BOARD OF APPEALS, CITY & COUNTY OF SAN FRANCISCO

Appeal of
SOUMYA SASTRY,)
Appellant(s))
)
vs.)
)
DEPARTMENT OF BUILDING INSPECTION,)

Respondent

Appeal No. **25-029**

NOTICE OF APPEAL

NOTICE IS HEREBY GIVEN THAT on July 24, 2025, the above named appellant(s) filed an appeal with the Board of Appeals of the City and County of San Francisco from the decision or order of the above named department(s), commission, or officer.

The substance or effect of the decision or order appealed from is the ISSUANCE on July 23, 2025 to Steven Huang, of an Alteration Permit (Revisions for approved permit application 2024/0517/2393; structural work-approved plan set inaccurately showed the rear wall dimensions; new architectural/structural plans show correct dimensions; minor structural revision) at 1077 Fell Street.

APPLICATION NO. 2025/0626/9586

FOR HEARING ON September 3, 2025

Address of Appellant(s):	Address of Other Parties:
Soumya Sastry, Appellant(s) 1075 Fell Street San Francisco, CA 94117	Steven Huang, Permit Holder(s) c/o Jefferson Jie Chen, Agent for Permit Holder(s) Enertia Designs 1167 Mission Street San Francisco, CA 94103

Date Filed: July 24, 2024

CITY & COUNTY OF SAN FRANCISCO
BOARD OF APPEALS

PRELIMINARY STATEMENT FOR APPEAL NO. 25-029

I / We, **Soumya Sastry**, hereby appeal the following departmental action: **ISSUANCE** of **Alteration Permit No. 2025/0626/9586** by the **Department of Building Inspection** which was issued or became effective on: **July 23, 2025**, to: **Stephen Huang,** for the property located at: **1077 Fell Street**.

BRIEFING SCHEDULE:

Appellant's Brief is due on or before: 4:30 p.m. on **August 14, 2025**, **(no later than three Thursdays prior to the hearing date)**. The brief may be up to 12 pages in length with unlimited exhibits. It shall be double-spaced with a minimum 12-point font. An electronic copy shall be emailed to: boardofappeals@sfgov.org, julie.lamarre@sfgov.org, corey.teague@sfgov.org, Natalia.fossi@sfgov.org, joseph.ospital@sfgov.org and jefferson@enertialdesigns.net

Respondent's and Other Parties' Briefs are due on or before: 4:30 p.m. on **August 28, 2025**, **(no later than one Thursday prior to hearing date)**. The brief may be up to 12 pages in length with unlimited exhibits. It shall be doubled-spaced with a minimum 12-point font. An electronic copy shall be emailed to: boardofappeals@sfgov.org, julie.lamarre@sfgov.org, corey.teague@sfgov.org, Natalia.fossi@sfgov.org, joseph.ospital@sfgov.org and soumya.sastry@gmail.com

Hard copies of the briefs do NOT need to be submitted to the Board Office or to the other parties.

Hearing Date: **Wednesday, September 3, 2025, 5:00 p.m., Room 416 San Francisco City Hall, 1 Dr. Carlton B. Goodlett Place.** The parties are encouraged to attend in-person, but may also attend remotely via Zoom. Information for access to the hearing will be provided before the hearing date.

All parties to this appeal must adhere to the briefing schedule above, however if the hearing date is changed, the briefing schedule MAY also be changed. Written notice will be provided of any changes to the briefing schedule.

In order to have their documents sent to the Board members prior to hearing, **members of the public** should email all documents of support/opposition no later than one Thursday prior to hearing date by 4:30 p.m. to boardofappeals@sfgov.org. Please note that names and contact information included in submittals from members of the public will become part of the public record. Submittals from members of the public may be made anonymously.

Please note that in addition to the parties' briefs, any materials that the Board receives relevant to this appeal, including letters of support/opposition from members of the public, are distributed to Board members prior to hearing. All such materials are available for inspection on the Board's website at www.sfgov.org/boa. You may also request a hard copy of the hearing materials that are provided to Board members at a cost of 10 cents per page, per S.F. Admin. Code Ch. 67.28.

The reasons for this appeal are as follows:

See attached statement.

Soumya Sastry, appellant, filed the appeal by email.

From:	soumya sastry
To:	BoardofAppeals (PAB); haraprasad sastry
Subject:	Appeal of Permit No. 202506269586
Date:	Thursday, July 24, 2025 11:47:19 AM
Attachments:	2024.0517.2393 job card.pdf

This message is from outside the City email system. Do not open links or attachments from untrusted sources.

Appellant: Soumya Sastry, owner of 1075 Fell Street

Appeal of Permit No. 202506269586

Preliminary Statement

I am appealing the issuance of Permit 202506269586 on the basis that significant life safety and structural concerns remain unaddressed. I have also filed a complaint related to Permit 202405172393 on July 22, 2025.

The applicant and their design team have not responded to serious engineering questions I raised—supported by evaluations from two independent licensed structural engineers—regarding discrepancies between plans, calculations, and field conditions. These include concerns about a large 3’ x 8’ wall opening that the applicant claims was “misrepresented” in earlier permit sets.

Despite acknowledging receipt of these questions, the applicant has made no substantive response for nearly a year and proceeded to submit serial permit revisions (at least five), without resolving these outstanding issues.

The work now permitted under 202506269586 was already performed before the permit was filed, and the revision appears designed to retroactively legalize that work rather than address the engineering inconsistencies.

As the co-owner of this two-unit HOA, I am directly affected by the potential life safety and liability implications of this design for both myself and my child. I ask the Board to suspend this permit to allow resolution of these matters and a review of whether the permit was issued to retroactively authorize unapproved work.

Attached is a copy of 202405172393. I do not have a copy of 202506269586.

Permit Details Report

Report Date:	**7/25/2025 10:23:03 AM**
Application Number:	202506269586
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	REVISIONS FOR APPROVED PA 202405172393: structural work - this approved plan set inaccurately showed rear wall dimensions. New arch/structural plan show correct dimensions. Minor structural revision.
Cost:	$8,500.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
6/26/2025	TRIAGE	
6/26/2025	FILING	
6/26/2025	FILED	
7/23/2025	APPROVED	
7/23/2025	ISSUED	

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
INTAKE		6/26/25	6/26/25			6/26/25	HANKINS ETHAN	Administrative	
CP-ZOC		7/23/25	7/23/25			7/23/25	LAUSH MAGGIE	Not Applicable	7/23/25: NA - no exterior per 202405172393 - Maggie.Laush@sfgov.org
BLDG		7/22/25	7/22/25			7/22/25	JONES DAVID	Denied	Discussed p/a with co-owner of property, please route application to DMJ prior to BLDG or PAD-STR review, DMJ 07/22/2025;
BLDG		7/23/25	7/23/25			7/23/25	JONES DAVID	Administrative	Discussed with project applicant, acceptable to review p/a, applicant required to get BID acceptance prior to permit issuance, DMJ 07/23/2025;
BLDG		7/23/25	7/23/25			7/23/25	LIU STEPHEN	Approved	otc; rev1 only
PAD-STR		7/23/25	7/23/25			7/23/25	LIU STEPHEN	Approved	otc; rev1 only
CPB		7/23/25	7/23/25			7/23/25	BROWN JANAE	Administrative	

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks

For information, or to schedule an inspection, call 628-652-3400 between 8:30 am and 3:00 pm.

Station Code Descriptions and Phone Numbers

Online Permit and Complaint Tracking home page.

Technical Support for Online Services
If you need help or have a question about this service, please visit our FAQ area.

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BRIEF(S) SUBMITTED BY APPELLANT(S)

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Soumya Sastry

CITY AND COUNTY OF SAN FRANCISCO

BOARD OF APPEALS

Soumya Sastry, Appellant, vs. Department of Building Inspection, Respondent	**Appeal No. 25-029** APPELLANT'S BRIEF Date: September 3, 2025 Time: 5:00 p.m. Location: Room 416 of San Francisco City Hall, 1 Dr. Carlton B. Goodlett Place

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I. INTRODUCTION

This Appeal arises from the Department of Building Inspection ("DBI") issuance of Permit Application No. 202506269586 (the "Permit") (**Exhibit 1**) for the real property located at 1077 Fell Street, San Francsico, California (the "1077 Property"). Appellant Soumya Sastry ("Appellant") appeals the issuance of the Permit on the grounds that serious structural and life safety concerns remain unaddressed.

Although the Permit is the subject of this Appeal, it is the latest permit in a series of interconnected applications related to the 1077 Property renovations. Specifically, the Permit revises Application No. 202405172393 (**Exhibit 2**) which revises Application No. 202304266513 (**Exhibit 3**) and further relates to Application Nos. 202306099711 (**Exhibit 4**) and 202309267475 (**Exhibit 5**). Despite repeated requests and two independent engineering peer reviews, the Permit applicant, Steven Huang ("Applicant") and his contractor ("Velox") and

engineering team ("Enertia Designs") have failed to resolve the ongoing structural and life safety issues raised by Appellant.

Appellant contends that the Permit should not have been issued since it is not compliant with applicable provisions of the San Francisco Building Code, including Sections 106A.3.1, 301, and 403.13.2. The Permit authorizes alterations that affect seismic safety and structural stability of the shared building. Accordingly, Appellant requests that the Board of Appeals suspend all work related to the Permit until the outstanding safety and structural issues are addressed and resolved.

II. STATEMENT OF THE CASE

A. **Background**.

The 1077 Property is the lower unit of a two-unit condominium property located at 1075-1077 Fell Street, San Francisco, California (the "Property"). Applicant owns the 1077 Property, and Appellant owns the upper unit (the "1075 Property"). Applicant holds a 40% ownership interest and Appellant holds a 60% ownership interest.

In April 2023, Applicant began what was initially described as a simple kitchen and bathroom remodel with no structural work (the "Project") (**Exhibit 3**). However, over the next two years, multiple permit revisions expanded the scope of the Project to include layout changes, window replacements, lighting upgrades, alteration of the floor joists, and ultimately structural work under the dining room and bathroom, including replacement of floor joints and other upgrades (**Exhibits 1-5**). These permit revisions did not accurately disclose the true extent of the structural alterations being undertaken at the Property. For example, by December 2023, the 1077 Property had been entirely gutted to the studs, with all interior wall, ceiling, and flooring removed, none of which was accurately reflected in the permits (**Exhibit 6**).

The current Permit, now on appeal, purported to make "minor structural revision" to correct dimensional errors in previous applications, but fails to reflect the full scope of work or

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resolve key safety concerns (**Exhibit 1**). Appellant, who resides in the 1075 Property with her son and has borne a significant amount of the construction costs through HOA contributions, has repeatedly raised concerns regarding the structural safety and misrepresentations filed in the permit applications. Appellant retained two separate structural engineers, Chiawang Yeh (**Exhibit 7**) and Detlev Doring (**Exhibit 8**), both of whom identified discrepancies between the approved plans, structural calculations, and the property conditions. To date, Applicant and his contractors have failed to adequately address any of Appellant's concerns and have left the Property in a compromised condition. Because the work covered by the Permit directly impacts the seismic safety and structural stability of the Property, Appellant believes that no further work should proceed until the safety and structural concerns are properly addressed.

B. **Facts.**

On or around April 2023, Applicant initiated the Project with Application No. 202304266513 (the "First Permit") (**Exhibit 3**). Pursuant to the First Permit, the scope of work for the Project was a simple kitchen and bath renovation with no changes to the floor or wall layout and no structural work (**Exhibit 3**).

By June 2023, Applicant revised the First Permit with Application No. 202306099711 (the "Second Permit") to expand the scope of the Project to include minor changes to the layout of the bathroom and kitchen and lighting upgrades (**Exhibit 4**).

In September 2023, Applicant made further revisions to the Second Permit with Application No. 202309267475 (the "Third Permit") to introduce structural alterations under the dining room and bath, including replacement of the floor joists (**Exhibit 5**). It is Appellant's understanding that the need for structural work was suggested by Applicant's contractor, Velox, in order to support the previously unpermitted footings and beams (**Exhibits 9 and 10**).

By December 2023, Applicant and his contractor, Velox, changed the interior layout and removed all interior walls, ceilings, and floor without filing another permit application to cover

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the scope of work (**Exhibit 6**). The 1077 Property was entirely gutted to the studs (**Exhibit 6**). Additionally, Applicant had plans to replace four windows, raise ceilings, add a taller sliding door, and add a new fifth window. To date, none of these changes have been accurately captured in the architectural drawings (**Exhibit 11**).

In December 2023, Applicant and Velox approached Appellant about doing a structural upgrade to the first story (**Exhibits 12 and 13**). Appellant supported the seismic upgrades and paid a majority of the associated costs ($60,000 out of approximately $100,000), based on representations by Applicant, Velox, and Enertia Designs that the work constituted a "full seismic/soft story upgrade" (**Exhibit 14 and 15**). However, at no point in time did the Applicant or his team clarify whether the scope of work triggered mandatory retrofit obligations under SFBC Section 403.13.2.

In May 2024, Applicant revised the Project with Application No. 202405172393(the "Fourth Permit") (**Exhibit 2**). The Fourth Permit covered bathroom layout changes, kitchen layout changes, lighting upgrades, and the replacement of two windows (**Exhibit 2**).

In June 2024, the HOA painter discovered significant dry rot in the building, and Enertia Designs, Velox, and the painter collaborated on a repair plan (**Exhibit 16**).

During September through October 2024, the HOA retained an independent structural engineer, Chiawang Yeh, to review the Project plans and calculations. Mr. Yeh's review of the Project identified many substantive life-safety concerns, and are set forth in his redlines of the calculations and plans (**Exhibit 17 and 18**). During this time Velox told Appellant that the building was left in a compromised condition since the 1077 Property was stripped down to the studs without proper reinforcement (**Exhibit 6**). Given time pressures and safety concerns, the HOA proceeded with a new contractor, Seismic Retrofitters, to complete the structural work (**Exhibit 19**). Seismic Retrofitters work introduced issues potentially conflicting with the

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previous engineering design and dry rot solutions. The Permit revisions fails to fully address structural issues discussed with Enertia Designs or raised in peer reviews.

In June 2025, Appellant received the permit revision calculations and drawings and immediately provided comments. Despite multiple requests, Appellant was excluded from all Project discussions. Subsequently, Appellant retained structural engineer, Detlev Doring, SE, to review the Project (**Exhibit 8**).

On June 26, 2025, Applicant filed for the Permit against Appellant's objections, and performed work while Appellant was out of town. The Permit characterizes the structural revisions as "minor" but does not reflect the scope of work or extent of structural deficiencies (**Exhibit 1**).

On July 7, 2025, Detlev Doring, SE, submitted a letter to Enertia Designs regarding the Project and the life safety issues that required review, including but not limited to missing earthquake overturning forces for the footing along Line E, a missing 4 ft SW along Line A, and calculations for the dry rot repairs (**Exhibit 20**). Appellant did not receive a response from Enertia Designs (**Exhibit 21**).

This appeal was filed by Appellant on July 14, 2025, to address the structural issues that pose life safety concerns, including an unapproved opening in a shear wall, beam replacement, and framing affected by dry rot. Subsequently, on July 20, 2025, Detlev Doring, SE, submitted a letter to DBI regarding the structural issues that should be addressed for the Project (**Exhibit 22**).

III. ARGUMENT

Despite repeated efforts by Appellant and the two independent structural engineers (Mr. Yeh and Mr. Doring), the Applicant and his contractors have failed to address critical structural concerns. The Permit contains material misrepresentations and omissions, and its issuance undermines the structural integrity of the building shared by Appellant and Applicant.

A. **Work Covered in the Permit Impacts Life Safety of the Current Residents.**

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The work covered by the Permit has direct implications for the life and safety of the Property's residents, which should be addressed before the Permit is approved.

First, the presence of a large, unapproved rough opening, approximately 100 inches by 42 inches, in a shear wall poses a significant threat to the structural integrity of the building (**Exhibit 23**). This opening was neither shown on prior plans nor approved, and was apparently cut by mistake during construction. The Applicant wishes to retain this opening, despite the fact that its own structural engineer, Enertia Designs, had admitted at one point that such an opening could compromise the original design intent of the shear wall. To date, Appellant has not received calculations or any professional assurances that the structural integrity of this altered wall is equal to or stronger than the original design. Furthermore, Seismic Retrofitters, the contractor hired by the HOA, undertook additional measures to strengthen this perforated shear wall beyond what was on the Permit revision. The fact that Seismic Retrofitters independently performed strengthening measures not included in the Permit demonstrates an implicit recognition of the opening's potential danger. Without correct engineering calculations confirming that this modification meets or exceeds the original designs load bearing capacity, accounting for all of the other site conditions, the opening remains a hazard.

In addition to the shear wall concerns, framing elements that had been repaired to address the dry rot were cut by Seismic Retrofitters during construction (**Exhibit 16**). Enertia Designs has acknowledged during site visits that this framing is structural, yet the Permit only addresses one visible framing element that the DBI inspector specifically noted. The failure to address these cuts and their impact on the diaphragm ties to the main building poses additional risk to the structural integrity of the building, and therefore, endangers the lives of the residents in the building.

The Permit also contemplates replacing two original load bearing beams with a single new beam measuring 7 by 7 inches. Appellant has concerns as to whether this new beam

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matches or exceeds the strength and safety provided by the original configuration and whether this solution can be evaluated in isolation.

Furthermore, Mr. Doring, SE, has raised serious concerns regarding code compliance and the seismic upgrades compatibility with the San Francisco Building Code (SFEBC) and California Existing Building Code (CEBC). Specifically, Mr. Doring has noted the following:

(i) SFEBC Section 303.4.1 states that voluntary seismic upgrade can be made "except when a vertical extension or other alterations are to be made which would increase the mass or reduce the seismic resistance capacity of the building or structure."

(ii) CEBC2022 Section 503.13, Voluntary lateral-force-resisting system alterations, provides that Structural alterations that are intended exclusively to improve the lateral force resisting system and are not required by other sections of this code shall not be required to meet the requirements of sections 1609 and 1613 of the CBC, provided that all of the following structural elements apply:

- The capacity of the existing structure is not reduced.
- New structural elements are detailed and connected to existing or new structural elements as required by the CBC for new construction.
- The alterations does not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.

Mr. Doring asserts that the life safety issues of this Permit revision continues from the previously issued permits and that this upgrade does not follow the intent of the current SFEBC. The set of calculations for the Permit state that the seismic analysis was based on CBC2022 and that the drawings reflect the seismic strengthening to that level in the E/W and N/S direction since plywood shear walls are added to replace the removed lath and plaster walls along Lines B,

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C, D and E. In Mr. Doring's opinion, the plywood shear walls are much stiffer than lath and plaster walls and this introduces a horizontal irregularity at Line A. It can be argued that this irregularity was there before, but by introducing stiffer shear wall elements in the building, this situation has been made worse, contrary to CEBC2022 Section 501.13 & SFEBC. Other problems include:

(i) No calculations or details were provided to show that the existing overhang diaphragm for a two story building will work per SDPWS Section 4.2.5.

(ii) The foundation for the Simpson Strong-walls at Line E has not been designed for seismic forces.

(iii) Drag struts tying the upper floor between Line D and E into the building are missing. Drag struts in N/S and E/W direction are missing.

(iv) Dry rot repairs to framing members have been made, but no calculations or details verifying the repair method have been provided.

(v) No calculations are provided for the anchorage of the perforated shear wall into the existing concrete.

These are a subset of the concerns of Mr. Doring, who states that Mr. Yeh's comments should be addressed (**Exhibits 20 and 22**).

Taken together, these unresolved issues pose a concern regarding the building's structural resilience and the life safety protections.

B. <u>Onsite conditions should be reflected in the Permit</u>.

The Permit does not accurately reflect existing conditions at the 1077 Property. In this case, there are many inconsistencies between site conditions, the structural calculations, and the Permit. These discrepancies include inaccuracies in the building height, the heights and weights of each floor, the roof type and weight, and the aspect ratios of the shear walls.

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For example, the calculations dated May 27, 2025, show this perforated shear wall design on page15 with an overall height of 11.58 ft.; however actual conditions (floor framing and cripple wall) place it closer to 13.5 ft +/- tall (**Exhibit 24**). The structural drawings dated Revision 2, May 27, 2025, on Sh. S-2 for the Second Floor Framing Plan show an additional wall being built inside the exterior wall with plywood on the inside (**Exhibit 25**). Section 8/S3 shows that condition with the perforated SW resting on the floor which does not allow the installation of the CW straps above and below opening as called for on the plan. Exhibit (photo) 1 shows the demolition of the floor and the intent of the SW wall being installed past the floor, so the permit documents and calculations are not correct or coordinated (**Exhibit 24 and 25**).

However, these issues are merely a subset of concerns. Other concerns remain that warrant a full review; for example, assumptions about the state of the current foundation in the calculations as meeting code and the impact of a brick chimney not identified in one of the north-south plywood walls need to be verified.

The DBI's review process relies heavily on the accuracy and completeness of submitted plans and calculations, as well as contractor verification during construction. When these documents misrepresent field conditions it undermines DBI's ability to properly evaluate structural safety and compliance. In this case, the Applicant has repeatedly failed to provide accurate or complete information, which not only undermines the permit process but places the residents safety at risk. Accordingly, the Permit should properly set forth the onsite conditions and correct calculations.

C. <u>Substantial Structural Alterations.</u>

The Project began as a kitchen and bath remodel with no structural work. It has since expanded through at least five permit applications and revisions to include gutting the interior of the 1077 Property to the studs, replacing and resizing windows and doors, raising ceilings, altering the floor joists under the 1075 Property, and significant structural work including footing

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replacements and floor joist upgrades. None of the individual permits captured the full extent of the work performed. These alterations go well beyond minor structural improvements. As shown in **Exhibit 6**, the entire interior walls and floors were removed. The cumulative scope of work arguably meets the definition of a "substantial structural alteration" pursuant to SFEBC Sections 403.13.12 and 202, which state:

> **SECTION 202 – GENERAL DEFINITIONS**
>
> SUBSTANTIAL STRUCTURAL ALTERATION. An alteration in which the gravity load-carrying structural elements altered since the original construction support more than 30 percent of the total floor and roof area of the building or structure. The areas to be counted toward the 30 percent shall include mezzanines, penthouses, and in-filled courts and shafts tributary to the altered structural elements.
>
> **403.13.2 Structural alterations.** When more than 30 percent of the floor and roof areas of the building or structure have been or are proposed to be involved in substantial structural alteration, the building or structure shall comply with Section 301. The areas to be counted towards the 30 percent shall be those areas tributary to the vertical load carrying components (joists, beams, columns, walls and other structural components) that have been or will be removed, added or altered, as well as areas such as mezzanines, penthouses, roof structures and infilled courts and shafts.

In this case, Applicant has altered more than 30 percent of the total floor area of the building and vertical load carrying components such as joists, beams, and walls, on two levels. Notably, Velox and Enertia Designs initially described the structural work as a seismic/ soft story upgrade, implying that building code compliance was necessary. When Velox first proposed the structural upgrade to Appellant, Velox said even without HOA approval, Velox would have to take action because they could not leave the building in its as-is state.

Given the scope of the alterations and seismic work already performed, the Project could

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qualify as a substantial structural alteration under SFEBC Sections 403.13.12 and 202, triggering mandatory compliance with seismic standards set forth in Section 301 of the SFEBC. The Permit should be suspended until the Applicant can demonstrate code compliance through proper engineering documentation and DBI review.

IV. CONCLUSION

Appellant has raised detailed, peer-reviewed concerns regarding whether the shear wall design is viable, whether beam replacement calculations are sufficient, and whether prior dry rot repairs were compromised. These issues remain unresolved. The Permit fails to accurately describe the scope of work or reflect the actual on-site conditions. Accordingly, Appellant respectfully requests that the Board of Appeals suspend Permit Application No. 202506269586 until:

(a) The Permit is updated to reflect the existing conditions at 1077 Property.

(b) Applicant provides Appellant and her engineer, Det Doring, with a revised full set of structural calculations.

(c) Engineering objections submitted to Applicant are formally addressed.

(d) A full engineering review is completed, and the Permit is brought into compliance with the San Francisco Building Code as agreed by engineers of both Applicant and Appellant.

Respectfully Submitted,

DATED: August 11, 2025

SCHINNER & SHAIN, LLP

By: Denise Pritchard

Denise Pritchard
Attorney for Appellant, Soumya Sastry

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4	Permit Application No. 202306099711 from DBI website	1
5	Permit Application No. 202309267475 from DBI website	1
6	1077 Fell Total Gutting and Work that Constitute Substantial Structural Alteration	13
7	Qualifications of Chiawang Yeh	1
8	Qualifications of Detlev Doring	1
9	September 2023 Remodel Structural Plans 1077 Fell Street – Structural set 092523	4
10	October 2023 Email from Velox on Structural Scope	2
11	Copy of 1077 Fell St, San Francisco – Architectural 6-15-25 Appellant comments	1
12	December 2023 Email with Velox Description of Work, and September 2024 Discussion regarding Velox Work	5
13	December 2023 - 1077 FELL PRELIMINARY PLAN	1
14	February 2024 Email from Velox regarding Structural Scope of Work & HOA Work	3
15	Velox Invoice HOA Quote	3
16	Pictures of Dry Rot Solution - Dry rot repair and cut 2 by 6	9
17	Chiawang Yeh SE redline of Calculations	37
18	Chiawang Yeh SE redline of Plans	9
19	Seismic Retrofitters HOA Contract	9
20	Detlev Doring SE Letter to Enertia	2
21	June 2025 Email regarding Engineering Questions	2
22	Detlev Doring SE Letter to DBI	1
23	Pictures of Rough Opening	6
24	Copy of 1077 Fell street – Calculations Rev 06-17-25 Appellant comments	21
25	Copy of 1077 Fell street – Structural Set – FIELD REV 06-17-25 Appellant comments	9

EXHIBIT 1

EXHIBIT 1

Permit Details Report

Report Date:	**7/30/2025 9:39:17 PM**
Application Number:	202506269586
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	REVISIONS FOR APPROVED PA 202405172393: structural work - this approved plan set inaccurately showed rear wall dimensions. New arch/structural plan show correct dimensions. Minor structural revision.
Cost:	$8,500.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
6/26/2025	TRIAGE	
6/26/2025	FILING	
6/26/2025	FILED	
7/23/2025	APPROVED	
7/23/2025	ISSUED	
7/25/2025	SUSPEND	Per BOA Appeal No.25-029

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
INTAKE		6/26/25	6/26/25			6/26/25	HANKINS ETHAN	Administrative	
CP-ZOC		7/23/25	7/23/25			7/23/25	LAUSH MAGGIE	Not Applicable	7/23/25: NA - no exterior per 202405172393 - Maggie.Laush@sfgov.org
BLDG		7/22/25	7/22/25			7/22/25	JONES DAVID	Denied	Discussed p/a with co-owner of property, please route application to DMJ prior to BLDG or PAD-STR review, DMJ 07/22/2025;
BLDG		7/23/25	7/23/25			7/23/25	JONES DAVID	Administrative	Discussed with project applicant, acceptable to review p/a, applicant required to get BID acceptance prior to permit issuance, DMJ 07/23/2025;
BLDG		7/23/25	7/23/25			7/23/25	LIU STEPHEN	Approved	otc; rev1 only
PAD-STR		7/23/25	7/23/25			7/23/25	LIU STEPHEN	Approved	otc; rev1 only
CPB		7/23/25	7/23/25			7/23/25	BROWN JANAE	Administrative	

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks

Exhibit 1: Appellant Notes of Permit 202506269586 from DBI Onsite Review

- Handwritten on permit by Kathleen Gevertz: “Revision to approved permit 202405172393 to reflect existing rear wall condition which was misrepresented in permit ending 6513. Minor structural revision to clarify header support of door opening width.”
- Ariel Lorenzale Architect drawings 7/16/2025- still inaccurately says height 11-0 minimum.
- Shows 3 by 8 door. (Correctly shows door swinging inwards.)
- Design criteria: SFBC 2022.

EXHIBIT 2

Permit Details Report

Report Date: **7/30/2025 8:34:39 AM**

Application Number:	202405172393
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	REV TO 202304266513; (E) BATHROOM LAYOUT CHANGED; (E) KITCHEN LAYOUT CHANGED; ADDITION - LIGHTING UPGRADE WHOLE UNIT; REPLACE 2-WINDOWS - LIKE TO LIKE, NOT VISIBLE FROM STREET. REF TO PA# 202306099711 & 202309267475
Cost:	$45,000.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
5/17/2024	TRIAGE	
5/17/2024	FILING	
5/17/2024	FILED	
10/2/2024	APPROVED	
10/2/2024	ISSUED	

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
INTAKE		5/17/24	5/17/24			5/17/24	BUFKA SUSAN	Administrative	
CP-ZOC		6/12/24	6/12/24			6/12/24	MAU ELIZABETH	Administrative	N/A - interior work only, increase in habitable space less than 800 sqft. No change to unit count. No work to the exterior. (E) garage space being converted to habitable space leaves a (N) garage that still meets dimensions of compact car.
CP-ZOC		7/15/24	7/15/24			7/15/24	OROPEZA EDGAR	Not Applicable	N/A E.O 7/15/2024
BLDG		7/15/24	7/15/24			7/15/24	CHAN PHILIP	Issued Comments	Comments OTC
BLDG	1	8/12/24	8/12/24			8/12/24	CHAN PHILIP	Approved	Approved OTC
MECH		8/12/24	8/12/24			8/12/24	GILMARTIN CHRISTIAN	Approved	OTC
BLDG		8/14/24	8/14/24			8/14/24	CHAN PHILIP	Approved	Approved OTC. EG-02
SFPUC		8/12/24	8/12/24			8/12/24	IMSON GRACE	Approved	08/12/2024 - APPROVED. Capacity Charge not applicable. No change in meter size, not enough fixtures added to warrant a larger meter. Route to MECH
SFFD		8/12/24	8/12/24			8/12/24	LY ROGER	Issued Comments	ISSUED COMMENT
SFFD	1	8/14/24	8/14/24			8/14/24	LY ROGER	Approved	APPROVED OTC PLANS WITH APPLICANT NO INSPECTION REQUIRED
CPB		10/2/24	10/2/24			10/2/24	SAPHONIA COLLINS	Administrative	

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots
7/21/2025	PM	CS	Clerk Scheduled	SHEAR WALL	1
5/14/2025	PM	CS	Clerk Scheduled	OK TO COVER	1
5/6/2025	AM	CS	Clerk Scheduled	OK TO COVER	1
1 2					

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status
7/21/2025	Matthew Sum	SHEAR WALL	CANCELLATION FOR INSPECTION SCHEDULE
5/14/2025	David Lara Araiza	OK TO COVER	ROUGH FRAME, PARTIAL
5/6/2025	David Lara Araiza	OK TO COVER	OK TO COVER, PARTIAL
1 2			

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks
0			1	CONCRETE (PLACEMENT & SAMPLING)	
0			4	REINFORCING STEEL AND PRETRESSING TENDONS	reinforcing steel
0			18A	BOLTS INSTALLED IN EXISTING CONCRETE	
0			24E	WOOD FRAMING	
0			19	SHEAR WALLS AND FLOOR SYSTEMS USED AS SHEAR DIAPHRAGMS	
0			20	HOLDOWNS	
0			24C	CONCRETE CONSTRUCTION	
0			18C	PULL/TORQUE TESTS PER SFBC SEC.1607C & 1615C	

For information, or to schedule an inspection, call 628-652-3400 between 8:30 am and 3:00 pm.

Station Code Descriptions and Phone Numbers

Online Permit and Complaint Tracking home page.

Technical Support for Online Services

If you need help or have a question about this service, please visit our FAQ area.

City and County of San Francisco © 2025

ATTACHMENT A

DEPARTMENT OF BUILDING INSPECTION
City & County of San Francisco
49 South Van Ness Ave, 5th Floor, San Francisco, California 94103

REQUEST FOR APPROVAL OF LOCAL EQUIVALENCY FOR MODIFICATION OR ALTERNATE MATERIALS, DESIGN OR METHODS OF CONSTRUCTION

DATE SUBMITTED 8/14/2024 [Note: This form shall be recorded as part of the permanent construction records of the property]

If no permit application has been filed, a Preapplication Review Fee is required for review of a request for local equivalency or modification, per SFBC Table 1A-B, Item 5. Additional fees may be required by Fire Department and other City review agencies.

If a permit application has been filed, no additional fees are required for this review.

Permit Application # 2024-0517-2393

Property Address: 1077 FELL St.

Block and Lot: 0825 / 050 Occupancy Group: R3 Type of Construction: V-B No. of Stories: 2

Describe Use of Building DUPLEX

RECEIVED
AUG 14 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN SET MEETS THE QUALITY CONTROL STANDARD FOR IMAGING ACCEPTED

Under the authority of the San Francisco Building Code, Sections 104A.2.7 and 104A.2.8; the San Francisco Mechanical Code, Section 302.2; the San Francisco Electrical Code, Section 89.117; and the San Francisco Plumbing Code, Section 301.3; the undersigned requests modifications of the provisions of these codes and/or approval of alternate materials, designs or methods of construction. Two copies of supporting documents, including plans showing the proposed modifications or alternate materials, design or methods of construction, are attached.

Regular Code Requirement (specify Code and Sections)

CBC 1031 - EERO
THE SFFD CAN PERFORM A RESCUE WITH A 27' STRAIGT LADDER FROM THE PUBLIC WAY THROUGH THE FRONT DOOR ~~OR GARAGE OR SIDE CORRIDOR/WALKWAY/TRADESMAN~~, THROUGH THE FAMILY ROOM, THROUGH THE BEDROOM OUT THE ~~SLIDING~~ DOOR TO THE REAR YARD/~~LIGHTWELL/COURTYARD~~; RAISED TO ALL BEDROOM EERO'S WITHOUT OBSTRUCTION

Proposed Modification or Alternate

REPLACE (E) WINDOW BY A (N) DOOR FACING THE REAR YARD.

Case-by-Case Basis of Request - Describe the practical difficulties presented in meeting the specific conditions of the code and how the proposed modification or alternate meets the intent of the code. A separate form should be filled for each requested modification or alternate. Attach copies of any Administrative Bulletin, Code Ruling, reference, test reports, expert opinions, etc., which support this request. The Department may require that an approved consultant be hired by the applicant to perform tests or analysis and to submit an evaluation report to the Department for consideration.

LAND LOCK TO ACCESS REAR YARD.

	PROJECT SPONSOR	ARCHITECT/ENGINEER
Requested by:		
Print Name:	ARIEL LORENZALE	
Signature:		
Telephone:	415-505-5288	

[PROFESSIONAL STAMP HERE]

Roger Ly, SFFD
AUG 14 2024

PLAN REVIEWER COMMENTS:

RECOMMENDATIONS: Approve Approve with conditions Disapprove

[signed off/dated by:] Philip Chan, DBI

Plan Reviewer: AUG 14 2024

Division Manager: David Jones, DBI — Reviewed & Approved For ESCAPE ONLY

for Director of Bldg. Inspection: AUG 14 2024

for Fire Marshal: Dee Lau, SFFD — Fire Access Only

AUG 14 2024

CONDITIONS OF APPROVAL or OTHER COMMENTS

RECEIVED
AUG 14 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR IMAGING
ACCEPTED

Roger Ly, SFFD
AUG 14 2024

GENERAL CONSTRUCTION NOTES

1. ANY ERRORS, OMISSIONS, OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
2. THE GENERAL CONTRACTOR AND ANY SUBCONTRACTORS SHALL IMMEDIATELY EXAMINE THE SITE AND PORTIONS THEREOF WHICH WILL AFFECT THIS WORK. CONTRACTORS SHALL COMPARE IT WITH THE DRAWINGS AND SATISFY THEMSELVES AS TO CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE GENERAL CONTRACTOR SHALL VERIFY THAT NO CONFLICTS EXIST IN LOCATIONS OF ANY AND ALL MECHANICAL, TELEPHONE, ELECTRICAL, PLUMBING (TO INCLUDE ALL PIPING, DUCT WORK, AND CONDUIT) AND THAT ALL REQUIRED CLEARANCES FOR INSTALLATION AND MAINTENANCE OF ABOVE EQUIPMENT ARE PROVIDED. EXPOSED OR CONCEALED ELEMENTS SHALL BE DETERMINED AND REVIEWED WITH ARCHITECT PRIOR TO CONSTRUCTION PROCEEDING.
3. WRITTEN DIMENSIONS TAKE PRECEDENCE. DO NOT SCALE DRAWINGS. DETAILS SHALL GOVERN OVER PLANS AND ELEVATIONS
4. ALL DIMENSIONS ARE TO FACE OF STUD, UNLESS OTHERWISE NOTED. DIMENSIONS NOTED AS "CLR" OR "CLEAR" ARE TO BE PRECISELY MAINTAINED. DIMENSIONS ARE NOT ADJUSTABLE WITHOUT ARCHITECT'S APPROVAL UNLESS OTHERWISE NOTED AS "+/-"
5. ALL DIMENSIONS NOTED AS "V.I.F." ARE TO BE CHECKED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IMMEDIATELY REPORT ANY DISCREPANCIES TO THE ARCHITECT.
6. ALL DIMENSIONS, NOTES, AND DETAILS SHOWN ON ONE PORTION OF THE DRAWING SHALL APPLY TYPICALLY TO ALL OPPOSITE HAND AND/OR SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. VERIFY ALL EQUIPMENT SIZES BEFORE BEGINNING WORK.
8. FURNISH AND INSTALL ALL MISCELLANEOUS AND STRUCTURAL ITEMS (STEEL, ALUMINUM, ETC. INCLUDING MATERIALS FOR SEPARATION OF DISSIMILAR MATERIALS) FOR EXTERIOR WALL SYSTEMS, WINDOWS, ARCHITECTURAL GLASS, RAILINGS, PARAPET WALLS, ETC. ASSOCIATED WITH THE BUILDING ENVELOPE AND ROOF.
9. COORDINATE LOCATION- AND PROVIDE BLOCKING, BACKING, AND/OR REINFORCEMENTS IN PARTITIONS FOR ALL CABINETS, COUNTERTOPS, AND ANY WALL-MOUNTED ITEMS. REFER TO ELEVATIONS AND DETAILS FOR LOCATIONS OF WALL STANDARDS AND OTHER SUPPORTS.
10. NEW WALL SURFACES SHALL ALIGN WITH EXISTING, ADJACENT, OR ADJOINING SURFACES, U.O.N. JOINTS SHALL BE TAPED AND SANDED SMOOTH WITH NO VISIBLE JOINTS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY FRAMING, BRACING, AND STRUCTURING ALL WALL, BULKHEAD, AND OTHER DRYWALL CONSTRUCTION IN ACCORDANCE WITH APPLICABLE TYPICAL DETAILS CONTAINED IN THE DRAWINGS WHETHER OR NOT SPECIFICALLY REFERENCED IN THE PLANS.
12. PROVIDE BLOCKING/BACKING AND REINFORCEMENT ABOVE FOR SUPPORT OF LIGHT FIXTURES, EQUIPMENT, OR ANY OTHER CEILING-MOUNTED ITEMS.
13. ALL WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS WHICH SHALL INCLUDE THE OUTLINE SPECIFICATIONS, THE DRAWINGS, AND ALL ADDENDA AND MODIFICATIONS ISSUED BY THE ARCHITECT.
14. GRID LINES AND COLUMN CENTER LINES ARE SHOWN FOR REFERENCE ONLY. VERIFY EXACT LOCATION IN FIELD.
15. IN CASE OF CONFLICT OR DISCREPANCIES IN CONTRACT DOCUMENTS, CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY.
16. FEATURES OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME CHARACTER AS SHOWN FOR SIMILAR CONDITIONS.
17. "TYPICAL" OR "TYP." SHALL MEAN THAT THE CONDITION IS REPRESENTATIVE FOR SIMILAR CONDITIONS THROUGHOUT, UNLESS OTHERWISE NOTED. DETAILS ARE USUALLY KEYED AND NOTED "TYP" ONLY ONCE, WHEN THEY FIRST OCCUR.
18. "SIMILAR" OR "SIM." MEANS COMPARABLE CHARACTERISTICS FOR THE CONDITIONS NOTED. VERIFY DIMENSIONS, ORIENTATION, AND CONDITIONS ON PLANS AND ELEVATIONS
19. WHERE REQUIRED BY INSTALLATION OF NEW CONSTRUCTION, REPLACE AND OR PROVIDE NEW BATT INSULATION AT ALL EXTERIOR ASSEMBLIES AS INDICATED BELOW. SEE T.24 FOR ADDITIONAL REQUIREMENTS.
WALLS/CEILING: R-19
20. IF ANY MATERIALS SUSPECTED OF CONTAINING ASBESTOS ARE ENCOUNTERED, DO NOT DISTURB THE MATERIALS. IMMEDIATELY NOTIFY THE ARCHITECT AND THE OWNER.
21. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR JOBSITE SAFETY AT ALL TIMES, INCLUDING BUT NOT LIMITED TO SAFETY OF PERSONS AND PROPERTY, AND MEANS AND METHODS OF CONSTRUCTION.

APPLICABLE CODES

All construction work shall comply with the 2022 California Code of Regulations Title 24, including:

1. 2022 California Building Code.
2. 2022 California Plumbing Code.
3. 2022 California Mechanical Code.
4. 2022 California Electrical Code.
5. 2022 California Building Energy Code.
6. 2022 California Fire Code.
7. 2022 California Green Building Standards.
8. 2022 Residential Building Code.

PROJECT INFORMATION

Owner: Steven Huang
Address: 1077 Fell St, San Francisco, CA 94117
Phone: 425-876-1946

SCOPE OF WORK

REVISION TO PERMIT #2023-0426-6513 / #2023-0609-9711 / #2023-0926-7475

- (E) BATHROOM LAYOUT CHANGE.
- (E) KITCHEN LAYOUT CHANGE AND ADDITION.
- LIGHTING UPGRADE WHOLE UNIT.
- REPLACE 2 WINDOWS. LIKE FOR LIKE. NOT VISIBLE FROM STREET.

1077 FELL ST, SAN FRANCISCO, CA

Green Halo Tracking Number Required

SHEET INDEX

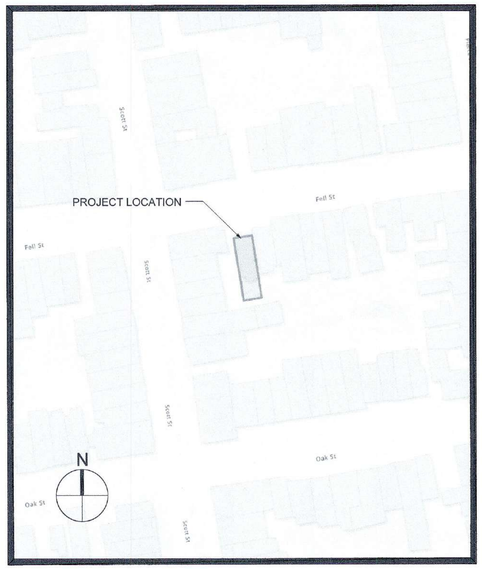
ARCHITECTURAL

A-0.00	COVER SHEET
A-1.01	FLOOR PLANS - EXISTING AND NEW
A-1.02	ELEVATIONS - EXISTING AND NEW
E-1.01	ELECTRICAL PLANS
EN-1.01	TITLE 24
EN-1.02	TITLE 24
EN-1.03	GS5 FORM

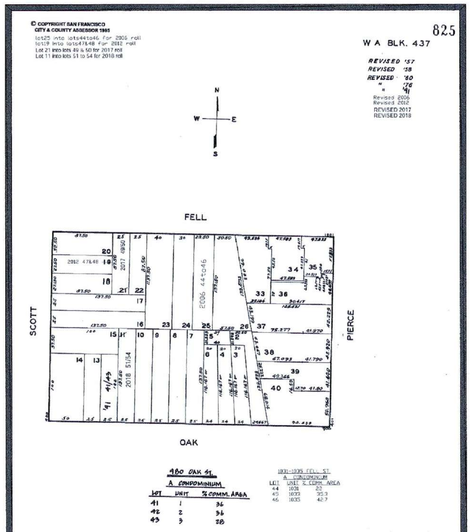
STRUCTURAL

S1.0	GENERAL NOTES
S1.A	TYPICAL WOOD DETAILS
S2	FOUNDATION PLAN
S3	STRUCTURAL DETAILS
S4	STRUCTURAL DETAILS
W1	STRUCTURAL DETAILS
W2	STRUCTURAL DETAILS

VICINITY MAP (No scale)

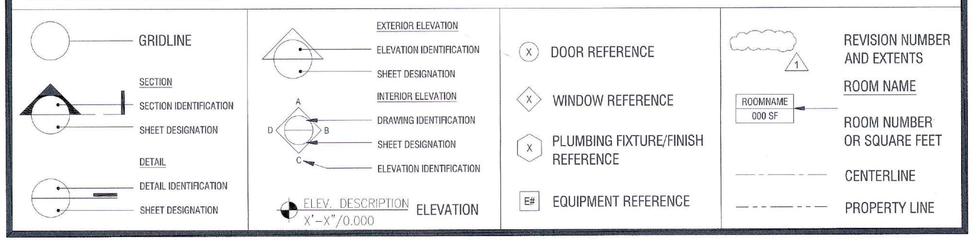


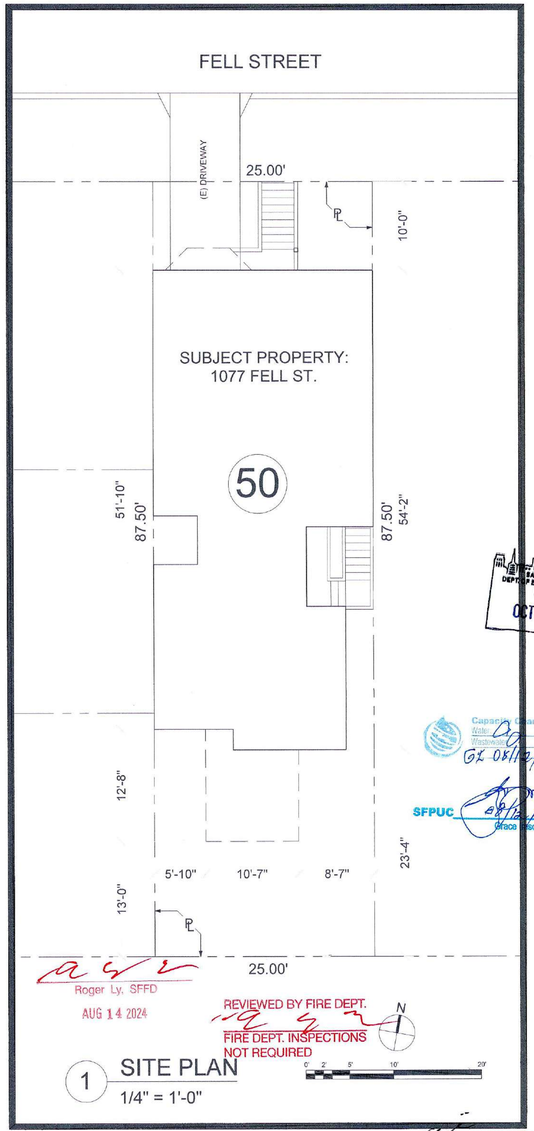
ASSESSOR'S MAP



BUILDING DATA			
Type of Construction	V-B	Ground Floor (E) Conditioned Area	721 sf
Type of Occupancy	R3	Ground Floor (N) Conditioned Area	45 sf
Parcel (Block/Lot)	0825/050	Ground Floor TOTAL Conditioned Area	766 sf
Sprinklers	NO		
Stories	2		
Basements	0		
Units	2		

REFERENCE SYMBOLS





1 SITE PLAN
1/4" = 1'-0"

Roger Ly, SFFD
AUG 14 2024

REVIEWED BY FIRE DEPT.
FIRE DEPT. INSPECTIONS NOT REQUIRED

PLAN REVIEW BY SFFD LIMITED TO:
1. FIRE DEPARTMENT ACCESS
2. FIRE FLOW REQUIREMENTS

Christian Gilmartin, DBI BPCH
AUG 12 2024

PROJECT ADDRESS
1077 FELL ST,
SAN FRANCISCO,
CA 94117

ARL|DESIGN
ARIEL R LORENZALE
607 ELMIRA RD, #249,
VACAVILLE, CA 95687
415-505-5288
ariel@arldesigner.com

VELOX
DESIGN + CONSTRUCTION
442 HAIGHT ST.
SAN FRANCISCO, CA 94117
415-416-0177
doug@veloxsf.com

SPECIAL INSPECTION REQUIRED PER SFBC SECTION 1704

Philip Chan, DBI
AUG 12 2024
Philip Chan, DBI
AUG 14 2024

RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR IMAGING ACCEPTED

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED
OCT 02 2024

Capacity Charges Waived
02 08/12/24

SFPUC 08/12/2024 Grace Jason

REVISIONS

	date	by

drawn: A. Lorenzale
checked:
date: 8/2/2024
scale: AS NOTED
project No: 0445
drawing title

COVER SHEET

sheet
A-0.00
1 of 14 sheets.

2024-0517-2363

CONTRUCTION NOTES

1. CONTRACTOR IS TO VERIFY ALL (E) DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION.
2. CARE SHALL BE TAKEN TO ELIMINATE DAMAGE TO (E) MATERIALS AND SURFACES DURING CONSTRUCTION. ANY DAMAGES TO (E) CONSTRUCTION SHALL BE REPLACED OR REPAIRED AT NO ADDITIONAL COST.
3. CONTRACTOR SHALL REPAIR ANY DAMAGE TO (E) WALLS AND FLOORS CAUSED BY DEMOLITION OF (E) PARTITIONS & CEILING.
4. ALL DIMENSIONS ARE TO FACE OF FINISH OR CENTERLINE, U.N.O.
5. ALL BLOCKING AND FURRING SHALL BE FIRE TREATED AS REQUIRED BY BUILDING CODE.
6. ALL PARTITIONS ABUTTING EXISTING BUILDING CONSTRUCTION SHALL ALIGN FINISH FACE TO FINISH FACE U.N.O.
7. ALL PARTITIONS SHALL BE BRACED PER THE REQUIREMENTS OF CURRENT LOCAL SEISMIC CODE.
8. ALL DOORS TO BE UNDERCUT AS REQUIRED TO CLEAR FINISH FLOOR BY 1/4".
9. ALL WORK TO BE INSTALLED PLUMB, LEVEL, SQUARE, AND TRUE AND IN PROPER ALIGNMENT.
10. CONTRACTOR TO PROTECT FINISHES IN PATH OF TRAVEL TO AREA OF WORK.

PLUMBING NOTES

P1. Gas vent terminations shall meet the requirements of CMC 802.6 & SFMC 802.6.2.

P2. Combustion air shall meet the requirements of CMC Chapter 7.

P3. Environmental air ducts shall terminate 3 feet from the property line and 3 feet from openings into the building per CMC 504.5 and provide with back-draft dampers per CMC Table 504.1.

P4. Clothes dryer exhaust shall be a minimum 4", terminate to the outside of the building, shall be equipped with a back-draft damper and meet the requirements of CMC 504.3. Provide 100 sq. in. minimum make-up air opening for domestic dryers.

P5. 100% of the construction waste generated by this project shall be recycled or salvaged for use.

P6. Plastic Plumbing Pipe shall not be used for domestic water supply or sanitary waste system within the building.

P7. Shower and Tub-Shower combinations shall be pressure balanced or thermostatic mixing type control valves per CPC 418.

P8. Shower shall be 1024 sq. in. Min. Must encompass a 30" circle. Shower door Min. 22" clear opening.

P9. Control valves and Showerheads shall be located on sidewall of shower compartment or otherwise arranged so that the showerhead does not discharge directly at the entrance to the compartment so that the bather can adjust valves prior to stepping into the shower spray.

P10. Minimum 26 gage steel heating supply ducts shall be installed between the garage and new habitable spaces.

P11. Provide insulation on all new domestic hot water piping in new accessory units, rooms down additions and new buildings. The insulation shall be the same thickness of the water piping up to 2" water piping size.

P12. Water Heater shall be raised 18" above the Floor.

P13. Seismically strap the water heater with two straps (one 1/3 down from the top of the tank and one strap 4" above the controls)

P14. R-6.0 duct insulation shall be installed if 40 feet or less of new ducts are installed in unconditioned space.

P15. 1 inch insulation shall be installed on first 5 feet of cold water pipes at the water heater.

P16. All interior spaces intended for human occupancy shall be provided with space heating per CBC 1204.1.

EGRESS WINDOW REQUIREMENTS

A finished sill height above the finished floor of 44" or less.
A minimum opening of 5.7 square feet net clear area.
A minimum net clear opening dimension of 20" in width.
A minimum net clear opening dimension of 24" in height.

WINDOW TYPE ABBREVIATION

DH: DOUBLE HUNG
CS: CASEMENT
FX: FIXED
SL: SLIDDER

WATER CONSERVATION REQUIREMENTS

W1. Water closets shall not exceed 1.28 gallons per effective flush.

W2. Single showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi.

W3. Multiple showerheads serving one shower shall have a combined flow rate of not more than 1.8 gallons per minute at 80 psi.

W4. Bathroom faucets shall have a maximum flow rate of not more than 1.2 gallons per minute at 60 psi.

W5. Maximum water factor equal to or less than 6.0 for clothes washers.

WALLS AND INTERIOR PARTITIONS, WOOD FRAMED

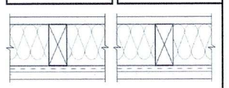
GA FILE NO. WP 3242	GENERIC	1 HOUR FIRE	50 to 54 STC SOUND

GYPSUM WALLBOARD, RESILIENT CHANNELS, MINERAL OR GLASS FIBER INSULATION, WOOD STUDS

Resilient channels 16" o.c. attached at right angles to ONE SIDE of 2 x 4 wood studs 24" o.c. with 1¼" Type S drywall screws. One layer ⅝" type X gypsum wallboard or gypsum veneer base applied at right angles to channels with 1" Type S drywall screws 8" o.c. with vertical joints located midway between studs. 3" mineral or glass fiber insulation in stud space.

OPPOSITE SIDE: One layer ⅝" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to studs with 6d cement coated nails, 17/8" long, 0.0915" shank, 15/64" heads, 7" o.c.

Vertical joints staggered 24" on opposite sides. **(LOAD-BEARING)**

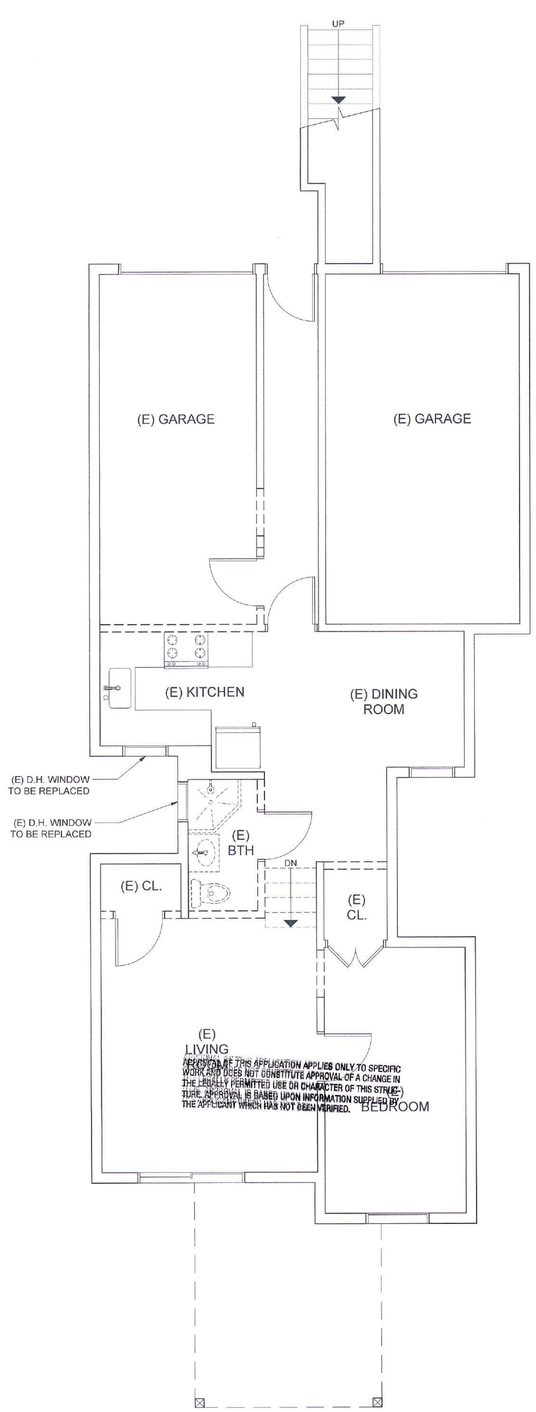


Thickness: 5⅛"
Approx. Weight: 7 psf
Fire Test: Based on UL R14196, 05NK05371, 2-15-05, UL Design U309
Sound Test: NRCC TL 93-098, IRC-IR-761, 3/98

3 FIRE RATED WALL

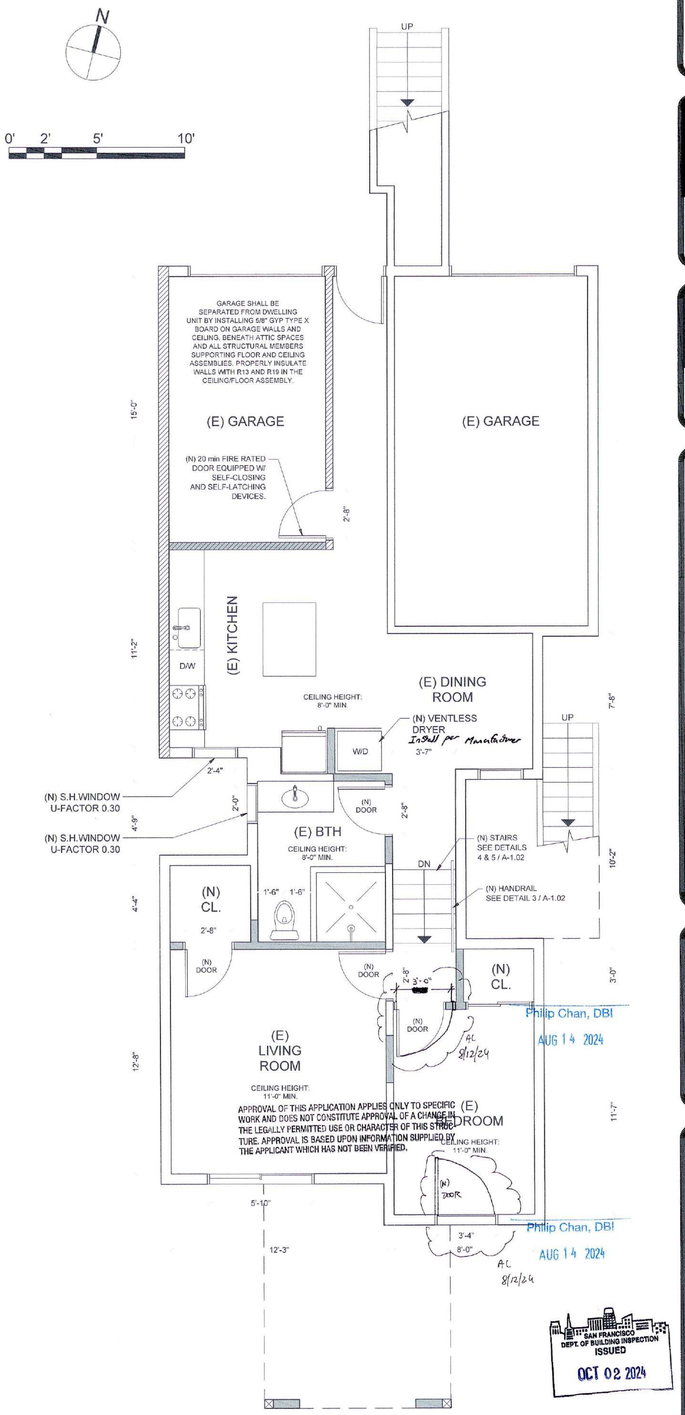
WALL TYPE

- EXISTING WALL
- DEMO WALL
- SOFFIT
- NEW WALL
- 1 HOUR FIRE RATED WALL



1 FIRST FLOOR PLAN - EXISTING
1/4" = 1'-0"

Roger Ly, SFFD
AUG 14 2024



Philip Chan, DBI
AUG 14 2024
8/12/24

Philip Chan, DBI
AUG 14 2024

Philip Chan, DBI
AUG 14 2024

2 FIRST FLOOR PLAN - NEW
1/4" = 1'-0"

Christian Gilmartin, DBI
AUG 12 2024

SAN FRANCISCO DEPT OF BUILDING INSPECTION ISSUED
OCT 02 2024

PROJECT ADDRESS
1077 FELL ST,
SAN FRANCISCO,
CA 94117

ARL|DESIGN
ARIEL R LORENZALE
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RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR IMAGING ACCEPTED

Philip Chan, DBI
AUG 12 2024

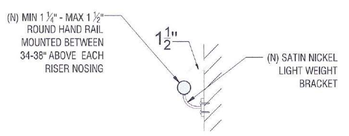
REVISIONS

No	date	by

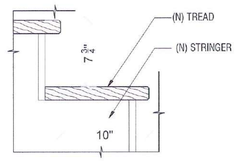
drawn: A. Lorenzale
checked:
date: 8/2/2024
scale: 1/4" = 1'-0"
project No: 0445
drawing title

FLOOR PLANS EXISTING AND NEW

sheet
A-1.01
2 of 14 sheets.



3 TYPICAL HANDRAIL DETAIL



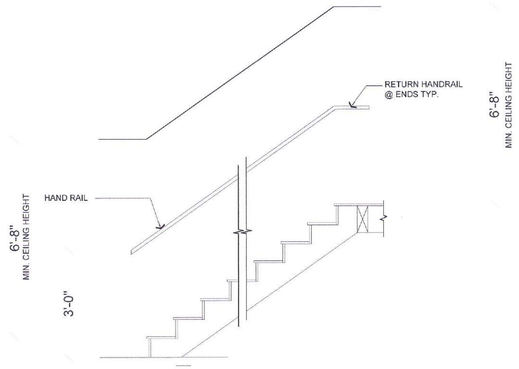
4 TYPICAL RISER/TREAD AT STAIR

NOSING PROJECTION TO BE NOT LESS THAN 3/4" AND NOT MORE THAN 1-1/4" FROM THE SOLID RISER. PER CRC R311.7.5.3.

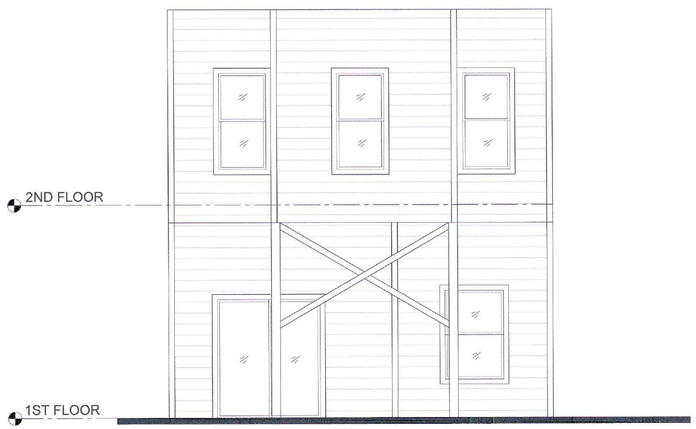
NOTES:

1. PROVIDE 2x NOMINAL LUMBER IN CONCEALED SPACE BETWEEN STAIR STRINGERS @ TOP & BOT. OF THE RUN & BETWEEN STUDS ALONG AND IN LINE WITH THE RUN OF STAIRS IF THE WALL UNDER STAIRS ARE UNFINISHED.

2. HANDRAIL MUST EXTEND NOT LESS THAN 6 INCHES BEYOND THE TOP AND BOTTOM RISERS. THE END OF HANDRAILS ARE TO BE RETURNED TO THE WALL OR SHALL TERMINATE IN NEWEL POST OR OTHER SIMILAR SAFETY TERMINALS.



5 STAIRS DETAILS



1 SOUTH ELEVATION - EXISTING
1/4" = 1'-0"



2 SOUTH ELEVATION - NEW
1/4" = 1'-0"

Roger Ly, SFFD
AUG 14 2024

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Philip Chan, DBI
AUG 12 2024

REVISIONS		
No	date	by

drawn: A. Lorenzale
checked:
date: 8/2/2024
scale: 1/4" = 1'-0"
project No: 0445
drawing title

ELEVATIONS EXISTING AND NEW

sheet
A-1.02
3 of 14 sheets.

Philip Chan, DBI
AUG 14 2024

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED
OCT 02 2024

ELECTRICAL NOTES

E1. ALL ELECTRICAL CONDUCTOR MATERIAL SHALL BE COPPER.

E2. APPROVED SMOKE ALARMS (HARDWIRED W/BATTERY BACKUP) TO BE LOCATED IN EACH BEDROOM, AND IMMEDIATELY OUTSIDE THE SLEEPING AREAS THROUGHOUT, INCLUDING EACH FLOOR LEVEL. SMOKE ALARMS SHALL BE LISTED AS COMPLYING WITH UL 217 AND BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH NFPA 72 AND THE MANUFACTURER'S INSTRUCTIONS. COMBINATION SMOKE AND CARBON MONOXIDE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 217 AND UL 2034. (CRC R314.1) WHERE MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING OR SLEEPING UNIT, 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. PER CRC R317.4

E3. APPROVED CARBON MONOXIDE ALARMS (HARDWIRED W/BATTERY BACKUP) TO BE LOCATED IMMEDIATELY OUTSIDE THE SLEEPING AREAS THROUGHOUT, INCLUDING EACH FLOOR LEVEL. CARBON MONOXIDE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 2034 AND BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH NFPA 720 AND THE MANUFACTURER'S INSTRUCTIONS. (CRC R315) WHERE MORE THAN ONE CARBON MONOXIDE ALARM IS REQUIRED TO BE INSTALLED WITHIN A DWELLING UNIT OR WITHIN A SLEEPING UNIT IN GROUP R OCCUPANCIES, THE ALARMS SHALL BE INTERCONNECTED IN A MANNER THAT ACTIVATION OF ONE ALARM SHALL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT. SEE CRC R315.7 FOR EXCEPTIONS.

E4. APPLIANCES TO BE ACCESSIBLE FOR SERVICE/REPAIR WITHOUT REMOVAL OF ANY PERMANENT CONSTRUCTION.

E5. CONTRACTOR TO VERIFY (E) OUTLETS LOCATIONS MEET REQUIREMENTS.

E6. ELECTRICAL PANELS SHALL NOT BE LOCATED IN CLOSETS USED TO STORE CLOTHES. PER CEC 240.24(D)

E7. THE RATING OF THE SERVICE DISCONNECTING MEANS SHALL BE IN ACCORDANCE WITH CEC 220 ART. 220 WITH A MINIMUM RATING AS FOLLOW: FOR A SINGLE FAMILY DWELLING, THE MINIMUM SERVICE DISCONNECTING MEANS SHALL BE A MINIMUM RATING OF 100 AMP, 3-WIRE. PER CEC 230.79(C).

E8. BATHROOM RECEPTACLE OUTLETS TO BE SUPPLIED BY DEDICATED 20 AMP BRANCH CIRCUIT PER CEC 210.11(C)(3). THIS CIRCUIT CANNOT SUPPLY ANY OTHER RECEPTACLE, LIGHTS, FANS, ETC. (EXCEPTION - WHERE THE CIRCUIT SUPPLIES A SINGLE BATHROOM, OUTLETS FOR OTHER EQUIPMENT WITHIN THE SAME BATHROOM SHALL BE ALLOWED).

E9. ALL 120-VOLT, 15- AND 20- AMP RECEPTACLE OUTLETS SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES PER CEC 406.12.

E10. ALL 15 AND 20 AMPERE RECEPTACLES INSTALLED IN THE BATHROOMS, GARAGE AND ACCESSORY BUILDINGS, CRAWL SPACE, UNFINISHED BASEMENTS, SINKS-OUTLETS INSTALLED WITHIN 6 FEET, BATHTUBS OR SHOWER STALL, AND LAUNDRY AREAS, AND IN EXTERIOR LOCATIONS ON THE BUILDING, SHALL BE PROTECTED BY A GROUND FAULT CIRCUIT INTERRUPTER (GFCI) PER CEC 210.8.

E11. ALL 15 AND 20 AMPERES BRANCH CIRCUITS SUPPLYING ALL OUTLETS OR DEVICES IN NEW HABITABLE AND NON-HABITABLE ROOMS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER (AFCI) PER CEC 210.12 (A). KITCHEN COUNTERTOP RECEPTACLES NEED TO BE AFCI AND GFCI PROTECTED

E12. ALL LIGHTING (INDOOR AND OUTDOOR) SHALL BE HIGH EFFICACY PER CEnC 150.0 (k) 1A.

E13. OUTDOOR LIGHTING SHALL COMPLY WITH CEnC 150.0 (k) 3.

E14. DEDICATED 20-AMP GFCI PROTECTED BRANCH CIRCUIT SHALL BE PROVIDED FOR THE LAUNDRY AREA PER CEC 210.11 (C) (2).

E15. GROUND-FAULT CIRCUIT INTERRUPTION SHALL BE PROVIDED ON NEWLY INSTALLED RECEPTACLE OUTLETS IF REQUIRED BY THE CALIFORNIA ELECTRICAL CODE, TITLE 24 PART 5. (PMC 20.10.140)

E16. GFCI PROTECTION SHALL BE PROVIDED AT ALL RECEPTACLES OUTLETS INSTALLED IN THE KITCHEN PER CEC 210.8 (A)(6).

E17. SMOKE ALARMS INSTALLED WITHIN 20 FT. OF A KITCHEN, BATHROOM, OR ROOM CONTAINING A FIREPLACE OR WOOD BURNING STOVE SHALL BE OF THE PHOTOELECTRIC TYPE. FOR PLACEMENT OF SMOKE ALARMS AND CARBON MONOXIDE ALARMS IN ROOMS WITH VARIATIONS IN CEILING HEIGHT (SLOPED, PITCHED ETC.), REFER TO THE MANUFACTURERS GUIDELINES FOR PROPER PLACEMENT. IF THE SMOKE ALARMS CURRENTLY INSTALLED IN THE RESIDENCE ARE MORE THAN 10 YEARS OLD (10 YEARS FROM THE DATE OF INSTALLATION) THEY ARE REQUIRED TO BE REPLACED WITH NEW SMOKE ALARMS.

E18. SMOKE ALARMS INSTALLED WITHIN 20 FT. OF A KITCHEN, BATHROOM, OR ROOM CONTAINING A FIREPLACE OR WOOD BURNING STOVE SHALL BE OF THE PHOTOELECTRIC TYPE. FOR PLACEMENT OF SMOKE ALARMS AND CARBON MONOXIDE ALARMS IN ROOMS WITH VARIATIONS IN CEILING HEIGHT (SLOPED, PITCHED ETC.), REFER TO THE MANUFACTURERS GUIDELINES FOR PROPER PLACEMENT. IF THE SMOKE ALARMS CURRENTLY INSTALLED IN THE RESIDENCE ARE MORE THAN 10 YEARS OLD (10 YEARS FROM THE DATE OF INSTALLATION) THEY ARE REQUIRED TO BE REPLACED WITH NEW SMOKE ALARMS.

ENERGY NOTES

EN1. ALL NON-FLUORESCENT LIGHTING AT NEW BATHROOMS TO BE CONTROLLED BY MANUAL-ON OCCUPANT SENSOR THAT DOES NOT TURN ON AUTOMATICALLY OR HAVE AN ALWAYS ON OPTION.

EN2. ALL EXTERIOR LIGHTING FIXTURES SHALL BE HIGH EFFICACY, AND CONTROLLED BY AN AUTO ON/OFF MOTION SENSOR AND ONE OF THE FOLLOWING CONTROLS: A PHOTO-CONTROL, AN ASTRONOMICAL CLOCK OR AN ENERGY MANAGEMENT CONTROL SYSTEM. PER CNC 150 (K) 13.

EN3. ALL GARAGE LIGHTING MUST BE HIGH EFFICACY LIGHTING AND MANUAL-ON OCCUPANCY SENSOR.

EN4. ALL NEW LIGHTING INSTALLED IN BATHROOMS, LAUNDRY ROOMS, CLOSETS GREATER THAN 70 sq. ft., AND UTILITY ROOMS SHALL BE HIGH EFFICACY AND MANUAL-ON OCCUPANCY SENSOR PER CNC 150 (K) 10.

EN5. ALL NEW LIGHTING INSTALLED IN HALLWAYS LIVING ROOMS, BEDROOMS, OFFICES, STUDIES, PLAYROOMS AND DENS SHALL BE HIGH EFFICACY OR MANUAL-ON OCCUPANCY SENSOR OR DIMMERS PER CNC 150 (K) 11.

EN6. BATHROOM FANS SHALL BE SWITCHED SEPARATELY FROM ANY LIGHTING SYSTEM.

EN7. ALL HARDWIRED LIGHTING MUST BE HIGH EFFICACY, OR CONTROLLED BY MANUAL-ON OCCUPANT SENSOR.

EN8. ALL OUTDOOR LIGHTING ATTACHED TO BUILDING MUST BE HIGH EFFICACY, AND CONTROLLED BY A MOTION SENSOR AND A PHOTOCONTROL.

EN9. RECESSED LUMINARIES IN INSULATED CEILINGS MUST BE APPROVED FOR ZERO-CLEARANCE INSULATION COVER (IC) AND MUST BE CERTIFIED AIRTIGHT.

EN10. ANNULAR SPACES AROUND PIPES, ELECTRICAL CABLES, CONDUITS OR OTHER OPENINGS IN PLATES AT EXTERIOR WALL SHALL BE PROTECTED AGAINST OF RODENTS BY CLOSING OPENINGS W/ CEMENT MORTAR CONCRETE MASONRY OR SIMILAR METHODS ACCEPTABLE TO THE ENFORCING AGENCY.

EN11. PROVIDE AN OPERATIONAL MAINTENANCE MANUAL OF ALL NEW EQUIPMENT INSTALLED TO THE BUILDING OCCUPANT OR THE OWNER.

KEY NOTE

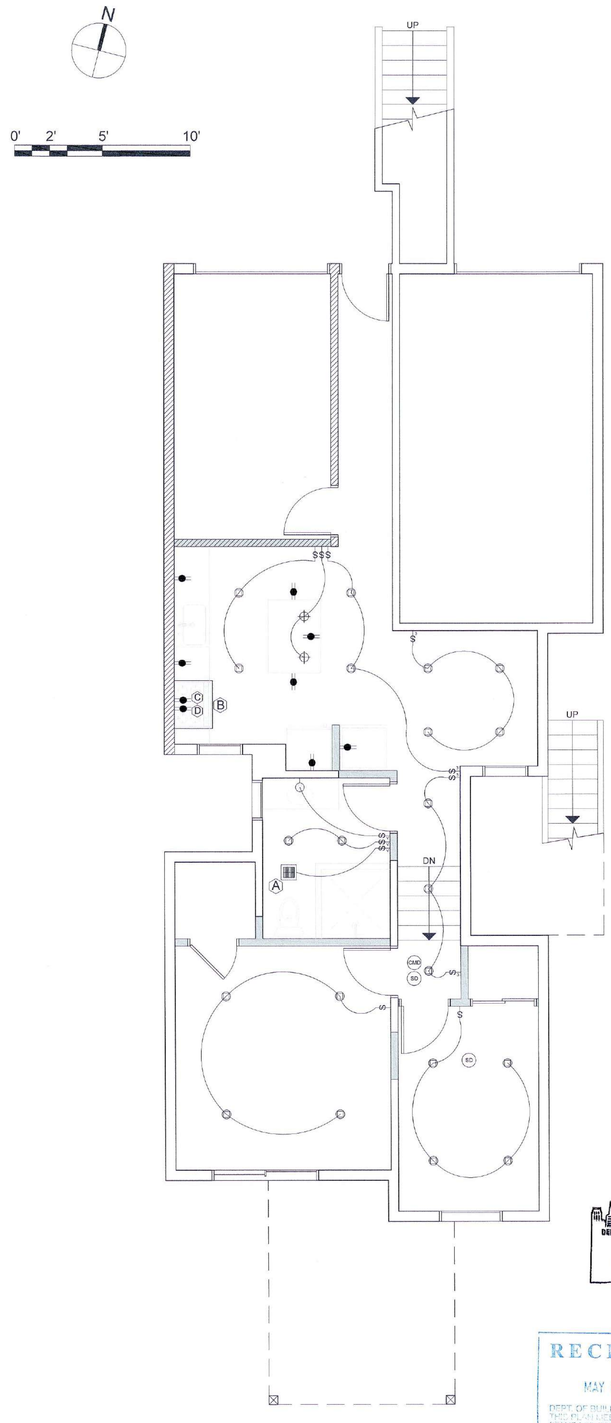
- Ceiling Mounted LED Light
- Pendant LED Light
- 4" Recessed LED Lights
- Wall Spot LED Light
- Outdoor Wall Spot LED Light
- Scone LED Lights
- LED Under Cabinet Tape Light
- $ Single Pole Switch
- $3 Three-Way Switch
- $V Vacancy Sensor Switch
- D Dimmer Switch
- I Intercom Station
- L Launch Port Wall Station
- T Thermostat
- 110 Volt Electrical Outlet
- 220 Volt Electrical Outlet
- 110 Volt G.F.C.I. Electrical Outlet
- 110 Volt G.F.C.I. w/ Waterproof Box Electrical Outlet
- SD Smoke Detector Alarm
- CMD Carbon Monoxide Detector Alarm
- Main Panel
- Sub Panel

(A) (N) ENERGY STAR COMPLIANT EXHAUST FAN MIN. 50 CFM W/ MAX. 1 SONE SOUND RATING PER ASHRAE 62.2. W/ HUMIDISTAT CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50% AND 80% - VENT TO ROOF. EXHAUST FAN SHALL BE SWITCHED SEPARATELY FROM ANY LIGHTING SYSTEM.

(B) (N) RANGE HOOD - MIN. 100 CFM W/ MAX. 1 SONE SOUND RATING PER ASHRAE 62.2. VENT TO ROOF

(C) (N) G.F.C.I. OUTLET FOR RANGE HOOD

(D) (N) G.F.C.I. OUTLET FOR RANGE



1 FIRST FLOOR PLAN - NEW
1/4" = 1'-0"

Philip Chan, DBI
AUG 12 2024

RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR IMAGING ACCEPTED

SAN FRANCISCO DEPT OF BUILDING INSPECTION ISSUED OCT 02 2024

RECEIVED
MAY 17 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR LIGHTING ACCEPTED

Christian Gilmartin, DBI
AUG 12 2024

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REVISIONS

No	date	by

drawn: A. Lorenzale
checked:
date: 5/17/2024
scale: 1/4" = 1'-0"
project No: 0445
drawing title

ELECTRICAL PLANS

sheet

E-1.01

3 of 13 sheets.

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

CERTIFICATE OF COMPLIANCE

Project Name:	1077 Fell	**Enforcement Agency:**	City of San Francisco
Dwelling Address:	1077 Fell Street	**Permit Number:**	
City and Zip Code	San Francisco, 94117	**Permit Application Date:**	

A. General Information

01	Project Name	1077 Fell	02	Date Prepared	2024-05-17
03	Project Location	1077 Fell Street	04	Building Front Orientation (deg)	340
05	CA City	San Francisco	06	Number of Dwelling Units with Additions	1
07	Zip Code	94117	08	Fuel Type	Electricity
09	Climate Zone	3	10	Total Conditioned Floor Area (ft^2) (Addition)	45
11	Building Type	Single family	12	Slab Area (ft^2)	45
13	Project Scope	Addition 300 ft^2 Kitchen Remodel	14	Fenestration Exceptions	NA (do not allow other entries)

B. Building Insulation Details - Framed Walls/ Framed Floors (Section 150.2(a))

01	02	03	04	05	06		07	08	09	10	11
					Proposed					Required	
Tag/ID	Assembly Type	Frame Type	Frame Depth (inches)	Frame Spacing (inches)	Cavity R-value	Continuous Insulation R-value	U-Factor	Appendix JA4 Reference		U-Factor from Table 150.1-A	Comments
								Table	Cell		
Wall	Wall	Wood	2x4	@ 16 in. O. C.	15	10	0.049	4.3.1	4G	0.049	

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

B. Building Insulation Details - Framed Walls/ Framed Floors (Section 150.2(a))

01	02	03	04	05	06		07	08	09	10	11
					Proposed					Required	
Tag/ID	Assembly Type	Frame Type	Frame Depth (inches)	Frame Spacing (inches)	Cavity R-value	Continuous Insulation R-value	U-Factor	Appendix JA4 Reference		U-Factor from Table 150.1-A	Comments
								Table	Cell		

Note:
- Where insulation is installed above the roofing membrane, or above the layer used to seal the roof from water penetration, the insulation shall have a maximum water absorption of 0.3 percent by volume when tested according to American Society for Testing and Materials (ASTM) Standard C272.
- Extensions of existing wood-framed walls may retain the dimensions of the existing walls and shall install cavity insulation of R-15 in a 2x4 framing and R-21 in a 2x6 framing.

C. Building Insulation Details - Non-framed (Section 150.1(c)1)

This section does not apply to this project.

D. Building insulation Details - Mass Walls (Section 150.1(c)1Bii)

This section does not apply to this project.

E. Slab On Grade/Concrete Raised Floor Insulation (Table 150.1-A)

This section does not apply to this project.

F. Radiant Barrier (Section 150.1(c).2)

01	02
Radiant Barrier installed below the roof deck and on all gable end walls	Comments
n/a	Existing roof

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

F. Radiant Barrier (Section 150.1(c).2)

01	02
Radiant Barrier installed below the roof deck and on all gable end walls	Comments

A radiant barrier is required (for Climate Zones 2-15)
- Radiant barriers shall meet specific eligibility and installation criteria to receive energy credit for compliance with the Building Energy Efficiency Standards for low-rise residential buildings. Refer to Reference Appendices, Residential Appendix RA4.2.1.
- The emittance of the radiant barrier shall be less than or equal to 0.05 as tested in accordance with American Society for Testing and Materials (ASTM) C1371 or ASTM E408.
- For Prescriptive Compliance the attic shall be ventilated to provide a minimum free ventilation area of not less than 1 square foot (ft^2 of vent area for each 300 square feet ft^2 of attic floor area with a minimum of 40 percent to no more than 50 percent upper vents. Ridge vents or gable end vents are recommended to achieve the best performance. The material should be cut to allow for full airflow to the venting.

G. Roofing Products (Cool Roof) (Section 150.1(c).11)

01	02	03	04	05	06	07	08	09	10	11	12	13
						Proposed				Required		
Tag/ID	Exception	Roof Pitch	Method of Compliance	Product Type	CRRC Product ID Number	Initial Solar Reflectance	Aged Solar Reflectance	Thermal Emittance	SRI (optional)	Aged Solar Reflectance	Thermal Emittance	SRI (optional)

Notes:
- Exception 1 Any roof area covered by building integrated photovoltaic (PV) panels and solar thermal panels are exempt from the above Cool Roof requirements
- Exception 2: Roof construction with a weight of 25 pounds per square foot (lb/ft^2) are also exempt.
- Liquid field applied coatings must comply with installation criteria from Section 110.8(i)4

H. Fenestration/Glazing Allowed Areas and Efficiencies (Section 150.2(a)1)

This section does not apply to this project.

I. Fenestration Proposed Areas and Efficiencies

This section does not apply to this project.

J. Opaque Swinging Doors to Exterior (Section 150.1(c)5)

This section does not apply to this project.

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

K. Space Conditioning (SC) Systems - Heating/ Cooling (Section 150.2(b) or (Section 150.1(c)7)

This section does not apply to this project.

L. Water Heating Systems (Section 150.2(a)1D)

This section does not apply to this project.

M. Indoor Air Quality (IAQ) Fan Information

This section does not apply to this project.

CalCERTS, Inc. HERS PROVIDER

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Ruben Lorenzale	Documentation Author Signature: Ruben Lorenzale
Company: ARL Design	Signature Date: 2024-05-17 08:19:54
Address: 607 Elmira rd, #249	CEA/ HERS Certification Identification (if applicable): N/A
City/State/Zip: Vacaville CA 95687-000	Phone: 415-505-5288

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I understand that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections, and I will take the necessary steps to accomplish this requirement.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

Responsible Designer Name: Ruben Lorenzale	Responsible Designer Signature: Ruben Lorenzale
Company: ARL Design	Date Signed: 2024-05-17 08:19:54
Address: 607 Elmira rd, #249	License: N/A
City/State/Zip: Vacaville CA 95687-000	Phone: 415-505-5288

Easy to Verify at CalCERTS.com

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

CalCERTS, Inc. HERS PROVIDER

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REVISIONS

No	date	by

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED OCT 02 2024

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EN-1.01

4 of 13 sheets.

2022 Single-Family Residential Mandatory Requirements Summary

NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information.
(04/2022)

Building Envelope:

§ 110.6(a)1:	**Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 101/I.S.2/A440-2011. *
§ 110.6(a)5:	**Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped. *
§ 110.7:	**Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	**Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	**Roof Deck, Ceiling and Rafter Roof Insulation.** Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling, or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling. *
§ 150.0(b):	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	**Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. *
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. *
§ 150.0(f):	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to §150.0(d).
§ 150.0(g)2:	**Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45. *

Fireplaces, Decorative Gas Appliances, and Gas Log:

§ 110.5(e)	**Pilot Light.** Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.
§ 150.0(e)3:	**Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *

Space Conditioning, Water Heating, and Plumbing System:

§ 110.0-§ 110.3:	**Certification.** Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission. *
§ 110.2(a):	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N. *
§ 110.2(c):	**Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.
§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
§ 110.3(c)3:	**Insulation.** Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)6:	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

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§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters. *
§ 150.0(h)1:	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.
§ 150.0(n)3A:	**Clearances.** Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(n)3B:	**Liquid Line Drier.** Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	**Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in § 609.11 of the California Plumbing Code. *
§ 150.0(j)2:	**Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	**Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2" higher than the base of the water heater.
§ 150.0(n)3:	**Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.

Ducts and Fans:

§ 110.8(d)3:	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	**CMC Compliance.** All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than ¼", If mastic or tape is used. Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not be compressed. *
§ 150.0(m)2:	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with doth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	**Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	**Porous Inner Core Flex Duct.** Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.
§ 150.0(m)11:	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter. *

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§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. *

Ventilation and Indoor Air Quality:

§ 150.0(o)1:	**Requirements for Ventilation and Indoor Air Quality.** All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	**Central Fan Integrated (CFI) Ventilation Systems.** Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed andcontrolled per §150.0(o)1BIIi&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C.
§ 150.0(o)1C:	**Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses .** Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1CI-iii.
§ 150.0(o)1G:	**Local Mechanical Exhaust.** Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of §150.0(o)1GII,enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1GII-iv. Airflow must be measured by the installer per §150.0(o)1Gv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H&I:	**Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems.** The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 82.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G

Pool and Spa Systems and Equipment:

§ 110.4(a):	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
§ 110.4(b)1:	**Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	**Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	**Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	**Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.

Lighting:

§ 110.9:	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9. *
§ 150.0(k)1A:	**Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.
§ 150.0(k)1B:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1C:	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
§ 150.0(k)1D:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1E:	**Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 150.0(k)1F:	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k). *

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§ 150.0(k)1G:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	**Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	**Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	**Accessible Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. *
§ 150.0(k)2B:	**Multiple Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	**Mandatory Requirements.** Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	**Energy Management Control Systems.** An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(k)2E:	**Automatic Shutoff Controls.** In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	**Dimmers.** Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2K:	**Independent controls.** Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3A:	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	**Internally illuminated address signs.** Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.

Solar Readiness:

§ 110.10(a)1:	**Single-family Residences.** Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
§110.10(b)1A:	**Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. *
§ 110.10(b)2:	**Azimuth.** All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)3A:	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
§ 110.10(b)3B:	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane."
§ 110.10(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
§ 110.10(e)1:	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

Electric and Energy Storage Ready:

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§ 150.0(s)	**Energy Storage System (ESS) Ready.** All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s), at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
§ 150.0(t)	**Heat Pump Space Heater Ready.** Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(u)	**Electric Cooktop Ready.** Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(v)	**Electric Clothes Dryer Ready.** Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

*Exceptions may apply.

5/6/22

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REVISIONS

No	date	by

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drawing title

TITLE 24

sheet

EN-1.02

Form version: December 13, 2023 (For permit applications October 3, 2023 - December 2025)

GS5: San Francisco Green Building Submittal Form for Residential Alteration, Addition, and Accessory Dwelling Unit Projects

INSTRUCTIONS:
Fill out the project information in the Verification box at the right.
Submittal must be a minimum of 11" x 17".

	TITLE	SOURCE OF REQUIREMENT	DESCRIPTION OF REQUIREMENT	OTHER RESIDENTIAL ALTERATIONS, ADDITIONS AND ACCESSORY DWELLING UNITS: adds any amount of conditioned area, volume, or size, OR a single freestanding unit accessory to an existing dwelling
RESIDENTIAL	GRADING & PAVING	CALGreen 4.106.3	Show how surface drainage (grading, swales, drains, retention areas) will keep surface water from entering the building.	if applicable
	RODENT PROOFING	CALGreen 4.406.1	Seal around pipe, cable, conduit, and other openings in exterior walls with cement mortar or DBI-approved similar method.	•
	FIREPLACES & WOODSTOVES	CALGreen 4.503.1	Install only direct-vent or sealed-combustion, EPA Phase II-compliant appliances.	•
	CAPILLARY BREAK, SLAB ON GRADE	CALGreen 4.505.2	Slab on grade foundation requiring vapor retarder also requires a capillary break such as: 4 inches of base 1/2-inch aggregate under retarder; slab design specified by licensed professional.	•
	MOISTURE CONTENT	CALGreen 4.505.3	Wall + floor <19% moisture content before enclosure.	•
	BATHROOM EXHAUST	CALGreen 4.506.1	Must be ENERGY STAR compliant, ducted to building exterior, and its humidistat shall be capable of adjusting between <50% to >80% (humidistat may be separate component).	•
MATERIAL EMISSIONS	LOW-EMITTING MATERIALS	CALGreen 4.504.2.1-5, SFGBC 4.103.3.2	Use products that comply with the emission limit requirements of 4.504.2.1-5, 5.504.4.1-6 for adhesives, sealants, paints, coatings, carpet systems including cushions and adhesives, resilient flooring (80% of area), and composite wood products.	•
WATER	INDOOR WATER USE REDUCTION	CALGreen 4.303.1, SF Housing Code sec.12A10	Meet flush/flow requirements for: toilets (1.28 gpf); urinals (0.125 gpf wall, 0.5 gpf floor); showerheads (1.8 gpm); lavatories (1.2 gpm private, 0.5 gpm public/common); kitchen faucets (1.8 gpm); wash fountains (1.8 gpm); metering faucets (0.2 gpc); food waste disposers (1 gpm/8 gpm). Residential major improvement projects must upgrade all non-compliant fixtures per SF Housing Code sec.12A10.	•
	WATER-EFFICIENT IRRIGATION	Administrative Code ch.63	If modified landscape area is ≥1,000 sq.ft., use low water use plants or climate appropriate plants, restrict turf areas and comply with Model Water Efficient Landscape Ordinance restrictions by calculated ETAF of ≤.55 or by prescriptive compliance for projects with ≤2,500 sq.ft. of landscape area.	•
ENERGY	ENERGY EFFICIENCY	CA Energy Code	Comply with all provisions of the CA Energy Code. Freestanding ADU only: All-Electric is required by SF Building Code 106A.1.17.	•
PARKING	WIRING FOR EV CHARGERS	CalGreen 4.106.4.3	For alterations to multifamily, install raceway for future Level 2 EVSE (min 40A 208/240VAC) terminating at 10% of parking spaces in areas where parking is added, or electrical systems (including lighting) are altered in existing parking facilities.	Applies to alterations where: Off-street parking is added, OR Electrical systems are altered in existing parking facilities
	BICYCLE PARKING	Planning Code sec.155.1-2	Provide short- and long-term bike parking to meet requirements of SF Planning Code sec.155.1-2.	if applicable
RESOURCE RECOVERY	RECYCLING BY OCCUPANTS	SF Building Code 106A.3.3, CalGreen 5.410.1, AB-088	Provide adequate space and equal access for storage, collection, and loading of compostable, recyclable and landfill materials. For help estimating adequate space for collection by hauler, see supporting materials including a design guide and calculator at: www.sfenvironment.org/refusecalculator.	•
	CONSTRUCTION & DEMOLITION (C&D) DISCARDS MANAGEMENT	Environment Code ch. 14 SFGBC 4.103.2.3 CalGreen 4.408.2, 4.408.5	100% of mixed debris must be taken by a Permitted Transporter to a Registered Facility for recycling and recovery. Complete Material Reduction and Recovery Plan and demonstrate minimum 65% recovery rate. For more information, see DBI Information Sheet GB-02 or contact: debrisrecovery@sfgov.org or 415-355-3799.	•
HVAC	HVAC INSTALLER QUALS	CALGreen 4.702.1	Installers must be trained in best practices.	•
	HVAC DESIGN	CALGreen 4.507.2	HVAC shall be designed to ACCA Manual J, D, and S.	•
GOOD NEIGHBOR	BIRD-SAFE BUILDINGS	Planning Code sec.139	Glass facades and bird hazards facing and/or near Urban Bird Refuges may need to treat their glass for opacity.	•
	TOBACCO SMOKE CONTROL	Health Code art.19F	Prohibit smoking within 10 feet of building entries, air intakes, and operable windows and enclosed common areas.	•
POLLUTION PREVENTION	STORMWATER CONTROL PLAN	Public Works Code art.4.2 sec.147	Projects disturbing ≥5,000 sq.ft. in combined or separate sewer areas, or replacing ≥2,500 impervious sq.ft. in separate sewer area, must implement a Stormwater Control Plan meeting SFPUC Stormwater Management Requirements.	if project extends outside envelope
	CONSTRUCTION SITE RUNOFF	Public Works Code art.4.2 sec.146	Provide a construction site Stormwater Pollution Prevention Plan and implement SFPUC Best Management Practices.	if project extends outside envelope
INDOOR AIR QUALITY	AIR FILTRATION (CONSTRUCTION)	CALGreen 4.504.1	Seal permanent HVAC ducts/equipment stored onsite before installation.	•

FOR YOUR INFORMATION: INDOOR WATER EFFICIENCY

Each fixture must not exceed CALGreen 4.303 maximum flow rates:

FIXTURE TYPE	MAXIMUM FIXTURE FLOW RATE
Showerheads[2]	1.8 gpm @ 80 psi
Lavatory Faucets: residential	1.2 gpm @ 60 psi
Kitchen Faucets	1.8 gpm @ 60 psi default
Wash Fountains	1.8 gpm / 20 [rim space (inches) @ 60 psi]
Metering Faucets	.20 gallons per cycle
Tank-type water closets	1.28 gallons / flush[1] and EPA WaterSense Certified
Flushometer valve water closets	1.28 gallons / flush[1]
Urinals	Wall mount: 0.125 gallons / flush Floor mount: 0.5 gallons / flush

NOTES:
1. For dual flush toilets, effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. The referenced standard is ASME A112.19.14 and USEPA WaterSense Tank-Type High Efficiency Toilet Specification – 1.28 gal (4.8L)
2. The combined flow rate of all showerheads in one shower stall shall not exceed the maximum flow rate for one showerhead, or the shower shall be designed to allow only one showerhead to be in operation at a time (CALGreen 5.303.2.1)

Water Efficiency of Existing Non-Compliant Fixtures

All fixtures that are not compliant with the San Francisco Residential Water Conservation Ordinance that serve or are located within the project area must be replaced with fixtures or fittings meeting the maximum flow rates and standards referenced above. For more information, see "Comply with water conservation requirements" available at SF.GOV.

NON-COMPLIANT PLUMBING FIXTURES INCLUDE:
1. Any toilet manufactured to use more than 1.6 gallons/flush
2. Any urinal manufactured to use more than 1 gallon/flush
3. Any showerhead manufactured to have a flow capacity of more than 2.5 gpm
4. Any interior faucet that emits more than 2.2 gpm

Exceptions to this requirement are limited to situations where replacement of fixture(s) would detract from the historic integrity of the building, as determined by the Department of Building Inspection pursuant to San Francisco Building Code Chapter 13A.

VERIFICATION

Indicate below who is responsible for ensuring green building requirements are met. Projects that increase total conditioned floor area by ≥1,000 sq. ft. are required to have a Green Building Compliance Professional of Record as described in Administrative Bulletin 93. For projects that increase total conditioned floor area by <1,000 sq. ft., the applicant or design professional may sign below, and no license or special qualifications are required. FINAL COMPLIANCE VERIFICATION form will be required prior to Certificate of Completion

1077 FELL ST
PROJECT NAME

0777/059
BLOCK/LOT

1077 FELL ST, SAN FRANCISCO
ADDRESS

DUPLEX
PRIMARY OCCUPANCY

721 sf
GROSS BUILDING AREA

45 sf
INCREASE IN CONDITIONED FLOOR AREA

I have been retained by the project sponsor to verify that approved construction documents and construction fulfill the requirements of San Francisco Green Building Code. It is my professional opinion that the requirements of the San Francisco Green Building Code will be met. I will notify the Department of Building Inspection if the project will, for any reason, not substantially comply with these requirements, if I am no longer the Green Building Compliance Professional of Record for the project, or if I am otherwise no longer responsible for assuring the compliance of the project with the San Francisco Green Building Code.

5/17/24
LICENSED PROFESSIONAL *(sign & date)*
May be signed by applicant when <1,000 sq. ft. is added.

AFFIX STAMP BELOW:

Projects that increase total conditioned floor area by ≥1,000 sq.ft.: *Green Building Compliance Professional of Record will verify compliance.*

GREEN BUILDING COMPLIANCE PROFESSIONAL
(name & contact phone #)

FIRM

☐ I am a LEED Accredited Professional

☐ I am a GreenPoint Rater

☐ I am an ICC Certified CALGreen Inspector

GREEN BUILDING COMPLIANCE PROFESSIONAL
(sign & date)

Signature by a professional holding at least one of the above certifications is required. If the Licensed Professional does not hold a certification for green design and/or inspection, this section may be completed by another party who will verify applicable green building requirements are met.

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED OCT 02 2025

Christian Gilmartin, CBI MECH
OCT 02 2024

PROJECT ADDRESS
1077 FELL ST,
SAN FRANCISCO,
CA 94117

ARL|DESIGN
ARIEL R LORENZALE
607 ELMIRA RD, #249,
VACAVILLE, CA 95687
415-505-5288
ariel@arldesigner.com

VELOX
DESIGN + CONSTRUCTION
442 HAIGHT ST,
SAN FRANCISCO, CA 94117
415-416-0177
doug@veloxsf.com

RECEIVED
MAY 17 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR DIGITIZING ACCEPTED

REVISIONS

No	date	by

drawn: A. Lorenzale
checked:
date: 5/17/2024
scale: N/A
project No: 0445
drawing title

GS5 FORM

sheet

EN-1.03

6 of 13 sheets.

GENERAL STRUCTURAL NOTES

I GENERAL

A. ALL CONSTRUCTION SHALL CONFORM TO THE CALIFORNIA BUILDING CODE 2019 EDITION w/ AMENDMENTS BY LOCAL JURISDICTIONS.
B. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT JOB SITE BEFORE COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT OR ENGINEER.
C. OMISSIONS OR CONFLICT BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
D. DO NOT USE SCALED DIMENSIONS; USE WRITTEN DIMENSIONS OR WHERE NO DIMENSION IS PROVIDED, CONSULT THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
E. DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS WHETHER SPECIFICALLY CALLED OUT OR NOT.
F. FOR WATERPROOFING, FIREPROOFING, ETC. REFER TO DRAWINGS OTHER THAN STRUCTURAL.
G. SEE DRAWINGS OTHER THAN STRUCTURAL FOR: KINDS OF FLOOR FINISH AND THEIR LOCATION, FOR DEPRESSIONS IN FLOOR SLABS, FOR OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MECHANICAL FEATURES, FOR ROADWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC.
H. HOLES AND OPENINGS THROUGH WALLS AND FLOORS FOR DUCTS, PIPING AND VENTILATION SHALL BE CHECKED BY THE CONTRACTOR, WHO SHALL VERIFY SIZES AND LOCATION OF SUCH HOLES OR OPENINGS WITH THE PLUMBING HEATING, VENTILATING AND ELECTRICAL DRAWINGS AND THESE SUB-CONTRACTORS.
I. NO PIPES AND DUCTS SHALL BE PLACED IN SLABS OR WALLS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ARCHITECT.
J. DRAWINGS AND SPECIFICATIONS REPRESENT FINISHED STRUCTURE. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION INCLUDING BUT NOT LIMITED TO SHORING AND TEMPORARY BRACING. THE SUBCONTRACTOR SHALL UNDERTAKE ALL NECESSARY MEASURES TO INSURE SAFETY OF ALL PERSONS AND STRUCTURES AT THE SITE AND ADJACENT TO THE SITE. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT, ENGINEER SHALL NOT RELIEVE THE SUBCONTRACTOR OF SUCH RESPONSIBILITY.
K. NOTE THAT SHEET S1 IS A STANDARD COVER SHEET AND AS SUCH, NOT ALL TYP. DETAILS AND OR NOTES APPLY TO EVERY PROJECT.

II DESIGN CRITERIA

A. APPLICABLE CODE: CALIFORNIA BUILDING CODE 2019 & SFBC 2019.
B. VERTICAL LIVE LOADS: (REDUCIBLE). ROOF: 20 PSF. FLOOR: 40 PSF. HALLWAYS & CORRIDORS: 100 PSF.
C. LATERAL LOADS:
   1. WIND: 110 MPH. BASIC WIND SPEED, EXPOSURE: "B"
   2. SEISMIC: SITE CLASS 'D'
      MAPPED SPECTRAL ACCELERATIONS: S_S= S_1=
      Fa=1.0 Fv=1.5 S_{ss}= .xxx S_{s1}= .xxx
      BASE SHEAR 'V' = .xx W (ASD)
      SEISMIC DESIGN CATEGORY: D
      RESPONSE MODIFICATION FACTOR, R=6.5
      ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
      IMPORTANCE FACTOR=1 OCCUPANCY CATEGORY=II

III MATERIALS

A. CONCRETE:
   1. REINFORCING STEEL: ASTM A615, GRADE 60, #4 AND SMALLER, GRADE 40.
   2. CONCRETE: NORMAL WEIGHT U.O.N. WITH COMPRESSIVE STRENGTH OF THE FOLLOWING AT 28 DAYS:
      FOOTINGS, ~~MAT SLAB~~ & DRILLED PIERS 2500 psi
      ~~WALLS, COLUMNS 5000 psi~~
      ~~STRUCTURAL SLAB (L.W. P.T. SEE S3.2) 5000 psi~~
   3. MINIMUM CONCRETE COVER FOR REINFORCING STEEL:
      a. SURFACE POURED AGAINST GROUND 3"
      b. FORMED SURFACES BELOW GRADE 2"
      c. SURFACES EXPOSED TO WEATHER 2"
      d. BEAM BARS (INCLUDING STIRRUPS) 1-1/2"
      e. ALL OTHER 1"
   4. ANCHOR BOLT EPOXY*: HILTI HIT-RE 500-SD. (ICC ESR-2322) OR SIMPSON SET-XP (ICC ESR-2508)
   5. SCREW ANCHORS*: SIMPSON TITEN HD (ICC ESR-2713)
      * USE COMPRESSED AIR TO BLOW THE DUST OUT OF ANCHOR BOLT HOLES.
   6. PNEUMATICALLY PLACED CONCRETE (SHOTCRETE) NOTES
      a. ALL CONCRETE WALLS MAY BE SHOTCRETED AT CONTRACTOR'S OPTION. VERIFY COMPATIBILITY OF SHOTCRETE WITH WATE PROOFINGCONTRACTOR.
      b. ALL SHOTCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 506.2 AND CBC SECTION 1924.
      c. ALL SHOTCRETE SHALL TEST NOT LESS THAN 4000 PSI AT 28 DAYS.
      d. MAXIMUM AGGREGATE SIZE SHALL BE 3/8 INCH.
      e. LAP ALL REINFORCING BARS 40 DIAMETERS AT SPLICES. SPLICE BARS BY THE NON-CONTACT LAP SPLICE METHOD WITH 2 INCHES CLEAR BETWEEN BARS.
      f. ANY REBOUND SHALL BE REMOVED PRIOR TO PLACING OF CONCRETE.
      g. IN-PLACE SHOTCRETE WHICH SHOW SAGS OR SLOUGHS, SEGREGATION, HONEY COMBING, SAND POCKETS OR OTHER OBVIOUS DEFECTS SHALL BE REMOVED AND REPLACED.
      h. CURE SHOTCRETE BY KEEPING CONTINUOUSLY MOIST FOR A MINIMUM OF 7 DAYS UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER.
      i. TEST PANELS: SHOOT ONE TEST PANEL, 18 INCHES SQUARE ,FOR EACH 50 CUBIC YARDS OF SHOTCRETE PLACED, BUT NOT LESS THAN ONE PANEL PER SHIFT. CURE PANELS UNDER SAME CONDITIONS AS THE WORK. TESTING AGENCY SHALL TAKE A MINIMUM OF THREE 2" DIAMETER CORES FROM EACH PANEL. WATER SOAK SPECIMENS 24 HOURS BEFORE TESTING. TEST IN ACCORDANCE WITH UNIFORM BUILDING CODE STANDARD NO. 26-10.
      j. A MINIMUM OF THREE 3" DIAMETER CORES SHALL BE TAKEN FROM THE WORK AT LOCATIONS SPECIFIED BY THE STRUCTURAL ENGINEER. THE SPECIAL INSPECTOR SHALL VISUALLY EXAMINE CORES FOR STRUCTURAL SOUNDNESS AND SUBMIT A REPORT TO THE STRUCTURAL ENGINEER AND THE BUILDING INSPECTION DEPARTMENT.
      k. INSPECTION: PROVIDE CONTINUOUS SPECIAL INSPECTION OF SHOTCRETING OPERATION.

B. CMU: UNITS 1500 PSI, MORTAR (TYPE 'S'), GROUT 2000 PSI

C. STEEL
   1. SHAPES AND PLATES: ASTM A36; TUBES: ASTM A500, GRADE B.
   2. MOMENT FRAMES (BEAMS, COLUMNS): ASTM A992 OR A913 (50 ksi)
      MOMENT FRAMES (PLATES): A572, GRADE 50.
   3. METAL STUDS, SEE S1.4, NOTES
   4. METAL JOISTS, 50 ksi
   5. BOLTS: ASTM A307, U.O.N.
   6. WELDING ELECTRODES: E-70 FOR FULL PEN WELDS USE CHARPY V-NOTCH WIRE, MIN. 20 ft # @ 0°F
   7. METAL DECKING, SEE S1.5

D. WOOD
   1. FRAMING LUMBER - DOUGLAS FIR LARCH
      a. HEADERS, PLATES, JOISTS: NO.1
      b. STUDS, BLOCKING: NO.2
      c. ALL LUMBER IN CONTACT WITH CONCRETE: PRESERVATIVE TREATED DOUGLAS FIR. (NOT CCA-C)
      d. POSTS AND BEAMS: NO.1
   2. PLYWOOD SHEATHING
      a. SHEARWALL PLYWOOD : 1/2 INCH STRUCTURAL I, C-D EXTERIOR, APA RATED 32/16.
      b. ROOF SHEATHING: 5/8 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 32/16
      c. FLOOR SHEATHING: 3/4 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 48/24
   3. FRAMING HARDWARE AND JOIST HANGERS: AS MANUFACTURED BY SIMPSON STRONGTIE CO. OR APPROVED EQUAL. SIMPSON DESIGNATIONS USED. USE NAILS PER I.C.C. APPROVAL FOR EACH DEVICE.
   4. COMMON NAILS, UNLESS OTHERWISE NOTED. SHORT NAILS MAY BE USED PROVIDED THEY HAVE COMMON CODE SPECIFIED MINIMUM EMBEDMENT. ALL NAILING TO BE PER IBC TABLE NO. 2304.9.1 UNLESS NOTED OTHERWISE.
   5. GLU-LAM BEAMS: 24F-V4 (Fb=2400 PSI)
   6. PARALLAM & MICROLLAM BEAMS AND TJI's TO BE FABRICATED BY TRUS JOIST:
      PARALLAM BEAMS: 2.2E (Fb=2900PSI)
      MICROLLAM BEAMS: 2.0E (Fb=2600PSI)
   7. FOR MICROLLAMS SEE CODE EVALUATION: ICC-ES ESR-1387
   8. FOR TJI JOISTS SEE CODE EVALUATION: ICC-ES ESR-1153

IV EXPOSURE TO WEATHER:

A. STEEL:
   1. ALL EXPOSED MEMBERS SHALL BE COATED WITH A ZINC RICH PRIMER.
   2. BOLTS, NUTS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED.

B. WOOD:
   1. ALL EXTERIOR TIMBER AND GLU-LAM BEAMS SHALL BE PRESSURE TREATED (BUT NOT CHROMATED COPPER ARSENATE) OR WOOD OF NATURAL RESISTANCE TO DECAY.
   2. ALL EXTERIOR HANGERS AND OTHER SIMPSON TYPE PRODUCTS SHALL BE GALVANIZED.
   3. ALL PLYWOOD SHALL BE OF AN EXTERIOR GRADE.
   4. METAL CONNECTORS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED w/ MIN. ZINC COATING OF G185.
   5. ALL NAILS & ANCHOR BOLTS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED.

V ABBREVIATIONS

B.N. — BOUNDARY NAILING
DIA. — DIAMETER
E.N. — EDGE NAILING
H.P. — HIGH POINT
L.P. — LOW POINT
LVL — LAMINATED VENEER LUMBER
L.W. — LIGHT WEIGHT
M.L. — MICROLLAM
PLWD — PLYWOOD SHEATHING
PSL — PARALLEL STRAND LUMBER
P.T. — PRESSURE TREATED OR POST-TENSIONED
S.A.D. — SEE ARCHITECTURAL DRAWINGS
S.O.G. — SLAB-ON-GRADE
S.S. — STAINLESS STEEL
T.O. — TOP OF
TYP. — TYPICAL
U.O.N. — UNLESS OTHERWISE NOTED
V.I.F. — VERIFY IN FIELD
W.W.F. — WELDED WIRE FABRIC

SYMBOLS

(E) WALL BELOW
(E) WALL ABOVE
(N) CONC. WALL ABOVE
BRICK OR CMU WALL ABOVE
WOOD SHEARWALL (BELOW)
WOOD JOIST HANGER (HUS TYPE, U.O.N.)
WOOD POST BELOW
WOOD POST ABOVE (OR ABOVE & BELOW)
HOLDOWN @ WOOD POST
STEEL COLUMN ABOVE
STEEL COLUMN BELOW
MOMENT CONNECTION
CONCRETE TOPPING OVER PLYWOOD
CONCRETE TOPPING OVER CORRUGATED METAL DECK
CONCRETE COLUMN ABOVE
CONCRETE COLUMN BELOW w/ DROPCAP
DRILLED CONCRETE PIER
PRECAST, PRESTRESSED CONCRETE PILE
DIAGONAL ABOVE
DIAGONAL BELOW

PROJECT NAME: VOLUNTARY STRENGTHENING
ADDRESS: 1077 FELL STREET
BLOCK/LOT: ----
CITY: SAN FRANCISCO, CA

DRAWING INDEX:

S1.0 ——— TITLE SHEET
S1.1A ——— TYPICAL WOOD DETAILS
S2 ——— FOUNDATION PLAN/ 1ST, 2ND AND ROOF FLOOR FRAMING
S3-S4 ——— STRUCTURAL DETAILS
W1-W2 ——— STRONG SIMPSOM WALL

City and County of San Francisco
Department of Building Inspection

London Breed, Mayor
Patrick O'Riordan, Interim Director

Attachment A

SLOPE AND SEISMIC HAZARD ZONE PROTECTION CHECKLIST

A COPY OF THIS DOCUMENT SHALL BE SUBMITTED WITH THE PERMIT APPLICATION

JOB ADDRESS 1077 FELL STREET APPLICATION NO. _____ ADDENDUM NO. ____
OWNER NAME _____ OWNER PHONE NO. (____) _____

1: PROPERTY LOCATION		
EARTHQUAKE INDUCED LANDSLIDE AREA ON THE STATE OF CALIFORNIA DEPARTMENT OF CONSERVATION DIVISION OF MINES AND GEOLOGY (CDMG) SEISMIC HAZARD ZONES MAP FOR SAN FRANCISCO, RELEASED NOVEMBER 17, 2000.	YES ☐	NO ☑

2: AVERAGE SLOPE OF PROPERTY		
PROPERTY EXCEEDING AN AVERAGE SLOPE OF 4(H):1V (25%) GRADE *(APPLICANT WILL NEED TO INCLUDE PLANS ILLUSTRATING SLOPE OF THE PROPERTY AND/OR INCLUDE A SURVEY VERIFYING THE SLOPE OF THE PROPERTY)*	YES ☐	NO ☑

3: PROPOSED CONSTRUCTION		
CONSTRUCTION OF NEW BUILDING OR STRUCTURE HAVING OVER 1000 SQFT OF NEW PROJECTED ROOF AREA	YES ☐	NO ☑
HORIZONTAL OR VERTICAL ADDITIONS HAVING OVER 500 SQFT OF NEW PROJECTED ROOF AREA	YES ☐	NO ☑
SHORING	YES ☐	NO ☑
UNDERPINNING	YES ☐	NO ☑
GRADING, INCLUDING EXCAVATION OR FILL, OF OVER 50 CUBIC YARDS OF EARTH MATERIAL	YES ☐	NO ☑
CONSTRUCTION ACTIVITY LISTED BELOW DETERMINED BY THE BUILDING OFFICIAL THAT MAY HAVE A SUBSTANTIAL IMPACT ON THE SLOPE STABILITY:		
RETAINING WALL:	YES ☐	NO ☑
OTHERS: _____	YES ☐	NO ☑

SECTION 4: LICENSED DESIGN PROFESSIONAL VERIFICATION AND SIGNATURES

Under penalty of perjury, I certify that the information provided on this form is based on my personal review of the building and its records, or review by others acting under my direct supervision, and is correct to the best of my knowledge.

Prepared by: JEFFERSON CHEN, P.E.
Engineer/Architect of Record

(415) 626 - 8300 Telephone
jefferson@enertiadesigns.net Email
Signature
Date

REGISTERED PROFESSIONAL ENGINEER JEFFERSON YU-LIN CHEN C057898 EXP. 08/30/24 CIVIL STATE OF CALIFORNIA

Permit Services Division
49 South Van Ness Avenue, Suite 500 - San Francisco CA 94103
Phone (628) 652-3600 – www.sfdbi.org

INFORMATION SHEET S-19 ATTACHMENT A — Slope Protection Checklist

FOR DBI USE ONLY

ASSIGNMENT OF REVIEW TIER

EXEMPTED: Reports per Section E and Third Party Peer Review Not Required

☑ If the box in Section 1 "Property Location" **AND** the box in Section 2 "Average Slope of Property" are marked "No" **OR** if all the boxes in Section 3 "Proposed Construction" are marked "No", reports per Section E and Third Party Peer Review are exempted by the SSPA.

TIER I: Reports per Section E Required but Third Party Peer Review Not Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property does not lie within any areas of potential landslide hazard, DBI shall require mandatory submittal of reports per Section E only.

TIER II: Reports per Section E and Third Party Peer Review Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property lies in the vicinity of mapped landslides, DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to a third party peer review. At the discretion of the SSPA Review Committee, the peer review may be followed by the establishment of a Structural Advisory Committee (SAC) with the project reassigned to Tier III.

If the DBI Plan Review Engineer (or the SSPA Review Committee, if established), in their discretion, determines from the submitted documents that the project has a substantial impact on the slope stability of the site or creates a potential for earthquake induced landslide hazards, DBI may require that the third party peer review be followed by the establishment of a Structural Advisory Committee (SAC) and re-assigned the project to Tier III.

TIER III: Structural Advisory Committee (SAC) Review

☐ If the box in Section 1 "Property Location" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes", DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to review by a Structural Advisory Committee (SAC), as defined by SFBC Section 105A.6. Philip Chan, DBI

Tier assigned by: AUG 12 2024 Phone: (628)
DBI Plan Review Engineer

Comment:

Page | 2

City and County of San Francisco
Department of Building Inspection

London N. Breed, Mayor
Patrick O'Riordan, Interim Director

NOTICE

SPECIAL INSPECTION REQUIREMENTS

Please note that the Special Inspections shown on the approved plans and checked on the Special Inspections form issued with the permit are required for this project. The employment of special inspectors is the direct responsibility of the owner or the engineer/architect of record acting as the owner's representative.

These special inspections are required *in addition to* the called inspections performed by the Department of Building Inspection. The name of the special inspector shall be furnished to the district building inspector prior to start of work for which special inspection is required.

For questions regarding the details or extent of required inspection or tests, please call the Plan Checker assigned to this project or **628-652-3407**. If there are any field problems regarding special inspection, please call your District Building Inspector or 628-652-3400 Ext 1.

Before final building inspection is scheduled, documentation of special inspection compliance must be submitted to and approved by the Special Inspection Services staff. To avoid delays in this process, the project owner should request final compliance reports from the architect or engineer of record and/or special inspection agency soon after the conclusion of work requiring special inspection. ***The permit will not be finalized without compliance with the special inspection requirements.***

STRUCTURAL OBSERVATION REQUIREMENTS

Structural observation shall be provided as required per Section 1704.6. **The building permit will not be finalized without compliance with the structural observation requirements.**

Special Inspection Services Contact Information

1. **Telephone: (628) 652-3407**
2. **Email:** dbi.specialinspections@sfgov.org
3. **In person: 49 South Van Ness Ave – Suite 400**

Note: We are moving towards a "paperless" mode of operation. All special inspection submittals, including final letters, may be emailed (preferred) or faxed. We will also be shifting to a paperless fax receipt mode.

Special Inspection Services
49 South Van Ness Ave – Suite 400 – San Francisco CA 94103
Office (628) 652-3407 – www.sfdbi.org

Updated 10/05/2020

Philip Chan, DBI
AUG 12 2024

SPECIAL INSPECTION AND STRUCTURAL OBSERVATION

A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED STRUCTURAL DRAWING SET

JOB ADDRESS 1077 FELL STREET APPLICATION NO. _____ ADDENDUM NO. ____
OWNER NAME _____ OWNER PHONE NO. (____) _____

Employment of Special Inspection is the direct responsibility of the OWNER, or the engineer/architect of record acting as the owner's representative. Special inspector shall be one of those as prescribed in Sec. 1704. Name of special inspector shall be furnished to DBI District Inspector prior to start of the work for which the Special inspection is required. Structural observation shall be performed as provided by Section 1704.6. A preconstruction conference is recommended for owner/builder or designer/builder projects, complex and high-rise projects, and for projects utilizing new processes or materials.

In accordance with Chapter 17 (SFBC), Special Inspection and/or testing is required for the following work:

1. [x] Concrete (Placement & sampling)
2. [ ] Bolts installed in concrete
3. [ ] Special moment - Resisting concrete frame
4. [x] Reinforcing steel ~~and prestressing tendons~~
5. **Structural welding:**
   A. Periodic visual inspection
   [ ] Single-pass fillet welds 5/16" or smaller
   [ ] Steel deck
   [ ] Welded studs
   [ ] Cold formed studs and joists
   [ ] Stair and railing systems
   [ ] Reinforcing steel
   B. Continuous visual inspection and NDT (Section 1704)
   [ ] All other welding (NDT exception: Fillet weld)
   [ ] Reinforcing steel; and [ ] NDT required
   [ ] Moment-resisting frames
   [ ] Others_____
6. [ ] High-strength bolting
7. [ ] Structural masonry
8. [ ] Reinforced gypsum concrete
9. [ ] Insulating concrete fill
10. [ ] Sprayed-on fireproofing
11. [ ] Piling, drilled piers and caissons
12. [ ] Shotcrete
13. [ ] Special grading, excavation and filling (Geo. Engineered)
14. [ ] Smoke-control system
15. [ ] Demolition
16. [ ] Exterior Facing
17. **Retrofit of unreinforced masonry buildings:**
    [ ] Testing of mortar quality and shear tests
    [ ] Inspection of repointing operations
    [ ] Installation inspection of new shear bolts
    [ ] Pre-installation inspection for embedded
    [ ] Pull/torque tests per SFBC Sec.1607C & 1615C
18. **Bolts Installed in existing concrete or masonry:**
    [ ] Concrete [ ] Masonry
    [ ] Pull/torque tests per SFBC Sec. 507C & 515C
19. [ ] Shear walls and floor systems used as shear diaphragms
20. [ ] Holdowns
21. **Special cases:**
    [ ] Shoring
    [ ] Underpinning [ ] Not affecting adjacent property
    [ ] Affecting adjacent property: PA_____
    [ ] Others
22. [ ] Crane safety (Apply to the operation of tower cranes on high-rise building) (Section 1705.22)
23. [ ] Others: "As recommended by professional of record"
24. **Structural observation per Sec. 1704.6 (SFBC) for the following:** [ ] Foundations [ ] Steel framing
    [ ] Concrete construction [ ] Masonry construction [x] Wood framing
    [ ] Other:
25. Certification is required for: [ ] Glu-lam components
26. [ ] Firestops in high-rise building

Prepared by: JEFFERSON CHEN, P.E. Phone: (415) 626 - 3800
Engineer/Architect of Record

Required information:
FAX: (415) 701 -0212 Email:jefferson@enertiadesigns.net

Review by: Philip Chan, DBI Phone: (628) 652-
DBI Engineer or Plan Checker
AUG 12 2024

APPROVAL (Based on submitted reports.)

DATE DBI Engineer or Plan Checker / Special Inspection Services Staff

QUESTIONS ABOUT SPECIAL INSPECTION AND STRUCTURAL OBSERVATION SHOULD BE DIRECTED TO: Special Inspection Services (628) 652-3407, or, dbi.specialinspections@sfgov.org

Updated 10/05/2020

CITY AND COUNTY OF SAN FRANCISCO DEPT. OF BUILDING INSPECTION THIS PLAN MEETS THE QUALITY STANDARDS FOR IMAGING ACCEPTED ISSUED AUG 12 2024

RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION THIS PLAN MEETS THE QUALITY STANDARDS FOR IMAGING ACCEPTED

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FAX: 415.701.0212
1187 FRANKLIN STREET, FL-1
SAN FRANCISCO, CA 94109

REGISTERED PROFESSIONAL ENGINEER JEFFERSON YU-LIN CHEN C057898 EXP. 08/30/24 CIVIL STATE OF CALIFORNIA

	DATE	REVISIONS
1		
2		
3		
4		

TITLE SHEET
GENERAL NOTES

VOLUNTARY STRENGTHENING
1077 FELL STREET
SAN FRANCISCO, CA

Date: 03-01-2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet S1.0
Of 7 Sheets

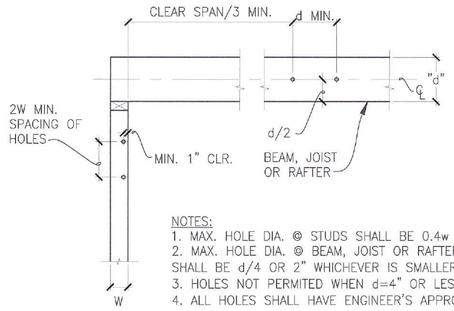
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NAILING SCHEDULE (PER CBC 2016, TABLE NO. 2304.10.1)

CONNECTION	NAILING [1]
1. JOIST TO SILL OR GIRDER, TOENAIL	3–8d
2. BRIDGING TO JOIST, TOENAIL EACH END	2–8d
3. 1"X6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2–8d
4. WIDER THAN 1" X 6" SUBFLOOR TO EACH JOIST, FACE NAIL	3–8d
5. 2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2–16d
6. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL	16d AT 16" O.C.
SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	3–16d PER 16"
7. TOP PLATE TO STUD, END NAIL	2–16d
8. STUD TO SOLE PLATE	4–8d, TOENAIL OR 2–16d, END NAIL
9. DOUBLE STUDS, FACE NAIL	16d AT 24" O.C.
10. DOUBLED TOP PLATES, TYPICAL FACE NAIL	16d AT 16" O.C.
DOUBLE TOP PLATES, LAP SPLICE	8–16d
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3–8d
12. RIM JOIST TO TOP PLATE, TOINAIL	8d AT 6" O.C.
13. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2–16d
14. CONTINUOUS HEADER, TWO PIECES	16d AT 16" O.C. ALONG EACH EDGE
15. CEILING JOISTS TO PLATE, TOENAIL	3–8d
16. CONTINUOUS HEADER TO STUD, TOINAIL	4–8d
17. CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3–16d
18. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3–16d
19. RAFTER TO PLATE, TOENAIL	3–8d
20. 1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2–8d
21. 1" X 8" SHEATHING OR LESS TO EACH BEARING, FACE NAIL	2–8d
22. WIDER THAN 1" X 8" SHEATHING TO EACH BEARING, FACE NAIL	3–8d
23. BUILT–UP CORNER STUDS	16d AT 24" O.C.
24. BUILT–UP GIRDER AND BEAMS	20d AT 32" O.C. AT TOP AND BOTTOM AND STAGGERED 2–20d AT ENDS AND AT EACH SPLICE
25. 2" PLANKS	2–16d AT EACH BEARING
26. COLLAR TIE TO RAFTER	3–10d AT FACE NAIL
27. JACK RAFTER TO HIP	2–10d AT TOENAIL AND 2–16d AT FACE NAIL
28. ROOF RAFTER TO 2–BY RIDGE BEAM	2–16d AT TOENAIL AND 2–16d AT FACE NAIL
29. JOIST TO BAND JOIST	3–16d AT FACE NAIL
30. LEDGER STRIP	3–16d AT FACE NAIL AT EACH JOIST
31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD [B] SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING)	
1/2" AND LESS	6d[C,L]
19/32"–3/4"	8d[D] or 6d[E]
7/8"–1"	10d[D] or 8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
COMBINATION SUBFLOOR–UNDERLAYMENT (TO FRAMING): 3/4" AND LESS	6d[E]
7/8"–1"	8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
32. PANEL SIDING (TO FRAMING): 1/2" OR LESS	6d[F]
5/8"	8d[F]
33. FIBERBOARD SHEATHING: [G] 1/2"	6d[D]
25/32"	8d[D]
34. INTERIOR PANELING 1/4"	4d[J]
3/8"	6d[K]

CBC TABLE 2304.10.1 FASTENING SCHEDULE NOTES

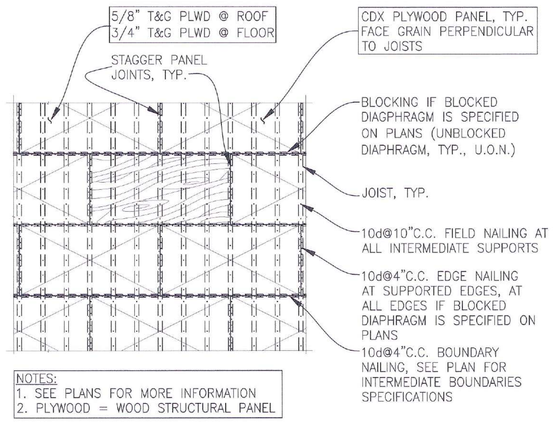
A. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED.
B. NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES AT SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLE BOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
C. COMMON OR DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
D. COMMON (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
E. DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
F. CORROSION–RESISTANT SIDING (6D – 1⅞" X 0.106"; 8D – 2⅜" X 0.128") OR CASING (6D – 2" X 0.099"; 8D – 2½" X 0.113") NAIL.
G. FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS.
H. CORROSION–RESISTANT ROOFING NAILS WITH 7/16–INCH–DIAMETER HEAD AND 1½–INCH LENGTH FOR ½–INCH SHEATHING AND 1¾–INCH LENGTH FOR 25/32–INCH SHEATHING.
I. CORROSION–RESISTANT STAPLES WITH NOMINAL 7/16–INCH CROWN AND 1⅛–INCH LENGTH FOR ½–INCH SHEATHING AND 1½–INCH LENGTH FOR 25/32–INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
J. CASING (1½" X 0.080") OR FINISH (1½" X 0.072") NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
K. PANEL SUPPORTS AT 24 INCHES. CASING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
L. FOR ROOF SHEATHING APPLICATIONS, 8D NAILS (2½" X 0.113") ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.
M. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16 INCH.
N. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.
O. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS SUB FLOOR AND WALL SHEATHING AND 3 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING.
P. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.



NOTES:
1. MAX. HOLE DIA. @ STUDS SHALL BE 0.4w
2. MAX. HOLE DIA. @ BEAM, JOIST OR RAFTER SHALL BE d/4 OR 2" WHICHEVER IS SMALLER.
3. HOLES NOT PERMITED WHEN d=4" OR LESS.
4. ALL HOLES SHALL HAVE ENGINEER'S APPROVAL.

1 TYPICAL HOLES IN BEAMS, JOISTS, RAFTERS AND STUDS

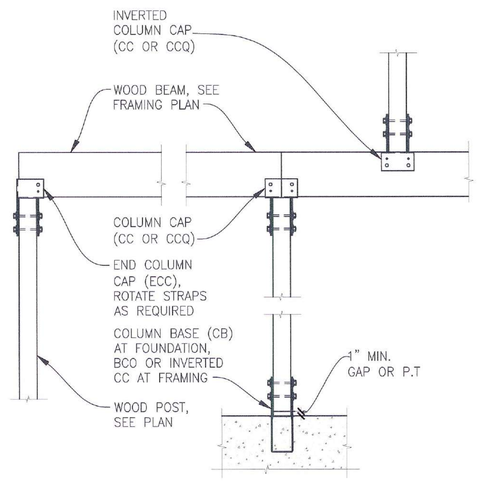
SCALE: 3/4" = 1'–0"



NOTES:
1. SEE PLANS FOR MORE INFORMATION
2. PLYWOOD = WOOD STRUCTURAL PANEL

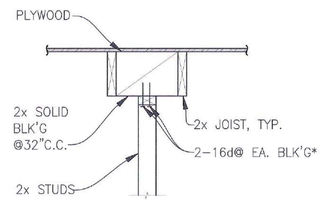
2 TYPICAL PLYWOOD DIAPHRAGM SHEATHING (PLAN VIEW)

SCALE: 3/4" = 1'–0"

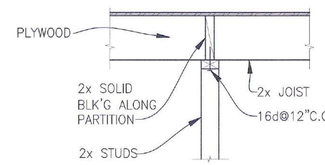


3 TYPICAL BEAM TO POST CONNECTION

SCALE: 3/4" = 1'–0"



PARTITION PARALLEL TO FLOOR JOISTS

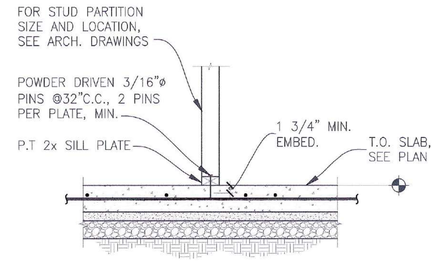


PARTITION PERPENDICULAR TO FLOOR JOISTS

*OPTION: PROVIDE STC CLIP TO ROOF TRUSS OR BEAM

4 TYPICAL NON–BEARING / NON–SHEARWALL SUPPORT @ ROOF

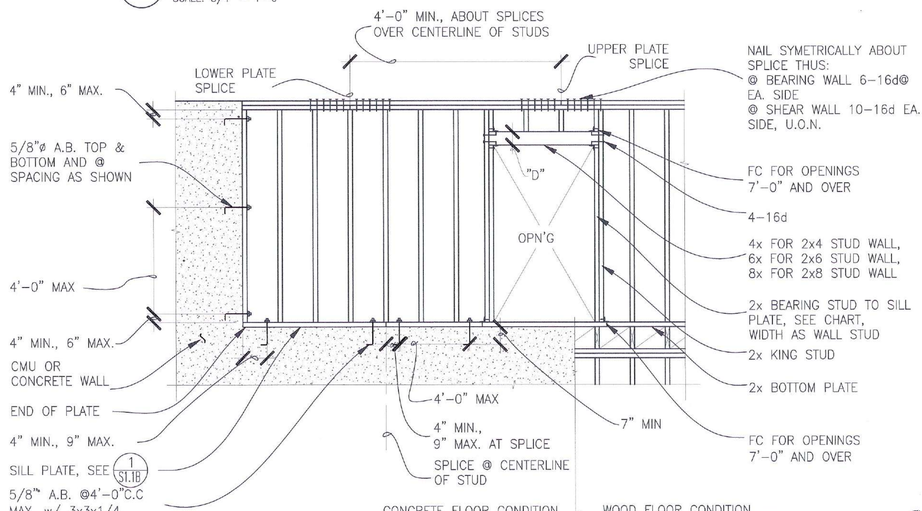
SCALE: 3/4" = 1'–0"



NOTES:
1. FOR SLAB THICKNESS, REINFORCEMENT AND BASE MATERIALS SEE PLAN.
2. AT P.T. SLAB PROVIDE MAX. 3/4" EMBEDMENT.

5 TYPICAL NON–BEARING / NON–SHEARWALL CONNECTION AT CONCRETE SLAB

SCALE: 3/4" = 1'–0"



HEADER SPANS "S"	"D" MIN.	ADDN'L BEARING STUDS
S ≤ 4'–0"	5 1/2"	0
4'–0" < S ≤ 8'–0"	7 1/4"	1
8'–0" < S ≤ 10'–0"	9 1/4"	2
S > 10'–0"	SEE PLAN	3

NOTE:
THIS DETAIL IS NOT FOR SHEARWALLS, SEE 1 S1.1B

6 TYPICAL FRAMING @ OPENINGS, TOP PLATE SPLICES, ETC.

SCALE: 3/4" = 1'–0"

Philip Chan, DBI
AUG 12 2024

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AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY REQUIRED FOR IMAGING ACCEPTED

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED OCT 02 2024

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	DATE	REVISIONS
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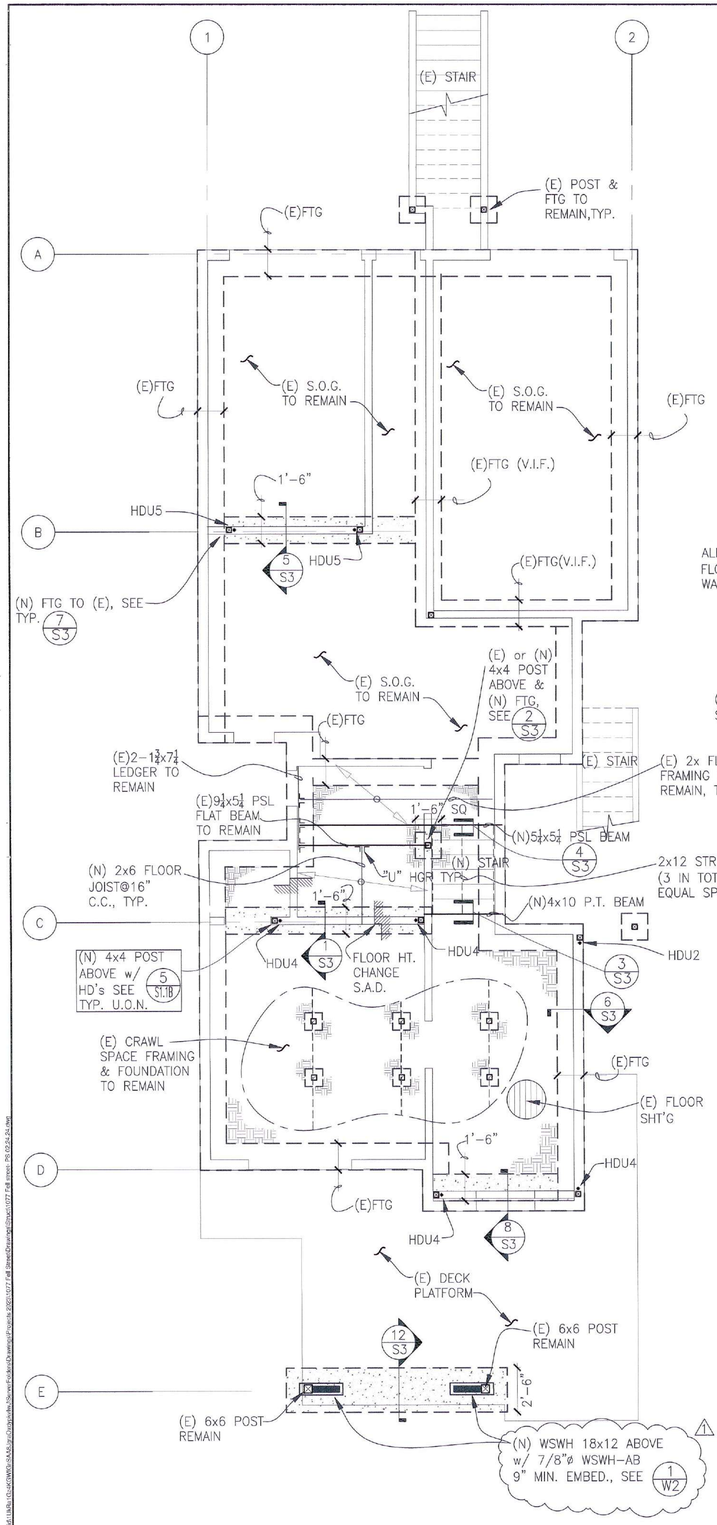
TYPICAL WOOD DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

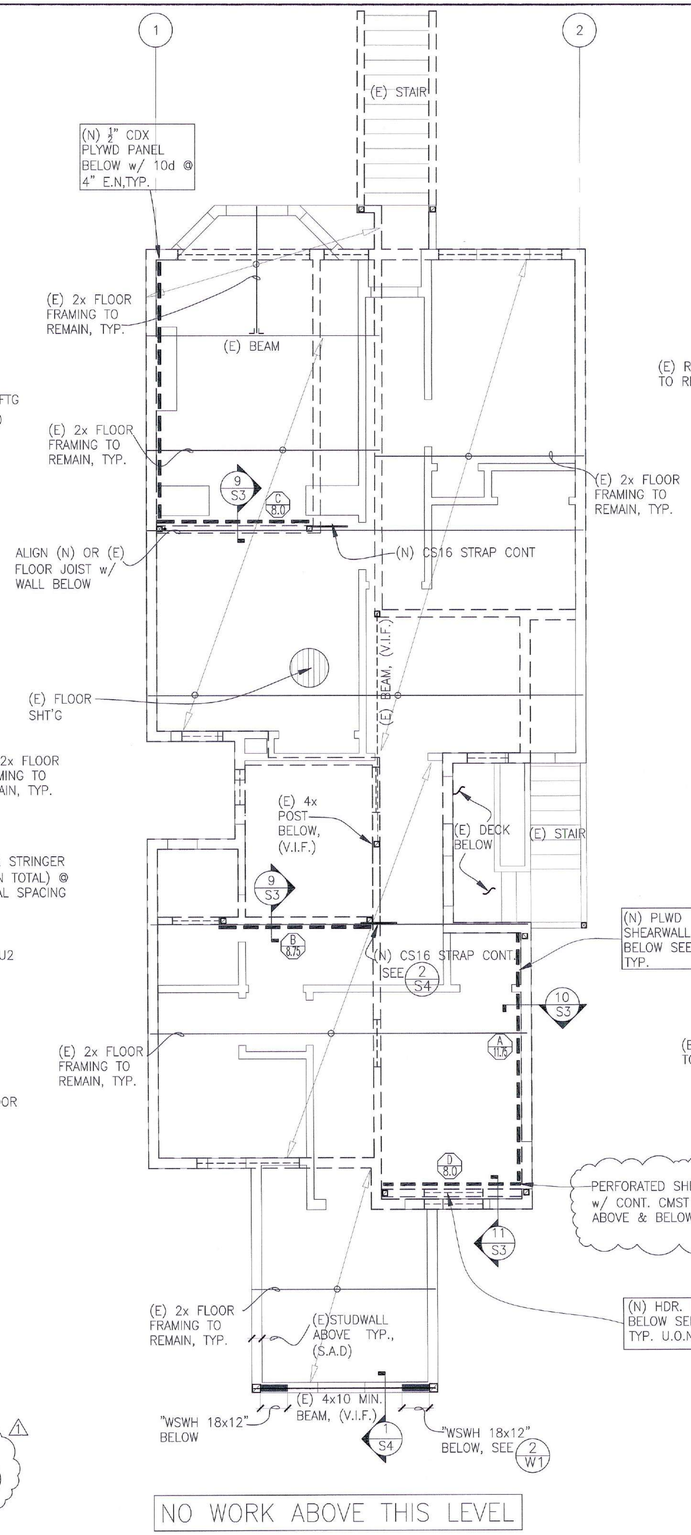
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Of	7 Sheets

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PLOT DATE: 03-01-24 PLOTTED BY: danjustorm



FIRST FLOOR / FOUNDATION PLAN

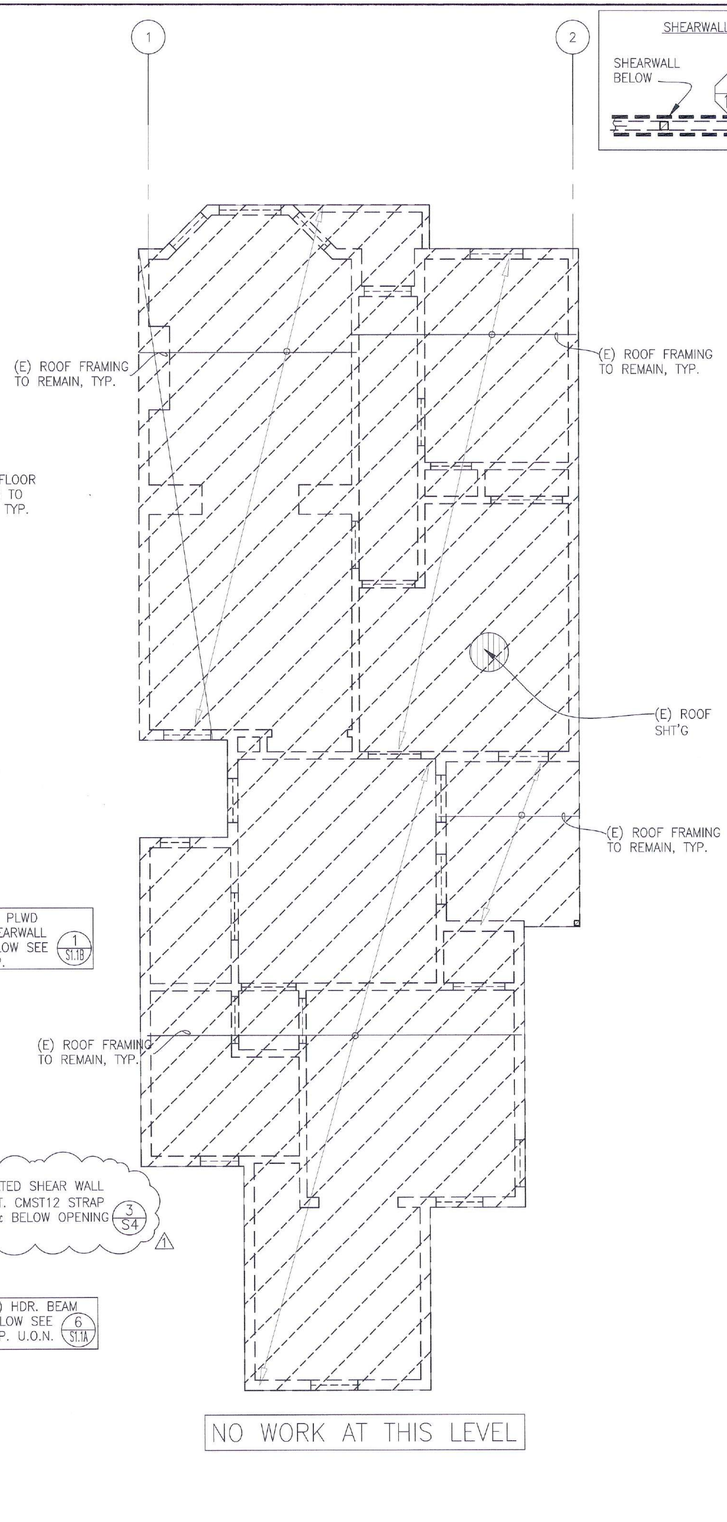
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SECOND FLOOR FRAMING PLAN

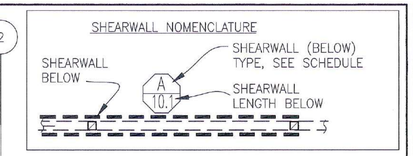
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ROOF FRAMING PLAN

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



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	DATE	REVISIONS
1	05/17/24	PC REV1

FIRST FLOOR FOUNDATION PLAN
SECOND FLOOR FRAMING PLAN
ROOF FRAMING PLAN

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

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THIS PLAN MEETS QUALITY CONTROL STANDARDS FOR IMAGING ACCEPTANCE

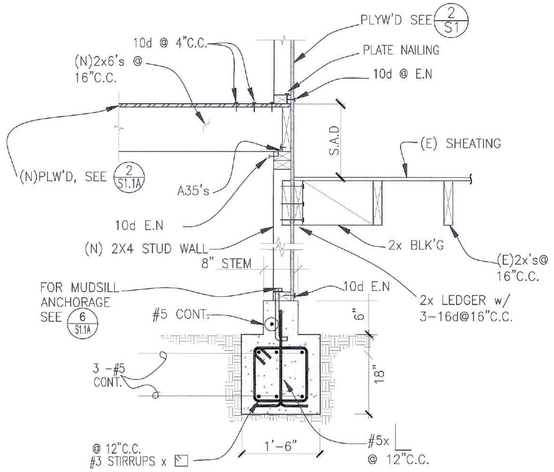
Philip Chan, DBI
AUG 12 2024

CITY AND COUNTY OF SAN FRANCISCO DEPT OF BUILDING INSPECTION ISSUED
OCT 02 2024

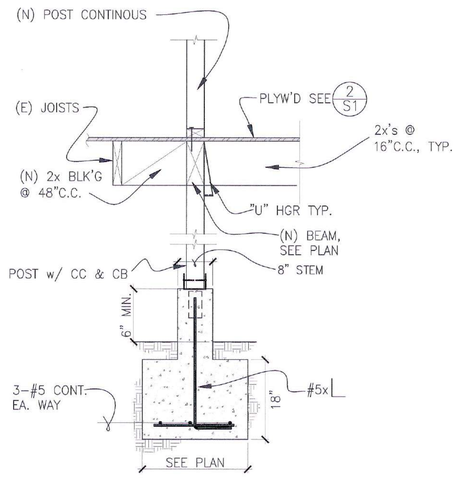
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NORTH

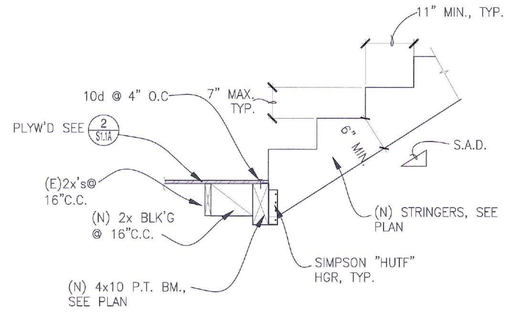
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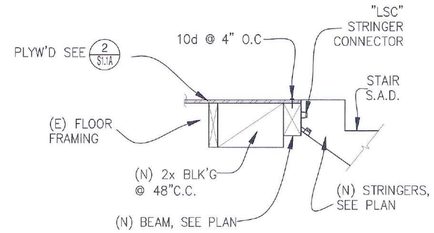
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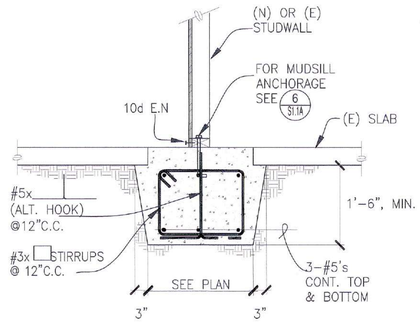
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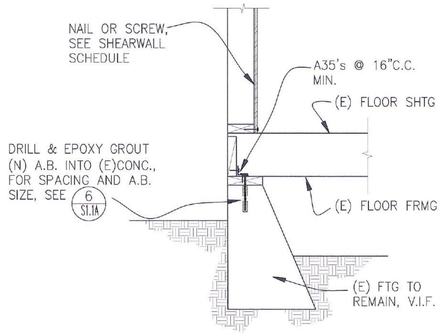
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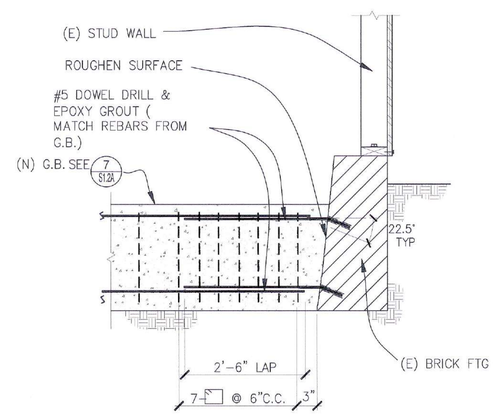
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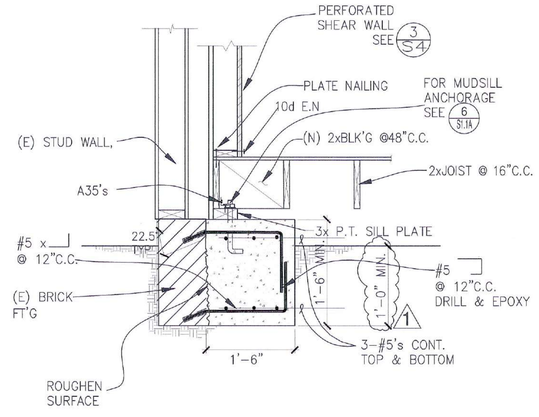
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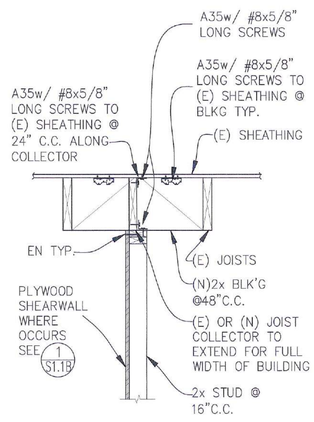
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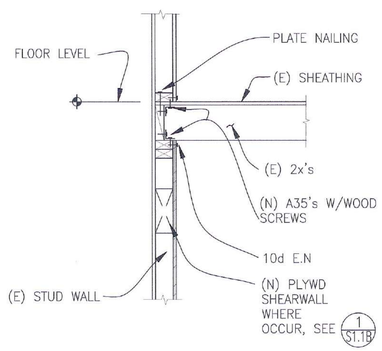
7 SCALE: 3/4" = 1'-0"



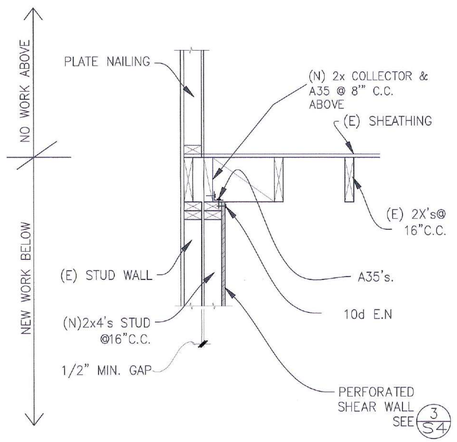
8 SCALE: 3/4" = 1'-0"



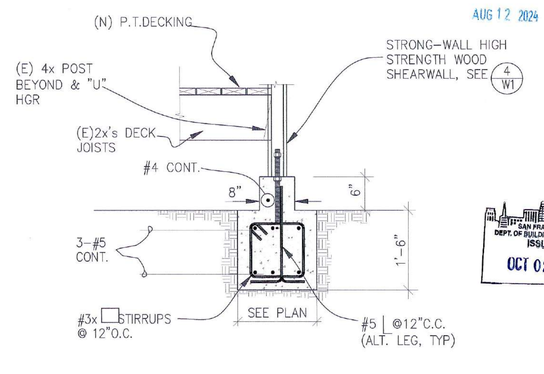
9 SCALE: 3/4" = 1'-0"



10 SCALE: 3/4" = 1'-0"



11 SCALE: 3/4" = 1'-0"



12 SCALE: 3/4" = 1'-0"

Philip Chan, DBI
AUG 12 2024

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED OCT 02 2024

RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR ACCEPTED IMAGING

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.826.8300
FAX: 415.701.0212
161 MISSION STREET, FL-1
SAN FRANCISCO, CA 94103

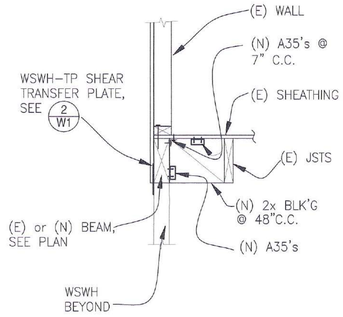
	DATE	REVISIONS
1	05/17/24	PC REV1

VOLUNTARY STRENGTHENING STRUCTURAL DETAILS

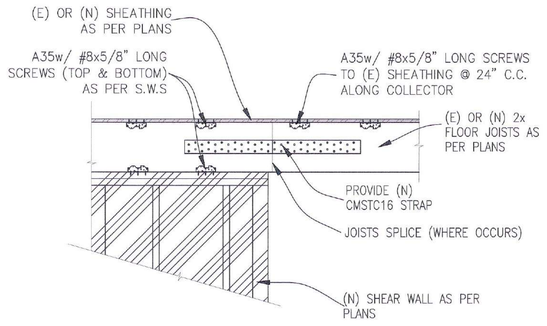
1077 FELL STREET
SAN FRANCISCO, CA

Date:	03/01/2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	S3
Of	7 Sheets

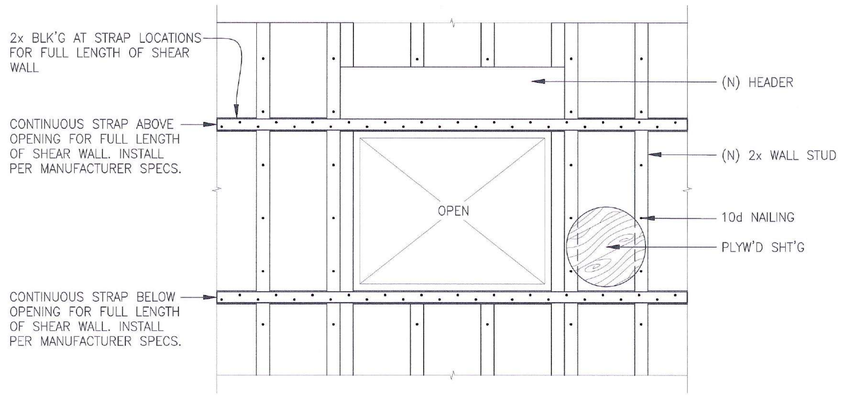
PLOT DATE: 07-24-24 PLOTTED BY: danquionm



1 — SCALE: 3/4" = 1'-0"



2 — SCALE: 3/4" = 1'-0"



3 — SCALE: 3/4" = 1'-0"

1

ENERTIA DESIGNS
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OFFICE: 415.826.8300
FAX: 415.701.0212
1187 MISSION STREET FL 4
SAN FRANCISCO, CA 94103

	DATE	REVISIONS
1	05/17/24	PC REV1

STRUCTURAL DETAILS

RECEIVED
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THIS PLAN MEETS THE QUALITY STANDARD FOR IMAGING ACCEPTED

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Philip Chan, DBI
AUG 12 2024

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED
OCT 02 2024

Date:	03/01/2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	S4
Of	7 Sheets

DRAWING NAME: D:\Users\dmqui\Dropbox (ENERTIA DESIGNS)\Projects\Active Projects\2023\1077 Fell Street\Drawings\Dwgs\1077 Fell Street - 20240524.dwg
PLOT DATE: 07-24-24 PLOTTED BY: dmquisonm

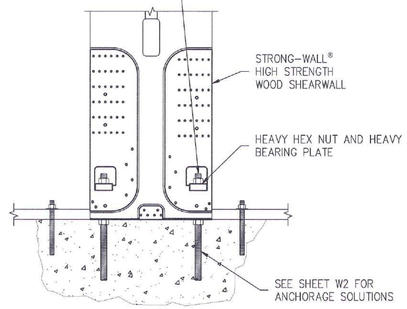
STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MODELS

MODEL NO.	W (in.)	H (in.)	ANCHOR BOLTS		TOTAL WALL WEIGHT (lb.)
			QUANTITY	DIA. (in.)	
WSWH12x7	12	84	2	1	105
WSWH18x7	18	84	2	1	155
WSWH12x8	12	96	2	1	120
WSWH18x8	18	96	2	1	175
WSWH24x8	24	96	2	1	225
WSWH12x9	12	108	2	1	130
WSWH18x9	18	108	2	1	195
WSWH24x9	24	108	2	1	250
WSWH12x10	12	120	2	1	145
WSWH18x10	18	120	2	1	210
WSWH24x10	24	120	2	1	275
WSWH12x12	12	144	2	1	165
WSWH18x12	18	144	2	1	245
WSWH24x12	24	144	2	1	325
WSWH18x14	18	168	2	1	285
WSWH24x14	24	168	2	1	370
WSWH24x16	24	192	2	1	420
WSWH18x20	18	240	2	1	390
WSWH24x20	24	240	2	1	520

NOTES :
1. FOR HEIGHTS NOT LISTED, ORDER THE NEXT TALLEST PANEL AND TRIM TO FIT. MINIMUM TRIMMED HEIGHT FOR ALL PANELS IS 74⅜".
2. ALL PANELS COME WITH PRE-ATTACHED HOLDOWNS, TWO HEAVY HEX NUTS, TWO HEAVY BEARING PLATES, ONE WSWH-TP TOP CONNECTION PLATE WITH REQUIRED FASTENERS AND INSTALLATION INSTRUCTIONS.
3. ALL PANELS ARE 3½" THICK.

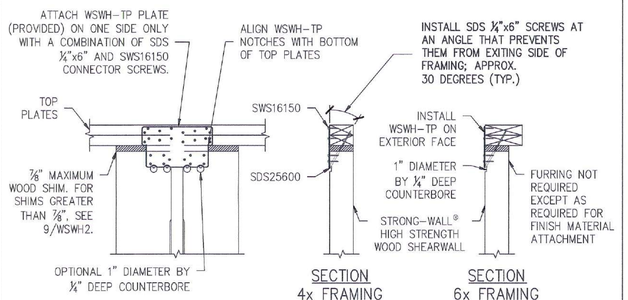
PLACE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL OVER THE ANCHOR BOLTS AND SECURE WITH HEAVY BEARING PLATES AND HEAVY HEX NUTS (PROVIDED). DO NOT USE AN IMPACT WRENCH. USE 1⅛" WRENCH FOR 1" NUT. TIGHTEN ANCHOR NUTS FINGER TIGHT + ½" TURN.

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



WSWH-TP CONNECTION		
MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	14	2
WSWH-TP18	26	4
WSWH-TP24	46	8

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



SECTION
4x FRAMING

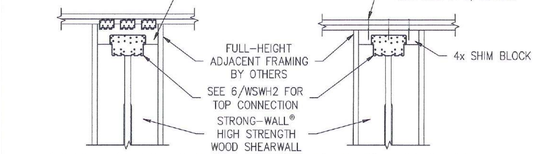
SECTION
6x FRAMING

LTP4 SPACING BY OTHERS

4x SHIM BLOCK

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

INSTALL SDS ¼"x6" SCREWS (MIN.) FROM THE TOP SIDE OF THE PLATES PER QTY. AND SPACING REQUIREMENTS DETAILED IN 8/WSWH2.



4⅛" TO 12" SHIM BLOCK

1" TO 4" SHIM BLOCK

DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

CRIPPLE SHEARWALL, BLOCKING AND STRAP BY OTHERS

SEE 6/WSWH2 FOR TOP CONNECTION

FULL-HEIGHT ADJACENT FRAMING BY OTHERS

STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL

CRIPPLE WALL

FOR 8" TO 12" BLOCK DEPTHS:
ATTACH SIMPSON STRONG-TIE® CS16 STRAPS AT EDGE OF WSWH PANEL (EACH SIDE) USING 10dx1½" NAILS

SHIM BLOCK HEIGHTS GREATER THAN 8" AND UP TO 10":
- 8 NAILS INTO BLOCK
- 8 NAILS INTO WSWH PANEL

SHIM BLOCK HEIGHTS GREATER THAN 10" AND UP TO 12":
- 10 NAILS INTO BLOCK
- 10 NAILS INTO WSWH PANEL

EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.823.8300
FAX: 415.701.0212
1187 MISSION STREET FL-4
SAN FRANCISCO, CA 94103

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR

	DATE	REVISIONS

STRUCTURAL DETAILS

RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
SAN FRANCISCO
PLAN REVIEW MEETS THE QUALITY STANDARDS ACCEPTED

VOLUNTARY STRENGTHENING

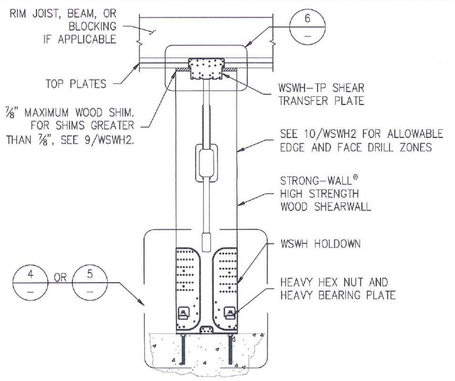
1077 FELL STREET
SAN FRANCISCO, CA

Philip Chan, DBI
AUG 12 2024

SAN FRANCISCO
DEPT. OF BUILDING INSPECTION
ISSUED
OCT 02 2024

Date:	03/01/2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	W1
Of	7 Sheets

STRONG-WALL® WSWH MODELS | 1

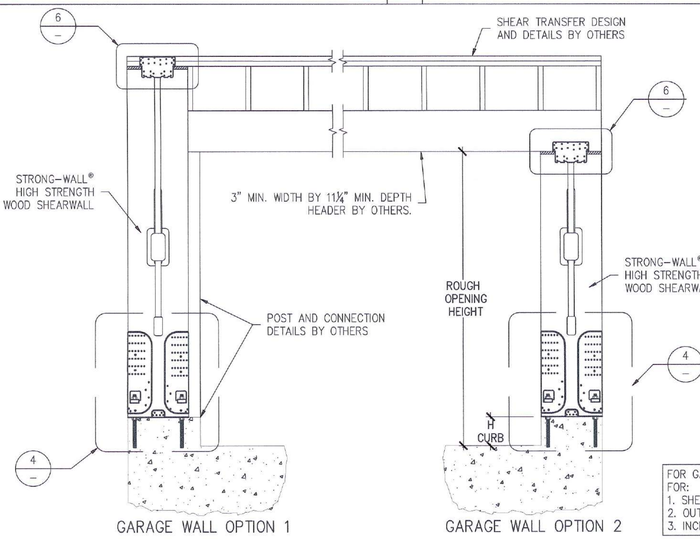


DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

ENSURE CONCRETE IS LEVEL AND SMOOTH BENEATH PANEL. GRIND OR FILL AS NECESSARY.

SINGLE STORY WSWH ON CONCRETE | 2

ALTERNATE WSWH GARAGE FRONT OPTIONS | 3



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

WHEN WSWH-PS STRAPS OMITTED, ALLOWABLE SHEAR VALUES FOR STANDARD PANEL APPLY.

GARAGE HEADER ROUGH OPENING HEIGHT

MODEL NO.	TRIMMED PANEL HEIGHT	H CURB	ROUGH OPENING HEIGHT
WSWH12x7 WSWH18x7 WSWH24x7	78"	5½"	6'-11½"
		6"	7'-0"
WSWH12x8 WSWH18x8 WSWH24x8	85½"	0"	7'-1½"
	93¼"	5½"	8'-2¾"
		6"	8'-3¾"

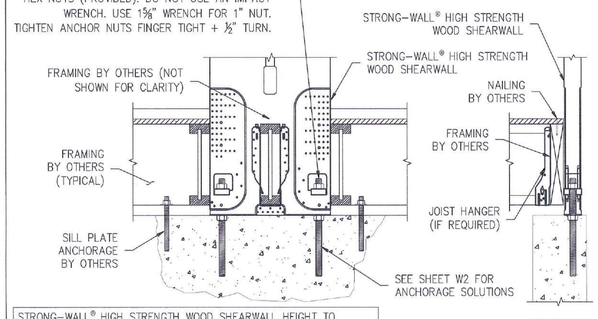
NOTES :
1. IF REQUIRED ROUGH OPENING HEIGHT EXCEEDS TABLE VALUE, SPECIFY NEXT TALLER PANEL AND TRIM AS NECESSARY. THE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MAY BE TRIMMED TO A MINIMUM HEIGHT OF 74⅜".
2. FURRING DOWN GARAGE HEADER MAY BE REQUIRED FOR CORRECT ROUGH OPENING HEIGHT.

FOR GARAGE WALL OPTION 2, DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

STANDARD INSTALLATION BASE CONNECTION | 4

PLACE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL OVER THE ANCHOR BOLTS AND SECURE WITH HEAVY BEARING PLATES AND HEAVY HEX NUTS (PROVIDED). DO NOT USE AN IMPACT WRENCH. USE 1⅛" WRENCH FOR 1" NUT. TIGHTEN ANCHOR NUTS FINGER TIGHT + ½" TURN.

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



SECTION

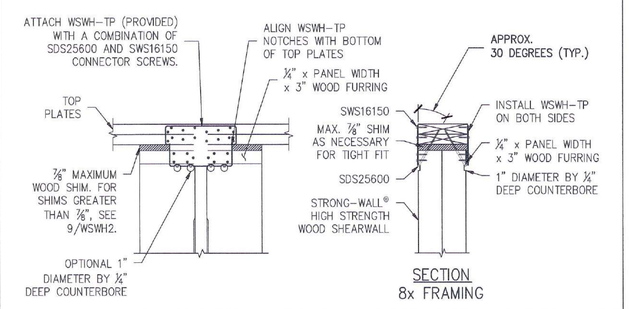
STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL HEIGHT TO INCLUDE THE DEPTH OF THE FLOOR SYSTEM AND SHALL BE INSTALLED DIRECTLY ON THE FOUNDATION. SPECIFY PANEL HEIGHT FROM TOP OF FOUNDATION TO UNDERSIDE OF TOP PLATES OR BEAM.

WOOD FLOOR SYSTEM BASE CONNECTION | 5

TOP CONNECTION | 6

WSWH-TP CONNECTION		
MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	28	4
WSWH-TP18	52	8
WSWH-TP24	92	16

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



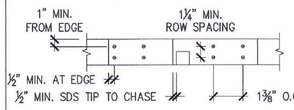
SECTION
8x FRAMING

BACK-TO-BACK TOP CONNECTION | 7

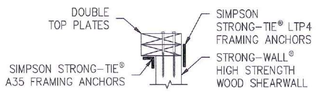
QTY. OF SDS¼"x6" SCREWS REQ'D.	
WSWH12	4
WSWH18	8
WSWH24	16

EDGE DISTANCE FOR SCREWS		
SLOPE	A (in.)	B (in.)
0:12-4:12	2	3
5:12-8:12	1½	4½
9:12-12:12	1½	5½

NOTES :
1. MAINTAIN END DISTANCES TO PREVENT SCREWS FROM PENETRATING THROUGH THE OUTER EDGES.
2. INSTALL SCREWS PERPENDICULAR TO THE TOP PLATE.
3. EDGE DISTANCES ASSUME DOUBLE TOP PLATE.

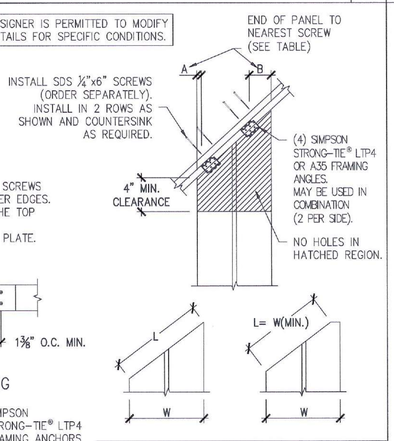


PLAN VIEW
SDS SCREW SPACING



SECTION VIEW
2X6 OR WIDER FRAMING

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



INSTALLATION NOTES :
1. ACTUAL CUT LENGTH (L) MUST BE GREATER THAN OR EQUAL TO PANEL WIDTH (W).
2. THIS DETAIL APPLICABLE FOR SLOPES UP TO 12:12.
3. PANELS TALLER THAN 12' MUST BE DESIGNED FOR THE APPLICATION.

RAKE WALL | 8

TOP OF WALL HEIGHT ADJUSTMENTS | 9

EDGE DRILL ZONE
MIDDLE ⅓ OF PANEL THICKNESS

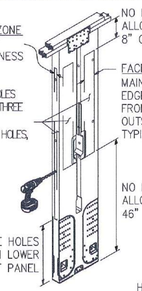
HOLES
- MAX. THREE HOLES IN FACE AND THREE IN EDGE.
- ¾"-DIAMETER HOLES, MAX.
- 6" O.C., MIN.

NO HOLES ALLOWED IN TOP 8" OF PANEL

FACE DRILL ZONE
MAINTAIN 1½" MIN. EDGE DISTANCE FROM CHASE AND OUTSIDE EDGE, TYPICAL.

NO FACE HOLES ALLOWED IN LOWER 46" OF PANEL

NO EDGE HOLES ALLOWED IN LOWER 26" OF PANEL



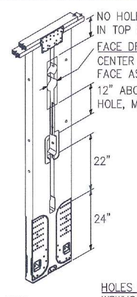
NO HOLES ALLOWED IN TOP 8" OF PANEL

FACE DRILL ZONE
CENTER 4⅜" OF PANEL FACE AS SHOWN

12" ABOVE EXISTING HOLE, MIN.

22"

24"



HOLES
- 4⅜"-DIA. HOLES, MAX.
- MAX. OF TWO 4⅜"-DIA. HOLES OR ONE 4⅜"x12" HOLE.
- NO MINIMUM ON-CENTER SPACING REQUIRED.

HOLES FOR WSWH24X7 PANEL ONLY
- MAX. OF ONE 4⅜"x6" HOLE
- 5" FROM TOP OF PANEL, MIN.

ALLOWABLE SMALL HOLES
FACE AND EDGE DRILL ZONES

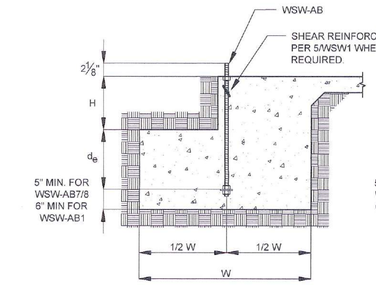
ALLOWABLE LARGE HOLES
IN ADDITION TO ALLOWABLE SMALL HOLES

TRIM ZONE AND ALLOWABLE HOLES | 10

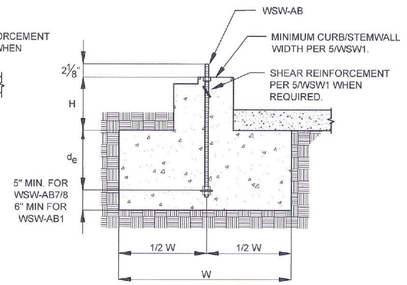
NOTES | 11

1. STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL IS MANUFACTURED AND TRADEMARKED BY "SIMPSON STRONG-TIE COMPANY INC." HOME OFFICE: 5956 W. LAS POSITAS BLVD., PLEASANTON, CA 94588 TEL: (800) 999-5099, FAX: (925) 847-1597. "SIMPSON STRONG-TIE COMPANY INC." IS AN ISO 9001-2008 REGISTERED COMPANY.
2. USE OF THIS PRODUCT IS SUBJECT TO THE APPROVAL OF THE LOCAL BUILDING DEPARTMENT.
3. THIS PRODUCT IS PART OF THE OVERALL LATERAL FORCE RESISTING SYSTEM OF THE STRUCTURE. DESIGN OF THE BUILDING'S LATERAL FORCE RESISTING SYSTEM, INCLUDING THE LOAD PATH TO TRANSFER LATERAL FORCES FROM THE STRUCTURE TO THE GROUND, IS THE RESPONSIBILITY OF THE DESIGNER.
4. ENGINEER OF RECORD IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, ELEVATIONS, ETC. PRIOR TO INSTALLATION OF ANY COMPONENTS FOR THE STRONG-WALL SB SYSTEM. IF ANY DISCREPANCIES ARE FOUND, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
6. INSTALLATION OF PRODUCT SHALL BE DONE IN CONFORMANCE TO THESE DRAWINGS. THE PERFORMANCE OF MODIFIED PRODUCTS OR ALTERED INSTALLATION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE DESIGNER.
7. SIMPSON STRONG-TIE COMPANY INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS, DESIGNS, AND MODELS WITHOUT NOTICE OR LIABILITY FOR SUCH CHANGES.
8. ALL HARDWARE CALLED OUT IS SIMPSON STRONG-TIE.
9. SEE ICC-ES ESR-2652 OR CITY OF LOS ANGELES RR25730 AS APPLICABLE FOR ADDITIONAL INFORMATION.

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PLOT DATE: 07-24-24 PLOTTED BY: danguiscrim



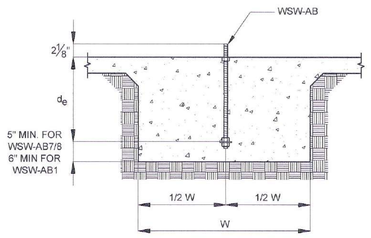
SLAB ON GRADE FOUNDATION



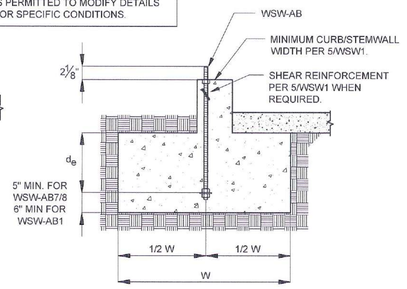
BRICK LEDGE FOUNDATION

NOTES:
1. SEE 2/WSW1 FOR DIMENSIONS AND ADDITIONAL NOTES.
2. SEE 5/WSW1 FOR SHEAR REINFORCEMENT WHEN REQUIRED.
3. MAXIMUM H = l_e - d_e. SEE 3/WSW1 AND 4/WSW1 FOR l_e.

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

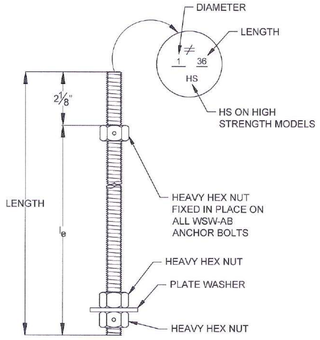


INTERIOR FOUNDATION



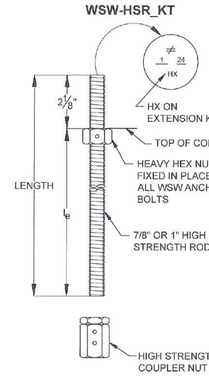
CURB OR STEMWALL FOUNDATION

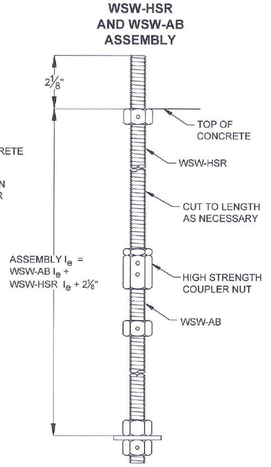
STRONG-WALL® WSW ANCHORAGE - TYPICAL SECTIONS | 1



WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSW12 AND WSW18	WSW-AB7/8x24	7/8"	24"	20"
	WSW-AB7/8x24HS	7/8"	24"	20"
	WSW-AB7/8x30	7/8"	30"	26"
	WSW-AB7/8x30HS	7/8"	30"	26"
	WSW-AB7/8x36HS	7/8"	36"	32"
WSW24	WSW-AB1x24	1"	24"	20"
	WSW-AB1x24HS	1"	24"	20"
	WSW-AB1x30	1"	30"	26"
	WSW-AB1x30HS	1"	30"	26"
	WSW-AB1x36HS	1"	36"	32"

WSW ANCHOR BOLTS | 3

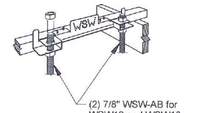




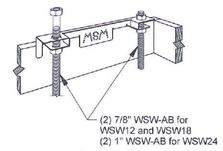
WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSW12 AND WSW18	WSW-HSR7/8x24KT	7/8"	24"	22"
	WSW-HSR7/8x36KT	7/8"	36"	34"
WSW24	WSW-HSR1x24KT	1"	24"	22"
	WSW-HSR1x36KT	1"	36"	34"

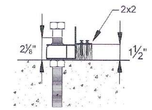
WSW ANCHOR BOLT EXTENSION | 4

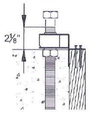
WSW-RT INTERIOR INSTALLATION



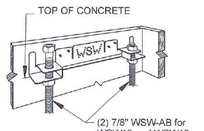
WSW-RT EXTERIOR INSTALLATION



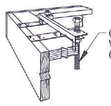




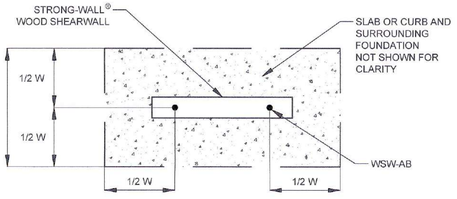
WSW-RTPF PANEL FORM INSTALLATION



WSW-RTBL BRICK LEDGE INSTALLATION



WSW ANCHOR BOLT TEMPLATES | 6



FOUNDATION PLAN VIEW

WSW ANCHORAGE SOLUTIONS FOR 2500 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
1 SEISMIC	CRACKED	STANDARD	11,900	27	9	16,100	33	11
			13,100	29	10	17,100	35	12
		HIGH STRENGTH	24,900	43	15	33,000	51	17
			27,100	46	16	35,300	54	18
	UNCRACKED	STANDARD	12,500	24	8	15,700	28	10
			13,100	25	9	17,100	30	10
		HIGH STRENGTH	25,300	38	13	32,300	44	15
			27,100	40	14	35,300	47	16
WIND	CRACKED	STANDARD	5,100	14	6	6,200	16	6
			8,700	20	7	11,400	24	8
		HIGH STRENGTH	13,100	27	9	17,100	32	11
			15,900	30	10	21,100	36	12
			18,400	33	11	27,300	42	14
			23,100	38	13	31,800	46	16
			27,100	42	14	35,300	50	17
	UNCRACKED	STANDARD	5,000	12	6	6,400	14	6
			9,300	18	6	12,500	22	8
		HIGH STRENGTH	13,100	23	8	17,100	28	10
			15,200	25	9	21,900	32	11
			19,900	30	10	26,400	36	12
			24,000	34	12	31,500	40	14
			27,100	37	13	35,300	43	15

NOTES:
1. ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D AND ACI 318-14 WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF WSW-AB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449).
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C - F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.3 AND ACI 318-14 SECTION 17.2.3.4.3.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
6. REFER TO 1/WSW1 FOR d_e.

STRONG-WALL® WOOD SHEARWALL TENSION ANCHORAGE SCHEDULE 2,500, 3,000 AND 4,500 PSI | 2

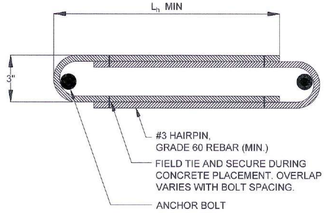
WSW ANCHORAGE SOLUTIONS FOR 3000 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
SEISMIC	CRACKED	STANDARD	12,300	26	9	16,000	31	11
			13,100	28	10	17,100	33	11
		HIGH STRENGTH	25,200	41	14	32,700	48	16
			27,100	43	15	35,300	51	17
	UNCRACKED	STANDARD	12,000	22	8	16,300	27	9
			13,100	24	8	17,100	28	10
		HIGH STRENGTH	25,300	36	12	32,700	42	14
			27,100	38	13	35,300	44	15
WIND	CRACKED	STANDARD	5,000	13	6	5,600	14	6
			8,800	19	7	10,200	21	7
		HIGH STRENGTH	13,100	25	9	17,100	30	10
			15,700	28	10	20,100	33	11
			19,200	32	11	25,300	38	13
			23,200	36	12	32,300	44	15
			27,100	40	14	35,300	47	16
	UNCRACKED	STANDARD	5,500	12	6	6,200	13	6
			8,500	16	6	12,800	21	7
		HIGH STRENGTH	13,100	22	8	17,100	26	9
			16,600	25	9	21,800	30	10
			19,700	28	10	25,200	33	11
			24,000	32	11	31,700	38	13
			27,100	35	12	35,300	41	14

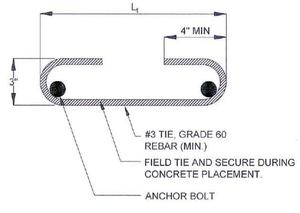
WSW ANCHORAGE SOLUTIONS FOR 4500 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
SEISMIC	CRACKED	STANDARD	12,600	23	8	16,000	27	9
			13,100	24	8	17,100	29	10
		HIGH STRENGTH	24,800	36	12	32,100	42	14
			27,100	38	13	35,300	45	15
	UNCRACKED	STANDARD	12,700	20	7	15,700	23	8
			13,100	21	7	17,100	25	9
		HIGH STRENGTH	24,600	31	11	32,500	37	13
			27,100	34	12	35,300	39	13
WIND	CRACKED	STANDARD	5,400	12	6	6,800	14	6
			8,300	16	6	11,600	20	7
		HIGH STRENGTH	13,100	22	8	17,100	26	9
			15,300	24	8	21,400	30	10
			19,300	28	10	25,800	34	12
			23,600	32	11	31,000	38	13
			27,100	36	12	35,300	42	14
	UNCRACKED	STANDARD	6,800	12	6	6,800	12	6
			9,400	15	6	12,400	18	6
		HIGH STRENGTH	13,100	19	7	17,100	23	8
			16,800	22	8	21,600	26	9
			20,300	25	9	26,700	30	10
			24,100	28	10	32,200	34	12
			27,100	31	11	35,300	36	12

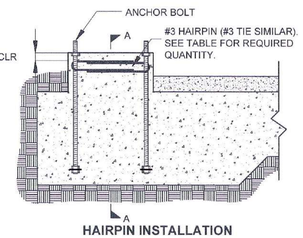
WSW ANCHOR BOLT EXTENSION | 4



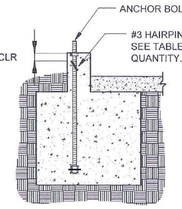
HAIRPIN SHEAR REINFORCEMENT



TIE SHEAR REINFORCEMENT



HAIRPIN INSTALLATION
(GARAGE CURB SHOWN. OTHER FOOTING TYPES SIMILAR.)



SECTION A-A

STRONG-WALL® WOOD SHEARWALL SHEAR ANCHORAGE

MODEL	L_1 OR L_h (in.)	SEISMIC [3] SHEAR REINFORCEMENT	SEISMIC [3] MINIMUM CURB/ STEMWALL WIDTH (in.)	WIND [4] SHEAR REINFORCEMENT	WIND [4] MINIMUM CURB/ STEMWALL WIDTH (in.)	WIND [4] ASD ALLOWABLE SHEAR LOAD, V (lb.) [6] UNCRACKED	WIND [4] ASD ALLOWABLE SHEAR LOAD, V (lb.) [6] CRACKED
WSW12	10¼	(1) #3 HAIRPIN	8[5]	SEE NOTE 6	6	1,035	740
WSW18	15	(1) #3 HAIRPIN	8[5]	(1) #3 HAIRPIN	6	HAIRPIN REINFORCEMENT ACHIEVES MAXIMUM ALLOWABLE SHEAR LOAD OF THE WSW	
WSW24	19	(2) #3 HAIRPINS	8[5]	(1) #3 HAIRPIN	6		

NOTES:
1. SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-11 AND ACI 318-14 AND ASSUME MINIMUM 2,500 PSI CONCRETE.
2. SHEAR REINFORCEMENT IS NOT REQUIRED FOR INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. WHERE NOTED, MINIMUM CURB/STEMWALL WIDTH IS 6 INCHES WHEN STANDARD STRENGTH ANCHOR BOLT IS USED.
6. USE (1) #3 TIE FOR WSW12 WHEN PANEL DESIGN SHEAR FORCE EXCEEDS TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.
7. #4 GRADE 40 SHEAR REINFORCEMENT MAY BE SUBSTITUTED FOR WSW SHEAR ANCHORAGE SOLUTIONS.

STRONG-WALL® WSW SHEAR ANCHORAGE SCHEDULE AND DETAILS | 5

RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE CITY AND COUNTY STANDARDS FOR PLAN CHECKING ACCEPTED

Philip Chan, DBI
AUG 12 2024

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

AUG 12 2024

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED OCT 02 2024

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.626.8300
FAX: 415.701.0212
1161 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103

	DATE	REVISIONS
1	05/17/24	PC REV1

STRUCTURAL DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date: 03/01/2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet W2
Of 7 Sheets

DRAWING NAME: G:\Jobs\Jobs\Jobs-21-\23059\WSW\DGN\Jobs\Jobs-Jobs\Jobs\Jobs\

EXHIBIT 3

Permit Details Report

Report Date:	**7/30/2025 9:34:29 PM**
Application Number:	202304266513
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	WORK ON LOWER UNIT - KITCHEN AND BATH REMODEL IN KIND. REPLACE CEILING CANS IN KIND (MAINTAIN 1 HR RATED CEILING). UPGRADE (1) SUBPANEL- PLUMBING AS NEEDED. NO CHANGES TO FLOOR LAYOUT. NO CHANGES TO WALL LAYOUT. NO STRUCTURAL WORK.
Cost:	$55,000.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
4/26/2023	TRIAGE	
4/26/2023	FILING	
4/26/2023	FILED	
4/26/2023	APPROVED	
4/26/2023	ISSUED	

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
INTAKE		4/26/23	4/26/23			4/26/23	GLADNEY JACQULINE		
BLDG		4/26/23	4/26/23			4/26/23	SZETO DAVID		4/26/2023: APPROVED OTC, NO PLANS. KITCHEN AND BATH REMODEL IN KIND AT LOWER UNIT. NO CHANGES TO FLOOR LAYOUT. NO CHANGES TO WALL LAYOUT. NO STRUCTURAL WORK.
CPB		4/26/23	4/26/23			4/26/23	BROWN JANAE		

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status
10/19/2023	Paul Matthews	SITE VERIFICATION	START WORK
10/18/2023	Robert Power	START WORK	NO ENTRY/NO PROGRESS

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks

For information, or to schedule an inspection, call 628-652-3400 between 8:30 am and 3:00 pm.

Station Code Descriptions and Phone Numbers

Online Permit and Complaint Tracking home page.

EXHIBIT 4

Permit Details Report

Report Date:	**7/30/2025 9:36:23 PM**
Application Number:	202306099711
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	REVISION TO PA 202304266513 LAYOUT CHANGE TO (E) BATHROOM AND KITCHEN. REPLACE 2 WINDOWS (LIKE FOR LIKE & NOT VISIBLE FROM STREET). LIGHTING UPGRADE IN KITCHEN AND DINING ROOM
Cost:	$10,700.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
6/9/2023	TRIAGE	
6/9/2023	FILING	
6/9/2023	FILED	
7/12/2023	APPROVED	
7/12/2023	ISSUED	

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
INTAKE		6/9/23	6/9/23			6/9/23	PANGELINAN MARIANNE		
BLDG		6/9/23	6/9/23			6/9/23	SOENKSEN RICHARD		Approved OTC revision to PA#202304266513 Lay out change at Kitchen and Bathroom. 6/9/2023
MECH-E		6/9/23	6/9/23			6/9/23	MASCK ED		N/A
MECH		6/9/23	6/9/23			6/9/23	TAN (PETER) JIA JIAN		Approved OTC
CPB		6/9/23	6/9/23			7/12/23	CHAN CHENG		

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks

For information, or to schedule an inspection, call 628-652-3400 between 8:30 am and 3:00 pm.

Station Code Descriptions and Phone Numbers

Online Permit and Complaint Tracking home page.

EXHIBIT 5

Permit Details Report

Report Date:	**7/30/2025 9:38:08 PM**
Application Number:	202309267475
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	REVISION TO 202306099711. UPGRADE STRUCTURAL UNDER DINING RM & BATH. REPLAC FLOOR JOISTS. OUR NEW FOOTING
Cost:	$15,000.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
9/26/2023	TRIAGE	
9/26/2023	FILING	
9/26/2023	FILED	
9/26/2023	APPROVED	
9/26/2023	ISSUED	

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
INTAKE		9/26/23	9/26/23			9/26/23	JINGJING LU	Administrative	
BLDG		9/26/23	9/26/23			9/26/23	LO JAMES	Approved	OTC PROJECT, APPROVED, PLANS HANDED TO APPLICANT.
CPB		9/26/23	9/26/23			9/26/23	LEE ERIC	Administrative	

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks
0			1	CONCRETE (PLACEMENT & SAMPLING)	
0			24E	WOOD FRAMING	
0			4	REINFORCING STEEL AND PRETRESSING TENDONS	reinforcing steel
0			2	BOLTS INSTALLED IN CONCRETE	

For information, or to schedule an inspection, call 628-652-3400 between 8:30 am and 3:00 pm.

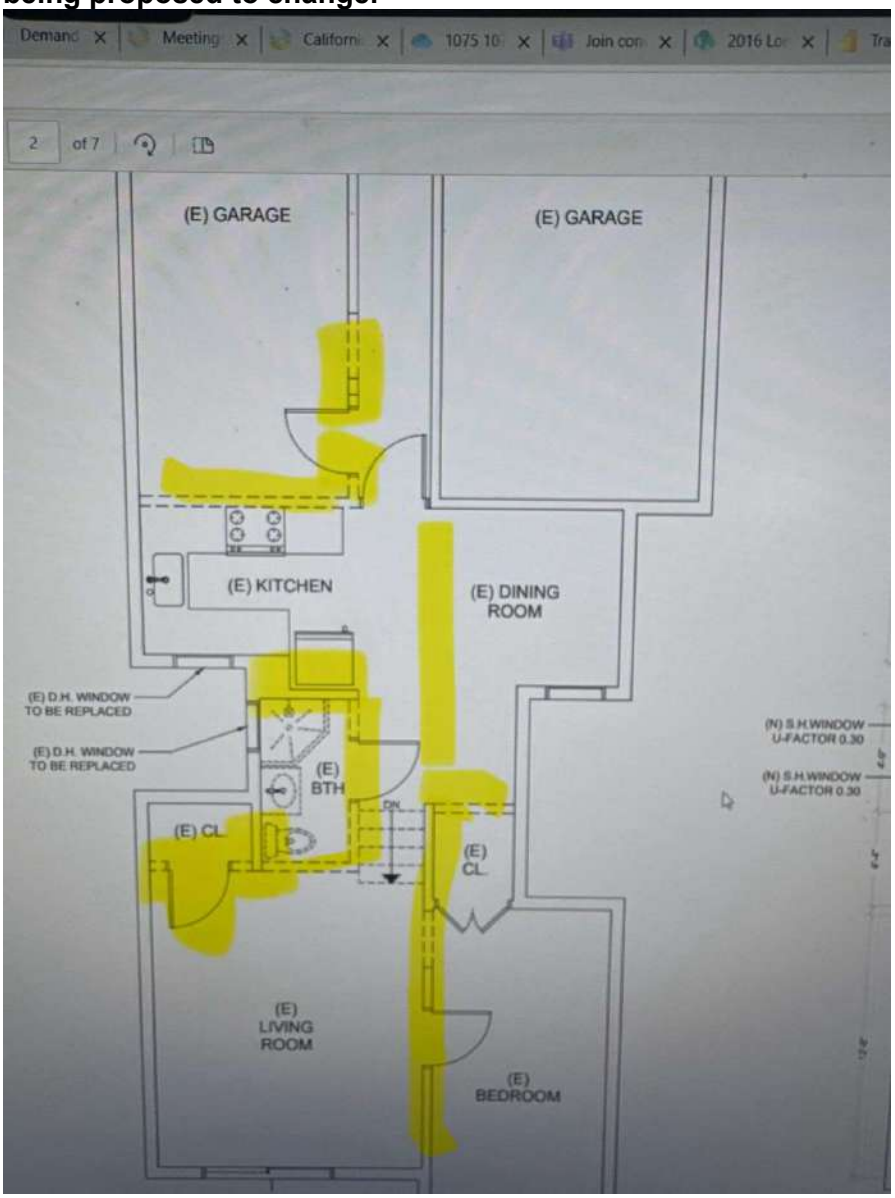
Station Code Descriptions and Phone Numbers

Online Permit and Complaint Tracking home page.

EXHIBIT 6

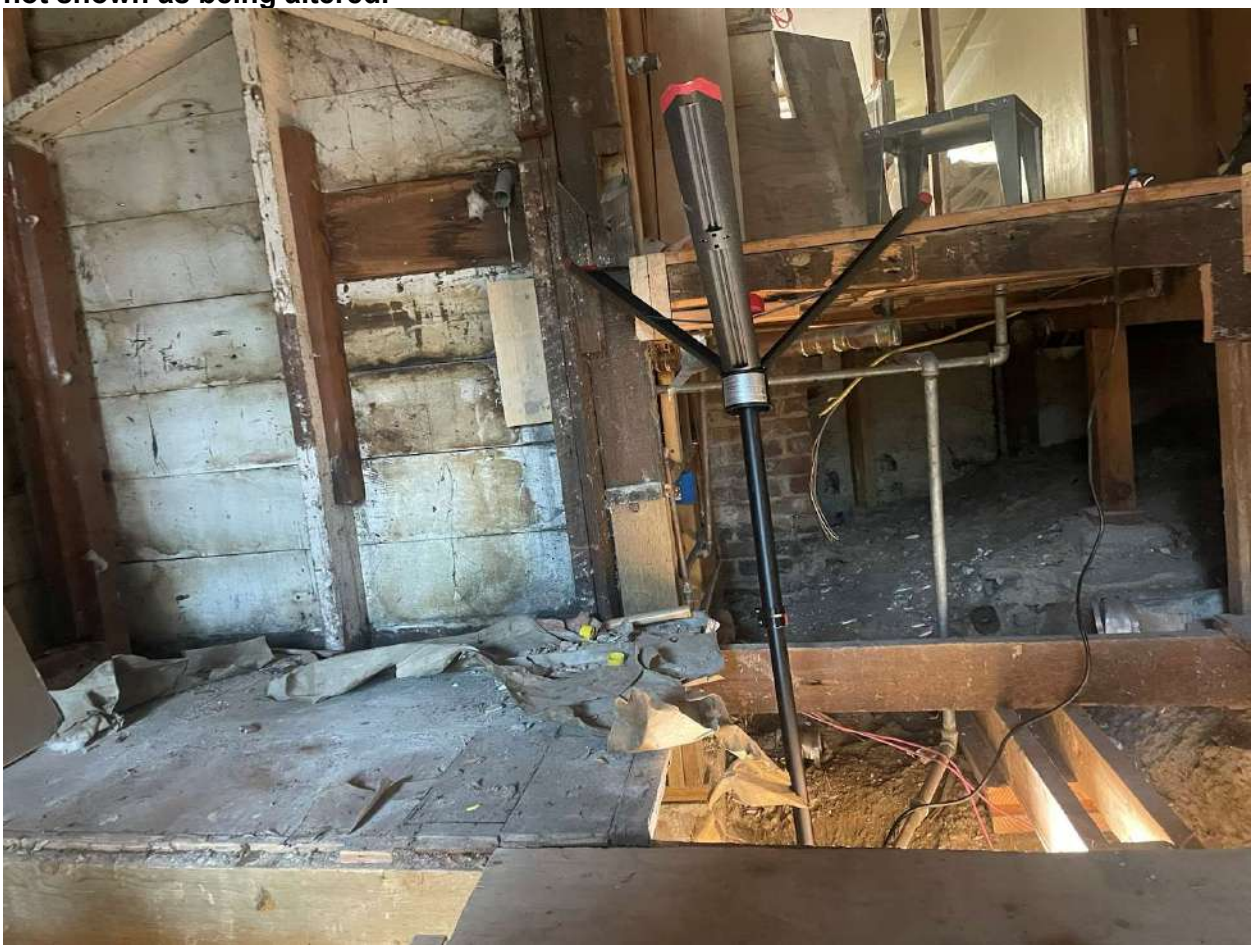
Exhibit 6: 1077 Fell total gutting (by Dec 2023) and Work that constituting Substantial Structural Alteration

6.1 Walls that were removed and left removed for over one year as part of 1077 remodel. Highlight between kitchen and dining room shows the structural beam now being proposed to change.



Photos to Show Internal Walls were Removed for One Year

6.2 Photo taken December 9, 2023- Walls in house interior removed, including walls not shown as being altered.



6.3 Photo taken December 9, 2023- Excavation prior to permit being submitted, in HOA common space; walls and floor were removed for this excavation.



6.4 Photo taken February 2024 Picture of Cantilevered/ Overhung Floor. The wood connecting the overhang to the main building had dry rot on both sides.



6.5 Sept 2024 Email to Velox- Summary that Velox stated that the Building was Unsafe

Support for building

soumya sastry <soumya.sastry@gmail.com> Fri, Sep 13, 2024 at 3:32 PM
To: Doug Burrows <Doug@veloxsf.com>, Steven Huang <thestevenhuang@gmail.com>, haraprasad sastry <haraprasadsastry@yahoo.com>

Hi Doug and Steven,

Doug today stated that he is concerned about the safety of the building because Steven's unit has been stripped down to the studs without proper reinforcement. Velox has left the building in this condition since December. Therefore, I'm quite surprised and concerned to hear about this now. Could you please add reinforcement next week. Additionally, please remove all of the trash/ debris that is on site.

Doug, my father located an agenda of the meeting where we talked about straightening the building on January 4.

I would appreciate further understanding of when this got changed Since it was not cleared with me and was not part of the agreement that I made.

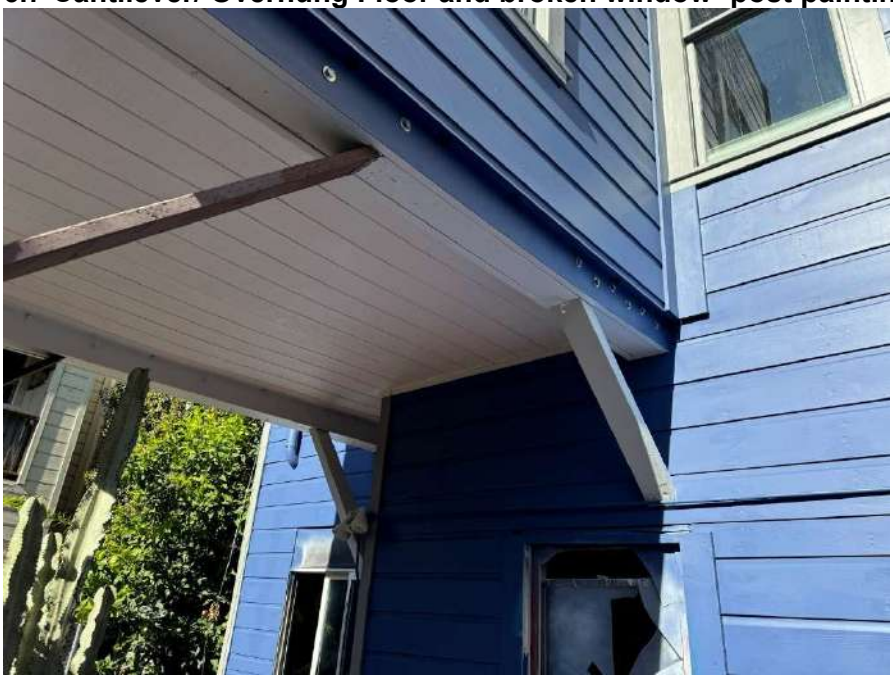
Thanks

6.6 Photos taken November 6 2024- Pictures Show Dry Rot framing fix and no wall between Living room/ Bedroom

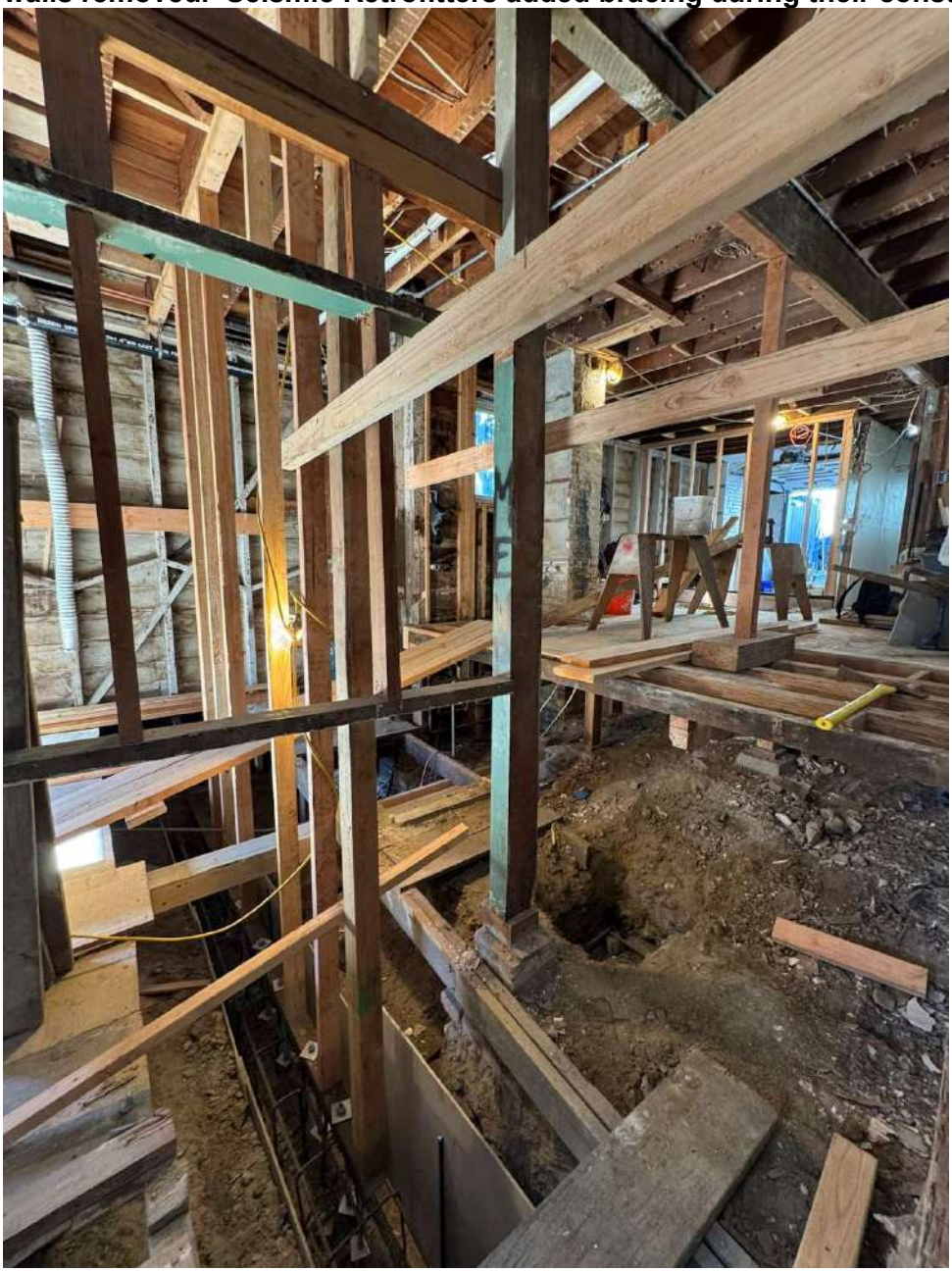




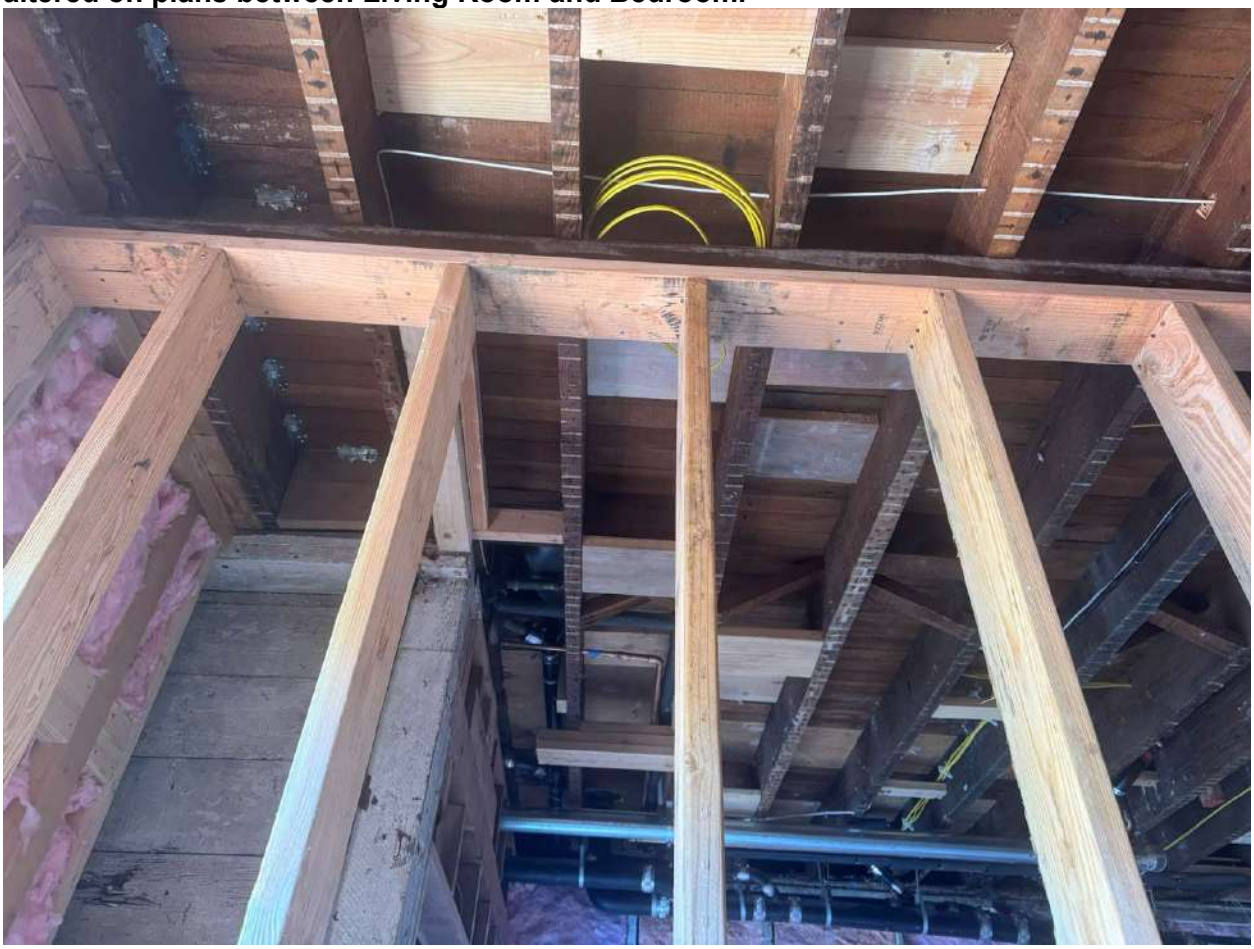
6.7 Cantilever/ Overhung Floor and broken window- post painting



6.8 Photo taken January 2025- During Structural Work, Can see all internal walls removed. Seismic Retrofitters added bracing during their construction.



6.9 Photo taken 2025 shows newly reconstructed wall that was not indicated to be altered on plans between Living Room and Bedroom.



6.10 Photos taken May 2025 shows areas under subfloor with new work or work that needs to be addressed







6.11 Photo taken July 2025- Shows additional Framing Done (in addition to dry rot fix) before Permit was Pulled



6.12 Additional Work on Vertical Support Element- Plan for Beam in 2025 permit- Unclear total scope on plans- Red squiggles by Velox. Alteration to 1075 Fell floor joists also visible.



6.13 Velox Alteration to Floor Joists for 1075 Fell

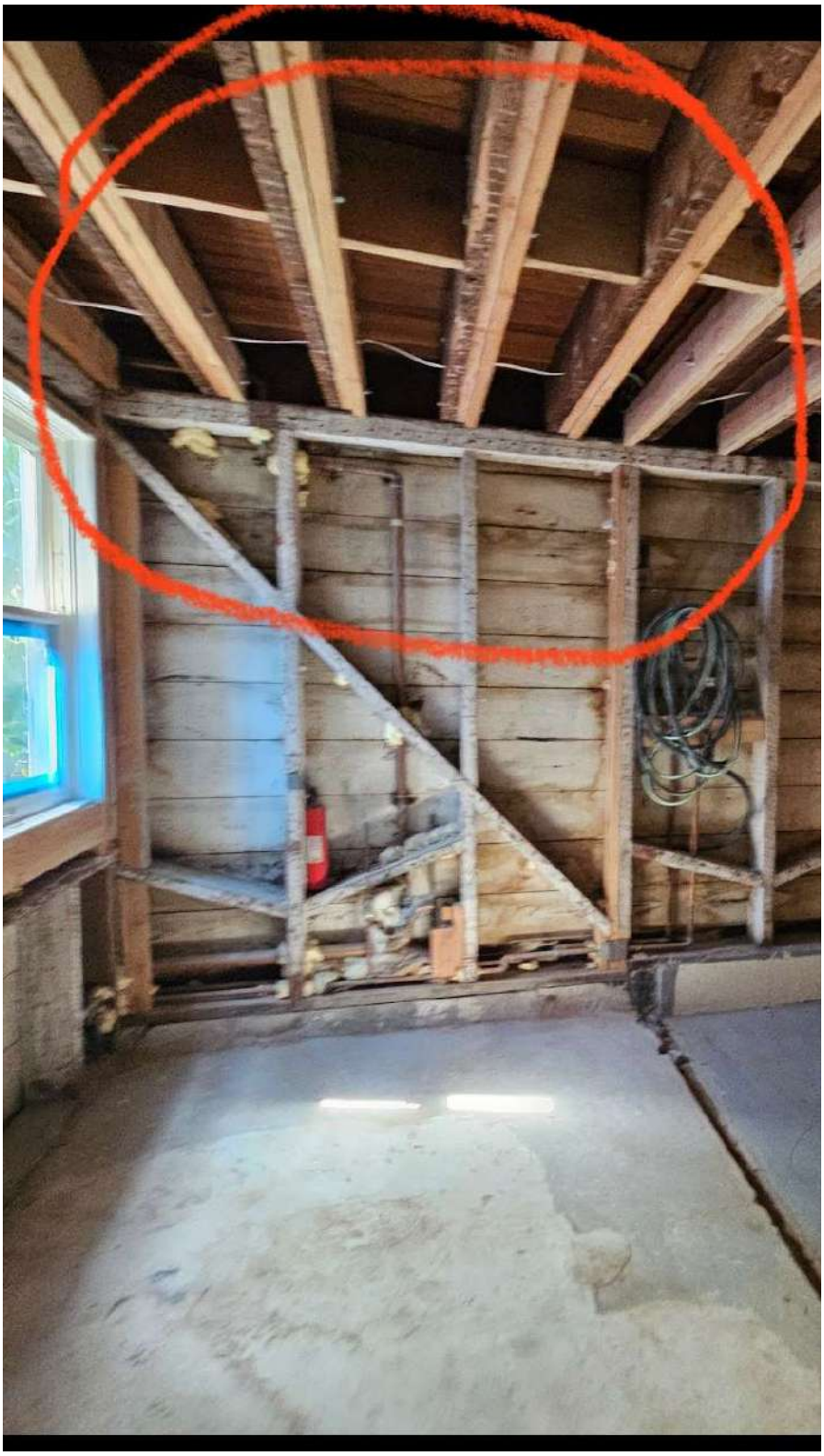


EXHIBIT 7

Exhibit 7: Chiawang Yeh credentials



Chiawang Yeh, S.E., LEED AP

Principal

After earning a M.S. degree from Stanford University in 2002, Chiawang's career started in the Bay Area. In his fifteen-year structural engineering career, he has been involved in numerous projects in the U.S.A, Taiwan, China and South-East Asia.

Specializing in high-rise building design, he has completed several high-profile projects in San Francisco ranging from 20 to 40 stories including 555 Mission, One Hawthorne, 45 Lansing and 350 Bush Street. In addition, Chiawang worked as an on-site structural engineer for the New Doha International Airport in Doha, Qatar open in 2014. Chiawang was promoted to an associate with Louie International in 2014 and then went on to found Chiawang Structural Engineering in late 2016.

Education

Stanford University
Master of Science in Civil and Environmental Engineering, Structural Program (2002)

National Taiwan University
Bachelor of Engineering, Civil and Environmental Engineering (1999)

Professional Registrations/Licenses

Structural Engineer, California
Professional Engineer, California
Leadership in Energy and Environmental Design Accredited Professionals, U.S.A.
U.S. Resiliency Council Rater, U.S.A.
Licensed Structural Engineer, Taiwan, R.O.C.
Licensed Civil Engineer, Taiwan, R.O.C.

k

Click for Resume

EXHIBIT 8

DETLEV P. DORING, S.E., Inc.
STRUCTURAL ENGINEER
216 CLEVELAND COURT, MILL VALLEY, CA 94941

Education

University of Colorado, Boulder 1972 to 1974
University of California, Berkeley 1980 to 1982
Bachelor of Civil Engineering UC Berkeley 1982

Engineering Registration

Civil Engineer	No. 36366	Year 1983
Structural Engineer	No. 3634	Year 1991

Experience

I started my engineering career in San Francisco with H.J. Brunnier Associates, Structural Engineers in October 1975. In May of 2001, I resigned as managing partner and started my own firm in Mill Valley. During my time with Brunnier and subsequently on my own, I have worked on and have been responsible for a large number of projects. Currently I am focusing on Residential remodel and new construction as well as small and medium size Commercial and Industrial projects.

Over the course of my currier I have been in charge of and worked on over 1200 Residential wood framed buildings, both new, additions, remodels and repairs costing from $30,000 to $10,000,000. I'm working on between 60 and 120 projects a year going back to 1991

Steel moment frame and steel braced buildings for commercial and industrial use ranging in height from one to 35 stories, i.e. commercial building at 555 Beach Street in San Francisco, Printing plants for the San Francisco Newspaper Agency in San Francisco and Union City, glass manufacturing plants for Owens-Brockway, both domestic and international.

Seismic evaluation and strengthening of buildings including the United Airlines Maintenance Base, the Chronicle Building, Bechman Instruments, Laguna Honda Hospital, 315 Montgomery Street (32 stories) and One California Street (32 stories).

During the late 1980's, I was responsible for bringing H.J. Brunnier Associates into the computer age. From mid-1997 to May 2001, as Vice President, I managed the computer and CAD departments, oversaw new and existing projects and was responsible for staffing the office with Engineers and CAD drafters.

Other representative projects include

Standard Oil Company – Richmond Refinery Administration Building/Earthquake bracing
NASA Ames Research Center – Moffet Field Aerodynamics Simulator Facility Building
San Francisco Public Library – Seismic Strengthening Study
San Francisco Civic Auditorium – Rehabilitation and remodel
The Gap Corp. – Various remodel projects
CSAA – Various remodel, seismic evaluation and upgrade project
United Airlines Maintenance Base – Computer room, Training Center
St. Mary's Hospital – Architectural remodel work
Sandia Laboratories - Computer Facility

Professional Memberships

Structural Engineers Association of Northern California

EXHIBIT 9

GENERAL STRUCTURAL NOTES

I GENERAL

A. ALL CONSTRUCTION SHALL CONFORM TO THE CALIFORNIA BUILDING CODE 2019 EDITION w/ AMENDMENTS BY LOCAL JURISDICTIONS.
B. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT JOB SITE BEFORE COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT OR ENGINEER.
C. OMISSIONS OR CONFLICT BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
D. DO NOT USE SCALED DIMENSIONS; USE WRITTEN DIMENSIONS OR WHERE NO DIMENSION IS PROVIDED, CONSULT THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
E. DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS WHETHER SPECIFICALLY CALLED OUT OR NOT.
F. FOR WATERPROOFING, FIREPROOFING, ETC. REFER TO DRAWINGS OTHER THAN STRUCTURAL.
G. SEE DRAWINGS OTHER THAN STRUCTURAL FOR: KINDS OF FLOOR FINISH AND THEIR LOCATION, FOR DEPRESSIONS IN FLOOR SLABS, FOR OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MECHANICAL FEATURES, FOR ROADWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC.
H. HOLES AND OPENINGS THROUGH WALLS AND FLOORS FOR DUCTS, PIPING AND VENTILATION SHALL BE CHECKED BY THE CONTRACTOR, WHO SHALL VERIFY SIZES AND LOCATION OF SUCH HOLES OR OPENINGS WITH THE PLUMBING HEATING, VENTILATING AND ELECTRICAL DRAWINGS AND THESE SUB-CONTRACTORS.
I. NO PIPES AND DUCTS SHALL BE PLACED IN SLABS OR WALLS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ARCHITECT.
J. DRAWINGS AND SPECIFICATIONS REPRESENT FINISHED STRUCTURE. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION INCLUDING BUT NOT LIMITED TO SHORING AND TEMPORARY BRACING. THE SUBCONTRACTOR SHALL UNDERTAKE ALL NECESSARY MEASURES TO INSURE SAFETY OF ALL PERSONS AND STRUCTURES AT THE SITE AND ADJACENT TO THE SITE. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT, ENGINEER SHALL NOT RELIEVE THE SUBCONTRACTOR OF SUCH RESPONSIBILITY.
K. NOTE THAT SHEET S1 IS A STANDARD COVER SHEET AND AS SUCH, NOT ALL TYP. DETAILS AND OR NOTES APPLY TO EVERY PROJECT.

II DESIGN CRITERIA

A. APPLICABLE CODE: CALIFORNIA BUILDING CODE 2019 & SFBC 2019.
B. VERTICAL LIVE LOADS: (REDUCIBLE). ROOF: 20 PSF. FLOOR: 40 PSF. HALLWAYS & CORRIDORS: 100 PSF.
C. LATERAL LOADS:
   1. WIND: 110 MPH. BASIC WIND SPEED, EXPOSURE: "B"
   2. SEISMIC: SITE CLASS 'D'
      MAPPED SPECTRAL ACCELERATIONS: S_S= S_1=
      Fa=1.0 Fv=1.5 S_{ds}= .xxx S_{d1}= .xxx
      BASE SHEAR 'V' = .xx W (ASD)
      SEISMIC DESIGN CATEGORY: D
      RESPONSE MODIFICATION FACTOR, R=6.5
      ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
      IMPORTANCE FACTOR=1 OCCUPANCY CATEGORY=II

III MATERIALS

A. CONCRETE:
   1. REINFORCING STEEL: ASTM A615, GRADE 60, #4 AND SMALLER, GRADE 40.
   2. CONCRETE: NORMAL WEIGHT U.O.N. WITH COMPRESSIVE STRENGTH OF THE FOLLOWING AT 28 DAYS:
      FOOTINGS, ~~MAT SLAB~~ & DRILLED PIERS 2500 psi
      ~~WALLS, COLUMNS~~ ~~5000 psi~~
      ~~STRUCTURAL SLAB (L.W. P.T. SEE S3.2)~~ ~~5000 psi~~
   3. MINIMUM CONCRETE COVER FOR REINFORCING STEEL:
      a. SURFACE POURED AGAINST GROUND 3"
      b. FORMED SURFACES BELOW GRADE 2"
      c. SURFACES EXPOSED TO WEATHER 2"
      d. BEAM BARS (INCLUDING STIRRUPS) 1-1/2"
      e. ALL OTHER 1"
   4. ANCHOR BOLT EPOXY*: HILTI HIT-RE 500-SD. (ICC ESR-2322) OR SIMPSON SET-XP (ICC ESR-2508)
   5. SCREW ANCHORS*: SIMPSON TITEN HD (ICC ESR-2713)
      * USE COMPRESSED AIR TO BLOW THE DUST OUT OF ANCHOR BOLT HOLES.
   6. PNEUMATICALLY PLACED CONCRETE (SHOTCRETE) NOTES
      a. ALL CONCRETE WALLS MAY BE SHOTCRETED AT CONTRACTOR'S OPTION. VERIFY COMPATIBILITY OF SHOTCRETE WITH WATE PROOFINGCONTRACTOR.
      b. ALL SHOTCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 506.2 AND CBC SECTION 1924.
      c. ALL SHOTCRETE SHALL TEST NOT LESS THAN 4000 PSI AT 28 DAYS.
      d. MAXIMUM AGGREGATE SIZE SHALL BE 3/8 INCH.
      e. LAP ALL REINFORCING BARS 40 DIAMETERS AT SPLICES. SPLICE BARS BY THE NON-CONTACT LAP SPLICE METHOD WITH 2 INCHES CLEAR BETWEEN BARS.
      f. ANY REBOUND SHALL BE REMOVED PRIOR TO PLACING OF CONCRETE.
      g. IN-PLACE SHOTCRETE WHICH SHOW SAGS OR SLOUGHS, SEGREGATION, HONEY COMBING, SAND POCKETS OR OTHER OBVIOUS DEFECTS SHALL BE REMOVED AND REPLACED.
      h. CURE SHOTCRETE BY KEEPING CONTINUOUSLY MOIST FOR A MINIMUM OF 7 DAYS UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER.
      i. TEST PANELS: SHOOT ONE TEST PANEL, 18 INCHES SQUARE ,FOR EACH 50 CUBIC YARDS OF SHOTCRETE PLACED, BUT NOT LESS THAN ONE PANEL PER SHIFT. CURE PANELS UNDER SAME CONDITIONS AS THE WORK. TESTING AGENCY SHALL TAKE A MINIMUM OF THREE 2" DIAMETER CORES FROM EACH PANEL. WATER SOAK SPECIMENS 24 HOURS BEFORE TESTING. TEST IN ACCORDANCE WITH UNIFORM BUILDING CODE STANDARD NO. 26-10.
      j. A MINIMUM OF THREE 3" DIAMETER CORES SHALL BE TAKEN FROM THE WORK AT LOCATIONS SPECIFIED BY THE STRUCTURAL ENGINEER. THE SPECIAL INSPECTOR SHALL VISUALLY EXAMINE CORES FOR STRUCTURAL SOUNDNESS AND SUBMIT A REPORT TO THE STRUCTURAL ENGINEER AND THE BUILDING INSPECTION DEPARTMENT.
      k. INSPECTION: PROVIDE CONTINUOUS SPECIAL INSPECTION OF SHOTCRETING OPERATION.

B. CMU: UNITS 1500 PSI, MORTAR (TYPE 'S'), GROUT 2000 PSI

C. STEEL
   1. SHAPES AND PLATES: ASTM A36; TUBES: ASTM A500, GRADE B.
   2. MOMENT FRAMES (BEAMS, COLUMNS): ASTM A992 OR A913 (50 ksi) MOMENT FRAMES (PLATES): A572, GRADE 50.
   3. METAL STUDS, SEE S1.4, NOTES
   4. METAL JOISTS, 50 ksi
   5. BOLTS: ASTM A307, U.O.N.
   6. WELDING ELECTRODES: E-70 FOR FULL PEN WELDS USE CHARPY V-NOTCH WIRE, MIN. 20 ft # @ 0°F
   7. METAL DECKING, SEE S1.5

D. WOOD
   1. FRAMING LUMBER - DOUGLAS FIR LARCH
      a. HEADERS, PLATES, JOISTS: NO.1
      b. STUDS, BLOCKING: NO.2
      c. ALL LUMBER IN CONTACT WITH CONCRETE: PRESERVATIVE TREATED DOUGLAS FIR, (NOT CCA-C)
      d. POSTS AND BEAMS: NO.1
   2. PLYWOOD SHEATHING
      a. SHEARWALL PLYWOOD : 1/2 INCH STRUCTURAL I, C-D EXTERIOR, APA RATED 32/16.
      b. ROOF SHEATHING: 5/8 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 32/16
      c. FLOOR SHEATHING: 3/4 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 48/24
   3. FRAMING HARDWARE AND JOIST HANGERS: AS MANUFACTURED BY SIMPSON STRONGTIE CO. OR APPROVED EQUAL. SIMPSON DESIGNATIONS USED. USE NAILS PER I.C.C. APPROVAL FOR EACH DEVICE.
   4. COMMON NAILS, UNLESS OTHERWISE NOTED. SHORT NAILS MAY BE USED PROVIDED THEY HAVE COMMON CODE SPECIFIED MINIMUM EMBEDMENT. ALL NAILING TO BE PER IBC TABLE NO. 2304.9.1 UNLESS NOTED OTHERWISE.
   5. GLU-LAM BEAMS: 24F-V4 (Fb=2400 PSI)
   6. PARALLAM & MICROLLAM BEAMS AND TJI's TO BE FABRICATED BY TRUS JOIST:
      PARALLAM BEAMS: 2.2E (Fb=2900PSI)
      MICROLLAM BEAMS: 2.0E (Fb=2600PSI)
   7. FOR MICROLLAMS SEE CODE EVALUATION: ICC-ES ESR-1387
   8. FOR TJI JOISTS SEE CODE EVALUATION: ICC-ES ESR-1153

IV EXPOSURE TO WEATHER:

A. STEEL:
   1. ALL EXPOSED MEMBERS SHALL BE COATED WITH A ZINC RICH PRIMER.
   2. BOLTS, NUTS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED.

B. WOOD:
   1. ALL EXTERIOR TIMBER AND GLU-LAM BEAMS SHALL BE PRESSURE TREATED (BUT NOT CHROMATED COPPER ARSENATE) OR WOOD OF NATURAL RESISTANCE TO DECAY.
   2. ALL EXTERIOR HANGERS AND OTHER SIMPSON TYPE PRODUCTS SHALL BE GALVANIZED.
   3. ALL PLYWOOD SHALL BE OF AN EXTERIOR GRADE.
   4. METAL CONNECTORS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED w/ MIN. ZINC COATING OF G185.
   5. ALL NAILS & ANCHOR BOLTS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED.

V ABBREVIATIONS

B.N. — BOUNDARY NAILING
DIA. — DIAMETER
E.N. — EDGE NAILING
H.P. — HIGH POINT
L.P. — LOW POINT
LVL — LAMINATED VENEER LUMBER
L.W. — LIGHT WEIGHT
M.L. — MICROLLAM
PLWD — PLYWOOD SHEATHING
PSL — PARALLEL STRAND LUMBER
P.T. — PRESSURE TREATED OR POST-TENSIONED
S.A.D. — SEE ARCHITECTURAL DRAWINGS
S.O.G. — SLAB-ON-GRADE
S.S. — STAINLESS STEEL
T.O. — TOP OF
TYP. — TYPICAL
U.O.N. — UNLESS OTHERWISE NOTED
V.I.F. — VERIFY IN FIELD
W.W.F. — WELDED WIRE FABRIC

SYMBOLS

(E) WALL BELOW
(E) WALL ABOVE
(N) CONC. WALL ABOVE
BRICK OR CMU WALL ABOVE
WOOD SHEARWALL (BELOW)
WOOD JOIST HANGER (HUS TYPE, U.O.N.)
WOOD POST BELOW
WOOD POST ABOVE (OR ABOVE & BELOW)
HOLDOWN @ WOOD POST
STEEL COLUMN ABOVE
STEEL COLUMN BELOW
MOMENT CONNECTION
CONCRETE TOPPING OVER PLYWOOD
CONCRETE TOPPING OVER CORRUGATED METAL DECK
CONCRETE COLUMN ABOVE
CONCRETE COLUMN BELOW w/ DROPCAP
DRILLED CONCRETE PIER
PRECAST, PRESTRESSED CONCRETE PILE
DIAGONAL ABOVE
DIAGONAL BELOW

Exhibit 10: 4 Pages

PROJECT NAME: REMODEL
ADDRESS: 1077 FELL STREET
BLOCK/LOT: ----
CITY: SAN FRANCISCO, CA

DRAWING INDEX:

S1.0 ——— TITLE SHEET
S1.1A ——— TYPICAL WOOD DETAILS
S2 ——— FOUNDATION PLAN, FIRST FLOOR FRAMING PLAN
S3 ——— STRUCTURAL DETAILS

City and County of San Francisco
Department of Building Inspection

London Breed, Mayor
Patrick O'Riordan, Interim Director

Attachment A

SLOPE AND SEISMIC HAZARD ZONE PROTECTION CHECKLIST

A COPY OF THIS DOCUMENT SHALL BE SUBMITTED WITH THE PERMIT APPLICATION

JOB ADDRESS 1077 FELL STREET APPLICATION NO. _____ ADDENDUM NO. ____
OWNER NAME _____ OWNER PHONE NO. (___) _____

1: PROPERTY LOCATION	YES	NO
EARTHQUAKE INDUCED LANDSLIDE AREA ON THE STATE OF CALIFORNIA DEPARTMENT OF CONSERVATION DIVISION OF MINES AND GEOLOGY (CDMG) SEISMIC HAZARD ZONES MAP FOR SAN FRANCISCO, RELEASED NOVEMBER 17, 2000.	☐	☑

2: AVERAGE SLOPE OF PROPERTY	YES	NO
PROPERTY EXCEEDING AN AVERAGE SLOPE OF 4H:1V (25%) GRADE *(APPLICANT WILL NEED TO INCLUDE PLANS ILLUSTRATING SLOPE OF THE PROPERTY AND/OR INCLUDE A SURVEY VERIFYING THE SLOPE OF THE PROPERTY)*	☐	☑

3: PROPOSED CONSTRUCTION	YES	NO
CONSTRUCTION OF NEW BUILDING OR STRUCTURE HAVING OVER 1000 SQFT OF NEW PROJECTED ROOF AREA	☐	☑
HORIZONTAL OR VERTICAL ADDITIONS HAVING OVER 500 SQFT OF NEW PROJECTED ROOF AREA	☐	☑
SHORING	☐	☑
UNDERPINNING	☐	☑
GRADING, INCLUDING EXCAVATION OR FILL, OF OVER 50 CUBIC YARDS OF EARTH MATERIAL	☐	☑
CONSTRUCTION ACTIVITY LISTED BELOW DETERMINED BY THE BUILDING OFFICIAL THAT MAY HAVE A SUBSTANTIAL IMPACT ON THE SLOPE STABILITY:		
RETAINING WALL:	☐	☑
OTHERS: _____	☐	☑

SECTION 4: LICENSED DESIGN PROFESSIONAL VERIFICATION AND SIGNATURES

Under penalty of perjury, I certify that the information provided on this form is based on my personal review of the building and its records, or review by others acting under my direct supervision, and is correct to the best of my knowledge.

Prepared by: JEFFERSON CHEN, P.E.
Engineer/Architect of Record

(415) 626 - 8300 Telephone
jefferson@enertiadesigns.net Email

Signature Date

REGISTERED PROFESSIONAL ENGINEER JEFFERSON MING CHEN C057898 Exp. 06/30/24 CIVIL STATE OF CALIFORNIA

Permit Services Division
49 South Van Ness Avenue, Suite 500 - San Francisco CA 94103
Phone (628) 652-3600 – www.sfdbi.org

INFORMATION SHEET S-19 ATTACHMENT A — Slope Protection Checklist

FOR DBI USE ONLY

ASSIGNMENT OF REVIEW TIER

EXEMPTED: Reports per Section E and Third Party Peer Review Not Required

☐ If the box in Section 1 "Property Location" **AND** the box in Section 2 "Average Slope of Property" are marked "No" **OR** if all the boxes in Section 3 "Proposed Construction" are marked "No", reports per Section E and Third Party Peer Review are exempted by the SSPA.

TIER I: Reports per Section E Required but Third Party Peer Review Not Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property does not lie within any areas of potential landslide hazard, DBI shall require mandatory submittal of reports per Section E only.

TIER II: Reports per Section E and Third Party Peer Review Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property lies in the vicinity of mapped landslides, DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to a third party peer review. At the discretion of the SSPA Review Committee, the peer review may be followed by the establishment of a Structural Advisory Committee (SAC) with the project reassigned to Tier III.

If the DBI Plan Review Engineer (or the SSPA Review Committee, if established), in their discretion, determines from the submitted documents that the project has a substantial impact on the slope stability of the site or creates a potential for earthquake induced landslide hazards, DBI may require that the third party peer review be followed by the establishment of a Structural Advisory Committee (SAC) and re-assigned the project to Tier III.

TIER III: Structural Advisory Committee (SAC) Review

☐ If the box in Section 1 "Property Location" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes", DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to review by a Structural Advisory Committee (SAC), as defined by SFBC Section 105A.6.

Tier assigned by: _____ Phone: (628) _____
DBI Plan Review Engineer

Comment:

City and County of San Francisco
Department of Building Inspection

London N. Breed, Mayor
Patrick O'Riordan, Interim Director

NOTICE

SPECIAL INSPECTION REQUIREMENTS

Please note that the Special Inspections shown on the approved plans and checked on the Special Inspections form issued with the permit are required for this project. The employment of special inspectors is the direct responsibility of the owner or the engineer/architect of record acting as the owner's representative.

These special inspections are required *in addition to* the called inspections performed by the Department of Building Inspection. The name of the special inspector shall be furnished to the district building inspector prior to start of work for which special inspection is required.

For questions regarding the details or extent of required inspection or tests, please call the Plan Checker assigned to this project or **628-652-3407**. If there are any field problems regarding special inspection, please call your District Building Inspector or 628-652-3400 Ext 1.

Before final building inspection is scheduled, documentation of special inspection compliance must be submitted to and approved by the Special Inspection Services staff. To avoid delays in this process, the project owner should request final compliance reports from the architect or engineer of record and/or special inspection agency soon after the conclusion of work requiring special inspection. ***The permit will not be finalized without compliance with the special inspection requirements.***

STRUCTURAL OBSERVATION REQUIREMENTS

Structural observation shall be provided as required per Section 1704.6. **The building permit will not be finalized without compliance with the structural observation requirements.**

Special Inspection Services Contact Information

1. **Telephone: (628) 652-3407**
2. **Email: dbi.specialinspections@sfgov.org**
3. **In person: 49 South Van Ness Ave – Suite 400**

Note: We are moving towards a "paperless" mode of operation. All special inspection submittals, including final letters, may be emailed (preferred) or faxed. We will also be shifting to a paperless fax receipt mode.

Special Inspection Services
49 South Van Ness Ave – Suite 400 – San Francisco CA 94103
Office (628) 652-3407 – www.sfdbi.org

Updated 10/05/2020

SPECIAL INSPECTION AND STRUCTURAL OBSERVATION

A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED STRUCTURAL DRAWING SET

JOB ADDRESS 1077 FELL STREET APPLICATION NO._____ ADDENDUM NO.____

OWNER NAME_____OWNER PHONE NO. (_____)_____

Employment of Special Inspection is the direct responsibility of the OWNER, or the engineer/architect of record acting as the owner's representative. Special inspector shall be one of those as prescribed in Sec. 1704. Name of special inspector shall be furnished to DBI District Inspector prior to start of the work for which the Special Inspection is required. Structural observation shall be performed as provided by Section 1704.6. A preconstruction conference is recommended for owner/builder or designer/builder projects, complex and high-rise projects, and for projects utilizing new processes or materials.

In accordance with Chapter 17 (SFBC), Special Inspection and/or testing is required for the following work:

1. [✓] Concrete (Placement & sampling)
2. [ ] Bolts installed in concrete
3. [ ] Special moment - Resisting concrete frame
4. [✓] Reinforcing steel ~~and prestressing tendons~~
5. **Structural welding:**
   A. Periodic visual inspection
   [ ] Single pass fillet welds 5/16" or smaller
   [ ] Steel deck
   [ ] Welded studs
   [ ] Cold formed studs and joists
   [ ] Stair and railing systems
   [ ] Reinforcing steel
   B. Continuous visual inspection and NDT (Section 1704)
   [ ] All other welding (NDT exception: Fillet weld)
   [ ] Reinforcing steel; and [ ] NDT required
   [ ] Moment-resisting frames
   [ ] Others _____
6. [ ] High-strength bolting
7. [ ] Structural masonry
8. [ ] Reinforced gypsum concrete
9. [ ] Insulating concrete fill
10. [ ] Sprayed-on fireproofing
11. [ ] Piling, drilled piers and caissons
12. [ ] Shotcrete
13. [ ] Special grading, excavation and filling (Geo. Engineered)
14. [ ] Smoke-control system
15. [ ] Demolition
16. [ ] Exterior Facing
17. **Retrofit of unreinforced masonry buildings:**
    [ ] Testing of mortar quality and shear tests
    [ ] Inspection of repointing operations
    [ ] Installation inspection of new shear bolts
    [ ] Pre-installation inspection for embedded
    [ ] Pull/torque tests per SFBC Sec.1607C & 1615C
18. **Bolts Installed in existing concrete or masonry:**
    [ ] Concrete [ ] Masonry
    [ ] Pull/torque tests per SFEBC Sec. 507C & 515C
19. [ ] Shear walls and floor systems used as shear diaphragms
20. [ ] Holdowns
21. **Special cases:**
    [ ] Shoring
    [ ] Underpinning; [ ] Not affecting adjacent property
    [ ] Affecting adjacent property: PA_____
    [ ] Others
22. [ ] Crane safety (Apply to the operation of tower cranes on high-rise building) (Section 1705.22)
23. [ ] Others: "As recommended by professional of record"_____
24. **Structural observation per Sec. 1704.6 (SFBC) for the following:** [ ] Foundations [ ] Steel framing
    [ ] Concrete construction [ ] Masonry construction [✓] Wood framing
    [ ] Other:_____
25. Certification is required for: [ ] Glu-lam components
26. [ ] Firestops in high-rise building

Prepared by: JEFFERSON CHEN, P.E. Phone: (415) 626 - 3800
Engineer/Architect of Record

Required information:
FAX: (415) 701 -0212 Email jefferson@enertiadesigns.net

Review by: _____ Phone: (628) 652-_____
DBI Engineer or Plan Checker

****

APPROVAL (Based on submitted reports.)

_____
DATE DBI Engineer or Plan Checker / Special Inspection Services Staff

QUESTIONS ABOUT SPECIAL INSPECTION AND STRUCTURAL OBSERVATION SHOULD BE DIRECTED TO:
Special Inspection Services (628) 652-3407; or, dbi.specialinspections@sfgov.org

Updated 10/05/2020

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REGISTERED PROFESSIONAL ENGINEER JEFFERSON MING CHEN C057898 Exp. 06/30/24 CIVIL STATE OF CALIFORNIA

	DATE	REVISIONS
1		
2		
3		
4		

TITLE SHEET
GENERAL NOTES

REMODEL
1077 FELL STREET
SAN FRANCISCO, CA

Date: 09/08/23
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet S1.0
Of 4 Sheets

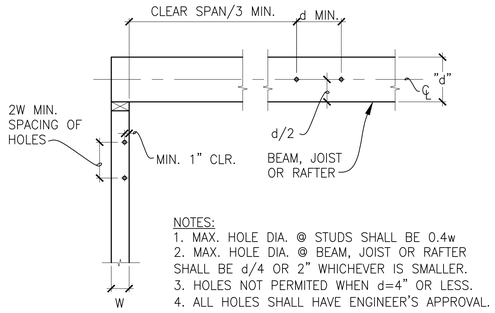
DRAWING NAME: G:\enertia\projects\by-all\1stFL\2nd\WORKS\MUNI\Archi\Working\Sheet\Fellen\Drawing\Plotted\ 2023\1077 Fell Street\Drawing\ Sheet\ 1077 Fell Street\ S1.dwg
PLOT DATE: 09-20-23 PLOTTED BY: dangusnorm

NAILING SCHEDULE (PER CBC 2016, TABLE NO. 2304.10.1)

CONNECTION	NAILING [1]
1. JOIST TO SILL OR GIRDER, TOENAIL	3–8d
2. BRIDGING TO JOIST, TOENAIL EACH END	2–8d
3. 1"X6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2–8d
4. WIDER THAN 1" X 6" SUBFLOOR TO EACH JOIST, FACE NAIL	3–8d
5. 2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2–16d
6. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL	16d AT 16" O.C.
SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	3–16d PER 16"
7. TOP PLATE TO STUD, END NAIL	2–16d
8. STUD TO SOLE PLATE	4–8d, TOENAIL OR 2–16d, END NAIL
9. DOUBLE STUDS, FACE NAIL	16d AT 24" O.C.
10. DOUBLED TOP PLATES, TYPICAL FACE NAIL	16d AT 16" O.C.
DOUBLE TOP PLATES, LAP SPLICE	8–16d
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3–8d
12. RIM JOIST TO TOP PLATE, TOINAIL	8d AT 6" O.C.
13. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2–16d
14. CONTINUOUS HEADER, TWO PIECES	16d AT 16" O.C. ALONG EACH EDGE
15. CEILING JOISTS TO PLATE, TOENAIL	3–8d
16. CONTINUOUS HEADER TO STUD, TOINAIL	4–8d
17. CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3–16d
18. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3–16d
19. RAFTER TO PLATE, TOENAIL	3–8d
20. 1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2–8d
21. 1" X 8" SHEATHING OR LESS TO EACH BEARING, FACE NAIL	2–8d
22. WIDER THAN 1" X 8" SHEATHING TO EACH BEARING, FACE NAIL	3–8d
23. BUILT–UP CORNER STUDS	16d AT 24" O.C.
24. BUILT–UP GIRDER AND BEAMS	20d AT 32" O.C. AT TOP AND BOTTOM AND STAGGERED 2–20d AT ENDS AND AT EACH SPLICE
25. 2" PLANKS	2–16d AT EACH BEARING
26. COLLAR TIE TO RAFTER	3–10d AT FACE NAIL
27. JACK RAFTER TO HIP	2–10d AT TOENAIL AND 2–16d AT FACE NAIL
28. ROOF RAFTER TO 2–BY RIDGE BEAM	2–16d AT TOENAIL AND 2–16d AT FACE NAIL
29. JOIST TO BAND JOIST	3–16d AT FACE NAIL
30. LEDGER STRIP	3–16d AT FACE NAIL AT EACH JOIST
31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD [B] SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING)	
1/2" AND LESS	6d[C,L]
19/32"–3/4"	8d[D] or 6d[E]
7/8"–1"	10d[D] or 8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
COMBINATION SUBFLOOR–UNDERLAYMENT (TO FRAMING):	
3/4" AND LESS	6d[E]
7/8"–1"	8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
32. PANEL SIDING (TO FRAMING):	
1/2" OR LESS	6d[F]
5/8"	8d[F]
33. FIBERBOARD SHEATHING: [G]	
1/2"	6d[D]
25/32"	8d[D]
34. INTERIOR PANELING	
1/4"	4d[J]
3/8"	6d[K]

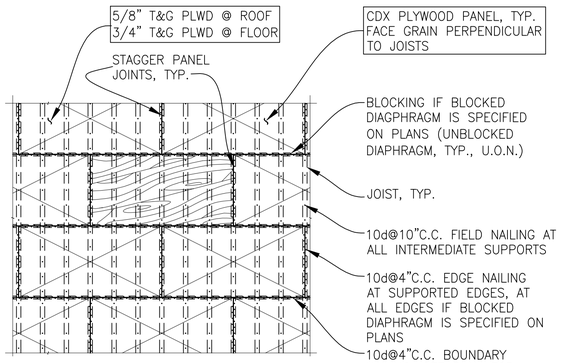
CBC TABLE 2304.10.1 FASTENING SCHEDULE NOTES

A. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED.
B. NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES AT SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLE BOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
C. COMMON OR DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
D. COMMON (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
E. DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
F. CORROSION–RESISTANT SIDING (6D – 1⅞" X 0.106"; 8D – 2⅜" X 0.128") OR CASING (6D – 2" X 0.099"; 8D – 2½" X 0.113") NAIL.
G. FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS.
H. CORROSION–RESISTANT ROOFING NAILS WITH 7/16–INCH–DIAMETER HEAD AND 1½–INCH LENGTH FOR ½–INCH SHEATHING AND 1¾–INCH LENGTH FOR 25/32–INCH SHEATHING.
I. CORROSION–RESISTANT STAPLES WITH NOMINAL 7/16–INCH CROWN AND 1⅛–INCH LENGTH FOR ½–INCH SHEATHING AND 1½–INCH LENGTH FOR 25/32–INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
J. CASING (1½" X 0.080") OR FINISH (1½" X 0.072") NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
K. PANEL SUPPORTS AT 24 INCHES. CASING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
L. FOR ROOF SHEATHING APPLICATIONS, 8D NAILS (2½" X 0.113") ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.
M. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16 INCH.
N. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.
O. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS SUB FLOOR AND WALL SHEATHING AND 3 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING.
P. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.



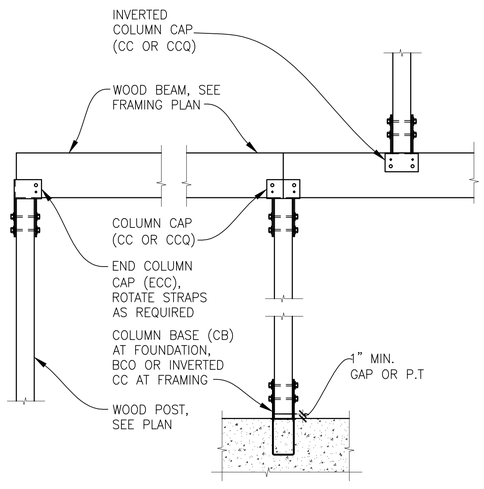
NOTES:
1. MAX. HOLE DIA. @ STUDS SHALL BE 0.4w
2. MAX. HOLE DIA. @ BEAM, JOIST OR RAFTER SHALL BE d/4 OR 2" WHICHEVER IS SMALLER.
3. HOLES NOT PERMITTED WHEN d=4" OR LESS.
4. ALL HOLES SHALL HAVE ENGINEER'S APPROVAL.

1 TYPICAL HOLES IN BEAMS, JOISTS, RAFTERS AND STUDS
SCALE: 3/4" = 1'–0"

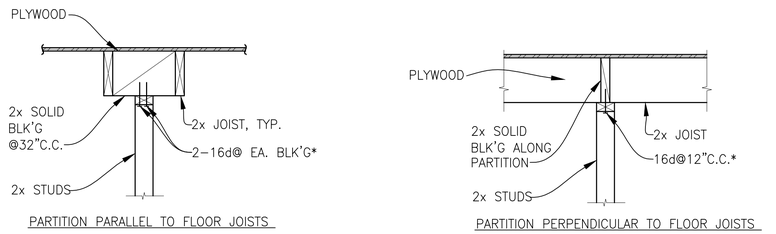


NOTES:
1. SEE PLANS FOR MORE INFORMATION
2. PLYWOOD = WOOD STRUCTURAL PANEL

2 TYPICAL PLYWOOD DIAPHRAGM SHEATHING (PLAN VIEW)
SCALE: 3/4" = 1'–0"



3 TYPICAL BEAM TO POST CONNECTION
SCALE: 3/4" = 1'–0"

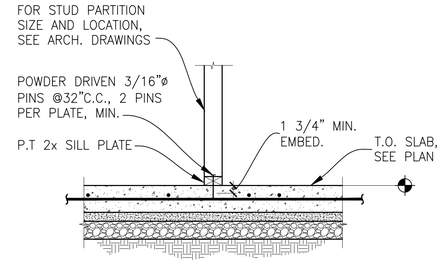


PARTITION PARALLEL TO FLOOR JOISTS

PARTITION PERPENDICULAR TO FLOOR JOISTS

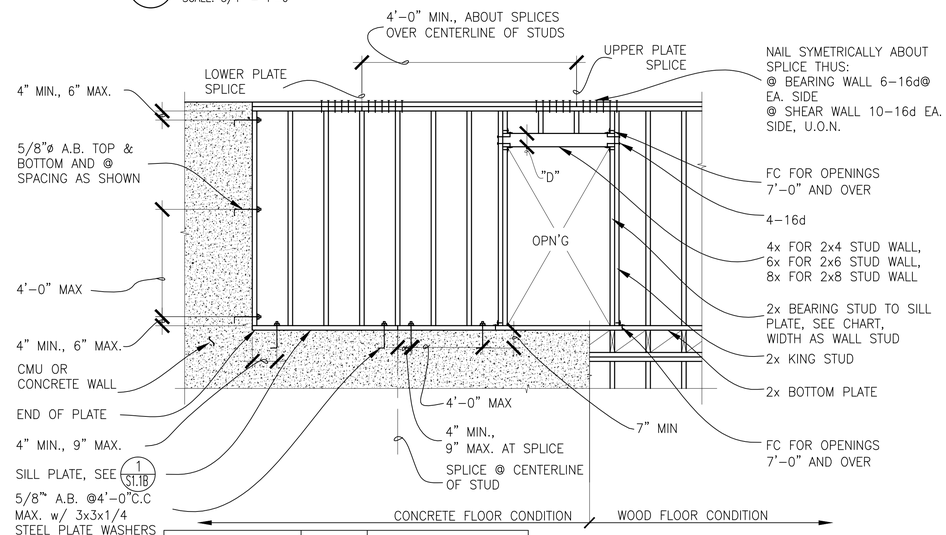
*OPTION: PROVIDE STC CLIP TO ROOF TRUSS OR BEAM

4 TYPICAL NON–BEARING / NON–SHEARWALL SUPPORT @ ROOF
SCALE: 3/4" = 1'–0"



NOTES:
1. FOR SLAB THICKNESS, REINFORCEMENT AND BASE MATERIALS SEE PLAN.
2. AT P.T. SLAB PROVIDE MAX. 3/4" EMBEDMENT.

5 TYPICAL NON–BEARING / NON–SHEARWALL CONNECTION AT CONCRETE SLAB
SCALE: 3/4" = 1'–0"



HEADER SPANS "S"	"D" MIN.	ADDN'L BEARING STUDS
S ⩽ 4'–0"	5 1/2"	0
4'–0" < S ⩽ 8'–0"	7 1/4"	1
8'–0" < S ⩽ 10'–0"	9 1/4"	2
S > 10'–0"	SEE PLAN	3

NOTE:
THIS DETAIL IS NOT FOR SHEARWALLS, SEE 1 S1.1B

6 TYPICAL FRAMING @ OPENINGS, TOP PLATE SPLICES, ETC.
SCALE: 3/4" = 1'–0"

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PROFESSIONAL ENGINEER – JASON JI CHEN – C057898 – REG. 05/2024 – CIVIL – STATE OF CALIFORNIA

	DATE	REVISIONS
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TYPICAL WOOD DETAILS

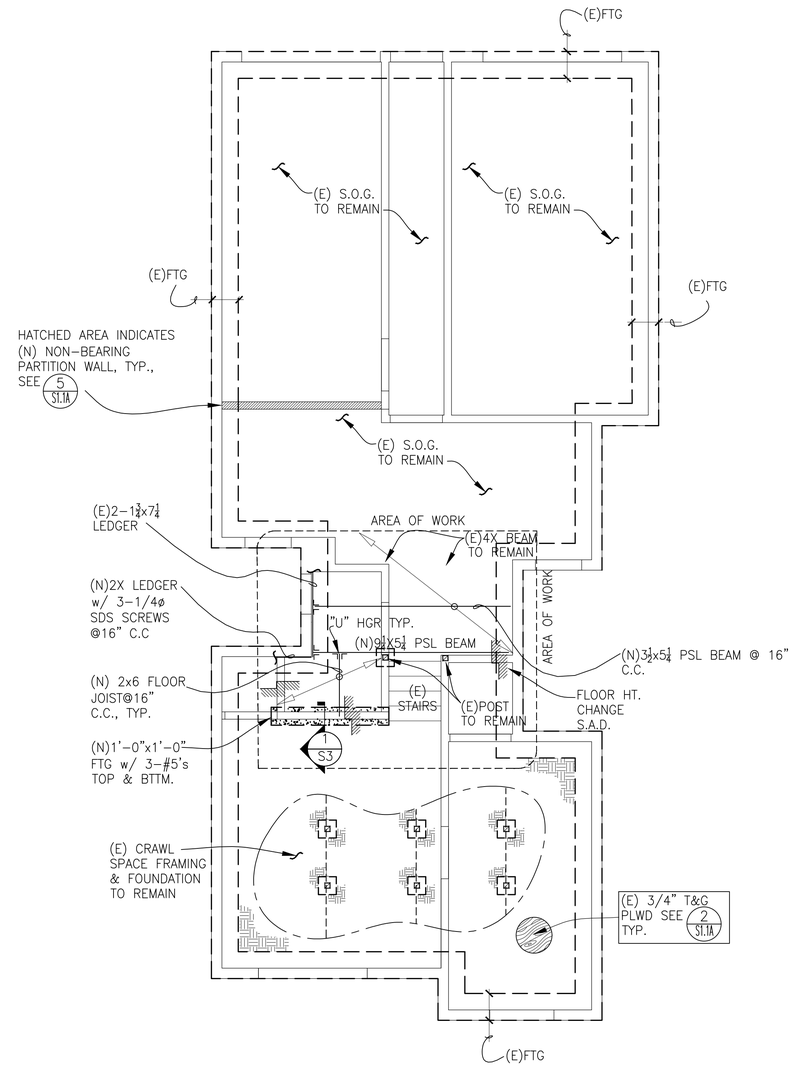
REMODEL

1077 FELL STREET
SAN FRANCISCO, CA

Date: 09/08/23
Scale: AS SHOWN
Drawn By: DM
Job No: 23059

Sheet S1.1A
Of 4 Sheets

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PLOT DATE: 09-20-23 PLOTTED BY: dangulsonm



FIRST FLOOR / FOUNDATION PLAN

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

NORTH

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REGISTERED PROFESSIONAL ENGINEER
JASON JIECHEN
C057898
REN 05/2024
CIVIL
STATE OF CALIFORNIA

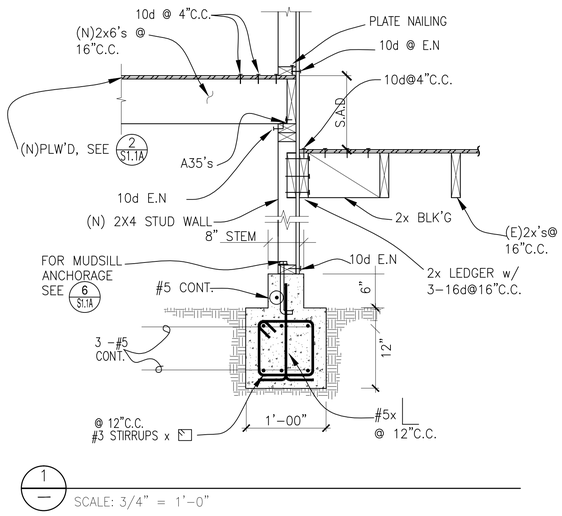
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REMODEL

1077 FELL STREET
SAN FRANCISCO, CA

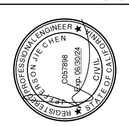
Date:	09/25/23
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Drawn By:	DM
Job No:	23059
Sheet	S2
Of	4 Sheets

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PLOT DATE: 09-25-23 PLOTTED BY: darquisionm



1 — SCALE: 3/4" = 1'-0"

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SAN FRANCISCO, CA 94103



	DATE	REVISIONS
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STRUCTURAL DETAILS

REMODEL

1077 FELL STREET
SAN FRANCISCO, CA

Date:	09/18/23
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	S3
Of	4 Sheets

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PLOT DATE: 09-21-23 PLOTTED BY: darquisonm

EXHIBIT 10

Gmail soumya sastry <soumya.sastry@gmail.com>

Update

Scot Peterson <scot@veloxsf.com> Tue, Oct 10, 2023 at 12:40 PM
To: soumya sastry <soumya.sastry@gmail.com>

The footings and beams that were installed under the bath and living area were not to code when the place was remodeled without permits the last time. We are replacing the floor joist structure under this area with joists that are strong enough to span over these areas without needing the faulty footings and beams to support it. We are adding one new 7' long footing to pick up the load from areas that can't span from original foundation to original foundation.

If you want, we can meet onsite to review the work.

Thanks



Scot Peterson
Project Manager
M: (415) 699-9571
scot@veloxsf.com

On Tue, Oct 10, 2023 at 12:31 PM soumya sastry <soumya.sastry@gmail.com> wrote:

> Thanks, can you elaborate on what is wrong with the foundation?
>
> On Tue, Oct 10, 2023 at 12:14 PM Scot Peterson <scot@veloxsf.com> wrote:
>
> > Hi Soumya,
> >
> > We will need to review the work you wanted done with Jose. We haven't inspected any of the piping above or around the area above Steven's deck. We can certainly check it out. I would like to review this work in a couple of weeks after Jose has had a chance to get moving
> >
> > Regarding the foundation work: We are not doing any work on the perimeter foundations that support the perimeter load bearing walls. We are not doing any work on the foundations that support the center load bearing walls. We are adding a new footing that supports the floor under Steven's bath and dining room areas. We are also having to rebuild the whole floor (what's not on concrete slab) under his bathroom and dining room area.
> >
> > To rebuild the floor structure to code, we do have to open up a 5 foot section of wall under your small deck that is close to the garage. We will have to temporarily shore up this wall and insert the new floor joists so they rest on top of the existing foundation.
> >
> > I have attached the plans from the engineer. The city has approved & permitted them. The last two pages detain the work for the new footing and the floor rebuild.
> >
> > Please let me know if you have any questions.
> >
> > Thanks
> > Scot
> >
> > 
> >
> >
> > Scot Peterson
> > Project Manager

M: (415) 699-9571
scot@veloxsf.com

On Thu, Oct 5, 2023 at 12:28 PM soumya sastry <soumya.sastry@gmail.com> wrote:

Hi, Scot,

1. do you have anyone in mind that could do the work we went over? Also, I think that some of the piping on the outside of the house (like above steven's deck) needs to be replaced.

2. Could you fill me in on some of the details of the foundation work?

thanks so much

On Mon, Aug 7, 2023 at 10:33 AM soumya sastry <soumya.sastry@gmail.com> wrote:

Oh no. How crazy.

On Mon, Aug 7, 2023 at 10:23 AM Scot Peterson <scot@veloxsf.com> wrote:

Hi Soumya,

We had to let Rosario go due to poor performance on another project. I am working to get another team started on the project ASAP. When I have this in place I will work with them to get your quote out ASAP.

Thanks
Scot

VELOX
DESIGN + CONSTRUCTION

Scot Peterson
Project Manager
M: (415) 699-9571
scot@veloxsf.com

On Mon, Aug 7, 2023 at 10:03 AM soumya sastry <soumya.sastry@gmail.com> wrote:

Hi Scott, is there an update on the work that we discussed? Thank you so much.

EXHIBIT 11

Exhibit 11: 1 page- HOA comments on only 1 page that was provided to the HOA for Architectural Plan Review out of 14 sheets

CONTRUCTION NOTES

1. CONTRACTOR IS TO VERIFY ALL (E) DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION.
2. CARE SHALL BE TAKEN TO ELIMINATE DAMAGE TO (E) MATERIALS AND SURFACES DURING CONSTRUCTION. ANY DAMAGES TO (E) CONSTRUCTION SHALL BE REPLACED OR REPAIRED AT NO ADDITIONAL COST.
3. CONTRACTOR SHALL REPAIR ANY DAMAGE TO (E) WALLS AND FLOORS CAUSED BY DEMOLITION OF (E) PARTITIONS & CEILING.
4. ALL DIMENSIONS ARE TO FACE OF FINISH OR CENTERLINE, U.N.O.
5. ALL BLOCKING AND FURRING SHALL BE FIRE TREATED AS REQUIRED BY BUILDING CODE.
6. ALL PARTITIONS ABUTTING EXISTING BUILDING CONSTRUCTION SHALL ALIGN FINISH FACE TO FINISH FACE U.N.O.
7. ALL PARTITIONS SHALL BE BRACED PER THE REQUIREMENTS OF CURRENT LOCAL SEISMIC CODE.
8. ALL DOORS TO BE UNDERCUT AS REQUIRED TO CLEAR FINISH FLOOR BY 1/4".
9. ALL WORK TO BE INSTALLED PLUMB, LEVEL, SQUARE, AND TRUE AND IN PROPER ALIGNMENT.
10. CONTRACTOR TO PROTECT FINISHES IN PATH OF TRAVEL TO AREA OF WORK.

PLUMBING NOTES

P1. Gas vent terminations shall meet the requirements of CMC 802.6 & SFMC 802.6.2.

P2. Combustion air shall meet the requirements of CMC Chapter 7.

P3. Environmental air ducts shall terminate 3 feet from the property line and 3 feet from openings into the building per CMC 504.5 and provide with back-draft dampers per CMC Table 504.1.

P4. Clothes dryer exhaust shall be a minimum 4", terminate to the outside of the building, shall be equipped with a back-draft damper and meet the requirements of CMC 504.3. Provide 100 sq. in. minimum make-up air opening for domestic dryers.

P5. 100% of the construction waste generated by this project shall be recycled or salvaged for use.

P6. Plastic Plumbing Pipe shall not be used for domestic water supply or sanitary waste system within the building.

P7. Shower and Tub-Shower combinations shall be pressure balanced or thermostatic mixing type control valves per CPC 418.

P8. Shower shall be 1024 sq. in. Min. Must encompass a 30" circle. Shower door Min. 22" clear opening.

P9. Control valves and Showerheads shall be located on sidewall of shower compartment or otherwise arranged so that the showerhead does not discharge directly at the entrance to the compartment so that the bather can adjust valves prior to stepping into the shower spray.

P10. Minimum 26 gage steel heating supply ducts shall be installed between the garage and new habitable spaces.

P11. Provide insulation on all new domestic hot water piping in new accessory units, rooms down additions and new buildings. The insulation shall be the same thickness of the water piping up to 2" water piping size.

P12. Water Heater shall be raised 18" above the Floor.

P13. Seismically strap the water heater with two straps (one 1/3 down from the top of the tank and one strap 4" above the controls)

P14. R-6.0 duct insulation shall be installed if 40 feet or less of new ducts are installed in unconditioned space.

P15. 1 inch insulation shall be installed on first 5 feet of cold water pipes at the water heater.

P16. All interior spaces intended for human occupancy shall be provided with space heating per CBC 1204.1.

EGRESS WINDOW REQUIREMENTS

A finished sill height above the finished floor of 44" or less.
A minimum opening of 5.7 square feet net clear area.
A minimum net clear opening dimension of 20" in width.
A minimum net clear opening dimension of 24" in height.

WINDOW TYPE ABBREVIATION

DH: DOUBLE HUNG
CS: CASEMENT
FX: FIXED
SL: SLIDDER

WATER CONSERVATION REQUIREMENTS

W1. Water closets shall not exceed 1.28 gallons per effective flush.

W2. Single showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi.

W3. Multiple showerheads serving one shower shall have a combined flow rate of not more than 1.8 gallons per minute at 80 psi.

W4. Bathroom faucets shall have a maximum flow rate of not more than 1.2 gallons per minute at 60 psi.

W5. Maximum water factor equal to or less than 6.0 for clothes washers.

WALLS AND INTERIOR PARTITIONS, WOOD FRAMED

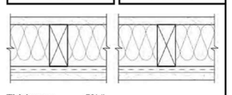
GA FILE NO. WP 3242	GENERIC	1 HOUR FIRE	50 to 54 STC SOUND

GYPSUM WALLBOARD, RESILIENT CHANNELS, MINERAL OR GLASS FIBER INSULATION, WOOD STUDS

Resilient channels 16" o.c. attached at right angles to ONE SIDE of 2 x 4 wood studs 24" o.c. with 1¼" Type S drywall screws. One layer ⅝" type X gypsum wallboard or gypsum veneer base applied at right angles to channels with 1" Type S drywall screws 8" o.c. with vertical joints located midway between studs. 3" mineral or glass fiber insulation in stud space.

OPPOSITE SIDE: One layer ⅝" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to studs with 6d cement coated nails, 1⅞" long, 0.0915" shank, 15/64" heads, 7" o.c.

Vertical joints staggered 24" on opposite sides. **(LOAD-BEARING)**



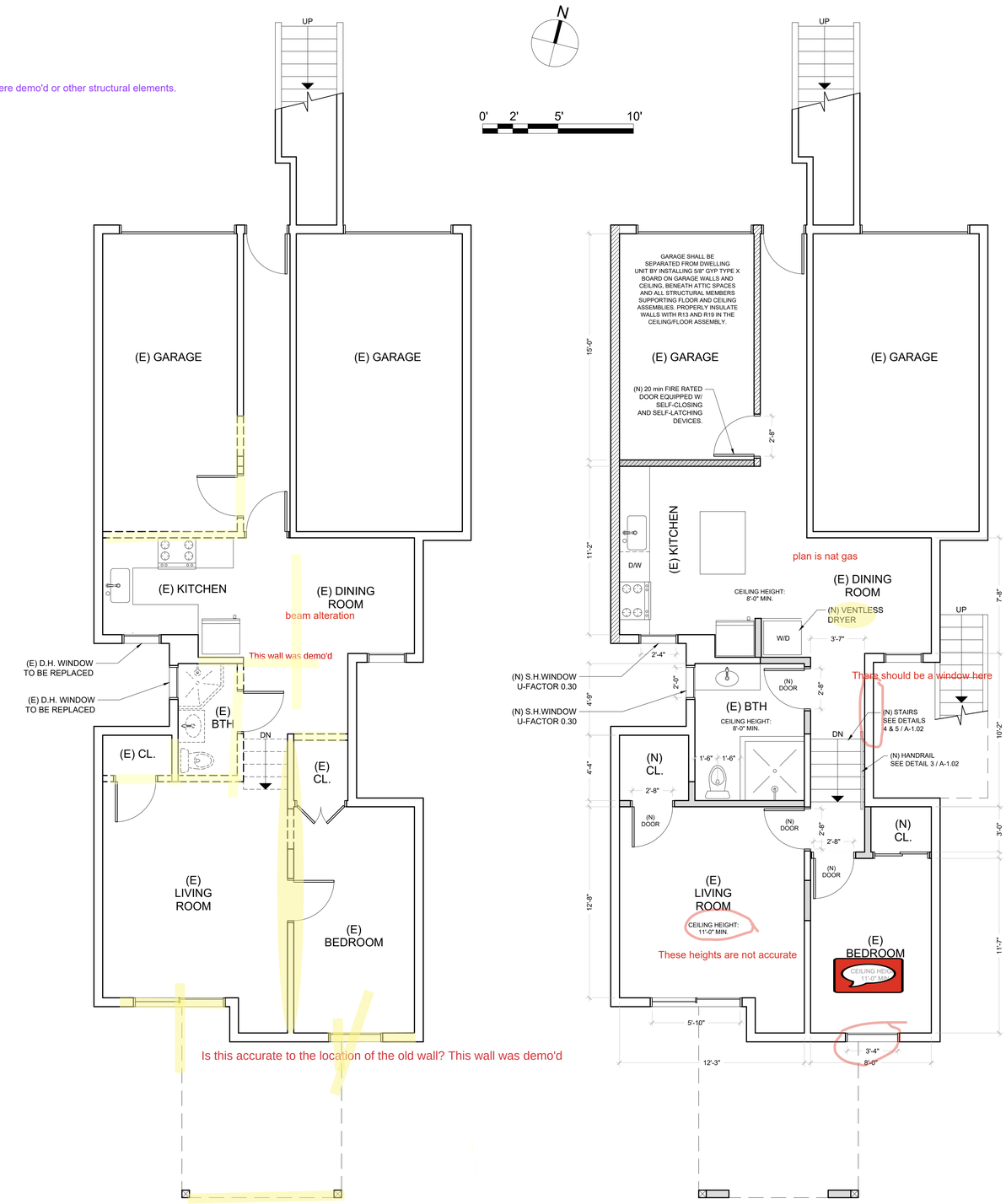
Thickness: 5³/₈"
Approx. Weight: 7 psf
Fire Test: Based on UL R14196, 05NK05371, 2-15-05, UL Design U309
Sound Test: NRCC TL 93-096, IRC-IR-761, 3/96

3 FIRE RATED WALL

WALL TYPE

- EXISTING WALL
- DEMO WALL
- SOFFIT
- NEW WALL
- 1 HOUR FIRE RATED WALL

Highlights are walls that were demo'd or other structural elements.



1 FIRST FLOOR PLAN - EXISTING
1/4" = 1'-0"

2 FIRST FLOOR PLAN - NEW
1/4" = 1'-0"

Full set not provided- only one sheet.

PROJECT ADDRESS
1077 FELL ST,
SAN FRANCISCO,
CA 94117

ARL|DESIGN
ARIEL R LORENZALE
607 ELMIRA RD, #249,
VACAVILLE, CA 95687
415-505-5288
ariel@arldesigner.com

VELOX
DESIGN & CONSTRUCTION
442 HAIGHT ST.
SAN FRANCISCO, CA 94117
415-416-0177
doug@veloxsf.com

REVISIONS

No	date	by

drawn: A. Lorenzale
checked:
date: 6/2/2025
scale: 1/4" = 1'-0"
project No: 0445
drawing title

FLOOR PLANS EXISTING AND NEW

sheet
A-1.01
of 14 sheets.

EXHIBIT 12

Gmail

soumya sastry <soumya.sastry@gmail.com>

Exhibit 12: 5 Pages- Dec 2023 Velox Description of Work, Sept 2024 building was unsafe.

Velox structural work and Velox's commitment as stated by velox.

6 messages

soumya sastry <soumya.sastry@gmail.com> Sat, Sep 14, 2024 at 6:40 PM
To: Doug Burrows <Doug@veloxsf.com>, Steven Huang <thestevenhuang@gmail.com>, Ariel Lorenzale <ariel@veloxsf.com>, "Eng. Jefferson Chen" <jefferson@enertiadesigns.net>, Darquison Martins <darquison@enertiadesigns.net>, haraprasad sastry <haraprasadsastry@yahoo.com>, Rathna sastry <rathnasas@yahoo.com>

Doug, Jefferson, Darquison, Ariel, and Steven,

Here is the best email that I can find from Velox describing the work that Velox is planning. @Doug Burrows you were cc'd, so were aware of the situation. Denial of awareness is not reasonable, since Steven had told be in July that you were worried about Velox's ability to do the work now, I told @Steven Huang that all changes from the plan needed to be discussed with me and called Doug, who didn't get back to me about that. I then asked Darquison about this, who told me that it was included in the plans submitted to the city, though he did not understand my question as it was out of context for him, which I appreciate. Therefore I assumed that this continued to be the plan.

I have copied some of the key points below as well as forwarding the email. We need to discuss all of that. I continue to be disappointed about the communication from Velox and will need to have a thorough discussion about this. My trust is low, **especially since Doug told me Friday that Velox has left our building (with me and my son inside) in a weakened and compromised position for nine months.**

- "We will not be changing the elevations or plumb of your un**it, just nudging it sideways 2.5 - 3 inches at the rear of the building**. This will straighten Stevens walls and properly realign the building on it's vertical axis. **Once the lower walls are straitened, we will lock the building in place with blocking and plywood shearing that goes clear down to the original brick foundations.** This alone will be a major improvement to the strength and stability of the building. Unfortunately, anchoring the sheared wall to the brick foundation is not possible (the anchors will just rip out of the old bricks). We are proposing that we pour a new footing inside of the old brick foundation in Steven's new office and anchor a second shear wall down to it.

I am available Monday 12-1 for sure, and could be available earlier.

---------- Forwarded message ---------
From: **Scot Peterson** <scot@veloxsf.com>
Date: Tue, Dec 12, 2023 at 5:05 AM
Subject: Re: Velox support if damage is done to 1075 Fell or HOA
To: soumya sastry <soumya.sastry@gmail.com>, Wendy Christensen <wendy@veloxsf.com>
Cc: <Doug@veloxsf.com>, Steven Huang <thestevenhuang@gmail.com>

Hi Soumya,

I can answer these questions for you, but first I owe you and your handyman an apology.

I am sorry for the tone I took in person and in the backyard. [redacted]

With regards to the potential damage to your unit and who would be responsible, Velox would be responsible. I'll get back to this in a minute but let me explain a few things.

Your unit is fairly square. It is Steven's unit that is wracked to one side. We will not be changing the elevations or plumb of your unit, just nudging it sideways 2.5 - 3 inches at the rear of the building. This will straighten Stevens walls and properly realign the building on it's vertical axis. Once the lower walls are straitened, we will lock the building in place with blocking and plywood shearing that goes clear down to the original brick foundations. This alone will be a major improvement to the strength and stability of the building. Unfortunately, anchoring the sheared wall to the brick foundation is not possible (the anchors will just rip out of the old bricks). We are proposing that we pour a new footing inside of the old brick foundation in Steven's new office and anchor a second shear wall down to it. This will hold up in an earthquake. We are also recommending installing a new footing under your back upper extension over the deck and then properly shearing this structure. We are already in the process of building new footings at the back wall of Steven's new bathroom and are planning on installing a footing and shear wall between Steven's garage and kitchen to stabilize the front of the structure, which as built is technically a soft story. Our engineer has assured me that the new footings and shear walls at these four locations will provide strong earthquake protection and prevent the building from slumping over again. In brief, this is the path we are navigating to ensure the future safety and stability of the building. Our engineer, the architect and the city inspector that came in for a structural pre inspection are all very concerned about the safety of the structure. With the building already shifted off it's vertical axis and having next to no proper shearing, the lower walls could simply slump further over and collapse in a bad earthquake. We are all concerned for your and Steven's safety and for the resale value of the property. This work will improve the value of your property and ensure the safety of the structure.

I should have pricing from the engineer for his work to do supporting calculations & drawings by Wednesday. When and if this is approved, we will have approved structural plans in a matter of days. He has already verbally approved the plan I described above after his recent site visit. I have pricing coming in today from our concrete and structural contractor. So, by the end of the week I will be able to provide you with a quote for the engineering and architectural work and the actual execution of the plan.

In the meantime, I will send you my drawings detailing exactly where this work would be executed.

All of this work is relatively cost effective to do at his point in time, since Stevens unit is striped bare. If it were to be executed on a finished structure, the cost would be close to double.

Getting back to potential damage to your unit. The only thing we would possibly anticipate might be a bit of plaster cracking. This is easily repaired with drywall mud and paint. From my recollection, your bathroom and kitchen don't have extensive tile on the wall. The floors are at low risk for cracking. We would address these potential minor issues first by photographing and performing a detailed inspection of all of the surfaces in your unit before any structural work was performed. We would reinspect and photograph it after the structural work was complete. We will provide a contingency quote and plan for dealing with these issues in the unlikely event that they happen.

I am working diligently to get you all of the info and documentation you require as soon as possible. We will provide hard and digital copies of all plans and documentation.

If you are available over the weekend, I could meet with you at our office to review plans, documentation and pricing. Doug isn't available on the weekends, but could probably come by with me one evening this week to meet with you.

Stay tuned & thanks for your patience with this process.

Sincerely

Scot

VELOX
DESIGN + CONSTRUCTION

Scot Peterson
Project Manager
M: (415) 699-9571

scot@veloxsf.com

On Mon, Dec 11, 2023 at 9:43 PM soumya sastry <soumya.sastry@gmail.com> wrote:

> Hi Doug,
>
> I would like to understand your responsibility if something happens to my unit or the house as a result of the remodeling work. For example, Scot told me that he is going "fix" some tilt in Steven's unit regardless. As we have emailed separately, I need to give permission for that if it is structural.
>
> My concern is what if that work causes something else- like a crack in my unit or somewhere. There is no contract with me. How am I covered and held harmless? I would like the response in writing.
>
> Thanks, Soumya

Steven Huang <thestevenhuang@gmail.com> Sat, Sep 14, 2024 at 8:32 PM
To: soumya sastry <soumya.sastry@gmail.com>
Cc: Doug Burrows <Doug@veloxsf.com>, Ariel Lorenzale <ariel@veloxsf.com>, "Eng. Jefferson Chen" <jefferson@enertiadesigns.net>, Darquison Martins <darquison@enertiadesigns.net>, haraprasad sastry <haraprasadsastry@yahoo.com>, Rathna sastry <rathnasas@yahoo.com>

Hi all,

Does Monday (9/16) 12-1pm work for folks? I can send out a zoom meeting link if it does. I know that's short notice since I don't expect people to be reading email on weekends – I'm also available Friday afternoon if Monday doesn't work.

Since the most recent meeting was in Spanish, I don't have a sense of where we stand at the moment and would love an update. But I also wanted to share my POV for the record:

- Some context around Scot's email from December: Scot wanted to straighten the building which we both didn't want to do at first. Soumya was eventually convinced this was a good time to invest in the house and the ROI was worth it, as Scot's quote was under half of what our 2nd opinion said it could be. I was eventually brought along too! I still had concerns about risk/need but I was happy to be a team player.
- In the subsequent months until Scot's death, Soumya and I haven't received enough communication or updates about what was in the plans and what wasn't. For example, I also initially thought the building straightening was in the plans (until Doug told me otherwise). Unfortunately, we all know why this communication broke down. [redacted] I know this applies to all of us, not just me and Soumya.
- I know Darquison, Ariel, and Jefferson have also had to deal with the instability of situations left by Scot. Thank you for helping Doug, Soumya and I through this phase that I know is costing you time and energy. This is not your fault and I so appreciate you for understanding the situation we're in. I respect your expertise and counsel; I am comfortable with the city-approved plans and am excited that our building will be stronger than before.
- When I started this project, I knew it was going to be frustrating, it would be disruptive, and I accepted that when I started -- I signed up for this. Soumya, however, didn't sign up for any of this. I got the ball rolling without Soumya's input in the beginning phase because I didn't anticipate any structural work being done. Soumya never chose Scot, or Velox, or any of us. So I have the utmost empathy for the situation that I have put her in – and left our home in its current state of affairs. I think that's important context to illuminate why we must bring Soumya up to speed on where we are today and the plan moving forward.
- Soumya – I affirm that you deserve to feel comfortable with the plan. We can't move forward without your understanding and support – that's fact. Please let us know your concerns coming out of the last meeting (and sorry if I'm the main person out of the loop here - I haven't gotten an update on the last meeting in Spanish)
- My request for all of us, as I know all have a right to feel frustrated here: remember that we all want the same thing in the end – a strong, finished house. I appreciate everybody's time, money and energy into getting this project in a better position, and hope this context helps create more shared understanding. I'm looking forward to our next call.

I hope everybody is having a good weekend,

Steven

[Quoted text hidden]

Doug Burrows <doug@veloxsf.com> Mon, Sep 16, 2024 at 11:11 AM
To: Steven Huang <thestevenhuang@gmail.com>
Cc: soumya sastry <soumya.sastry@gmail.com>, Ariel Lorenzale <ariel@veloxsf.com>, "Eng. Jefferson Chen" <jefferson@enertiadesigns.net>, Darquison Martins <darquison@enertiadesigns.net>, haraprasad sastry

<haraprasadsastry@yahoo.com>, Rathna sastry <rathnasas@yahoo.com>

Steven,

Good morning, I am available for a call. I do apologize if anyone was misled. That was not our intention. The type of work described in "building straightening" there's not something that Velox or 98% of the contractors in California performs. However we do perform seismic retrofits as well as voluntary.

The Velox proposal did not include "straightening" work. We have approved plans, permits with the city of San Francisco and we're happy to get started as soon as you are.

Thank you,
[Quoted text hidden]

--
Douglas J Burrows
Velox Design & Construction
442 Haight St San Francisco,
CA 94117
CSLB lic #1059825
Ph: (415) 416-0177
Web: www.veloxsf.com/projects

We build out commercial Spaces, take a look at the brand Mr. Charlies Thats us!

Our latest VELOX projects sold below

166 Meadowbrook Dr San Francisco

1648 Sweetwood Dr., Daly city

363 Scott St San Francisco

Thank you,

LIC 1059825
Business Logo

---

companyLogoSmall.png
8K

---

soumya sastry <soumya.sastry@gmail.com> Mon, Sep 16, 2024 at 11:14 AM
To: Doug Burrows <doug@veloxsf.com>
Cc: Steven Huang <thestevenhuang@gmail.com>, Ariel Lorenzale <ariel@veloxsf.com>, "Eng. Jefferson Chen" <jefferson@enertiadesigns.net>, Darquison Martins <darquison@enertiadesigns.net>, haraprasad sastry <haraprasadsastry@yahoo.com>, Rathna sastry <rathnasas@yahoo.com>

I just called Jefferson and we had a good conversation. I feel comfortable with the process and understand that straightening is only for aesthetic purposes, which is not necessary for me.
[Quoted text hidden]

---

soumya sastry <soumya.sastry@gmail.com> Thu, May 29, 2025 at 10:48 AM
To: Kathleen Gevertz <kathleen@kagdesigns.com>, haraprasad sastry <haraprasadsastry@yahoo.com>

Here is some history.
[Quoted text hidden]

---

soumya sastry <soumya.sastry@gmail.com> Thu, Jun 19, 2025 at 10:06 AM

To: det@dpdoringse.com

more background about how the work was originally described to me.

[Quoted text hidden]

EXHIBIT 13

Exhibit 13: 1 Page- December 2023 Prelim Seismic Plan from Velox

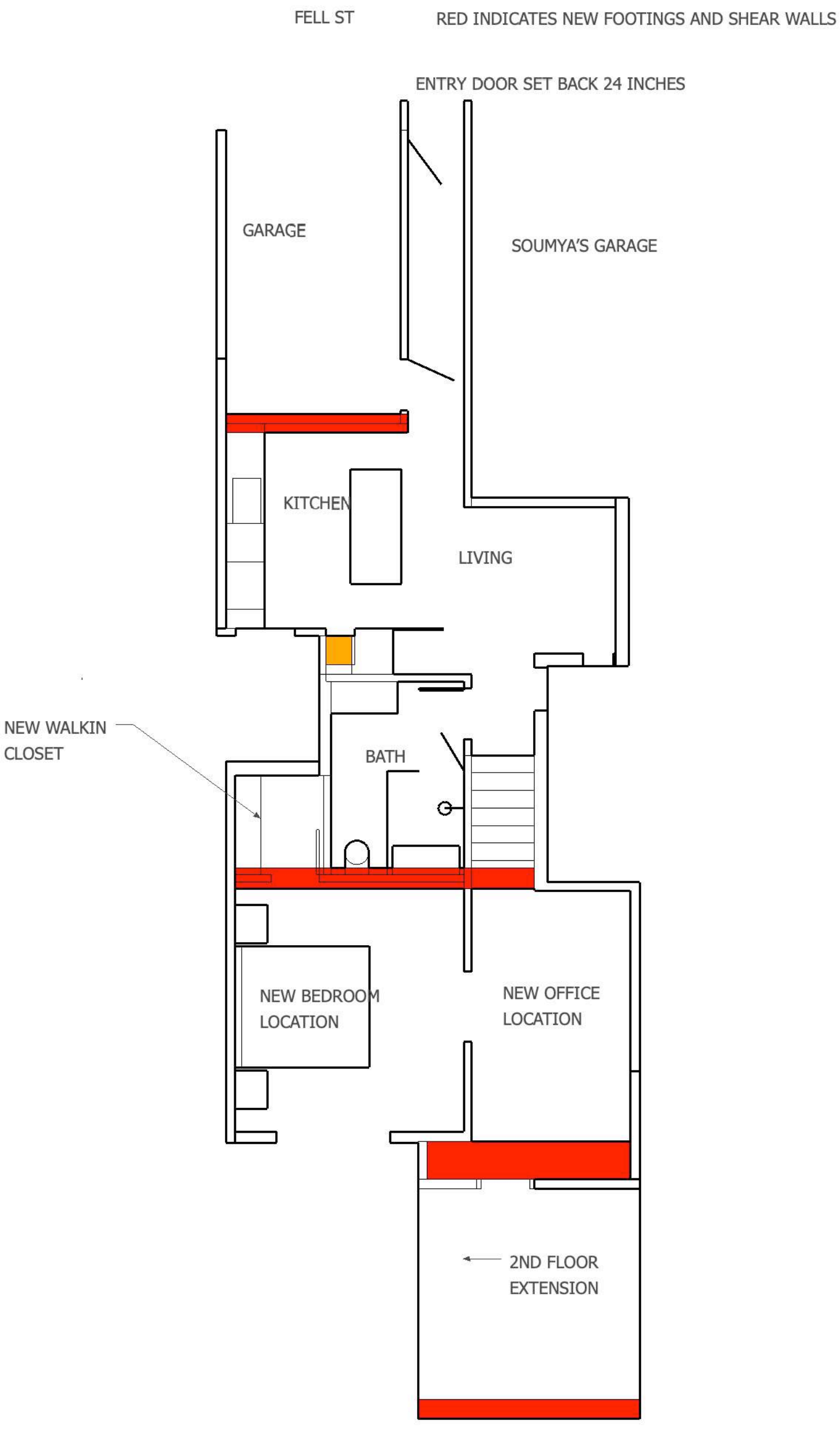


EXHIBIT 14

Exhibit 14: ~~3~~ pages - Velox description of Seismic for HOA

From: Scot Peterson <scot@veloxsf.com>
Sent: Friday, February 9, 2024 7:07 PM
To: soumya sastry
Subject: Fwd: [redacted]

---------- Forwarded message ---------
From: **Scot Peterson** <scot@veloxsf.com>
Date: Fri, Feb 9, 2024 at 2:54 PM
[redacted email]
Cc: Doug Burrows <doug@veloxsf.com>, Steven Huang <thestevenhuang@gmail.com>, Wendy Christensen <wendy@veloxsf.com>

Hi Jordan,

I am copying the line items from quote 2949 and will add more detailed description under each.

SEISMIC UPGRADES
KITCHEN--CONCRETE & SHEAR WALL
Excavate to install strip footing between garage and kitchen
Form, install rebar & pour concrete for 12” x 12” x 10’ long strip footing w/ stem wall
Reinforce structural connections
Construct new shear wall

BEDROOM/BATHROOM-SHEAR WALL & NEW FOOTING
Excavate for new footing between the bathroom and the office
Form, install rebar & pour concrete for 12” x 12” x 16’6" long strip footing w/ stem wall
Reinforce structural connections
Construct new shear wall approx 8' long

EXTERIOR/OFFICE WALL- CONCRETE & SHEAR WALL
Excavate for new footing at back office/exterior wall
Block and stabilize original exterior wall
Reinforce structural connections
Prepare original brick foundation for structural epoxy doweling and bonding with concrete
Form, install rebar & pour concrete for 12” x 12” x 10' 7"" long strip footing w/ stem wall
Construct new interior shear wall.

2ND FLOOR EXTENSION- CONCRETE & MOMENT FRAME
Shore and brace structure as needed
Excavate for new exterior footing
Form, install rebar & pour concrete for 24” x 24” x 11' 6" long strip footing w/ stem walls
Reinforce structural connections

Construct 2 strong walls
Waterproof strong walls
Apply stucco to strong walls

2ND FLOOR EXTENSION- ADD STEEL STRONG TIE STRAPPING TO CONNECT 2ND FLOOR EXTENSION FLOOR JOISTS THROUGH TO INTERIOR JOIST STRUCTURE, ADD 1/2 INCH PLYWOOD SHEAR DIAPHRAGM TO BOTTOM OF 2ND FLOOR EXTENSION
Demo existing exterior sheeting under 2nd floor
Block and strap joist to main structure.
Insulate structure
Apply plywood shear diaphram

INSULATION
INSULATE FLOOR STRUCTURE OF 2ND FLOOR EXTENSION AFTER BLOCKING AND STRAPPING ARE COMPLETE
Self explanatory

EXTERIOR PAINT
PREP, PRIME AND PAINT ALL UNFINISHED NEW EXTERIOR WOOD WORK--THIS ONLY INCLUDES WORK RELATED TO STRUCTURAL SEISMIC UPGRADES LISTED IN THIS QUOTE
Self explanatory

Thanks
Scot

VELOX
DESIGN + CONSTRUCTION
Scot Peterson
Project Manager
M: (415) 699-9571
scot@veloxsf.com

From: Scot Peterson <scot@veloxsf.com>
Sent: Friday, February 2, 2024 5:02 PM
[redacted emails]

Please see the attached quote. This is the complete scope of work we are doing for "1075-1077 Fell St. HOA.

We are already in contract with Steven Huang individually for a remodel, separate from the HOA.

Thanks



Scot Peterson

Project Manager

M: (415) 699-9571

scot@veloxsf.com

From: Scot Peterson <scot@veloxsf.com>
Sent: Thursday, February 1, 2024 9:38 AM
[redacted emails]

We are doing work on a property at 1077 Fell St. for our client Steven Huang. The original contract was not with the HOA. We are now proposing a voluntary seismic upgrade to the whole building. This work will be for the HOA.

[Redacted content]

Thanks

Scot



Scot Peterson

Project Manager

EXHIBIT 15

VELOX
DESIGN & CONSTRUCTION

442 Haight Street
San Francisco, CA 94117

Tel. 415 416 0177

EIN 47-5030130
License # 1059825

Exhibit 15: 3 Pages Velox quote for HOA services (partial quote)

CUSTOMER QUOTATION NO. 2951

1075-1077 Fell Street HOA
1075-1077 Fell Street
San Francisco CA 94117

Quote No: 2951
Site: 1075-1077 Fell Street San Francisco
Site Contact:
Site Phone:
Salesperson: Scot Peterson

Engineering Services

Part #	Item	Quantity	Unit Price	Total
	Structural Engineering Services to accomodate voluntary seismic upgrades.	1.00	$4,940.00	$4,940.00
			Sub-Total ex Tax	$4,940.00
			Tax	$0.00
			Total inc Tax	$4,940.00

Architectural Services

Part #	Item	Quantity	Unit Price	Total
	MEASURE AND DRAW 2ND FLOOR FLOOR PLAN	1.00	$1,620.00	$1,620.00
	INTEGRATE SEISMIC UPGRADE ENGINEERING PLANS INTO ARCHITECTURAL PLANS,	1.00	$2,600.00	$2,600.00
	PULL PERMITS, PLAN CHECK	1.00	$1,950.00	$1,950.00
			Sub-Total ex Tax	$6,170.00
			Tax	$0.00
			Total inc Tax	$6,170.00

Section Sub-Total ex Tax	$11,110.00
Tax	$0.00
Section Total inc Tax	$11,110.00

Sub-Total ex Tax	$11,110.00
Tax	$0.00
Total inc Tax	$11,110.00

Velox Terms and Conditions

As of July 2023

A. Work and associated Charges:

- *Upon commencement of Work: 30% of total charge is required*
- Owner agrees to pay Contractor progress payments for labor and materials which have been placed in position and paid for by Contractor, and for work performed as reflected in Contractor's applications for payment every month. Each payment application must be accompanied by waivers and releases executed by Contractor and its subcontractors and suppliers. Contractor may submit progress payment applications as frequently as every two to three weeks.
- Owner may withhold retention of five percent (5%) from the final payment for up to 14 days, until all systems and materials have been verified and put to use.
- *VELOX CONSTRUCTION reserves the right to add to any account outstanding for more than 30 days a service charge the lesser of 1.5% of the principal amount due at the end of each month, or the maximum allowable legal interest rate.* Owner shall be liable to VELOX CONSTRUCTION for all collectable expenses, including but not limited to attorney's fees, court costs, and vendor/subcontractor fees incurred by VELOX CONSTRUCTION in attempting to collect any amounts due from Owner. VELOX CONSTRUCTION reserves the right to suspend or terminate performance in the event of Owner's non-payment.
- Work will only occur during business hours (9AM-5PM) unless Owner is notified otherwise. Owner will be responsible for communicating any work hours and needs to tenants or property stakeholders.

B. Other Terms and Conditions:

Laws and Permits

- Contractor will perform the Work in compliance with applicable laws, ordinances, rules, regulations, and lawful orders of any public authority having jurisdiction over performance of the work.
- Contractor will procure, at Owner's expense, a building permit for the Work if required.

Owner and Contractor Communication

- Owner is not to communicate directly with team members performing work, only with the Velox Project Manager or Management in order to avoid confusion and to ensure full communication and transparency with project scope and directives.
- Requests for additional work outside of the original scope of work and quote will require a change order be submitted by Contractor and approved in writing by Owner before work can begin. Owner acknowledges that change orders may affect the project timeline and also may delay the project completion date.
- If Owner chooses to stop work at any point, Contractor must be notified in writing, in advance, and given a reasonable amount of time to secure and clear the work site of any supplies and materials owned by Contractor.

Safety

- Contractor will provided all necessary safety devices in accordance with CAL OSHA Regulation.
- If unsafe conditions exist at the site preventing work from being done, the Owner agrees to be responsible to remedy the unsafe situation in order for Contractor to continue work.

Change of Project Scope

- Any alteration or deviation from the scope of work defined in this quote will require a change order to the project that will incur further costs and could extend the timeline and subsequent finish date. Contractor will present change orders and invoice for any unforeseen or additional

work to be done for approval by Owner before commencing work and purchasing additional supplies needed.

C. "NOTICE TO OWNER" (Section 7018, 7019 – Contractors License Law)

Under the Mechanics' Lien Law, a contractor, subcontractor, laborer, material man or other person who helps to improve your property and is not paid for his labor, services or material, has a right to enforce his claim against your property. This means that, after a court hearing, your property could be sold by a court officer and the proceeds of the sale used to satisfy the indebtedness. This can happen even if you have paid your contractor in full, if the subcontractor, laborer, or supplier remains unpaid. Under the law, you may protect yourself against such claims by filling , before commencing such work or improvement, an original contract for the work or improvement or a modification thereof, in the office of the county recorder of the county where the property is situated and requiring that a contractor's payment bond be recorded in such office. Said bond shall be in an amount not less than fifty percent (50%) of the contract price and shall, in addition to any conditions for the performance of the contract, be conditioned for the payment in full of the claims of all persons furnishing labor, services, equipment or materials of the work described in said contract. Contractors are required to be licensed and regulated by the Contractors State License Board. Any questions concerning a contractor may be referred to the Registrar of the board whose address is Contractors State License Board, 9821 Business Park Drive, Sacramento, CA 95827.

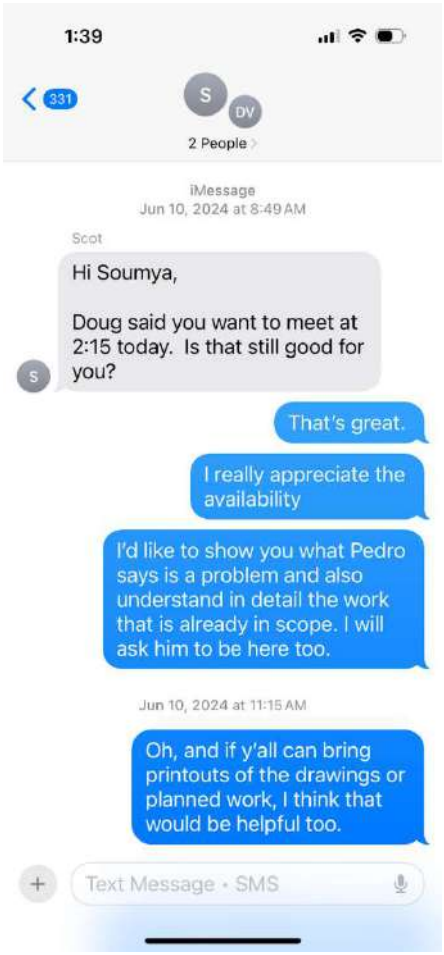
Exclusions:

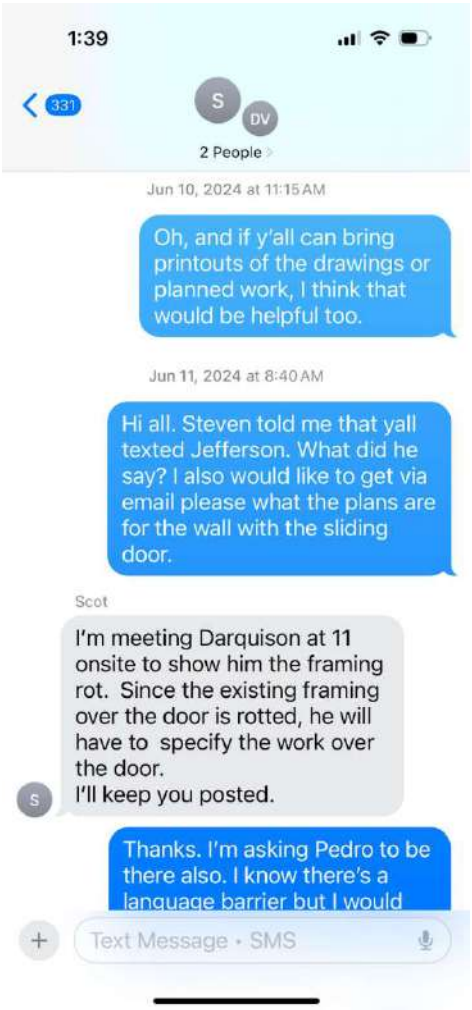
1. Unforeseen Conditions
2. Low Voltage work
3. Special Inspections or Testing Fees
4. Power and Water to perform work
5. Abatement
6. ACM (Asbestos Containing Materials) removal
7. Fire Sprinklers and Fire Suppression Systems
8. Street Parking Permits
9. Appliances
10. Cabinets and Countertops
11. PG&E Upgrades and electrical work not listed specifically
12. All Finish Materials - Owner is responsible to order and purchase
13. Code Upgrades
14. Scaffolding Rental Fees
15. Siding or Waterproofing
16. Concrete work
17. Graffiti Removal
18. Structural Steel
19. Direct Communication with Tenants or Stakeholders
20. Permits Fees or any fees to close out previous contractor permits
21. Drawings, Plans or As Built Drawings

EXHIBIT 16

Exhibit 16: Dryrot repair and cut 2 by 6's

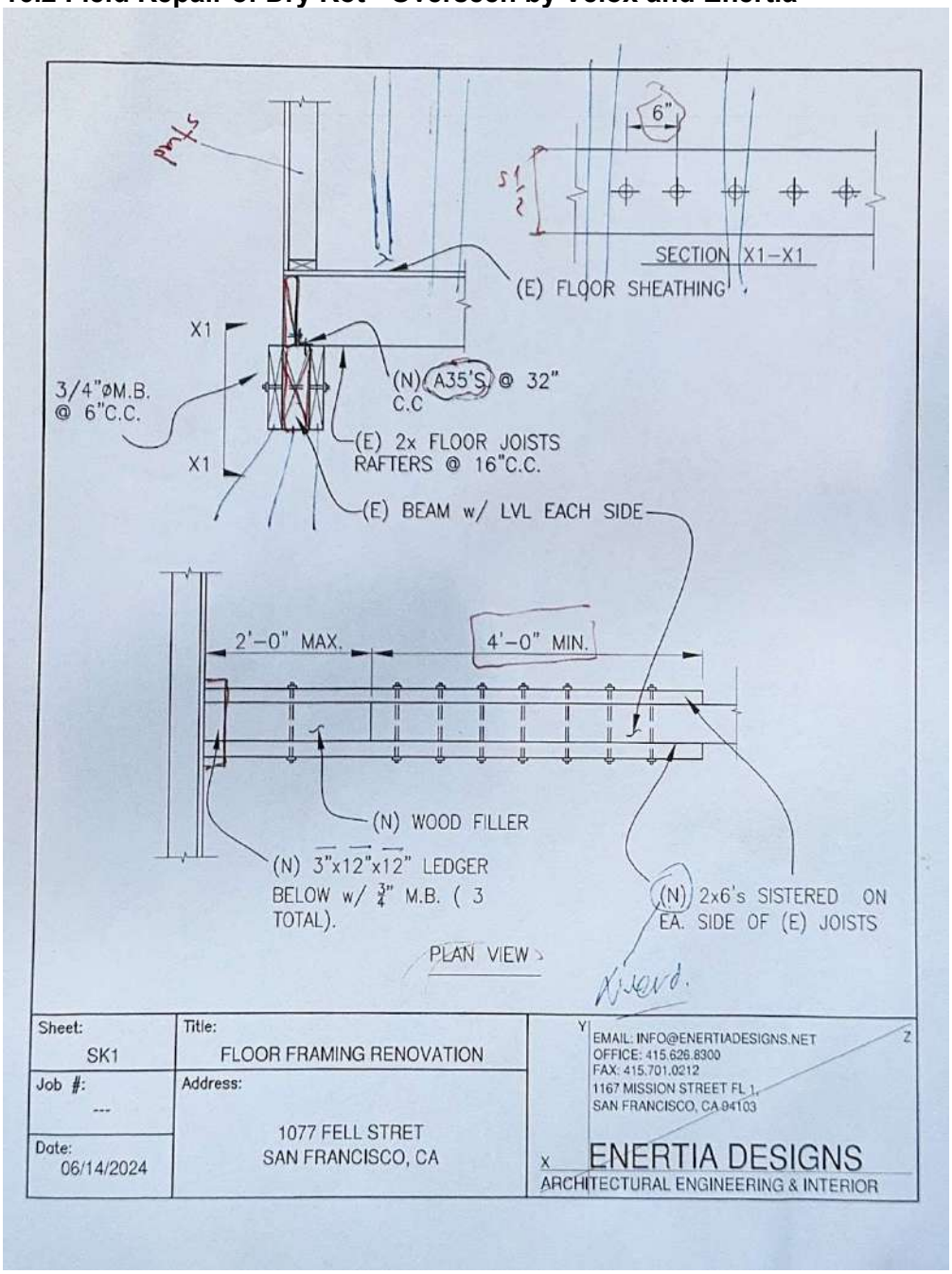
16.1 Texts Showing Communication on Dry Rot to Velox: These screen shots from June 2024 shows that Appellant immediately notified Velox of dry rot in the structural beams. Velox met with Enertia on site to resolve. "S" is Scot of Velox and "DV" is Doug Burrows. Darquison is the Enertia project engineer.



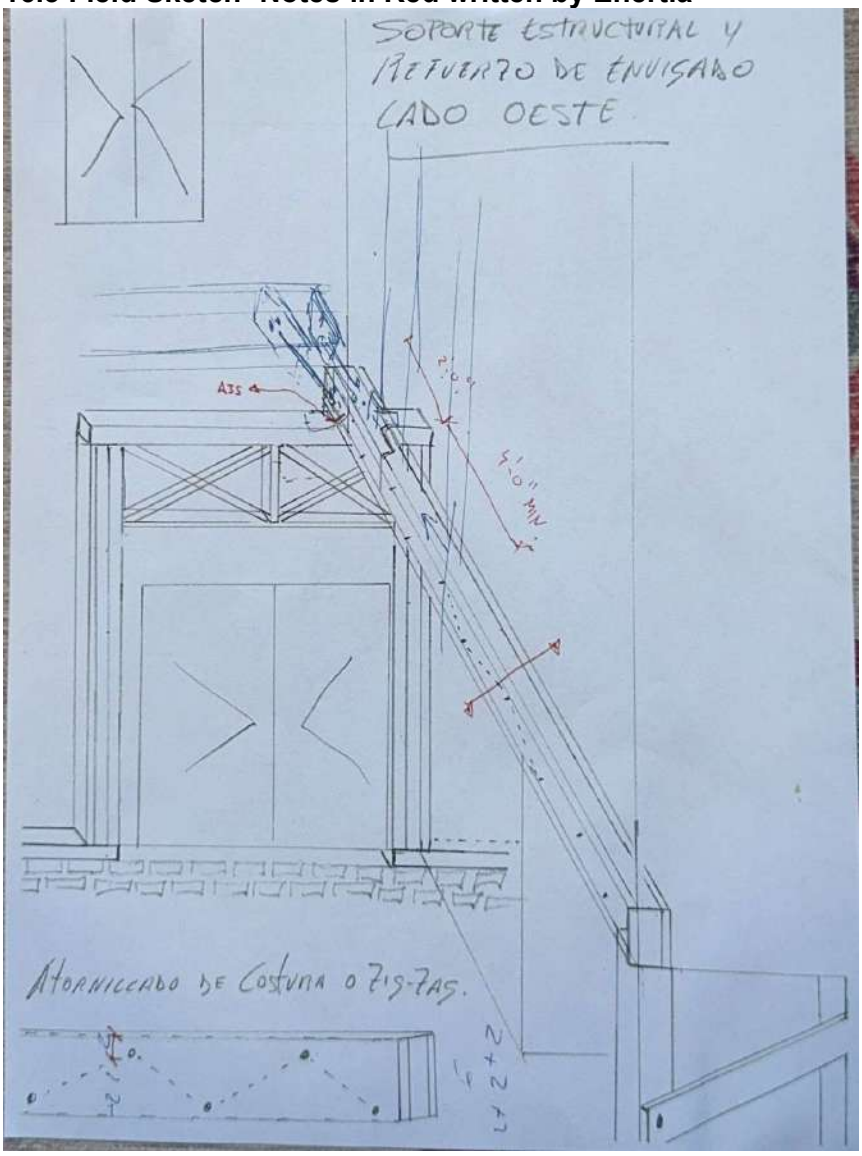



1:39
331
S
DV
2 People
Jun 11, 2024 at 1:45 PM
Scot
Hi Soumya
The meeting went well. The engineer has a lot to process and will be getting back to us. I'll give him a day or two and reach out about it.
Thanks
Jun 12, 2024 at 10:02 AM
That's. It's lucky that Darquison could speak Portuguese!
Sounds like it was a really good interaction.
Jun 13, 2024 at 11:20 AM
Hey scot, any update?
Scot
Not yet. I'll check again with him in a bit.
Text Message • SMS

16.2 Field Repair of Dry Rot - Overseen by Velox and Enertia



16.3 Field Sketch- Notes in Red written by Enertia

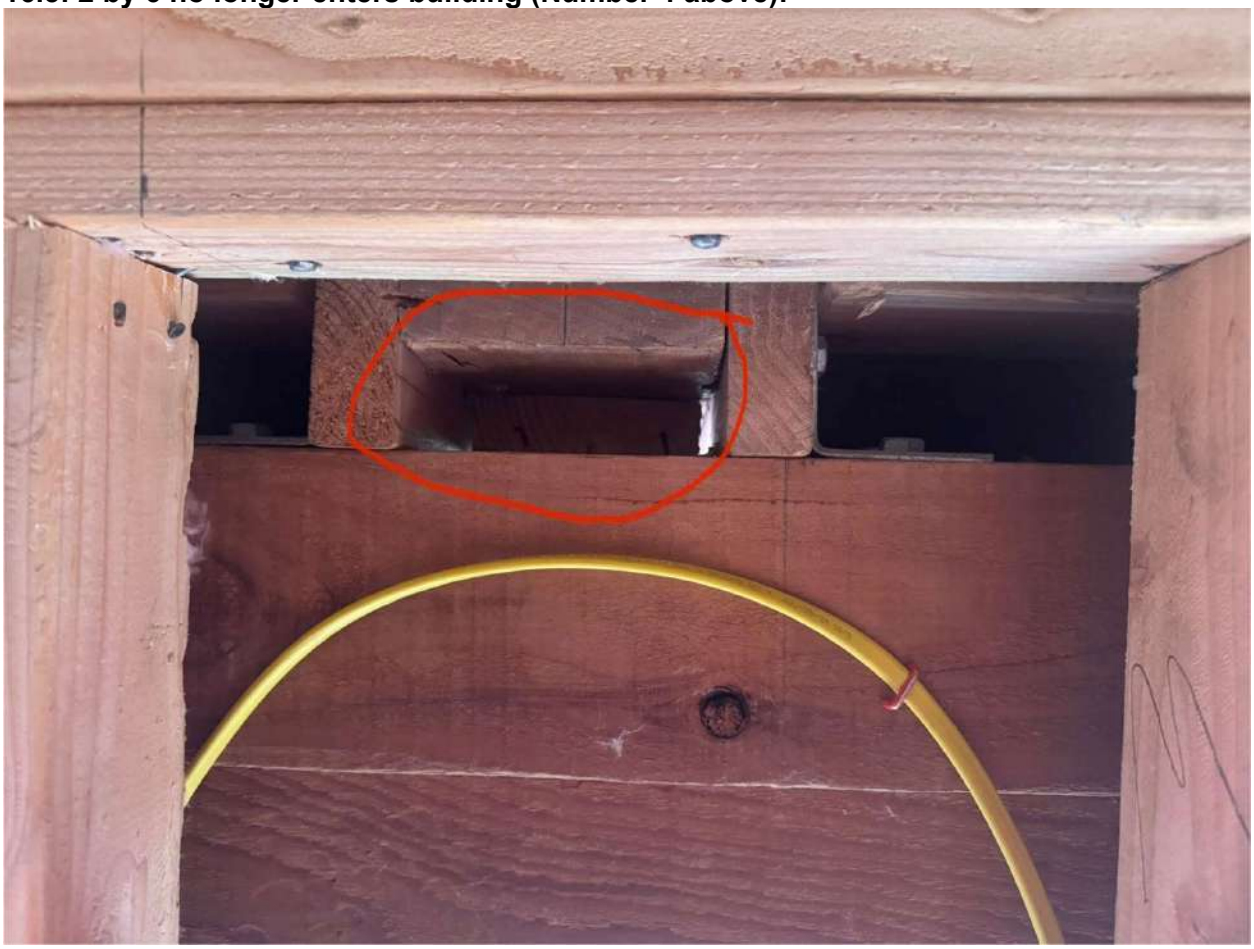


16.4: 2 by 6 cut during Construction- Enertia said was structural during onsite visit





16.5: 2 by 6 no longer enters building (Number 4 above):



16.6: Contractor said 2 by 6 was cladding:



16.7: Example Field Condition not in Drawing- Chimney

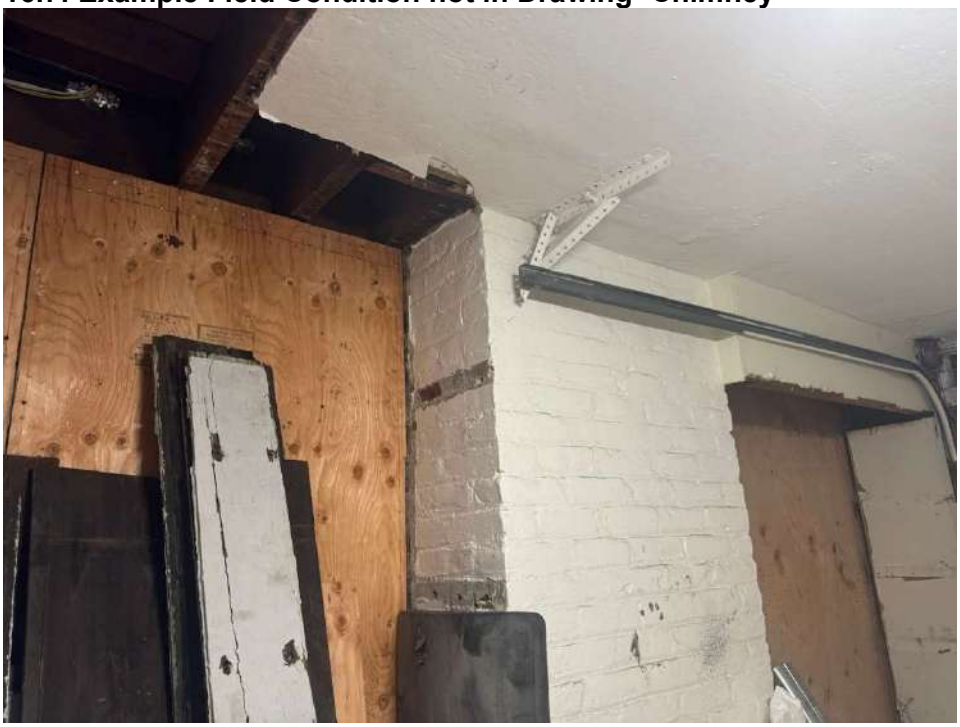


EXHIBIT 17

STRUCTURAL CALCULATIONS FOR:

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

REPORT PREPARED BY:

ENERTIA DESIGNS
1167 MISSION STREET, FL.1
SAN FRANCISCO, CA 94103
P: (415) 626-8300
F: (415) 701-0212



ED PROJECT #23059

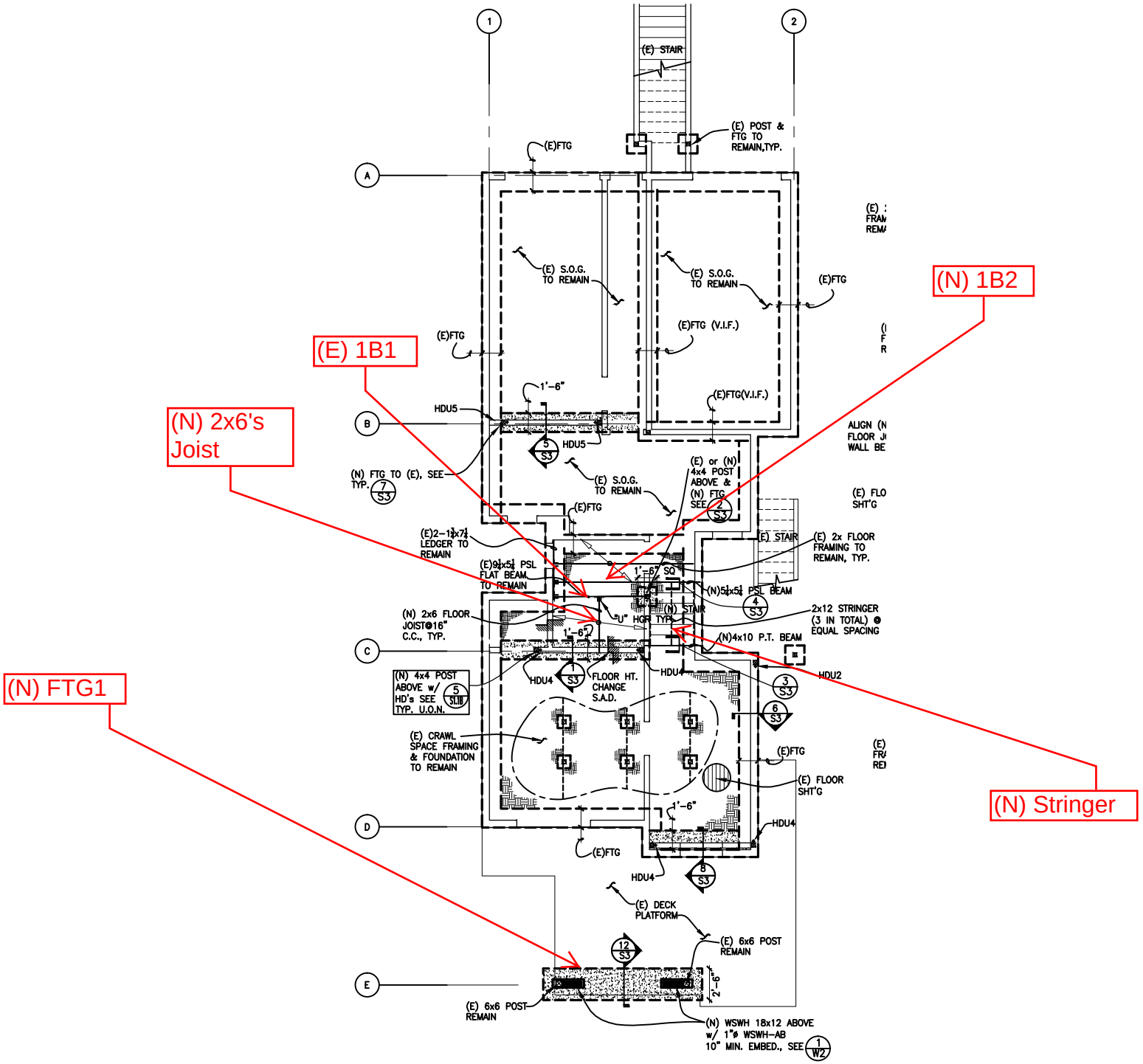
DATE: March 12, 2024

ENERTIA DESIGNS

1077 FELL STREET
ED PROJECT #23059

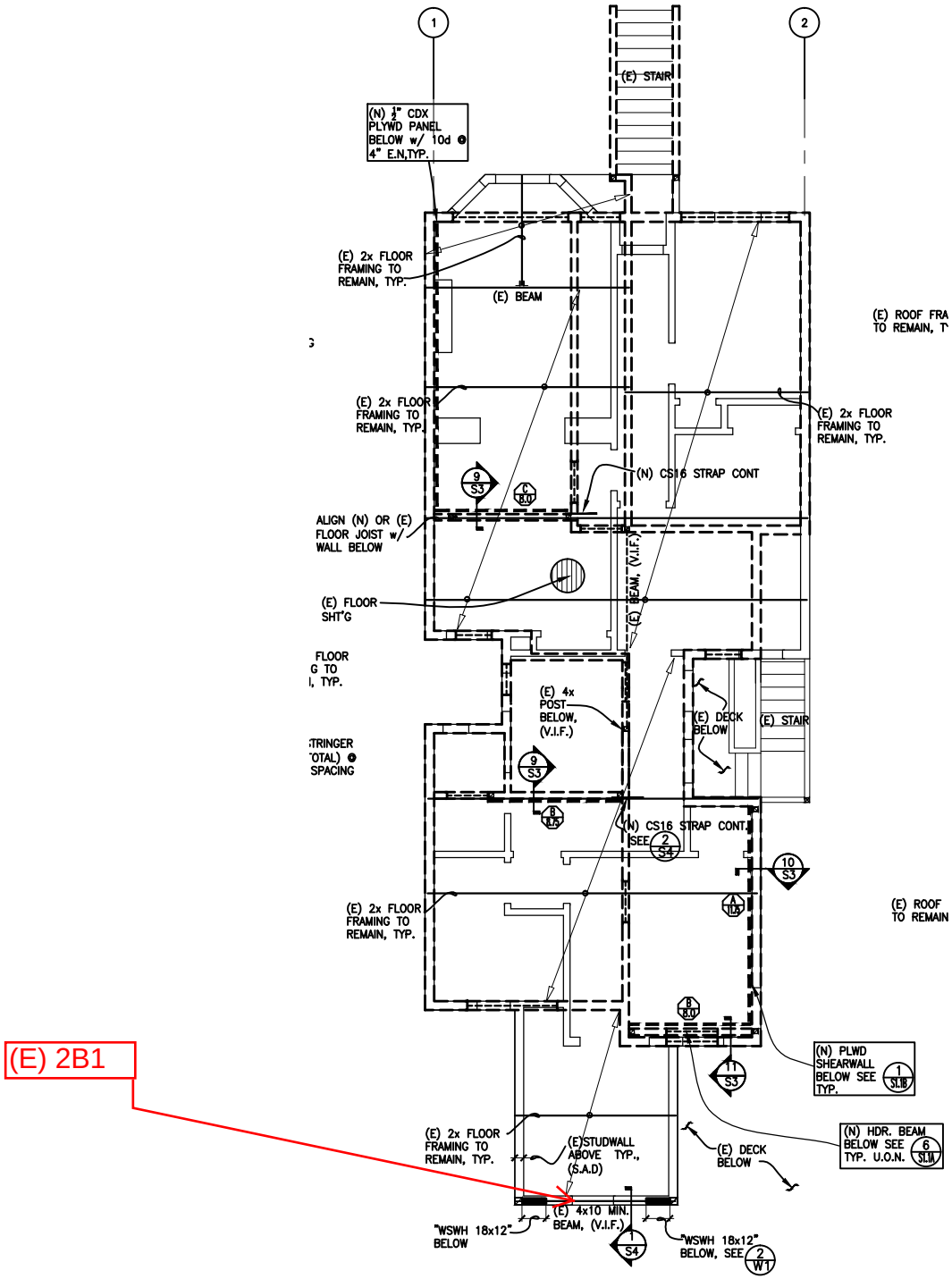
TABLE OF CONTENTS

DESCRIPTION	PAGE NUMBER
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ATZ HAZARDS SITE SEISMIC MAP	4 –7
LATERAL ANALYSIS:	
Lateral base shear	8 – 13
Shear wall and Holdowns	14–15
Legend	16
GRAVITY:	
Beams / girders	17 – 26
Foundations	27 – 35



FIRST FLOOR / FOUNDATION PLAN

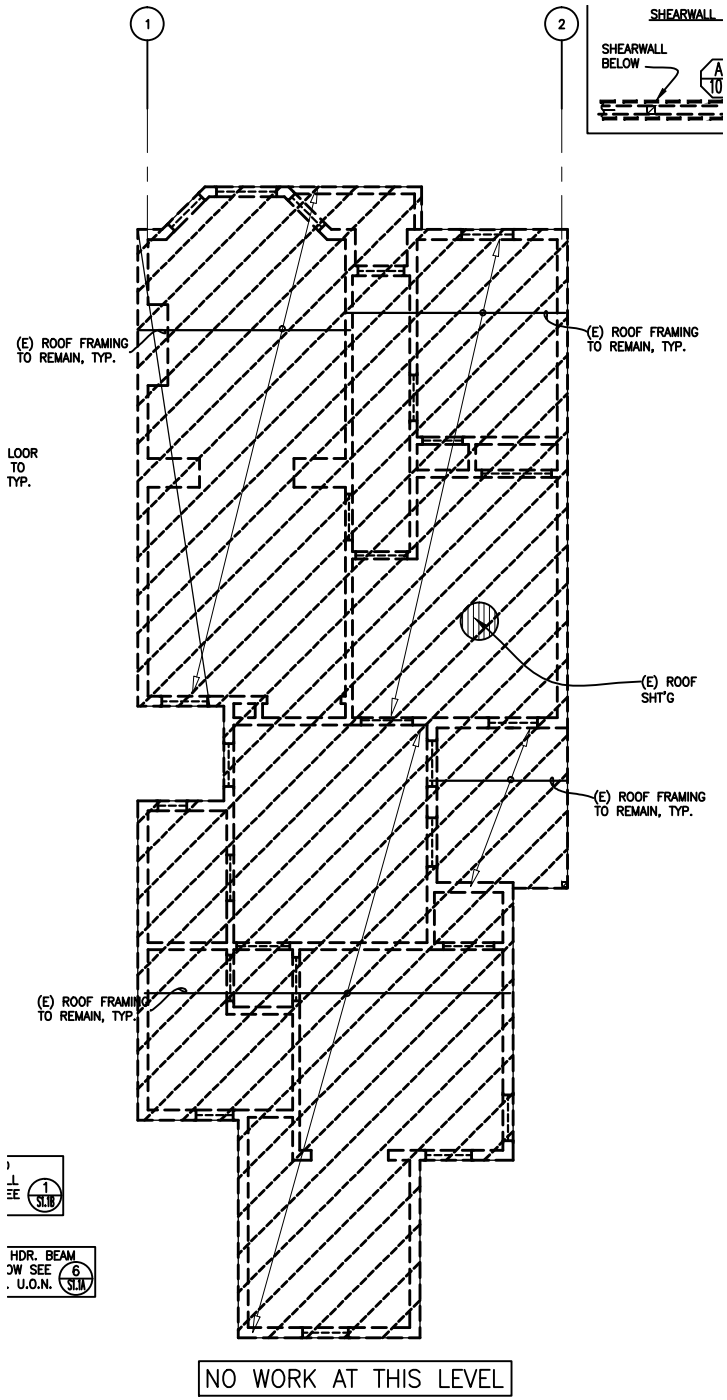
SCALE: 1/4"=1'-0"



NO WORK ABOVE THIS LEVEL

SECOND FLOOR FRAMING PLAN

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



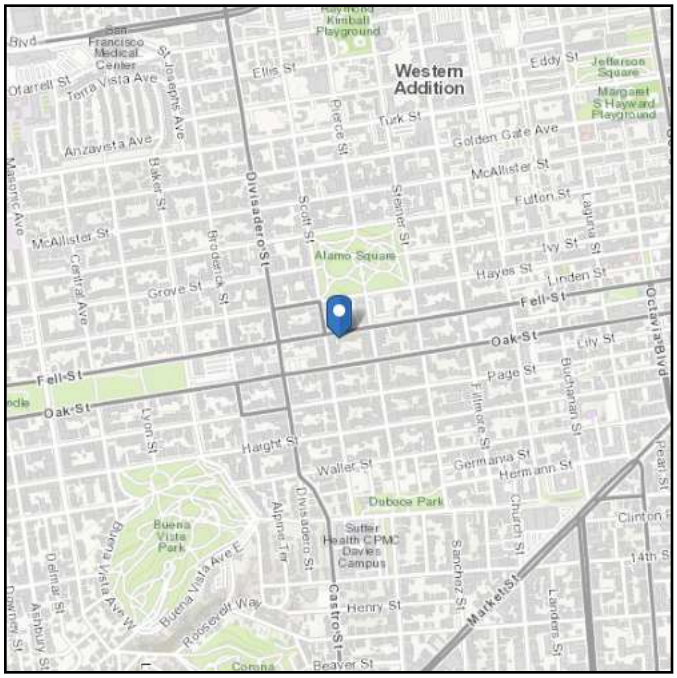
ROOF FRAMING PLAN

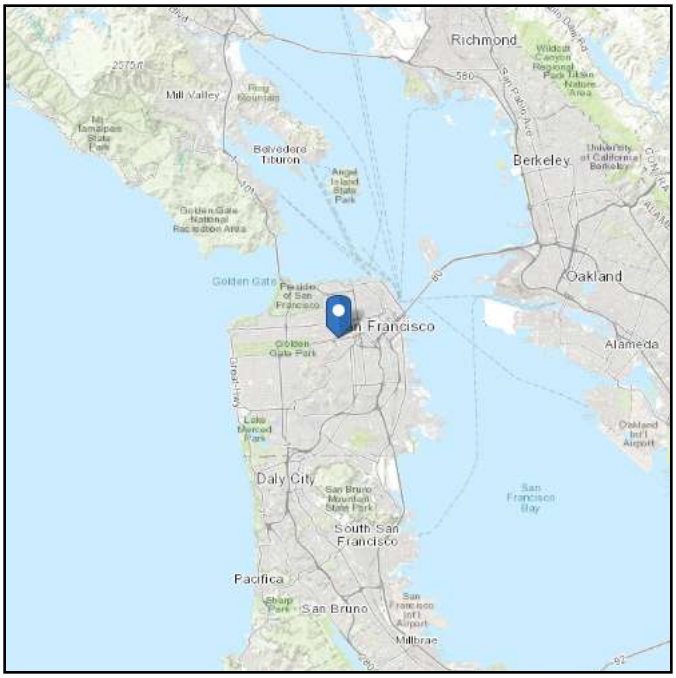
SCALE: 1/4"=1'-0"

ASCE Hazards Report

Address:
1077 Fell St
San Francisco, California
94117

Standard:	ASCE/SEI 7-22	**Latitude:**	37.774145
Risk Category:	II	**Longitude:**	-122.435446
Soil Class:	Default	**Elevation:**	195.3952831817827 ft (NAVD 88)





Seismic

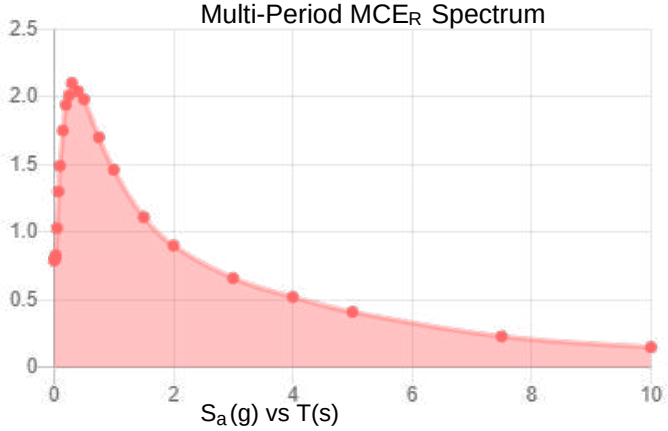
Site Soil Class: Default

Results:

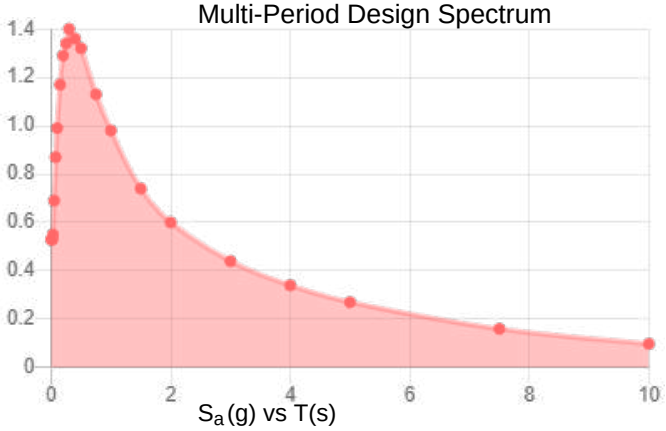
PGA_M :	0.66	T_L :	12
S_{MS} :	1.89	S_S :	1.66
S_{M1} :	1.85	S_1 :	0.62
S_{DS} :	1.26	V_{S30} :	260
S_{D1} :	1.24		

Seismic Design Category: D

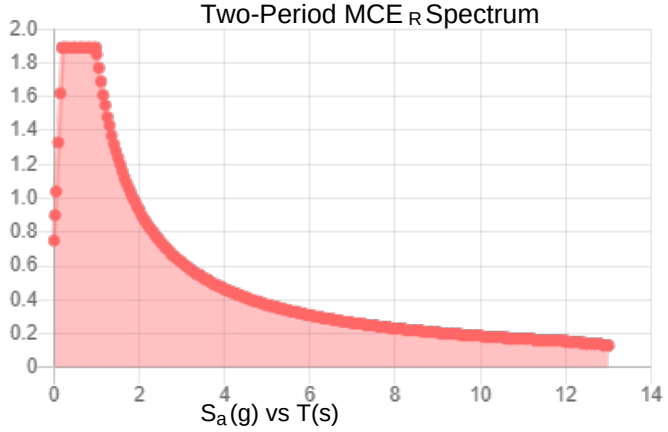
Multi-Period MCE_R Spectrum



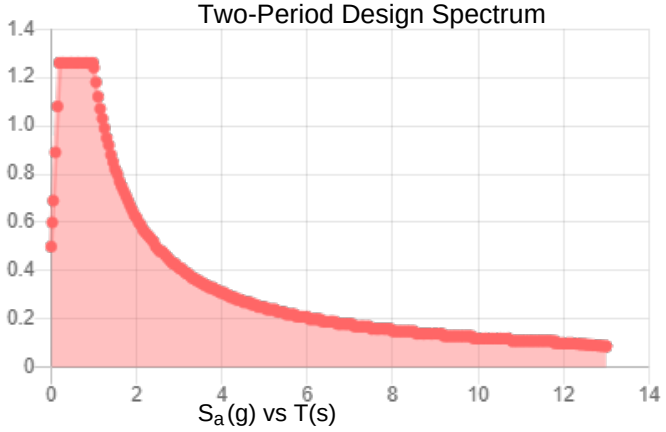
Multi-Period Design Spectrum



Two-Period MCE_R Spectrum



Two-Period Design Spectrum



MCE_R Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.

Design Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.

Data Accessed: Tue Feb 27 2024

Date Source:
USGS Seismic Design Maps based on ASCE/SEI 7-22 and ASCE/SEI 7-22 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-22 Ch. 21 are available from USGS.

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PROJECT:	SHEET NO	
VOLUNTARY STRENGTHENING	JOB No.	0
3941 23rd Street	REV. NO.	DATE
94117	00	02/27/24

Design Criteria **2016 California Building Code based on 2015 IBC**

1. MATERIAL SPECIFICATIONS

1.1 Concrete f'c = 2500 psi (28 day compressive strength)

1.2 Concrete Block f'm = 1500 psi (Type N or S)

1.3 Reinforcing Steel
Grade 40 : #4 and smaller
Grade 60 : #5 and larger

1.4 Lumber

2" to 4" thick		DF No.2	Fb= 900 psi	
2" to 4" wide		DF No.1	Fb= 1000 psi	
Roof/ Ceiling Joist		DF No.2	Fb= 900 psi	
Beam/ Post	4x	DF No.2	Fb= 875 psi	Fc= 600 psi
	6x	DF No.1	Fb= 1350 psi	Fc= 925 psi
Mudsill		DF Pressure Treated		
Glu-Lam Beam		DF/ DF Simple Span		24F-V4
		DF/ DF Cantilever		24F-V8
Parallam (PSL)		2.2 E Truss Joist MacMillan		
Micro-Lam (ML)		2.0 E Truss Joist MacMillan		
Floor I-Joist (TJI)		Manufactured by Trus Joist Corporation		

1.5 Plywood Diaphragm
Roof 1/2" CDX APA(32/16)
Floor 3/4" T&G CDX APA(48/24)

1.6 Structural Steel ASTM A-992 or per latest AISC provision

1.7 Manufactured Shear Panels
Simpson Strongwall: Manufactured by Simpson Strong-Tie
Hardy Frame Panels: Manufactured by Mitek Company

2. FOUNDATION PARAMETERS

2.1 Minimum Building Code Requirements **USED**

2.2

Geotechnical Engineer:	N.A.
Project Reference No.:	N.A.
Date:	N.A.
Telephone No.	N.A.

Allowable Soil Bearing Capacity	1500	psf
Allowable Pier Skin Friction	N.A.	psf

PROJECT:	SHEET NO	
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Verify if there is additional ceiling framing underneath the roof framing which is common in SF

3. GRAVITY LOADS

3.1 Live Load / Snow Load

LLr = 20 psf

LL = 40 psf

S = 0 psf (Snow Load)

...of Slope 0.0 : 12

...ope Factor 1.00

3.2 Dead Load

3.21 Roof

Composition Shingles	5.0	psf	
5/8" Plywood Sheathing	2.0	psf	
2x8 @ 16" Framing	2.2	psf	
Insulation	1.0	psf	
Ceiling/ 1 Layers of G.B.	2.7	psf	
Miscellaneous	1.0	psf	
Total =	14.0	x 1	
	14.0	psf	

3.22 Lower Roof/ Roof Deck

5.0	psf
2.0	psf
2.2	psf
1.0	psf
2.7	psf
1.0	psf
14.0	psf

3.23 Floors

Hard Wood Flooring	4.0	psf
3/4" Plywood Sheathing	2.5	psf
2x10 @ 16" Framing	2.9	psf
Insulation	1.0	psf
Ceiling 1 Layes of G.B.	2.7	psf
Miscellaneous	1.5	psf
Total =	**14.6**	psf

3.24 Deck/Balcony

4.0	psf
2.5	psf
2.9	psf
1.0	psf
2.7	psf
1.5	psf
14.6	psf

3.25 Exterior Walls

Stucco	9.0	psf
1/2" thk Plywd sht'g	2.0	psf
2x Studs	2.5	psf
Gypboard	2.0	psf
Miscellaneous	1.5	psf
Total =	**17.0**	psf

3.26 Interior Walls

	-	-
→	2	psf
→	2.0	psf
→	4.0	psf
→	2.0	psf
	10.0	psf

PROJECT:	SHEET NO	
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4. LATERAL LOADS ASD

4.1 Seismic Parameters

Site Class (Use deafult 'D1' if no Soil Report)		D1
Occupancy Category		II
Seismic Design Category **(SDC)**		D
Response Modification Coefficient **(R)**	R=	6.50
Importance Factor **(I)**	I=	1.00
Site Coordinates	37.774 ° N	-122.435 ° W
Short Period Response **(S_S)**	S_S=	1.66
One Second Period Response **(S_1)**	S_1=	0.62

4.2 Wind Parameters

Exposure Type		B
Basic Wind Speed		95 mph

15. Light frame (wood) walls sheathed with wo

Location

5.1 Wind Forces

Exposure Type =	B		**Kd =**	0.85	**Cp =** 0.80
Basic Wind Speed =	95	mph	**K_{ZT} =**	1.00	**GCpi =** 0.18
Occupancy Category =	II		**G =**	0.85	

Z	**15'-0"**	**20'-0"**	**25'-0"**	**30'-0"**	**40'-0"**	**60'-0"**
Z_{min}	30	30	30	30	40	60
Zg	1200	1200	1200	1200	1200	1200
α	7.00	7.00	7.00	7.00	7.00	7.00
Kz	0.70	0.70	0.70	0.70	0.76	0.85
qz	8.26	8.26	8.26	8.26	8.96	10.06
P (psf)	**7.10**	**7.10**	**7.10**	**7.10**	**7.71**	**8.65**

$Kz = 2.01 (Z/Zg)^{(2/\alpha)}$

$qz = 0.00256 K_z K_{ZT} K_d V^2$

$P = qz (GCp + GCpi)$

5.2 Seismic Forces

5.21 Site Coefficients

Site Coefficient (Fa)

SITE CLASS	Ss < 0.25	0.50	0.75	1.00	1.25	>1.5
A	0.8	0.8	0.8	0.8	0.8	0.8
B	0.9	0.9	0.9	0.9	0.9	0.9
C	1.3	1.3	1.2	1.2	1.2	1.2
D	1.6	1.4	1.2	1.1	1.0	1.0
E	2.4	1.7	1.3	SEE SEC 11.4.8		

Table 1613.5.3 (1)

Site Coefficient (Fv)

SITE CLASS	S1 < 0.1	0.2	0.3	0.4	0.5	0.6
A	0.8	0.8	0.8	0.8	0.8	0.8
B	0.8	0.8	0.8	0.8	0.8	0.8
C	1.5	1.5	1.5	1.5	1.5	1.4
D	2.4	2.2	2.0	1.9	1.8	1.7
E	4.2	SEE SECTION 11.4.8				

Table 1613.5.3 (2)

Tabulated Result

Site Class =	**D1**
S_S=	**1.66**
S_1=	**0.62**
By Interpolation:	
Fa =	**1.20**
Fv =	**3.00**

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5.22 Spectral Response Acceleration

S_{MS}=	Fa S_S =	1.20 x 1.66=	1.89	**S_{DS}=**	2/3 (S_{MS}) =	**1.26**
S_{M1}=	Fv S_1 =	3.00 x 0.62=	1.85	**S_{D1}=**	2/3 (S_{M1}) =	**1.24**

5.23 Horizontal Sismic Load Effect w/ Overstrength Load Combinations (ASCE 12.4.3.1)

Ωo = **2.50**

LC 5: (1.0 + 0.14 S_{DS})D + 0.7 Ωo Qe = **1.18D+2.5Qe**

LC 6: (1.0 + 0.15 S_{DS})D + 0.525 Ωo Qe +0.75L +0.75 LLr = **1.19D+1.88Qe+0.75(LL+LLr)**

LC 8: (0.6 - 0.14 S_{DS})D - 0.7 Ωo Qe = **0.43D+2.5Qe**

5.24 Design Base Shear

R =	6.50		**C_r =**	**0.020**	All other structural system
I =	1.00		**x =**	0.75	
TL =	8.00	sec	**h_n =**	20.0	ft
Redundancy Factor **ρ =**	**1.30**		**T =**	$C_r (h_n)^X$ =	0.189

ASCE (12.8-2)	*ASCE (12.8-3)*	*ASCE (12.8-4)*	*ASCE (12.8-6)*	*ASCE (12.8-5)*
	($T \le$ TL)	($T >$ TL)	$S_1 \ge$ 0.60	
Cs = $\frac{S_{DS}}{(R/I)}$	Cs_{max}= $\frac{S_{D1}}{T\,(R/I)}$	Cs_{max}= $\frac{S_{D1}\,T_L}{T^2\,(R/I)}$	Cs_{min}= $\frac{0.5\,S_1}{(R/I)}$	Cs_{min}= 0.01
Cs = 0.194	**Cs =** 1.009	**Cs =** 0.000	**Cs =** 0.048	**Cs =** 0.01
		NOT USED		

Use **Cs** = **0.194**

V = Cs W ***Apply 0.7 Reduction for ASD*

GOVERNING DESIGN BASE SHEAR **V = 0.136W ASD**

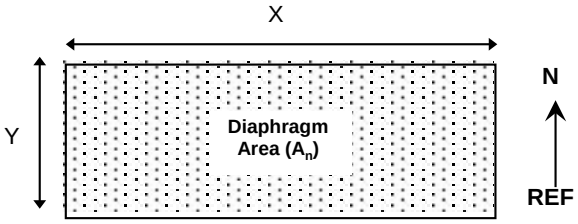
6. BUILDING PARAMETERS

6.1 Building Dimensions

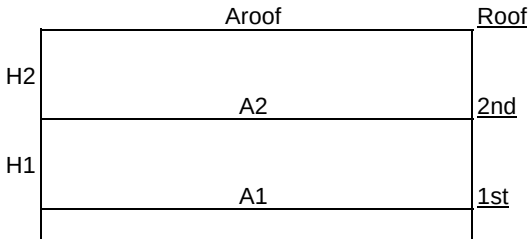
No. of Floor/s Levels **2**

Total building height 18.0 ft

Basement/Crawl Space 3.00 ft



PLAN



SECTION

Nomenclature:

n	Subscript for floor levels
Xn	Building width
Yn	Building length
An	Diaphragm area
Hn	Floor height between levels

PROJECT:	SHEET NO	
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6.2 Roof /Floor Areas

Floor Level	Area A_n (ft^2)	Low Roof Area A_n (ft^2)	Deck Area A_n (ft^2)	Bldg Length X_n (ft)	Bldg Width Y_n (ft)
Roof	1406	~~0~~	~~0~~	56	25
2nd floor	1212		193	48	25

6.3 Wall Heights

Floor Level	Floor Height H_n (ft)	Exterior Wall Length (ft)	Interior Wall Length (ft)	Tributary Ext. Wall (ft^2)	Tributary Int. Wall (ft^2)	Height of Diaphragm
Roof	~~0~~	~~0~~	~~0~~	815	770	20.0
2nd floor	9.0	181	171	1566	1308	12.0
1st floor	9.0	167	120	752	538	3.0
				0	0	0.0
				0	0	

Warning Check Bldg height !!!

6.3 Building Weights

6.3a Roof weight

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Roof	1406	14.0	19684
Ext Walls	815	17.0	13847
Int Walls	770	10.0	7704
Misc			0

Level Weight = **41,235** lbs

NOT USED

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Floor	0	14.6	0
Low Roof	0	14.0	0
Deck	0	14.6	0
Ext Walls	0	17.0	0
Int Walls	0	10.0	0
Misc			0

Level Weight = **0** lbs

6.3b 2nd floor

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Floor	1212	14.6	17695
Low Roof	0	14.0	0
Deck	193	14.6	2821
Ext Walls	1566	17.0	26622
Int Walls	1308	10.0	13082
Misc			0

Level Weight = **60,220** lbs

NOT USED

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Floor			
Low Roof			
Deck			
Ext Walls			
Int Walls			
Misc			

Level Weight = **0** lbs

6. 4 Building Weight Summary

Floor Level	Level Weights (lbs)	S Weights (lbs)
Roof	41,235	41,235
2nd floor	60,220	101,455
	-	-
	-	-
S	**101,455**	

6. 5 Base Shear

Vu = 0.136 x 101,455

V =	**13,767**	**lbs**
V x ρ =	**17.897**	**kips**
	ASD	

PROJECT:	SHEET NO	
VOLUNTARY STRENGTHENING	JOB No.	0
3941 23rd Street	REV. NO.	DATE
94117	00	02/27/24

7. LATERAL FORCES

T= 0.189

k= 1.00

7.1 Seismic Forces

7.1a Lateral Force Distribution

C_{vx} $F_x = C_{vx} V$

Floor Level (x)	h_x (ft)	h^k_x (ft)	Wx (kips)	$h^k x$ Wx (kip-ft)	$\frac{h^k x \text{ Wx}}{S\ h^k x \text{ Wx}}$	Fx (kips)	Diaphragm Area (ft^2)	Fx / Area (lbs/ ft^2)
Roof	20.0	20.0	41.23	824.69	0.53	9.54	1406	**6.78**
2nd floor	12.0	12.0	60.22	722.64	0.47	8.36	1405	**5.95**
0	0.0	0.0	0.0	0.0	0.00	0.00	0	**0.00**
0	0.0	0.0	0.0	0.0	0.00	0.00	0	**0.00**
		SUM	101.5	1547.3	1.00	**17.90**		

7.1b Lateral Diaphragm Force Distribution

$Fpx\ max = 0.4 S_{DS}\ I\ wpx$ = 0.50 wpx (%)

$Fpx\ min = 0.2 S_{DS}\ I\ wpx$ = 0.25 wpx (%)

S_{DS}= 1.26

I= 1.00

Floor Level	Fx (kips)	S Forces (kips)	S Weights (kips)	S Forces / S Weights (% Level)	% Level Fpx min Fpx max	Level Weight (kips)	Level Diaphragm Force (kips)	Fx / Area (lbs/ ft^2)
Roof	9.54	9.54	41.23	0.23	0.25	41.23	10.39	**7.39**
2nd floor	8.36	17.90	101.45	0.18	0.25	60.22	15.18	**10.80**
0	0.00	0.0	0.0	0.0	0.00	0.00	0.00	**0.00**
0	0.00	0.0	0.0	0.0	0.00	0.00	0.00	**0.00**

7.2 Wind Load

	North -South Direction			East West Direction	
Floor Level	Wind Height Projection (ft)	Building Length X_n (ft)	Projected Wind Area (ft^2)	Building Length Y_n (ft)	Projected Wind Area (ft^2)
Roof	1.5	56.2	84.4	25.0	37.5
2nd floor	9.0	48.5	436.3	25.0	225.0
0	0.0	0.0	0.0	0.0	0.0
0	0.0	0.0	0.0	0.0	0.0

*** (See 5.1 for wind pressures)*

	North -South Direction				East West Direction		
Floor Level	Floor Level Height (ft)	Projected Wind Area (ft^2)	Wind Pressure** (psf)	**Wind Force (kip)**	Projected Wind Area (ft^2)	Wind Pressure** (psf)	**Wind Force (kip)**
Roof	20.0	84.4	7.10	**0.60**	37.5	7.10	**0.27**
2nd floor	12.0	436.3	7.10	**3.10**	225.0	7.10	**1.60**
0	0.0	0.0	0.00	**0.00**	0.0	0.00	**0.00**
0	0.0	0.0	0.00	**0.00**	0.0	0.00	**0.00**
			S	**3.70**		**S**	**1.86**

SEISMIC LOAD GOVERNS

PROJECT:	SHEET NO		
VOLUNTARY STRENGTHENING	JOB No.		0
1077 FELL STREET	BY	REV	DATE
94117	DM	00	02/27/24

SEISMIC LOAD DISTRIBUTION TO SHEARWALL & FRAMES

Distribution of Seismic Forces per Tributary Area (**for Story Levels from Roof to 1st Floor**) ** With Wood Diaphragm

Total Seismic Base Shear, **V** = **17.90** kips

Lateral Force F_{roof} = **9.54** kips

$V3r_d$ = **9.54** kips

A_{roof} = **1,406** ft^2

Allowable Aspect Ratio = 3.5 : 1

(See AF & PA ADPWS Table 4.3.4 Note '1' on blocked Shearwall panel aspect ratio greater than 2)

Reduction on Allowable Shear Value = $\frac{2w}{h}(V_{allow})$

DL reduction per 1605.3 of CBC 2010 and ASCE 7 12.4 (0.6 -0.14Sds)DL= **0.42**

Seismic Load Distribution to Shear Walls & Frames in N-S direction

Line	System	Tributary Area (ft²)	Wall properties					Portion of Area (%)	Wall loading and capacity					Wall Type	For Hold Down use Simpson PHD/MST						H.D.
			Length (ft)	Height	Aspect Ratio	$V_{allowable}$ (plf)	$V_{all} > V_{demand}$				Σ v_x (lbs)	v_{total} (lbs)	v_{demand} (plf)		Wall wt. (psf)	Tri. Width for DL (ft)	DL (lbs)		OTM(V_i) (kip-ft)	OTM(DL) (kip-ft)	T (kip)	
A	PW	419	3	9	**3.0**	**510**	**OK**	**15%**			**1421**	**1421**	**474**	***B***	17	**1.30**	**525**		**12.79**	**0.71**	**4.03**	***HDU4***
A	PW		3	9	**3.0**	**510**	**OK**	**15%**			**1421**	**1421**	**474**	***B***	17	**1.30**	**525**		**12.79**	**0.71**	**4.03**	***HDU4***
B	PW	362	6.5	9	**1.4**	**510**	**OK**	**26%**			**2456**	**2456**	**378**	***B***	17	**1.30**	**1138**		**22.10**	**3.33**	**2.89**	***HDU2***
C	PW	312	4.5	9	**2.0**	**510**	**OK**	**22%**			**2117**	**2117**	**470**	***B***	17	**1.30**	**788**		**19.05**	**1.60**	**3.88**	***HDU4***
D	PW	247	3	9	**3.0**	**340**	**OK**	**9%**			**898**	**898**	**299**	***A***	17	**1.30**	**525**		**8.08**	**0.71**	**2.46**	***HDU2***
	PW		2.6	9	**3.5**	**340**	**OK**	**8%**			**778**	**778**	**299**	***A***	17	**1.30**	**455**		**7.00**	**0.53**	**2.49**	***HDU2***
E	PW	66	3.5	9	**2.6**	**340**	**OK**	**2%**			**209**	**209**	**60**	***A***	17	**1.30**	**613**		**1.88**	**0.97**	**0.26**	***HDU2***
	PW		4	9	**2.3**	**340**	**OK**	**3%**			**239**	**239**	**60**	***A***	17	**1.30**	**700**		**2.15**	**1.26**	**0.22**	***HDU2***
		1406						100%			9538	9538										

FOR REFERENCE ONLY

PROJECT:	SHEET NO		
VOLUNTARY STRENGTHENING	JOB No.		0
1077 FELL STREET	BY	REV	DATE
94117	DM	00	02/27/24

SHEARWALL ALONG LINE A IS MISSING ON PLAN S2

SEISMIC LOAD DISTRIBUTION TO SHEARWALL & FRAMES

Lateral Force F3rd = 8.36 kips
V2nd = 17.90 kips
A3rd = 1,405 ft^2

Seismic Load Distribution to Shear Walls & Frames in N-S direction

Line	System	Tributary Area (ft^2)	Wall properties: Length (ft)	Height	Aspect Ratio	$V_{allowable}$ (plf)	$V_{all} > V_{demand}$	Portion of partial area (%)	Wall loading and capacity: Σv_{Above} roof	Σv_x (lbs)	v_{total} (lbs)	v_{demand} (plf)	Wall Type	For Hold Down use Simpson PHD/MST: Wall wt. (psf)	Tri. Width for DL (ft)	DL (lbs)	$DL_{(above)}$	OTM(V_i) (kip-ft)	OTM(DL) (kip-ft)	T (kip)	H.D.
A	PW	279	4	9	2.3	1330	OK	20%	2843	1659	4502	1125	E	17	8.00			40.52	0.00	10.13	HDU14
B	PW	417	8	9	1.1	665	OK	30%	2456	2480	4936	617	C	17	8.00			44.42	0.00	5.55	HDU5
C	PW	383	8.75	9	1.0	510	OK	27%	2117	2278	4395	502	B	17	8.00			39.55	0.00	4.52	HDU4
D	PW	201	8	9	1.1	510	OK	14%	1676	1196	2871	359	B	17	8.00			25.84	0.00	3.23	HDU4
E	WSWH	125	1.5	9	N.A.	N.A.	N.A.	4%	224	372	596	397		17	8.00			5.36	0.00	3.57	
	WSWH		1.5	9	N.A.	N.A.	N.A.	4%	224	372	596	397		17	8.00			5.36	0.00	3.57	
		1405						100%	9539	8356.7	17895.4										

VERIFY WALL HEIGHT
THE ARCHITECTURAL ELEVATION SHOWS THE WALL IS 11' TALL INSTEAD OF 9'

PROVIDE PERFORATED SHEARWALL CALCULATION



PROVIDE DESIGN LOADS FOR SHEAWALLS DESIGNED IN LONGITUDINAL DIRECTIONS

PROJECT:	SHEET NO	
VOLUNTARY STRENGTHENING	JOB No.	0
1077 FELL STREET	BY	DATE
94117	DM	02/27/24

LEGEND

HF	HARDY FRAME
TS	TUBE STEEL (CANTILEVER COLUMN)
PW	PLYWOOD SHEARWALL
MF	STEEL MOMENT FRAME
SW	STRONGWALL
SSW	STL. STRONGWALL
CMU	CONRETE MASONRY
CON.	CONCRETE WALL
L	LENGTH OF WALL
BETA (β)	FACTOR TO ACCOUNT TO ANGLE VARIATION OF LATERAL
OTM (V_i)	OVERTURNING MOMENT DUE TO TOTAL SHEAR FORCE ON SHEARWALL
OTM (DL)	RESISTING MOMENT DUE TO TOTAL DEADWEIGHT OF WALL

NOTE :

1. PLYWOOD SHEARWALLS WITH CAPACITY OF 300LBS/FT SHALL BE INSPECTED BY A DEPUTY INSPECTOR
2. PLYWOOD SHALL BE AT LEAST 4-PLY 3-PLY SHALL ONLY HAVE A MAX CAP OF 200LBS/FT
3. USE ONLY COMMON NAILS FOR PLYWOOD SHEARWALLS AND DIAPRAGHM

SHEARWALL SCHEDULE

MARK	TYPE	MATERIALS	NAILING	ALLOW. SHEAR PLF
1	A	1/2" STRUC 1	10d @6 oc	340
2	B	1/2" STRUC 1	10d @4 oc	510
3	C	1/2" STRUC 1	10d @3 oc	665
4	D	1/2" STRUC 1	10d @2 oc	870
5	E	1/2", PLY STRUC 1 BOTH SIDES	10d @4 oc ea side	1330
6	F	1/2", PLY STRUC 1 BOTH SIDES	10d @3 oc ea side	1740

HOLDOWN CAPACITIES

FOUNDATION		UPPER FLOOR	
(SIMPSON) (ICC ESR 2330	4x4 POST kips	(SIMPSON)	4x4 POST kips
HDU2	3.080	MST37	5.080
HDU4	4.560	MST48	5.310
HDU5	5.645	MST60	6.730
HDU8	6.97	2-MST48	10.620
HDU11	9.54	2-MST60	13.46
HDU14	14.37		
HD12	15.51		
HD19	19.07		

Note : For HDU14, HD12, HD19 : Capacity is based on 6x6 wood post

Project Title:
Engineer:
Project ID:
Project Descr:

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (E) 2B1

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, ASCE 7-16
Load Combination Set : ASCE 7-16

Material Properties

Analysis Method : Allowable Stress Design
Load Combination : ASCE 7-16

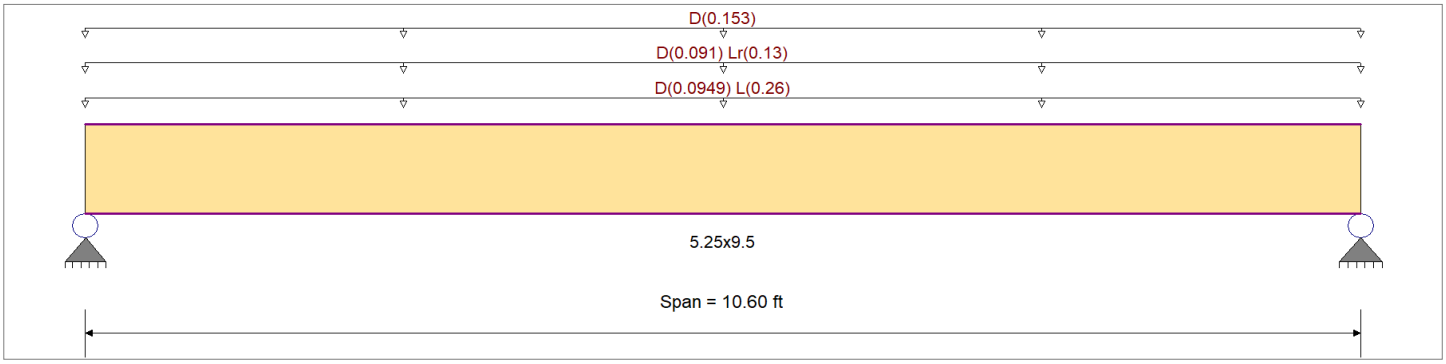
Wood Species : iLevel Truss Joist
Wood Grade : Parallam PSL 2.2E

Beam Bracing : Beam is Fully Braced against lateral-torsional buckling

Fb +	2,900.0 psi
Fb -	2,900.0 psi
Fc - Prll	2,900.0 psi
Fc - Perp	750.0 psi
Fv	290.0 psi
Ft	2,025.0 psi

E : Modulus of Elasticity

Ebend- xx	2,200.0 ksi
Eminbend - xx	1,118.19 ksi
Density	45.070 pcf



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Uniform Load : D = 0.01460, L = 0.040 ksf, Tributary Width = 6.50 ft, (FLOOR LOAD)
Uniform Load : D = 0.0140, Lr = 0.020 ksf, Tributary Width = 6.50 ft, (ROOF LOAD)
Uniform Load : D = 0.0170 ksf, Tributary Width = 9.0 ft, (WALL)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.441 : 1	Maximum Shear Stress Ratio	=	0.288 : 1
Section used for this span		5.25x9.5	Section used for this span		5.25x9.5
fb: Actual	=	1,311.53 psi	fv: Actual	=	83.65 psi
F'b	=	2,976.18 psi	F'v	=	290.00 psi
Load Combination		+D+L	Load Combination		+D+L
Location of maximum on span	=	5.300 ft	Location of maximum on span	=	0.000 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.090 in	Ratio =	1413 >=300	Span: 1 : L Only
Max Upward Transient Deflection	0 in	Ratio =	0 <300	n/a
Max Downward Total Deflection	0.224 in	Ratio =	567 >=400	Span: 1 : +D+0.750Lr+0.750L
Max Upward Total Deflection	0 in	Ratio =	0 <400	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 10.60 ft	1	0.282	0.185	0.90	1.00	1.00	1.00	1.026	1.00	1.00	1.00	4.98	756.6	2,678.6	1.60	48.3	261.0
+D+L					1.00	1.00	1.00	1.026	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 10.60 ft	1	0.441	0.288	1.00	1.00	1.00	1.00	1.026	1.00	1.00	1.00	8.63	1,311.5	2,976.2	2.78	83.7	290.0
+D+Lr					1.00	1.00	1.00	1.026	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 10.60 ft	1	0.278	0.182	1.25	1.00	1.00	1.00	1.026	1.00	1.00	1.00	6.80	1,034.1	3,720.2	2.19	66.0	362.5
+D+0.750Lr+0.750L					1.00	1.00	1.00	1.026	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 10.60 ft	1	0.371	0.243	1.25	1.00	1.00	1.00	1.026	1.00	1.00	1.00	9.09	1,380.9	3,720.2	2.93	88.1	362.5
+D+0.750L					1.00	1.00	1.00	1.026	1.00	1.00	1.00			0.0	0.00	0.0	0.0

Project Title:
Engineer:
Project ID:
Project Descr:

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (E) 2B1

Maximum Forces & Stresses for Load Combinations

Load Combination		Max Stress Ratios										Moment Values			Shear Values		
Segment Length	Span #	M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	M	fb	F'b	V	fv	F'v
Length = 10.60 ft	**1**	0.343	0.224	1.15	1.00	1.00	1.00	1.026	1.00	1.00	1.00	7.72	1,172.8	3,422.6	2.49	74.8	333.5
+0.60D					1.00	1.00	1.00	1.026	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 10.60 ft	**1**	0.095	0.062	1.60	1.00	1.00	1.00	1.026	1.00	1.00	1.00	2.99	454.0	4,761.9	0.96	29.0	464.0

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+0.750Lr+0.750L	1	0.2240	5.339		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	3.429	3.429
Max Upward from Load Combinations	3.429	3.429
Max Upward from Load Cases	1.879	1.879
D Only	1.879	1.879
+D+L	3.257	3.257
+D+Lr	2.568	2.568
+D+0.750Lr+0.750L	3.429	3.429
+D+0.750L	2.912	2.912
+0.60D	1.127	1.127
Lr Only	0.689	0.689
L Only	1.378	1.378

Project Title:
Engineer:
Project ID:
Project Descr:

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (E) 1B1

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, ASCE 7-16
Load Combination Set : ASCE 7-16

Material Properties

Analysis Method : Allowable Stress Design
Load Combination : ASCE 7-16

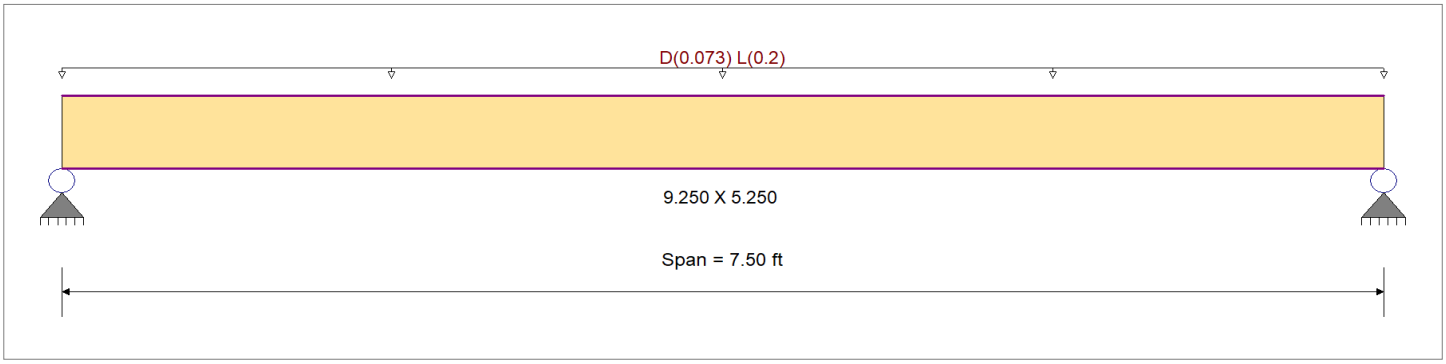
Wood Species : iLevel Truss Joist
Wood Grade : Parallam PSL 2.2E

Beam Bracing : Beam is Fully Braced against lateral-torsional buckling

Fb +	2,900.0 psi
Fb -	2,900.0 psi
Fc - Prll	2,900.0 psi
Fc - Perp	750.0 psi
Fv	290.0 psi
Ft	2,025.0 psi

E : Modulus of Elasticity

Ebend- xx	2,200.0 ksi
Eminbend - xx	1,118.19 ksi
Density	45.070 pcf



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Uniform Load : D = 0.01460, L = 0.040 ksf, Tributary Width = 5.0 ft, (FLOOR LOAD)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.197 : 1	Maximum Shear Stress Ratio	=	0.103 : 1
Section used for this span		9.250 X 5.250	Section used for this span		9.250 X 5.250
fb: Actual	=	572.27 psi	fv: Actual	=	29.73 psi
F'b	=	2,900.00 psi	F'v	=	290.00 psi
Load Combination		+D+L	Load Combination		+D+L
Location of maximum on span	=	3.750 ft	Location of maximum on span	=	7.089 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.058 in	Ratio =	1542	>=300	Span: 1 : L Only
Max Upward Transient Deflection	0 in	Ratio =	0	<300	n/a
Max Downward Total Deflection	0.084 in	Ratio =	1070	>=400	Span: 1 : +D+L
Max Upward Total Deflection	0 in	Ratio =	0	<400	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 7.50 ft	1	0.067	0.035	0.90	1.00	1.00	1.00	1.000	1.00	1.00	1.00	0.62	175.1	2,610.0	0.29	9.1	261.0
+D+L					1.00	1.00	1.00	1.000	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 7.50 ft	1	0.197	0.103	1.00	1.00	1.00	1.00	1.000	1.00	1.00	1.00	2.03	572.3	2,900.0	0.96	29.7	290.0
+D+0.750L					1.00	1.00	1.00	1.000	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 7.50 ft	1	0.130	0.068	1.25	1.00	1.00	1.00	1.000	1.00	1.00	1.00	1.67	473.0	3,625.0	0.80	24.6	362.5
+0.60D					1.00	1.00	1.00	1.000	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 7.50 ft	1	0.023	0.012	1.60	1.00	1.00	1.00	1.000	1.00	1.00	1.00	0.37	105.1	4,640.0	0.18	5.5	464.0

Wood Beam

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (E) 1B1

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L	1	0.0841	3.777		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	1.081	1.081
Max Upward from Load Combinations	1.081	1.081
Max Upward from Load Cases	0.750	0.750
D Only	0.331	0.331
+D+L	1.081	1.081
+D+0.750L	0.893	0.893
+0.60D	0.198	0.198
L Only	0.750	0.750

Project Title:
Engineer:
Project ID:
Project Descr:

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (N) 1B2

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, ASCE 7-16
Load Combination Set : ASCE 7-16

Material Properties

Analysis Method : Allowable Stress Design
Load Combination : ASCE 7-16

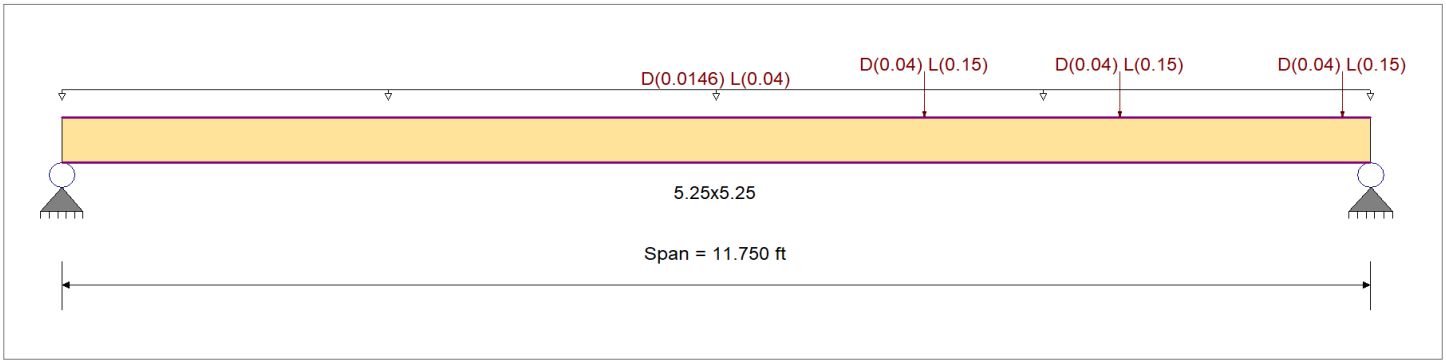
Wood Species : iLevel Truss Joist
Wood Grade : Parallam PSL 2.2E

Beam Bracing : Beam is Fully Braced against lateral-torsional buckling

Fb +	2,900.0 psi
Fb -	2,900.0 psi
Fc - Prll	2,900.0 psi
Fc - Perp	750.0 psi
Fv	290.0 psi
Ft	2,025.0 psi

E : Modulus of Elasticity

Ebend- xx	2,200.0 ksi
Eminbend - xx	1,118.19 ksi
Density	45.070 pcf



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Uniform Load : D = 0.01460, L = 0.040 ksf, Tributary Width = 1.0 ft, (FLOOR LOAD)
Point Load : D = 0.040, L = 0.150 k @ 7.750 ft, (STRINGER 1)
Point Load : D = 0.040, L = 0.150 k @ 9.50 ft, (STRINGER 2)
Point Load : D = 0.040, L = 0.150 k @ 11.50 ft, (STRINGER 3)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.281 : 1	Maximum Shear Stress Ratio	=	0.116 : 1
Section used for this span		5.25x5.25	Section used for this span		5.25x5.25
fb: Actual	=	893.64 psi	fv: Actual	=	33.70 psi
F'b	=	3,178.70 psi	F'v	=	290.00 psi
Load Combination		+D+L	Load Combination		+D+L
Location of maximum on span	=	7.547 ft	Location of maximum on span	=	11.321 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.218 in	Ratio =	648 >=300	Span: 1 : L Only
Max Upward Transient Deflection	0 in	Ratio =	0 <300	n/a
Max Downward Total Deflection	0.314 in	Ratio =	448 >=400	Span: 1 : +D+L
Max Upward Total Deflection	0 in	Ratio =	0 <400	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 11.750 ft	1	0.094	0.038	0.90	1.00	1.00	1.00	1.096	1.00	1.00	1.00	0.54	269.4	2,860.8	0.18	10.0	261.0
+D+L					1.00	1.00	1.00	1.096	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 11.750 ft	1	0.281	0.116	1.00	1.00	1.00	1.00	1.096	1.00	1.00	1.00	1.80	893.6	3,178.7	0.62	33.7	290.0
+D+0.750L					1.00	1.00	1.00	1.096	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 11.750 ft	1	0.185	0.077	1.25	1.00	1.00	1.00	1.096	1.00	1.00	1.00	1.48	736.9	3,973.4	0.51	27.8	362.5
+0.60D					1.00	1.00	1.00	1.096	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 11.750 ft	1	0.032	0.013	1.60	1.00	1.00	1.00	1.096	1.00	1.00	1.00	0.32	161.6	5,085.9	0.11	6.0	464.0

Wood Beam

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (N) 1B2

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L	1	0.3144	6.132		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	0.477	0.836
Max Upward from Load Combinations	0.477	0.836
Max Upward from Load Cases	0.318	0.602
D Only	0.159	0.234
+D+L	0.477	0.836
+D+0.750L	0.397	0.686
+0.60D	0.095	0.141
L Only	0.318	0.602

Project Title:
Engineer:
Project ID:
Project Descr:

Wood Beam

Project File: 1077 Fell street- voluntary 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

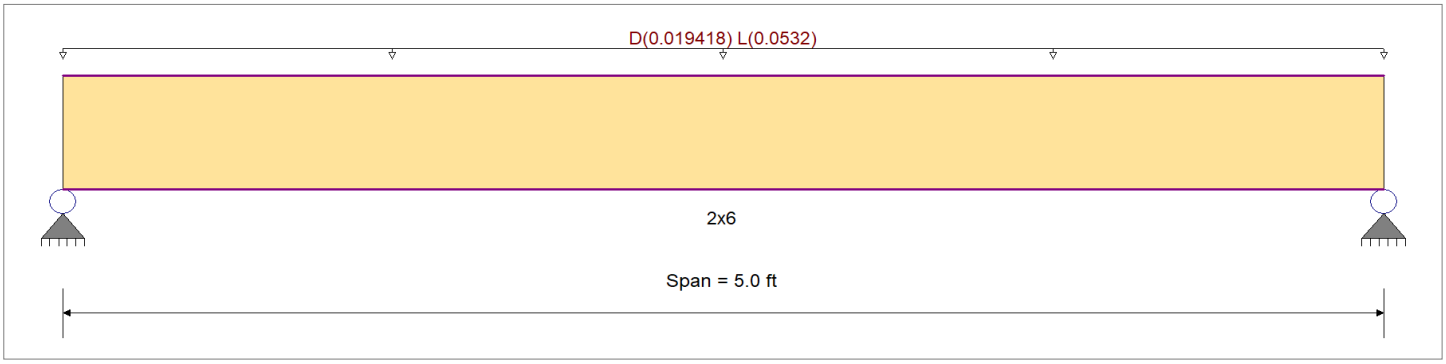
DESCRIPTION: (N) 2x6 JOISTS

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, ASCE 7-16
Load Combination Set : ASCE 7-16

Material Properties

Analysis Method :	Allowable Stress Design	Fb +	925 psi	*E : Modulus of Elasticity*	
Load Combination :	ASCE 7-16	Fb -	925 psi	Ebend- xx	1300 ksi
		Fc - Prll	1450 psi	Eminbend - xx	470 ksi
Wood Species :	Douglas Fir-South	Fc - Perp	520 psi		
Wood Grade :	No.1	Fv	180 psi		
		Ft	600 psi	Density	28.72 pcf
Beam Bracing :	Beam is Fully Braced against lateral-torsional buckling				



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Uniform Load : D = 0.01460, L = 0.040 ksf, Tributary Width = 1.330 ft, (FLOOR LOAD)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.306 : 1	Maximum Shear Stress Ratio	=	0.153 : 1
Section used for this span		2x6	Section used for this span		2x6
fb: Actual	=	368.25 psi	fv: Actual	=	27.60 psi
F'b	=	1,202.50 psi	F'v	=	180.00 psi
Load Combination		+D+L	Load Combination		+D+L
Location of maximum on span	=	2.500 ft	Location of maximum on span	=	0.000 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.028 in	Ratio =	2155 >=300	Span: 1 : L Only
Max Upward Transient Deflection	0 in	Ratio =	0 <300	n/a
Max Downward Total Deflection	0.039 in	Ratio =	1544 >=400	Span: 1 : +D+L
Max Upward Total Deflection	0 in	Ratio =	0 <400	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination		Max Stress Ratios										Moment Values			Shear Values		
Segment Length	Span #	M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	M	fb	F'b	V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 5.0 ft	1	0.097	0.048	0.90	1.00	1.00	1.00	1.300	1.00	1.00	1.00	0.07	104.4	1,082.3	0.04	7.8	162.0
+D+L					1.00	1.00	1.00	1.300	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 5.0 ft	1	0.306	0.153	1.00	1.00	1.00	1.00	1.300	1.00	1.00	1.00	0.23	368.2	1,202.5	0.15	27.6	180.0
+D+0.750L					1.00	1.00	1.00	1.300	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 5.0 ft	1	0.201	0.101	1.25	1.00	1.00	1.00	1.300	1.00	1.00	1.00	0.19	302.3	1,503.1	0.12	22.7	225.0
+0.60D					1.00	1.00	1.00	1.300	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 5.0 ft	1	0.033	0.016	1.60	1.00	1.00	1.00	1.300	1.00	1.00	1.00	0.04	62.7	1,924.0	0.03	4.7	288.0

Wood Beam

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (N) 2x6 JOISTS

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L	1	0.0389	2.518		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	0.186	0.186
Max Upward from Load Combinations	0.186	0.186
Max Upward from Load Cases	0.133	0.133
D Only	0.053	0.053
+D+L	0.186	0.186
+D+0.750L	0.152	0.152
+0.60D	0.032	0.032
L Only	0.133	0.133

Project Title:
Engineer:
Project ID:
Project Descr:

Wood Beam

Project File: 1077 Fell street- voluntary 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (N) STRINGER

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, ASCE 7-16
Load Combination Set : ASCE 7-16

Material Properties

Analysis Method : Allowable Stress Design
Load Combination : ASCE 7-16

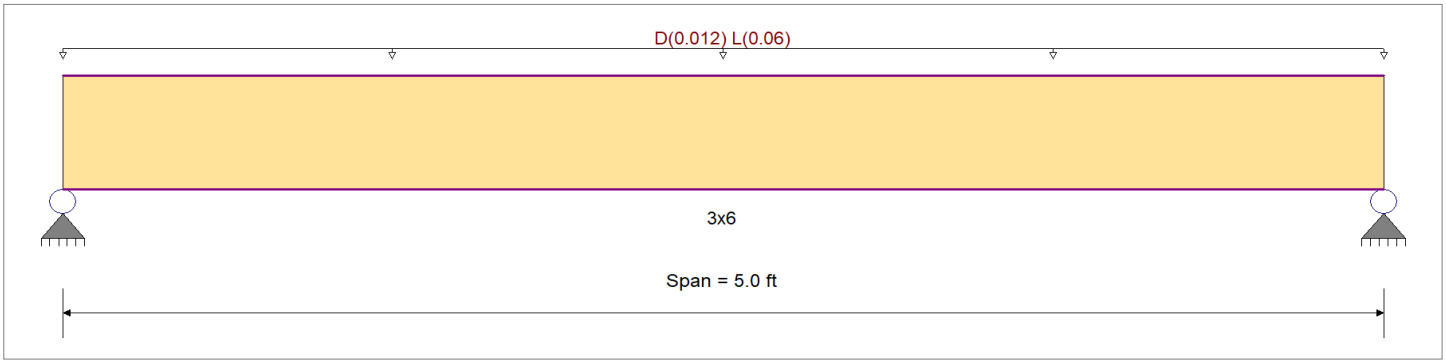
Wood Species :
Wood Grade :

Beam Bracing : Beam is Fully Braced against lateral-torsional buckling

Fb +	1,000.0 psi
Fb -	1,000.0 psi
Fc - Prll	1,000.0 psi
Fc - Perp	1,000.0 psi
Fv	65.0 psi
Ft	65.0 psi

E : Modulus of Elasticity

Ebend- xx	1,300.0 ksi
Eminbend - xx	1,300.0 ksi
Density	34.0 pcf



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Uniform Load : D = 0.0080, L = 0.040 ksf, Tributary Width = 1.50 ft, (STAIR LOAD)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.224 : 1	Maximum Shear Stress Ratio	=	0.258 : 1
Section used for this span		3x6	Section used for this span		3x6
fb: Actual	=	223.87 psi	fv: Actual	=	16.78 psi
F'b	=	1,000.00 psi	F'v	=	65.00 psi
Load Combination		+D+L	Load Combination		+D+L
Location of maximum on span	=	2.500 ft	Location of maximum on span	=	0.000 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.019 in	Ratio =	3185	>=300	Span: 1 : L Only
Max Upward Transient Deflection	0 in	Ratio =	0	<300	n/a
Max Downward Total Deflection	0.024 in	Ratio =	2540	>=400	Span: 1 : +D+L
Max Upward Total Deflection	0 in	Ratio =	0	<400	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination		Max Stress Ratios										Moment Values			Shear Values		
Segment Length	Span #	M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	M	fb	F'b	V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 5.0 ft	1	0.050	0.058	0.90	1.00	1.00	1.00	1.000	1.00	1.00	1.00	0.05	45.4	900.0	0.03	3.4	58.5
+D+L					1.00	1.00	1.00	1.000	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 5.0 ft	1	0.224	0.258	1.00	1.00	1.00	1.00	1.000	1.00	1.00	1.00	0.24	223.9	1,000.0	0.15	16.8	65.0
+D+0.750L					1.00	1.00	1.00	1.000	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 5.0 ft	1	0.143	0.165	1.25	1.00	1.00	1.00	1.000	1.00	1.00	1.00	0.19	179.2	1,250.0	0.12	13.4	81.3
+0.60D					1.00	1.00	1.00	1.000	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 5.0 ft	1	0.017	0.020	1.60	1.00	1.00	1.00	1.000	1.00	1.00	1.00	0.03	27.2	1,600.0	0.02	2.0	104.0

Wood Beam

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (N) STRINGER

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L	1	0.0236	2.518		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	0.188	0.188
Max Upward from Load Combinations	0.188	0.188
Max Upward from Load Cases	0.150	0.150
D Only	0.038	0.038
+D+L	0.188	0.188
+D+0.750L	0.151	0.151
+0.60D	0.023	0.023
L Only	0.150	0.150

Project Title:
Engineer:
Project ID:
Project Descr:

Combined Footing

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

Code References

Calculations per ACI 318-14, IBC 2018, CBC 2019, ASCE 7-16
Load Combinations Used : IBC 2021

General Information

Material Properties

f'c : Concrete 28 day strength	2.50	ksi
fy : Rebar Yield	60.0	ksi
Ec : Concrete Elastic Modulus	3,122.0	ksi
Concrete Density	145.0	pcf
ϕ : Phi Values Flexure :	0.90	
Shear :	0.750	

Analysis/Design Settings

Calculate footing weight as dead load ?	Yes
Calculate Pedestal weight as dead load ?	No
Min Steel % Bending Reinf (based on 'd')	
Min Allow % Temp Reinf (based on thick)	0.00180
Min. Overturning Safety Factor	1.0: 1
Min. Sliding Safety Factor	1.0: 1

Soil Information

Allowable Soil Bearing	1.50	ksf
Increase Bearing By Footing Weight	No	
Soil Passive Sliding Resistance	250.0	pcf
(Uses entry for "Footing base depth below soil surface" for force)		
Coefficient of Soil/Concrete Friction	0.30	

Soil Bearing Increase

Footing base depth below soil surface	ft
Increases based on footing Depth	
Allowable pressure increase per foot	ksf
when base of footing is below	ft
Increases based on footing Width . . .	
Allowable pressure increase per foot	ksf
when maximum length or width is greater tha	ft
Maximum Allowed Bearing Pressure	10.0 ksf
(A value of zero implies no limit)	
Adjusted Allowable Soil Bearing	1.50 ksf
(Allowable Soil Bearing adjusted for footing weight and depth & width increases as specified by user.)	

Dimensions & Reinforcing

Distance Left of Column #1	=	1.0 ft
Between Columns	=	10.0 ft
Distance Right of Column #2	=	1.0 ft
Total Footing Length	=	12.0 ft
Footing Width	=	1.50 ft
Footing Thickness	=	18.0 in

Pedestal dimensions...

		Col #1	Col #2	
Sq. Dim.	=	0.50	0.50	in
Height	=	150.0	150.0	in

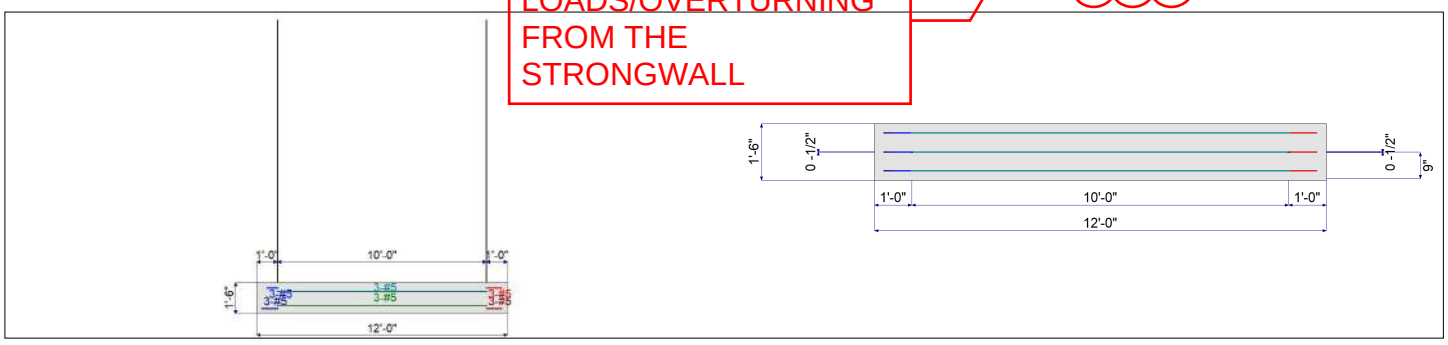
Rebar Center to Concrete Edge @ Top	=	3.0 in
Rebar Center to Concrete Edge @ Bottom	=	3.0 in

Bars left of Col #1	Count	Size #	As Provided	As Req'd
Bottom Bars	3.0	5	0.930	0.5832 in^2
Top Bars	3.0	5	0.930	0.0 in^2
Bars Btwn Cols				
Bottom Bars	3.0	5	0.930	0.5832 in^2
Top Bars	3.0	5	0.930	0.5832 in^2
Bars Right of Col #2				
Bottom Bars	3.0	5	0.930	0.5832 in^2
Top Bars	3.0	5	0.930	0.0 in^2

Applied Loads

Applied @ Left Column		D	Lr	L	S	W	E	H	
Axial Load Downward	=	1.880	0.690	1.380					k
Moment (+CW)	=								k-ft
Shear (+X)	=								k
Applied @ Right Column									
Axial Load Downward	=	1.880	0.690	1.380					k
Moment (+CW)	=								k-ft
Shear (+X)	=								k
Overburden	=								

SEISMIC LOADS/OVERTURNING FROM THE STRONGWALL



Combined Footing

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

DESIGN SUMMARY

Design OK

Factor of Safety	Item	Applied	Capacity	Governing Load Combination
PASS No OTM	Overturning	0.0 k-ft	0.0 k-ft	No OTM
PASS No Sliding	Sliding	0.0 k	2.303 k	No Sliding
PASS No Uplift	Uplift	0.0 k	0.0 k	No Uplift

Utilization Ratio	Item	Applied	Capacity	Governing Load Combination
PASS 0.3993	Soil Bearing	0.5989 ksf	1.50 ksf	+D+0.750Lr+0.750L
PASS 0.1471	1-way Shear - Col #1	11.030 psi	75.0 psi	+1.20D+0.50Lr+1.60L
PASS 0.1471	1-way Shear - Col #2	11.030 psi	75.0 psi	+1.20D+0.50Lr+1.60L
PASS 0.02814	2-way Punching - Col #1	4.221 psi	150.0 psi	+1.20D+0.50Lr+1.60L
PASS 0.02814	2-way Punching - Col #2	4.221 psi	150.0 psi	+1.20D+0.50Lr+1.60L
PASS No Bending	Flexure - Left of Col #1 - Top	0.0 k-ft	0.0 k-ft	N/A
PASS 0.006183	Flexure - Left of Col #1 - Bottom	0.3693 k-ft	59.722 k-ft	+1.20D+0.50Lr+1.60L
PASS 0.1610	Flexure - Between Cols - Top	-9.618 k-ft	59.722 k-ft	+1.20D+0.50Lr+1.60L
PASS 0.003372	Flexure - Between Cols - Bottom	0.2014 k-ft	59.722 k-ft	+1.20D+0.50Lr+1.60L
PASS No Bending	Flexure - Right of Col #2 - Top	0.0 k-ft	0.0 k-ft	N/A
PASS 0.006183	Flexure - Right of Col #2 - Bottom	0.3693 k-ft	59.722 k-ft	+1.20D+0.50Lr+1.60L

Soil Bearing

Load Combination...	Total Bearing	Eccentricity from Ftg CL	Actual Soil Bearing Stress @ Left Edge	@ Right Edge	Allowable	Actual / Allow Ratio
D Only	7.68 k	0.000 ft	0.43 ksf	0.43 ksf	1.50 ksf	0.284
+D+L	10.44 k	0.000 ft	0.58 ksf	0.58 ksf	1.50 ksf	0.386
+D+Lr	9.06 k	0.000 ft	0.50 ksf	0.50 ksf	1.50 ksf	0.335
+D+0.750Lr+0.750L	10.78 k	0.000 ft	0.60 ksf	0.60 ksf	1.50 ksf	0.399
+D+0.750L	9.75 k	0.000 ft	0.54 ksf	0.54 ksf	1.50 ksf	0.361
+0.60D	4.61 k	0.000 ft	0.26 ksf	0.26 ksf	1.50 ksf	0.171

Overturning Stability

Load Combination...	Moments about Left Edge k-ft Overturning	Resisting	Ratio	Moments about Right Edg k-ft Overturning	Resisting	Ratio
D Only	0.00	0.00	999.000	0.00	0.00	999.000
+D+L	0.00	0.00	999.000	0.00	0.00	999.000
+D+Lr	0.00	0.00	999.000	0.00	0.00	999.000
+D+0.750Lr+0.750L	0.00	0.00	999.000	0.00	0.00	999.000
+D+0.750L	0.00	0.00	999.000	0.00	0.00	999.000
+0.60D	0.00	0.00	999.000	0.00	0.00	999.000

Sliding Stability

Load Combination...	Sliding Force	Resisting Force	Sliding SafetyRatio
D Only	0.00 k	2.30 k	999
+D+L	0.00 k	3.13 k	999
+D+Lr	0.00 k	2.72 k	999
+D+0.750Lr+0.750L	0.00 k	3.23 k	999
+D+0.750L	0.00 k	2.92 k	999
+0.60D	0.00 k	1.38 k	999

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+0.60D	0.000	0.000	0	0.000	0	0.000	0.000	0.000
+0.60D	0.000	0.030	0	0.000	0	0.000	0.000	0.000
+0.60D	0.000	0.060	0	0.000	0	0.000	0.000	0.000
+0.60D	0.000	0.090	0	0.000	0	0.000	0.000	0.000
+0.60D	0.000	0.120	0	0.000	0	0.000	0.000	0.000
+0.60D	0.000	0.150	0	0.000	0	0.000	0.000	0.000
+1.20D+0.50Lr+1.60L	0.013	0.180	Bottom	0.583	Min Temp %	0.930	59.722	0.000
+1.20D+0.50Lr+1.60L	0.018	0.210	Bottom	0.583	Min Temp %	0.930	59.722	0.000
+1.20D+0.50Lr+1.60L	0.023	0.240	Bottom	0.583	Min Temp %	0.930	59.722	0.000

Combined Footing

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+0.50Lr+1.60L	0.029	0.270	Bottom	0.583	Min Temp %	0.930	59.722	0.000
+1.20D+0.50Lr+1.60L	0.036	0.300	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.044	0.330	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.052	0.360	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.061	0.390	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.071	0.420	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.081	0.450	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.092	0.480	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.104	0.510	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.117	0.540	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.130	0.570	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.144	0.600	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.159	0.630	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.175	0.660	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.191	0.690	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.208	0.720	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.225	0.750	Bottom	0.583	Min Temp %	0.930	59.722	0.004
+1.20D+0.50Lr+1.60L	0.244	0.780	Bottom	0.583	Min Temp %	0.930	59.722	0.004
+1.20D+0.50Lr+1.60L	0.263	0.810	Bottom	0.583	Min Temp %	0.930	59.722	0.004
+1.20D+0.50Lr+1.60L	0.283	0.840	Bottom	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	0.303	0.870	Bottom	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	0.325	0.900	Bottom	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	0.347	0.930	Bottom	0.583	Min Temp %	0.930	59.722	0.006
+1.20D+0.50Lr+1.60L	0.369	0.960	Bottom	0.583	Min Temp %	0.930	59.722	0.006
+1.20D+0.50Lr+1.60L	0.364	0.990	Bottom	0.583	Min Temp %	0.930	59.722	0.006
+1.20D+0.50Lr+1.60L	0.307	1.020	Bottom	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	0.201	1.050	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.083	1.080	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	-0.035	1.110	Top	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	-0.152	1.140	Top	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	-0.269	1.170	Top	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	-0.385	1.200	Top	0.583	Min Temp %	0.930	59.722	0.006
+1.20D+0.50Lr+1.60L	-0.500	1.230	Top	0.583	Min Temp %	0.930	59.722	0.008
+1.20D+0.50Lr+1.60L	-0.614	1.260	Top	0.583	Min Temp %	0.930	59.722	0.010
+1.20D+0.50Lr+1.60L	-0.728	1.290	Top	0.583	Min Temp %	0.930	59.722	0.012
+1.20D+0.50Lr+1.60L	-0.841	1.320	Top	0.583	Min Temp %	0.930	59.722	0.014
+1.20D+0.50Lr+1.60L	-0.953	1.350	Top	0.583	Min Temp %	0.930	59.722	0.016
+1.20D+0.50Lr+1.60L	-1.064	1.380	Top	0.583	Min Temp %	0.930	59.722	0.018
+1.20D+0.50Lr+1.60L	-1.175	1.410	Top	0.583	Min Temp %	0.930	59.722	0.020
+1.20D+0.50Lr+1.60L	-1.285	1.440	Top	0.583	Min Temp %	0.930	59.722	0.022
+1.20D+0.50Lr+1.60L	-1.394	1.470	Top	0.583	Min Temp %	0.930	59.722	0.023
+1.20D+0.50Lr+1.60L	-1.503	1.500	Top	0.583	Min Temp %	0.930	59.722	0.025
+1.20D+0.50Lr+1.60L	-1.611	1.530	Top	0.583	Min Temp %	0.930	59.722	0.027
+1.20D+0.50Lr+1.60L	-1.718	1.560	Top	0.583	Min Temp %	0.930	59.722	0.029
+1.20D+0.50Lr+1.60L	-1.824	1.590	Top	0.583	Min Temp %	0.930	59.722	0.031
+1.20D+0.50Lr+1.60L	-1.930	1.620	Top	0.583	Min Temp %	0.930	59.722	0.032
+1.20D+0.50Lr+1.60L	-2.035	1.650	Top	0.583	Min Temp %	0.930	59.722	0.034
+1.20D+0.50Lr+1.60L	-2.139	1.680	Top	0.583	Min Temp %	0.930	59.722	0.036
+1.20D+0.50Lr+1.60L	-2.243	1.710	Top	0.583	Min Temp %	0.930	59.722	0.038
+1.20D+0.50Lr+1.60L	-2.345	1.740	Top	0.583	Min Temp %	0.930	59.722	0.039
+1.20D+0.50Lr+1.60L	-2.447	1.770	Top	0.583	Min Temp %	0.930	59.722	0.041
+1.20D+0.50Lr+1.60L	-2.549	1.800	Top	0.583	Min Temp %	0.930	59.722	0.043
+1.20D+0.50Lr+1.60L	-2.649	1.830	Top	0.583	Min Temp %	0.930	59.722	0.044
+1.20D+0.50Lr+1.60L	-2.749	1.860	Top	0.583	Min Temp %	0.930	59.722	0.046
+1.20D+0.50Lr+1.60L	-2.848	1.890	Top	0.583	Min Temp %	0.930	59.722	0.048
+1.20D+0.50Lr+1.60L	-2.947	1.920	Top	0.583	Min Temp %	0.930	59.722	0.049
+1.20D+0.50Lr+1.60L	-3.045	1.950	Top	0.583	Min Temp %	0.930	59.722	0.051
+1.20D+0.50Lr+1.60L	-3.142	1.980	Top	0.583	Min Temp %	0.930	59.722	0.053
+1.20D+0.50Lr+1.60L	-3.238	2.010	Top	0.583	Min Temp %	0.930	59.722	0.054
+1.20D+0.50Lr+1.60L	-3.334	2.040	Top	0.583	Min Temp %	0.930	59.722	0.056
+1.20D+0.50Lr+1.60L	-3.428	2.070	Top	0.583	Min Temp %	0.930	59.722	0.057
+1.20D+0.50Lr+1.60L	-3.523	2.100	Top	0.583	Min Temp %	0.930	59.722	0.059
+1.20D+0.50Lr+1.60L	-3.616	2.130	Top	0.583	Min Temp %	0.930	59.722	0.061

Combined Footing

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+0.50Lr+1.60L	-3.709	2.160	Top	0.583	Min Temp %	0.930	59.722	0.062
+1.20D+0.50Lr+1.60L	-3.801	2.190	Top	0.583	Min Temp %	0.930	59.722	0.064
+1.20D+0.50Lr+1.60L	-3.892	2.220	Top	0.583	Min Temp %	0.930	59.722	0.065
+1.20D+0.50Lr+1.60L	-3.982	2.250	Top	0.583	Min Temp %	0.930	59.722	0.067
+1.20D+0.50Lr+1.60L	-4.072	2.280	Top	0.583	Min Temp %	0.930	59.722	0.068
+1.20D+0.50Lr+1.60L	-4.161	2.310	Top	0.583	Min Temp %	0.930	59.722	0.070
+1.20D+0.50Lr+1.60L	-4.250	2.340	Top	0.583	Min Temp %	0.930	59.722	0.071
+1.20D+0.50Lr+1.60L	-4.337	2.370	Top	0.583	Min Temp %	0.930	59.722	0.073
+1.20D+0.50Lr+1.60L	-4.424	2.400	Top	0.583	Min Temp %	0.930	59.722	0.074
+1.20D+0.50Lr+1.60L	-4.510	2.430	Top	0.583	Min Temp %	0.930	59.722	0.076
+1.20D+0.50Lr+1.60L	-4.596	2.460	Top	0.583	Min Temp %	0.930	59.722	0.077
+1.20D+0.50Lr+1.60L	-4.681	2.490	Top	0.583	Min Temp %	0.930	59.722	0.078
+1.20D+0.50Lr+1.60L	-4.765	2.520	Top	0.583	Min Temp %	0.930	59.722	0.080
+1.20D+0.50Lr+1.60L	-4.848	2.550	Top	0.583	Min Temp %	0.930	59.722	0.081
+1.20D+0.50Lr+1.60L	-4.931	2.580	Top	0.583	Min Temp %	0.930	59.722	0.083
+1.20D+0.50Lr+1.60L	-5.013	2.610	Top	0.583	Min Temp %	0.930	59.722	0.084
+1.20D+0.50Lr+1.60L	-5.094	2.640	Top	0.583	Min Temp %	0.930	59.722	0.085
+1.20D+0.50Lr+1.60L	-5.174	2.670	Top	0.583	Min Temp %	0.930	59.722	0.087
+1.20D+0.50Lr+1.60L	-5.254	2.700	Top	0.583	Min Temp %	0.930	59.722	0.088
+1.20D+0.50Lr+1.60L	-5.333	2.730	Top	0.583	Min Temp %	0.930	59.722	0.089
+1.20D+0.50Lr+1.60L	-5.411	2.760	Top	0.583	Min Temp %	0.930	59.722	0.091
+1.20D+0.50Lr+1.60L	-5.489	2.790	Top	0.583	Min Temp %	0.930	59.722	0.092
+1.20D+0.50Lr+1.60L	-5.565	2.820	Top	0.583	Min Temp %	0.930	59.722	0.093
+1.20D+0.50Lr+1.60L	-5.642	2.850	Top	0.583	Min Temp %	0.930	59.722	0.094
+1.20D+0.50Lr+1.60L	-5.717	2.880	Top	0.583	Min Temp %	0.930	59.722	0.096
+1.20D+0.50Lr+1.60L	-5.792	2.910	Top	0.583	Min Temp %	0.930	59.722	0.097
+1.20D+0.50Lr+1.60L	-5.866	2.940	Top	0.583	Min Temp %	0.930	59.722	0.098
+1.20D+0.50Lr+1.60L	-5.939	2.970	Top	0.583	Min Temp %	0.930	59.722	0.099
+1.20D+0.50Lr+1.60L	-6.011	3.000	Top	0.583	Min Temp %	0.930	59.722	0.101
+1.20D+0.50Lr+1.60L	-6.083	3.030	Top	0.583	Min Temp %	0.930	59.722	0.102
+1.20D+0.50Lr+1.60L	-6.154	3.060	Top	0.583	Min Temp %	0.930	59.722	0.103
+1.20D+0.50Lr+1.60L	-6.224	3.090	Top	0.583	Min Temp %	0.930	59.722	0.104
+1.20D+0.50Lr+1.60L	-6.294	3.120	Top	0.583	Min Temp %	0.930	59.722	0.105
+1.20D+0.50Lr+1.60L	-6.363	3.150	Top	0.583	Min Temp %	0.930	59.722	0.107
+1.20D+0.50Lr+1.60L	-6.431	3.180	Top	0.583	Min Temp %	0.930	59.722	0.108
+1.20D+0.50Lr+1.60L	-6.499	3.210	Top	0.583	Min Temp %	0.930	59.722	0.109
+1.20D+0.50Lr+1.60L	-6.565	3.240	Top	0.583	Min Temp %	0.930	59.722	0.110
+1.20D+0.50Lr+1.60L	-6.631	3.270	Top	0.583	Min Temp %	0.930	59.722	0.111
+1.20D+0.50Lr+1.60L	-6.697	3.300	Top	0.583	Min Temp %	0.930	59.722	0.112
+1.20D+0.50Lr+1.60L	-6.761	3.330	Top	0.583	Min Temp %	0.930	59.722	0.113
+1.20D+0.50Lr+1.60L	-6.825	3.360	Top	0.583	Min Temp %	0.930	59.722	0.114
+1.20D+0.50Lr+1.60L	-6.888	3.390	Top	0.583	Min Temp %	0.930	59.722	0.115
+1.20D+0.50Lr+1.60L	-6.950	3.420	Top	0.583	Min Temp %	0.930	59.722	0.116
+1.20D+0.50Lr+1.60L	-7.012	3.450	Top	0.583	Min Temp %	0.930	59.722	0.117
+1.20D+0.50Lr+1.60L	-7.073	3.480	Top	0.583	Min Temp %	0.930	59.722	0.118
+1.20D+0.50Lr+1.60L	-7.133	3.510	Top	0.583	Min Temp %	0.930	59.722	0.119
+1.20D+0.50Lr+1.60L	-7.193	3.540	Top	0.583	Min Temp %	0.930	59.722	0.120
+1.20D+0.50Lr+1.60L	-7.252	3.570	Top	0.583	Min Temp %	0.930	59.722	0.121
+1.20D+0.50Lr+1.60L	-7.310	3.600	Top	0.583	Min Temp %	0.930	59.722	0.122
+1.20D+0.50Lr+1.60L	-7.367	3.630	Top	0.583	Min Temp %	0.930	59.722	0.123
+1.20D+0.50Lr+1.60L	-7.424	3.660	Top	0.583	Min Temp %	0.930	59.722	0.124
+1.20D+0.50Lr+1.60L	-7.480	3.690	Top	0.583	Min Temp %	0.930	59.722	0.125
+1.20D+0.50Lr+1.60L	-7.535	3.720	Top	0.583	Min Temp %	0.930	59.722	0.126
+1.20D+0.50Lr+1.60L	-7.589	3.750	Top	0.583	Min Temp %	0.930	59.722	0.127
+1.20D+0.50Lr+1.60L	-7.643	3.780	Top	0.583	Min Temp %	0.930	59.722	0.128
+1.20D+0.50Lr+1.60L	-7.696	3.810	Top	0.583	Min Temp %	0.930	59.722	0.129
+1.20D+0.50Lr+1.60L	-7.748	3.840	Top	0.583	Min Temp %	0.930	59.722	0.130
+1.20D+0.50Lr+1.60L	-7.800	3.870	Top	0.583	Min Temp %	0.930	59.722	0.131
+1.20D+0.50Lr+1.60L	-7.851	3.900	Top	0.583	Min Temp %	0.930	59.722	0.131
+1.20D+0.50Lr+1.60L	-7.901	3.930	Top	0.583	Min Temp %	0.930	59.722	0.132
+1.20D+0.50Lr+1.60L	-7.950	3.960	Top	0.583	Min Temp %	0.930	59.722	0.133
+1.20D+0.50Lr+1.60L	-7.999	3.990	Top	0.583	Min Temp %	0.930	59.722	0.134
+1.20D+0.50Lr+1.60L	-8.047	4.020	Top	0.583	Min Temp %	0.930	59.722	0.135

Combined Footing

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+0.50Lr+1.60L	-8.094	4.050	Top	0.583	Min Temp %	0.930	59.722	0.136
+1.20D+0.50Lr+1.60L	-8.141	4.080	Top	0.583	Min Temp %	0.930	59.722	0.136
+1.20D+0.50Lr+1.60L	-8.186	4.110	Top	0.583	Min Temp %	0.930	59.722	0.137
+1.20D+0.50Lr+1.60L	-8.232	4.140	Top	0.583	Min Temp %	0.930	59.722	0.138
+1.20D+0.50Lr+1.60L	-8.276	4.170	Top	0.583	Min Temp %	0.930	59.722	0.139
+1.20D+0.50Lr+1.60L	-8.320	4.200	Top	0.583	Min Temp %	0.930	59.722	0.139
+1.20D+0.50Lr+1.60L	-8.362	4.230	Top	0.583	Min Temp %	0.930	59.722	0.140
+1.20D+0.50Lr+1.60L	-8.405	4.260	Top	0.583	Min Temp %	0.930	59.722	0.141
+1.20D+0.50Lr+1.60L	-8.446	4.290	Top	0.583	Min Temp %	0.930	59.722	0.141
+1.20D+0.50Lr+1.60L	-8.487	4.320	Top	0.583	Min Temp %	0.930	59.722	0.142
+1.20D+0.50Lr+1.60L	-8.527	4.350	Top	0.583	Min Temp %	0.930	59.722	0.143
+1.20D+0.50Lr+1.60L	-8.566	4.380	Top	0.583	Min Temp %	0.930	59.722	0.143
+1.20D+0.50Lr+1.60L	-8.605	4.410	Top	0.583	Min Temp %	0.930	59.722	0.144
+1.20D+0.50Lr+1.60L	-8.643	4.440	Top	0.583	Min Temp %	0.930	59.722	0.145
+1.20D+0.50Lr+1.60L	-8.680	4.470	Top	0.583	Min Temp %	0.930	59.722	0.145
+1.20D+0.50Lr+1.60L	-8.716	4.500	Top	0.583	Min Temp %	0.930	59.722	0.146
+1.20D+0.50Lr+1.60L	-8.752	4.530	Top	0.583	Min Temp %	0.930	59.722	0.147
+1.20D+0.50Lr+1.60L	-8.787	4.560	Top	0.583	Min Temp %	0.930	59.722	0.147
+1.20D+0.50Lr+1.60L	-8.821	4.590	Top	0.583	Min Temp %	0.930	59.722	0.148
+1.20D+0.50Lr+1.60L	-8.855	4.620	Top	0.583	Min Temp %	0.930	59.722	0.148
+1.20D+0.50Lr+1.60L	-8.888	4.650	Top	0.583	Min Temp %	0.930	59.722	0.149
+1.20D+0.50Lr+1.60L	-8.920	4.680	Top	0.583	Min Temp %	0.930	59.722	0.149
+1.20D+0.50Lr+1.60L	-8.951	4.710	Top	0.583	Min Temp %	0.930	59.722	0.150
+1.20D+0.50Lr+1.60L	-8.982	4.740	Top	0.583	Min Temp %	0.930	59.722	0.150
+1.20D+0.50Lr+1.60L	-9.012	4.770	Top	0.583	Min Temp %	0.930	59.722	0.151
+1.20D+0.50Lr+1.60L	-9.041	4.800	Top	0.583	Min Temp %	0.930	59.722	0.151
+1.20D+0.50Lr+1.60L	-9.069	4.830	Top	0.583	Min Temp %	0.930	59.722	0.152
+1.20D+0.50Lr+1.60L	-9.097	4.860	Top	0.583	Min Temp %	0.930	59.722	0.152
+1.20D+0.50Lr+1.60L	-9.124	4.890	Top	0.583	Min Temp %	0.930	59.722	0.153
+1.20D+0.50Lr+1.60L	-9.151	4.920	Top	0.583	Min Temp %	0.930	59.722	0.153
+1.20D+0.50Lr+1.60L	-9.176	4.950	Top	0.583	Min Temp %	0.930	59.722	0.154
+1.20D+0.50Lr+1.60L	-9.201	4.980	Top	0.583	Min Temp %	0.930	59.722	0.154
+1.20D+0.50Lr+1.60L	-9.225	5.010	Top	0.583	Min Temp %	0.930	59.722	0.154
+1.20D+0.50Lr+1.60L	-9.249	5.040	Top	0.583	Min Temp %	0.930	59.722	0.155
+1.20D+0.50Lr+1.60L	-9.271	5.070	Top	0.583	Min Temp %	0.930	59.722	0.155
+1.20D+0.50Lr+1.60L	-9.293	5.100	Top	0.583	Min Temp %	0.930	59.722	0.156
+1.20D+0.50Lr+1.60L	-9.315	5.130	Top	0.583	Min Temp %	0.930	59.722	0.156
+1.20D+0.50Lr+1.60L	-9.335	5.160	Top	0.583	Min Temp %	0.930	59.722	0.156
+1.20D+0.50Lr+1.60L	-9.355	5.190	Top	0.583	Min Temp %	0.930	59.722	0.157
+1.20D+0.50Lr+1.60L	-9.374	5.220	Top	0.583	Min Temp %	0.930	59.722	0.157
+1.20D+0.50Lr+1.60L	-9.393	5.250	Top	0.583	Min Temp %	0.930	59.722	0.157
+1.20D+0.50Lr+1.60L	-9.410	5.280	Top	0.583	Min Temp %	0.930	59.722	0.158
+1.20D+0.50Lr+1.60L	-9.427	5.310	Top	0.583	Min Temp %	0.930	59.722	0.158
+1.20D+0.50Lr+1.60L	-9.443	5.340	Top	0.583	Min Temp %	0.930	59.722	0.158
+1.20D+0.50Lr+1.60L	-9.459	5.370	Top	0.583	Min Temp %	0.930	59.722	0.158
+1.20D+0.50Lr+1.60L	-9.474	5.400	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.488	5.430	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.501	5.460	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.514	5.490	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.526	5.520	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.537	5.550	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.547	5.580	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.557	5.610	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.566	5.640	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.574	5.670	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.582	5.700	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.589	5.730	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.595	5.760	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.600	5.790	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.605	5.820	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.609	5.850	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.612	5.880	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.615	5.910	Top	0.583	Min Temp %	0.930	59.722	0.161

Combined Footing

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+0.50Lr+1.60L	-9.617	5.940	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.618	5.970	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.618	6.000	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.618	6.030	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.617	6.060	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.615	6.090	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.612	6.120	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.609	6.150	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.605	6.180	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.600	6.210	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.595	6.240	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.589	6.270	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.582	6.300	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.574	6.330	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.566	6.360	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.557	6.390	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.547	6.420	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.537	6.450	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.526	6.480	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.514	6.510	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.501	6.540	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.488	6.570	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.474	6.600	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.459	6.630	Top	0.583	Min Temp %	0.930	59.722	0.158
+1.20D+0.50Lr+1.60L	-9.443	6.660	Top	0.583	Min Temp %	0.930	59.722	0.158
+1.20D+0.50Lr+1.60L	-9.427	6.690	Top	0.583	Min Temp %	0.930	59.722	0.158
+1.20D+0.50Lr+1.60L	-9.410	6.720	Top	0.583	Min Temp %	0.930	59.722	0.158
+1.20D+0.50Lr+1.60L	-9.393	6.750	Top	0.583	Min Temp %	0.930	59.722	0.157
+1.20D+0.50Lr+1.60L	-9.374	6.780	Top	0.583	Min Temp %	0.930	59.722	0.157
+1.20D+0.50Lr+1.60L	-9.355	6.810	Top	0.583	Min Temp %	0.930	59.722	0.157
+1.20D+0.50Lr+1.60L	-9.335	6.840	Top	0.583	Min Temp %	0.930	59.722	0.156
+1.20D+0.50Lr+1.60L	-9.315	6.870	Top	0.583	Min Temp %	0.930	59.722	0.156
+1.20D+0.50Lr+1.60L	-9.293	6.900	Top	0.583	Min Temp %	0.930	59.722	0.156
+1.20D+0.50Lr+1.60L	-9.271	6.930	Top	0.583	Min Temp %	0.930	59.722	0.155
+1.20D+0.50Lr+1.60L	-9.249	6.960	Top	0.583	Min Temp %	0.930	59.722	0.155
+1.20D+0.50Lr+1.60L	-9.225	6.990	Top	0.583	Min Temp %	0.930	59.722	0.154
+1.20D+0.50Lr+1.60L	-9.201	7.020	Top	0.583	Min Temp %	0.930	59.722	0.154
+1.20D+0.50Lr+1.60L	-9.176	7.050	Top	0.583	Min Temp %	0.930	59.722	0.154
+1.20D+0.50Lr+1.60L	-9.151	7.080	Top	0.583	Min Temp %	0.930	59.722	0.153
+1.20D+0.50Lr+1.60L	-9.124	7.110	Top	0.583	Min Temp %	0.930	59.722	0.153
+1.20D+0.50Lr+1.60L	-9.097	7.140	Top	0.583	Min Temp %	0.930	59.722	0.152
+1.20D+0.50Lr+1.60L	-9.069	7.170	Top	0.583	Min Temp %	0.930	59.722	0.152
+1.20D+0.50Lr+1.60L	-9.041	7.200	Top	0.583	Min Temp %	0.930	59.722	0.151
+1.20D+0.50Lr+1.60L	-9.012	7.230	Top	0.583	Min Temp %	0.930	59.722	0.151
+1.20D+0.50Lr+1.60L	-8.982	7.260	Top	0.583	Min Temp %	0.930	59.722	0.150
+1.20D+0.50Lr+1.60L	-8.951	7.290	Top	0.583	Min Temp %	0.930	59.722	0.150
+1.20D+0.50Lr+1.60L	-8.920	7.320	Top	0.583	Min Temp %	0.930	59.722	0.149
+1.20D+0.50Lr+1.60L	-8.888	7.350	Top	0.583	Min Temp %	0.930	59.722	0.149
+1.20D+0.50Lr+1.60L	-8.855	7.380	Top	0.583	Min Temp %	0.930	59.722	0.148
+1.20D+0.50Lr+1.60L	-8.821	7.410	Top	0.583	Min Temp %	0.930	59.722	0.148
+1.20D+0.50Lr+1.60L	-8.787	7.440	Top	0.583	Min Temp %	0.930	59.722	0.147
+1.20D+0.50Lr+1.60L	-8.752	7.470	Top	0.583	Min Temp %	0.930	59.722	0.147
+1.20D+0.50Lr+1.60L	-8.716	7.500	Top	0.583	Min Temp %	0.930	59.722	0.146
+1.20D+0.50Lr+1.60L	-8.680	7.530	Top	0.583	Min Temp %	0.930	59.722	0.145
+1.20D+0.50Lr+1.60L	-8.643	7.560	Top	0.583	Min Temp %	0.930	59.722	0.145
+1.20D+0.50Lr+1.60L	-8.605	7.590	Top	0.583	Min Temp %	0.930	59.722	0.144
+1.20D+0.50Lr+1.60L	-8.566	7.620	Top	0.583	Min Temp %	0.930	59.722	0.143
+1.20D+0.50Lr+1.60L	-8.527	7.650	Top	0.583	Min Temp %	0.930	59.722	0.143
+1.20D+0.50Lr+1.60L	-8.487	7.680	Top	0.583	Min Temp %	0.930	59.722	0.142
+1.20D+0.50Lr+1.60L	-8.446	7.710	Top	0.583	Min Temp %	0.930	59.722	0.141
+1.20D+0.50Lr+1.60L	-8.405	7.740	Top	0.583	Min Temp %	0.930	59.722	0.141
+1.20D+0.50Lr+1.60L	-8.362	7.770	Top	0.583	Min Temp %	0.930	59.722	0.140
+1.20D+0.50Lr+1.60L	-8.320	7.800	Top	0.583	Min Temp %	0.930	59.722	0.139

Combined Footing

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+0.50Lr+1.60L	-8.276	7.830	Top	0.583	Min Temp %	0.930	59.722	0.139
+1.20D+0.50Lr+1.60L	-8.232	7.860	Top	0.583	Min Temp %	0.930	59.722	0.138
+1.20D+0.50Lr+1.60L	-8.186	7.890	Top	0.583	Min Temp %	0.930	59.722	0.137
+1.20D+0.50Lr+1.60L	-8.141	7.920	Top	0.583	Min Temp %	0.930	59.722	0.136
+1.20D+0.50Lr+1.60L	-8.094	7.950	Top	0.583	Min Temp %	0.930	59.722	0.136
+1.20D+0.50Lr+1.60L	-8.047	7.980	Top	0.583	Min Temp %	0.930	59.722	0.135
+1.20D+0.50Lr+1.60L	-7.999	8.010	Top	0.583	Min Temp %	0.930	59.722	0.134
+1.20D+0.50Lr+1.60L	-7.950	8.040	Top	0.583	Min Temp %	0.930	59.722	0.133
+1.20D+0.50Lr+1.60L	-7.901	8.070	Top	0.583	Min Temp %	0.930	59.722	0.132
+1.20D+0.50Lr+1.60L	-7.851	8.100	Top	0.583	Min Temp %	0.930	59.722	0.131
+1.20D+0.50Lr+1.60L	-7.800	8.130	Top	0.583	Min Temp %	0.930	59.722	0.131
+1.20D+0.50Lr+1.60L	-7.748	8.160	Top	0.583	Min Temp %	0.930	59.722	0.130
+1.20D+0.50Lr+1.60L	-7.696	8.190	Top	0.583	Min Temp %	0.930	59.722	0.129
+1.20D+0.50Lr+1.60L	-7.643	8.220	Top	0.583	Min Temp %	0.930	59.722	0.128
+1.20D+0.50Lr+1.60L	-7.589	8.250	Top	0.583	Min Temp %	0.930	59.722	0.127
+1.20D+0.50Lr+1.60L	-7.535	8.280	Top	0.583	Min Temp %	0.930	59.722	0.126
+1.20D+0.50Lr+1.60L	-7.480	8.310	Top	0.583	Min Temp %	0.930	59.722	0.125
+1.20D+0.50Lr+1.60L	-7.424	8.340	Top	0.583	Min Temp %	0.930	59.722	0.124
+1.20D+0.50Lr+1.60L	-7.367	8.370	Top	0.583	Min Temp %	0.930	59.722	0.123
+1.20D+0.50Lr+1.60L	-7.310	8.400	Top	0.583	Min Temp %	0.930	59.722	0.122
+1.20D+0.50Lr+1.60L	-7.252	8.430	Top	0.583	Min Temp %	0.930	59.722	0.121
+1.20D+0.50Lr+1.60L	-7.193	8.460	Top	0.583	Min Temp %	0.930	59.722	0.120
+1.20D+0.50Lr+1.60L	-7.133	8.490	Top	0.583	Min Temp %	0.930	59.722	0.119
+1.20D+0.50Lr+1.60L	-7.073	8.520	Top	0.583	Min Temp %	0.930	59.722	0.118
+1.20D+0.50Lr+1.60L	-7.012	8.550	Top	0.583	Min Temp %	0.930	59.722	0.117
+1.20D+0.50Lr+1.60L	-6.950	8.580	Top	0.583	Min Temp %	0.930	59.722	0.116
+1.20D+0.50Lr+1.60L	-6.888	8.610	Top	0.583	Min Temp %	0.930	59.722	0.115
+1.20D+0.50Lr+1.60L	-6.825	8.640	Top	0.583	Min Temp %	0.930	59.722	0.114
+1.20D+0.50Lr+1.60L	-6.761	8.670	Top	0.583	Min Temp %	0.930	59.722	0.113
+1.20D+0.50Lr+1.60L	-6.697	8.700	Top	0.583	Min Temp %	0.930	59.722	0.112
+1.20D+0.50Lr+1.60L	-6.631	8.730	Top	0.583	Min Temp %	0.930	59.722	0.111
+1.20D+0.50Lr+1.60L	-6.565	8.760	Top	0.583	Min Temp %	0.930	59.722	0.110
+1.20D+0.50Lr+1.60L	-6.499	8.790	Top	0.583	Min Temp %	0.930	59.722	0.109
+1.20D+0.50Lr+1.60L	-6.431	8.820	Top	0.583	Min Temp %	0.930	59.722	0.108
+1.20D+0.50Lr+1.60L	-6.363	8.850	Top	0.583	Min Temp %	0.930	59.722	0.107
+1.20D+0.50Lr+1.60L	-6.294	8.880	Top	0.583	Min Temp %	0.930	59.722	0.105
+1.20D+0.50Lr+1.60L	-6.224	8.910	Top	0.583	Min Temp %	0.930	59.722	0.104
+1.20D+0.50Lr+1.60L	-6.154	8.940	Top	0.583	Min Temp %	0.930	59.722	0.103
+1.20D+0.50Lr+1.60L	-6.083	8.970	Top	0.583	Min Temp %	0.930	59.722	0.102
+1.20D+0.50Lr+1.60L	-6.011	9.000	Top	0.583	Min Temp %	0.930	59.722	0.101
+1.20D+0.50Lr+1.60L	-5.939	9.030	Top	0.583	Min Temp %	0.930	59.722	0.099
+1.20D+0.50Lr+1.60L	-5.866	9.060	Top	0.583	Min Temp %	0.930	59.722	0.098
+1.20D+0.50Lr+1.60L	-5.792	9.090	Top	0.583	Min Temp %	0.930	59.722	0.097
+1.20D+0.50Lr+1.60L	-5.717	9.120	Top	0.583	Min Temp %	0.930	59.722	0.096
+1.20D+0.50Lr+1.60L	-5.642	9.150	Top	0.583	Min Temp %	0.930	59.722	0.094
+1.20D+0.50Lr+1.60L	-5.565	9.180	Top	0.583	Min Temp %	0.930	59.722	0.093
+1.20D+0.50Lr+1.60L	-5.489	9.210	Top	0.583	Min Temp %	0.930	59.722	0.092
+1.20D+0.50Lr+1.60L	-5.411	9.240	Top	0.583	Min Temp %	0.930	59.722	0.091
+1.20D+0.50Lr+1.60L	-5.333	9.270	Top	0.583	Min Temp %	0.930	59.722	0.089
+1.20D+0.50Lr+1.60L	-5.254	9.300	Top	0.583	Min Temp %	0.930	59.722	0.088
+1.20D+0.50Lr+1.60L	-5.174	9.330	Top	0.583	Min Temp %	0.930	59.722	0.087
+1.20D+0.50Lr+1.60L	-5.094	9.360	Top	0.583	Min Temp %	0.930	59.722	0.085
+1.20D+0.50Lr+1.60L	-5.013	9.390	Top	0.583	Min Temp %	0.930	59.722	0.084
+1.20D+0.50Lr+1.60L	-4.931	9.420	Top	0.583	Min Temp %	0.930	59.722	0.083
+1.20D+0.50Lr+1.60L	-4.848	9.450	Top	0.583	Min Temp %	0.930	59.722	0.081
+1.20D+0.50Lr+1.60L	-4.765	9.480	Top	0.583	Min Temp %	0.930	59.722	0.080
+1.20D+0.50Lr+1.60L	-4.681	9.510	Top	0.583	Min Temp %	0.930	59.722	0.078
+1.20D+0.50Lr+1.60L	-4.596	9.540	Top	0.583	Min Temp %	0.930	59.722	0.077
+1.20D+0.50Lr+1.60L	-4.510	9.570	Top	0.583	Min Temp %	0.930	59.722	0.076
+1.20D+0.50Lr+1.60L	-4.424	9.600	Top	0.583	Min Temp %	0.930	59.722	0.074
+1.20D+0.50Lr+1.60L	-4.337	9.630	Top	0.583	Min Temp %	0.930	59.722	0.073
+1.20D+0.50Lr+1.60L	-4.250	9.660	Top	0.583	Min Temp %	0.930	59.722	0.071
+1.20D+0.50Lr+1.60L	-4.161	9.690	Top	0.583	Min Temp %	0.930	59.722	0.070

Combined Footing

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+0.50Lr+1.60L	-4.072	9.720	Top	0.583	Min Temp %	0.930	59.722	0.068
+1.20D+0.50Lr+1.60L	-3.982	9.750	Top	0.583	Min Temp %	0.930	59.722	0.067
+1.20D+0.50Lr+1.60L	-3.892	9.780	Top	0.583	Min Temp %	0.930	59.722	0.065
+1.20D+0.50Lr+1.60L	-3.801	9.810	Top	0.583	Min Temp %	0.930	59.722	0.064
+1.20D+0.50Lr+1.60L	-3.709	9.840	Top	0.583	Min Temp %	0.930	59.722	0.062
+1.20D+0.50Lr+1.60L	-3.616	9.870	Top	0.583	Min Temp %	0.930	59.722	0.061
+1.20D+0.50Lr+1.60L	-3.523	9.900	Top	0.583	Min Temp %	0.930	59.722	0.059
+1.20D+0.50Lr+1.60L	-3.428	9.930	Top	0.583	Min Temp %	0.930	59.722	0.057
+1.20D+0.50Lr+1.60L	-3.334	9.960	Top	0.583	Min Temp %	0.930	59.722	0.056
+1.20D+0.50Lr+1.60L	-3.238	9.990	Top	0.583	Min Temp %	0.930	59.722	0.054
+1.20D+0.50Lr+1.60L	-3.142	10.020	Top	0.583	Min Temp %	0.930	59.722	0.053
+1.20D+0.50Lr+1.60L	-3.045	10.050	Top	0.583	Min Temp %	0.930	59.722	0.051
+1.20D+0.50Lr+1.60L	-2.947	10.080	Top	0.583	Min Temp %	0.930	59.722	0.049
+1.20D+0.50Lr+1.60L	-2.848	10.110	Top	0.583	Min Temp %	0.930	59.722	0.048
+1.20D+0.50Lr+1.60L	-2.749	10.140	Top	0.583	Min Temp %	0.930	59.722	0.046
+1.20D+0.50Lr+1.60L	-2.649	10.170	Top	0.583	Min Temp %	0.930	59.722	0.044
+1.20D+0.50Lr+1.60L	-2.549	10.200	Top	0.583	Min Temp %	0.930	59.722	0.043
+1.20D+0.50Lr+1.60L	-2.447	10.230	Top	0.583	Min Temp %	0.930	59.722	0.041
+1.20D+0.50Lr+1.60L	-2.345	10.260	Top	0.583	Min Temp %	0.930	59.722	0.039
+1.20D+0.50Lr+1.60L	-2.243	10.290	Top	0.583	Min Temp %	0.930	59.722	0.038
+1.20D+0.50Lr+1.60L	-2.139	10.320	Top	0.583	Min Temp %	0.930	59.722	0.036
+1.20D+0.50Lr+1.60L	-2.035	10.350	Top	0.583	Min Temp %	0.930	59.722	0.034
+1.20D+0.50Lr+1.60L	-1.930	10.380	Top	0.583	Min Temp %	0.930	59.722	0.032
+1.20D+0.50Lr+1.60L	-1.824	10.410	Top	0.583	Min Temp %	0.930	59.722	0.031
+1.20D+0.50Lr+1.60L	-1.718	10.440	Top	0.583	Min Temp %	0.930	59.722	0.029
+1.20D+0.50Lr+1.60L	-1.611	10.470	Top	0.583	Min Temp %	0.930	59.722	0.027
+1.20D+0.50Lr+1.60L	-1.503	10.500	Top	0.583	Min Temp %	0.930	59.722	0.025
+1.20D+0.50Lr+1.60L	-1.394	10.530	Top	0.583	Min Temp %	0.930	59.722	0.023
+1.20D+0.50Lr+1.60L	-1.285	10.560	Top	0.583	Min Temp %	0.930	59.722	0.022
+1.20D+0.50Lr+1.60L	-1.175	10.590	Top	0.583	Min Temp %	0.930	59.722	0.020
+1.20D+0.50Lr+1.60L	-1.064	10.620	Top	0.583	Min Temp %	0.930	59.722	0.018
+1.20D+0.50Lr+1.60L	-0.953	10.650	Top	0.583	Min Temp %	0.930	59.722	0.016
+1.20D+0.50Lr+1.60L	-0.841	10.680	Top	0.583	Min Temp %	0.930	59.722	0.014
+1.20D+0.50Lr+1.60L	-0.728	10.710	Top	0.583	Min Temp %	0.930	59.722	0.012
+1.20D+0.50Lr+1.60L	-0.614	10.740	Top	0.583	Min Temp %	0.930	59.722	0.010
+1.20D+0.50Lr+1.60L	-0.500	10.770	Top	0.583	Min Temp %	0.930	59.722	0.008
+1.20D+0.50Lr+1.60L	-0.385	10.800	Top	0.583	Min Temp %	0.930	59.722	0.006
+1.20D+0.50Lr+1.60L	-0.269	10.830	Top	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	-0.152	10.860	Top	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	-0.035	10.890	Top	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.083	10.920	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.201	10.950	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.307	10.980	Bottom	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	0.364	11.010	Bottom	0.583	Min Temp %	0.930	59.722	0.006
+1.20D+0.50Lr+1.60L	0.369	11.040	Bottom	0.583	Min Temp %	0.930	59.722	0.006
+1.20D+0.50Lr+1.60L	0.347	11.070	Bottom	0.583	Min Temp %	0.930	59.722	0.006
+1.20D+0.50Lr+1.60L	0.325	11.100	Bottom	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	0.303	11.130	Bottom	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	0.283	11.160	Bottom	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	0.263	11.190	Bottom	0.583	Min Temp %	0.930	59.722	0.004
+1.20D+0.50Lr+1.60L	0.244	11.220	Bottom	0.583	Min Temp %	0.930	59.722	0.004
+1.20D+0.50Lr+1.60L	0.225	11.250	Bottom	0.583	Min Temp %	0.930	59.722	0.004
+1.20D+0.50Lr+1.60L	0.208	11.280	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.191	11.310	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.175	11.340	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.159	11.370	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.144	11.400	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.130	11.430	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.117	11.460	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.104	11.490	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.092	11.520	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.081	11.550	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.071	11.580	Bottom	0.583	Min Temp %	0.930	59.722	0.001

Combined Footing

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+0.50Lr+1.60L	0.061	11.610	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.052	11.640	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.044	11.670	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.036	11.700	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.029	11.730	Bottom	0.583	Min Temp %	0.930	59.722	0.000
+1.20D+0.50Lr+1.60L	0.023	11.760	Bottom	0.583	Min Temp %	0.930	59.722	0.000
+1.20D+0.50Lr+1.60L	0.018	11.790	Bottom	0.583	Min Temp %	0.930	59.722	0.000
+1.20D+0.50Lr+1.60L	0.013	11.820	Bottom	0.583	Min Temp %	0.930	59.722	0.000
+1.20D+0.50Lr+1.60L	0.000	11.850	0	0.000	0	0.000	0.000	0.000
+1.20D+0.50Lr+1.60L	0.000	11.880	0	0.000	0	0.000	0.000	0.000
+1.20D+0.50Lr+1.60L	0.000	11.910	0	0.000	0	0.000	0.000	0.000
+1.20D+0.50Lr+1.60L	0.000	11.940	0	0.000	0	0.000	0.000	0.000
+1.20D+0.50Lr+1.60L	0.000	11.970	0	0.000	0	0.000	0.000	0.000
+1.20D+0.50Lr+1.60L	0.000	12.000	0	0.000	0	0.000	0.000	0.000

One Way Shear

Punching Shear

Load Combination...	Phi Vn	vu @ Col #1	vu @ Col #2	Phi Vn	vu @ Col #1	vu @ Col #2
+1.40D	75.00 psi	6.03 psi	6.03 psi	150.00 psi	2.31 psi	2.31 psi
+1.20D+0.50Lr+1.60L	75.00 psi	11.03 psi	11.03 psi	150.00 psi	4.22 psi	4.22 psi
+1.20D+1.60L	75.00 psi	10.24 psi	10.24 psi	150.00 psi	3.92 psi	3.92 psi
+1.20D+1.60Lr+0.50L	75.00 psi	9.29 psi	9.29 psi	150.00 psi	3.56 psi	3.56 psi
+1.20D+1.60Lr	75.00 psi	7.70 psi	7.70 psi	150.00 psi	2.95 psi	2.95 psi
+1.20D+0.50L	75.00 psi	6.75 psi	6.75 psi	150.00 psi	2.59 psi	2.59 psi
+1.20D	75.00 psi	5.17 psi	5.17 psi	150.00 psi	1.98 psi	1.98 psi
+1.20D+0.50Lr+0.50L	75.00 psi	7.54 psi	7.54 psi	150.00 psi	2.89 psi	2.89 psi
+0.90D	75.00 psi	3.88 psi	3.88 psi	150.00 psi	1.49 psi	1.49 psi

EXHIBIT 18

GENERAL STRUCTURAL NOTES

Exhibit 17: 9 pages - Chia Wang Yeh Oct 2024 Comments on Enertia March 2024 plan

I GENERAL

A. ALL CONSTRUCTION SHALL CONFORM TO THE CALIFORNIA BUILDING CODE 2019 EDITION w/ AMENDMENTS BY LOCAL JURISDICTIONS.
B. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT JOB SITE BEFORE COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT OR ENGINEER.
C. OMISSIONS OR CONFLICT BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
D. DO NOT USE SCALED DIMENSIONS; USE WRITTEN DIMENSIONS OR WHERE NO DIMENSION IS PROVIDED, CONSULT THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
E. DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS WHETHER SPECIFICALLY CALLED OUT OR NOT.
F. FOR WATERPROOFING, FIREPROOFING, ETC. REFER TO DRAWINGS OTHER THAN STRUCTURAL.
G. SEE DRAWINGS OTHER THAN STRUCTURAL FOR: KINDS OF FLOOR FINISH AND THEIR LOCATION, FOR DEPRESSIONS IN FLOOR SLABS, FOR OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MECHANICAL FEATURES, FOR ROADWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC.
H. HOLES AND OPENINGS THROUGH WALLS AND FLOORS FOR DUCTS, PIPING AND VENTILATION SHALL BE CHECKED BY THE CONTRACTOR, WHO SHALL VERIFY SIZES AND LOCATION OF SUCH HOLES OR OPENINGS WITH THE PLUMBING HEATING, VENTILATING AND ELECTRICAL DRAWINGS AND THESE SUB-CONTRACTORS.
I. NO PIPES AND DUCTS SHALL BE PLACED IN SLABS OR WALLS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ARCHITECT.
J. DRAWINGS AND SPECIFICATIONS REPRESENT FINISHED STRUCTURE. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION INCLUDING BUT NOT LIMITED TO SHORING AND TEMPORARY BRACING. THE SUBCONTRACTOR SHALL UNDERTAKE ALL NECESSARY MEASURES TO INSURE SAFETY OF ALL PERSONS AND STRUCTURES AT THE SITE AND ADJACENT TO THE SITE. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT, ENGINEER SHALL NOT RELIEVE THE SUBCONTRACTOR OF SUCH RESPONSIBILITY.
K. NOTE THAT SHEET S1 IS A STANDARD COVER SHEET AND AS SUCH, NOT ALL TYP. DETAILS AND OR NOTES APPLY TO EVERY PROJECT.

II DESIGN CRITERIA

A. APPLICABLE CODE: CALIFORNIA BUILDING CODE 2019 & SFBC 2019.
B. VERTICAL LIVE LOADS: (REDUCIBLE). ROOF: 20 PSF. FLOOR: 40 PSF. HALLWAYS & CORRIDORS: 100 PSF.
C. LATERAL LOADS:
   1. WIND: 110 MPH. BASIC WIND SPEED, EXPOSURE: "B"
   2. SEISMIC: SITE CLASS 'D'
      MAPPED SPECTRAL ACCELERATIONS: S_S= S_1=
      Fa=1.0 Fv=1.5 S_{ds}= .xxx S_{d1}= .xxx
      BASE SHEAR 'V' = .xx W (ASD)
      SEISMIC DESIGN CATEGORY: D
      RESPONSE MODIFICATION FACTOR, R=6.5
      ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
      IMPORTANCE FACTOR=1 OCCUPANCY CATEGORY=II

III MATERIALS

A. CONCRETE:
   1. REINFORCING STEEL: ASTM A615, GRADE 60, #4 AND SMALLER, GRADE 40.
   2. CONCRETE: NORMAL WEIGHT U.O.N. WITH COMPRESSIVE STRENGTH OF THE FOLLOWING AT 28 DAYS:

FOOTINGS, ~~MAT SLAB~~ & DRILLED PIERS	2500 psi
~~WALLS, COLUMNS~~	~~5000 psi~~
~~STRUCTURAL SLAB (L.W. P.T. SEE S3.2)~~	~~5000 psi~~

   3. MINIMUM CONCRETE COVER FOR REINFORCING STEEL:
      a. SURFACE POURED AGAINST GROUND 3"
      b. FORMED SURFACES BELOW GRADE 2"
      c. SURFACES EXPOSED TO WEATHER 2"
      d. BEAM BARS (INCLUDING STIRRUPS) 1-1/2"
      e. ALL OTHER 1"
   4. ANCHOR BOLT EPOXY*: HILTI HIT-RE 500-SD. (ICC ESR-2322) OR SIMPSON SET-XP (ICC ESR-2508)
   5. SCREW ANCHORS*: SIMPSON TITEN HD (ICC ESR-2713)
      * USE COMPRESSED AIR TO BLOW THE DUST OUT OF ANCHOR BOLT HOLES.
   6. PNEUMATICALLY PLACED CONCRETE (SHOTCRETE) NOTES
      a. ALL CONCRETE WALLS MAY BE SHOTCRETED AT CONTRACTOR'S OPTION. VERIFY COMPATIBILITY OF SHOTCRETE WITH WATE PROOFINGCONTRACTOR.
      b. ALL SHOTCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 506.2 AND CBC SECTION 1924.
      c. ALL SHOTCRETE SHALL TEST NOT LESS THAN 4000 PSI AT 28 DAYS.
      d. MAXIMUM AGGREGATE SIZE SHALL BE 3/8 INCH.
      e. LAP ALL REINFORCING BARS 40 DIAMETERS AT SPLICES. SPLICE BARS BY THE NON-CONTACT LAP SPLICE METHOD WITH 2 INCHES CLEAR BETWEEN BARS.
      f. ANY REBOUND SHALL BE REMOVED PRIOR TO PLACING OF CONCRETE.
      g. IN-PLACE SHOTCRETE WHICH SHOW SAGS OR SLOUGHS, SEGREGATION, HONEY COMBING, SAND POCKETS OR OTHER OBVIOUS DEFECTS SHALL BE REMOVED AND REPLACED.
      h. CURE SHOTCRETE BY KEEPING CONTINUOUSLY MOIST FOR A MINIMUM OF 7 DAYS UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER.
      i. TEST PANELS: SHOOT ONE TEST PANEL, 18 INCHES SQUARE ,FOR EACH 50 CUBIC YARDS OF SHOTCRETE PLACED, BUT NOT LESS THAN ONE PANEL PER SHIFT. CURE PANELS UNDER SAME CONDITIONS AS THE WORK. TESTING AGENCY SHALL TAKE A MINIMUM OF THREE 2" DIAMETER CORES FROM EACH PANEL. WATER SOAK SPECIMENS 24 HOURS BEFORE TESTING. TEST IN ACCORDANCE WITH UNIFORM BUILDING CODE STANDARD NO. 26-10.
      j. A MINIMUM OF THREE 3" DIAMETER CORES SHALL BE TAKEN FROM THE WORK AT LOCATIONS SPECIFIED BY THE STRUCTURAL ENGINEER. THE SPECIAL INSPECTOR SHALL VISUALLY EXAMINE CORES FOR STRUCTURAL SOUNDNESS AND SUBMIT A REPORT TO THE STRUCTURAL ENGINEER AND THE BUILDING INSPECTION DEPARTMENT.
      k. INSPECTION: PROVIDE CONTINUOUS SPECIAL INSPECTION OF SHOTCRETING OPERATION.

B. CMU: UNITS 1500 PSI, MORTAR (TYPE 'S'), GROUT 2000 PSI

C. STEEL
   1. SHAPES AND PLATES: ASTM A36; TUBES: ASTM A500, GRADE B.
   2. MOMENT FRAMES (BEAMS, COLUMNS): ASTM A992 OR A913 (50 ksi) MOMENT FRAMES (PLATES): A572, GRADE 50.
   3. METAL STUDS, SEE S1.4, NOTES
   4. METAL JOISTS, 50 ksi
   5. BOLTS: ASTM A307, U.O.N.
   6. WELDING ELECTRODES: E-70 FOR FULL PEN WELDS USE CHARPY V-NOTCH WIRE, MIN. 20 ft # @ 0°F
   7. METAL DECKING, SEE S1.5

D. WOOD
   1. FRAMING LUMBER – DOUGLAS FIR LARCH
      a. HEADERS, PLATES, JOISTS: NO.1
      b. STUDS, BLOCKING: NO.2
      c. ALL LUMBER IN CONTACT WITH CONCRETE: PRESERVATIVE TREATED DOUGLAS FIR, (NOT CCA-C)
      d. POSTS AND BEAMS: NO.1
   2. PLYWOOD SHEATHING
      a. SHEARWALL PLYWOOD : 1/2 INCH STRUCTURAL I, C-D EXTERIOR, APA RATED 32/16.
      b. ROOF SHEATHING: 5/8 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 32/16
      c. FLOOR SHEATHING: 3/4 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 48/24
   3. FRAMING HARDWARE AND JOIST HANGERS: AS MANUFACTURED BY SIMPSON STRONGTIE CO. OR APPROVED EQUAL. SIMPSON DESIGNATIONS USED. USE NAILS PER I.C.C. APPROVAL FOR EACH DEVICE.
   4. COMMON NAILS, UNLESS OTHERWISE NOTED. SHORT NAILS MAY BE USED PROVIDED THEY HAVE COMMON CODE SPECIFIED MINIMUM EMBEDMENT. ALL NAILING TO BE PER IBC TABLE NO. 2304.9.1 UNLESS NOTED OTHERWISE.
   5. GLU-LAM BEAMS: 24F-V4 (Fb=2400 PSI)
   6. PARALLAM & MICROLLAM BEAMS AND TJI's TO BE FABRICATED BY TRUS JOIST:
      PARALLAM BEAMS: 2.2E (Fb=2900PSI)
      MICROLLAM BEAMS: 2.0E (Fb=2600PSI)
   7. FOR MICROLLAMS SEE CODE EVALUATION: ICC-ES ESR-1387
   8. FOR TJI JOISTS SEE CODE EVALUATION: ICC-ES ESR-1153

IV EXPOSURE TO WEATHER:

A. STEEL:
   1. ALL EXPOSED MEMBERS SHALL BE COATED WITH A ZINC RICH PRIMER.
   2. BOLTS, NUTS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED.

B. WOOD:
   1. ALL EXTERIOR TIMBER AND GLU-LAM BEAMS SHALL BE PRESSURE TREATED (BUT NOT CHROMATED COPPER ARSENATE) OR WOOD OF NATURAL RESISTANCE TO DECAY.
   2. ALL EXTERIOR HANGERS AND OTHER SIMPSON TYPE PRODUCTS SHALL BE GALVANIZED.
   3. ALL PLYWOOD SHALL BE OF AN EXTERIOR GRADE.
   4. METAL CONNECTORS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED w/ MIN. ZINC COATING OF G185.
   5. ALL NAILS & ANCHOR BOLTS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED.

V ABBREVIATIONS

B.N. — BOUNDARY NAILING
DIA. — DIAMETER
E.N. — EDGE NAILING
H.P. — HIGH POINT
L.P. — LOW POINT
LVL — LAMINATED VENEER LUMBER
L.W. — LIGHT WEIGHT
M.L. — MICROLLAM
PLWD — PLYWOOD SHEATHING
PSL — PARALLEL STRAND LUMBER
P.T. — PRESSURE TREATED OR POST-TENSIONED
S.A.D. — SEE ARCHITECTURAL DRAWINGS
S.O.G. — SLAB-ON-GRADE
S.S. — STAINLESS STEEL
T.O. — TOP OF
TYP. — TYPICAL
U.O.N. — UNLESS OTHERWISE NOTED
V.I.F. — VERIFY IN FIELD
W.W.F. — WELDED WIRE FABRIC

SYMBOLS

(E) WALL BELOW
(E) WALL ABOVE
(N) CONC. WALL ABOVE
BRICK OR CMU WALL ABOVE
WOOD SHEARWALL (BELOW)
WOOD JOIST HANGER (HUS TYPE, U.O.N.)
WOOD POST BELOW
WOOD POST ABOVE (OR ABOVE & BELOW)
HOLDOWN @ WOOD POST
STEEL COLUMN ABOVE
STEEL COLUMN BELOW
MOMENT CONNECTION
CONCRETE TOPPING OVER PLYWOOD
CONCRETE TOPPING OVER CORRUGATED METAL DECK
CONCRETE COLUMN ABOVE
CONCRETE COLUMN BELOW w/ DROPCAP
DRILLED CONCRETE PIER
PRECAST, PRESTRESSED CONCRETE PILE
DIAGONAL ABOVE
DIAGONAL BELOW

DRAWING NAME: G:\enertia\projects\by-all\1645\1Dwg\PDF\S1-MAIN.pdf DWG\[Yellow Stone\Fell\Fell\Drawings\Phase1\2023\1077 Fell Street\Drawings\Sheet\1077 Fell Street_S1 - 02.28.24.dwg
PLOT DATE: 03-01-24 PLOTTED BY: dangulsonm

PROJECT NAME: VOLUNTARY STRENGTHENING
ADDRESS: 1077 FELL STREET
BLOCK/LOT: ----
CITY: SAN FRANCISCO, CA

DRAWING INDEX:

S1.0 — TITLE SHEET
S1.1A — TYPICAL WOOD DETAILS
S2 — FOUNDATION PLAN/ 1ST, 2ND AND ROOF FLOOR FRAMING
S3-S4 — STRUCTURAL DETAILS
W1-W2 — STRONG SIMPSOM WALL

City and County of San Francisco
Department of Building Inspection

London Breed, Mayor
Patrick O'Riordan, Interim Director

Attachment A

SLOPE AND SEISMIC HAZARD ZONE PROTECTION CHECKLIST

A COPY OF THIS DOCUMENT SHALL BE SUBMITTED WITH THE PERMIT APPLICATION

JOB ADDRESS 1077 FELL STREET APPLICATION NO. _____ ADDENDUM NO. ____
OWNER NAME _____ OWNER PHONE NO. (___) _____

1: PROPERTY LOCATION	YES	NO
EARTHQUAKE INDUCED LANDSLIDE AREA ON THE STATE OF CALIFORNIA DEPARTMENT OF CONSERVATION DIVISION OF MINES AND GEOLOGY (CDMG) SEISMIC HAZARD ZONES MAP FOR SAN FRANCISCO, RELEASED NOVEMBER 17, 2000.	☐	☑

2: AVERAGE SLOPE OF PROPERTY	YES	NO
PROPERTY EXCEEDING AN AVERAGE SLOPE OF 4H:1V (25%) GRADE *(APPLICANT WILL NEED TO INCLUDE PLANS ILLUSTRATING SLOPE OF THE PROPERTY AND/OR INCLUDE A SURVEY VERIFYING THE SLOPE OF THE PROPERTY)*	☐	☑

3: PROPOSED CONSTRUCTION	YES	NO
CONSTRUCTION OF NEW BUILDING OR STRUCTURE HAVING OVER 1000 SQFT OF NEW PROJECTED ROOF AREA	☐	☑
HORIZONTAL OR VERTICAL ADDITIONS HAVING OVER 500 SQFT OF NEW PROJECTED ROOF AREA	☐	☑
SHORING	☐	☑
UNDERPINNING	☐	☑
GRADING, INCLUDING EXCAVATION OR FILL, OF OVER 50 CUBIC YARDS OF EARTH MATERIAL	☐	☑
CONSTRUCTION ACTIVITY LISTED BELOW DETERMINED BY THE BUILDING OFFICIAL THAT MAY HAVE A SUBSTANTIAL IMPACT ON THE SLOPE STABILITY:		
RETAINING WALL:	☐	☑
OTHERS: _____	☐	☑

SECTION 4: LICENSED DESIGN PROFESSIONAL VERIFICATION AND SIGNATURES

Under penalty of perjury, I certify that the information provided on this form is based on my personal review of the building and its records, or review by others acting under my direct supervision, and is correct to the best of my knowledge.

Prepared by: JEFFERSON CHEN, P.E.
Engineer/Architect of Record

(415) 626 - 8300 Telephone
jefferson@enertiadesigns.net Email

Signature Date

REGISTERED PROFESSIONAL ENGINEER JEFFERSON WEN CHEN C057898 Exp. 06/30/24 CIVIL STATE OF CALIFORNIA

Permit Services Division
49 South Van Ness Avenue, Suite 500 - San Francisco CA 94103
Phone (628) 652-3600 – www.sfdbi.org

INFORMATION SHEET S-19 ATTACHMENT A — Slope Protection Checklist

FOR DBI USE ONLY

ASSIGNMENT OF REVIEW TIER

EXEMPTED: Reports per Section E and Third Party Peer Review Not Required

☐ If the box in Section 1 "Property Location" **AND** the box in Section 2 "Average Slope of Property" are marked "No" **OR** if all the boxes in Section 3 "Proposed Construction" are marked "No", reports per Section E and Third Party Peer Review are exempted by the SSPA.

TIER I: Reports per Section E Required but Third Party Peer Review Not Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property does not lie within any areas of potential landslide hazard, DBI shall require mandatory submittal of reports per Section E only.

TIER II: Reports per Section E and Third Party Peer Review Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property lies in the vicinity of mapped landslides, DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to a third party peer review. At the discretion of the SSPA Review Committee, the peer review may be followed by the establishment of a Structural Advisory Committee (SAC) with the project reassigned to Tier III.

If the DBI Plan Review Engineer (or the SSPA Review Committee, if established), in their discretion, determines from the submitted documents that the project has a substantial impact on the slope stability of the site or creates a potential for earthquake induced landslide hazards, DBI may require that the third party peer review be followed by the establishment of a Structural Advisory Committee (SAC) and re-assigned the project to Tier III.

TIER III: Structural Advisory Committee (SAC) Review

☐ If the box in Section 1 "Property Location" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes", DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to review by a Structural Advisory Committee (SAC), as defined by SFBC Section 105A.6.

Tier assigned by: _____ Phone: (628) _____
DBI Plan Review Engineer

Comment:

City and County of San Francisco
Department of Building Inspection

London N. Breed, Mayor
Patrick O'Riordan, Interim Director

NOTICE

SPECIAL INSPECTION REQUIREMENTS

Please note that the Special Inspections shown on the approved plans and checked on the Special Inspections form issued with the permit are required for this project. The employment of special inspectors is the direct responsibility of the owner or the engineer/architect of record acting as the owner's representative.

These special inspections are required *in addition to* the called inspections performed by the Department of Building Inspection. The name of the special inspector shall be furnished to the district building inspector prior to start of work for which special inspection is required.

For questions regarding the details or extent of required inspection or tests, please call the Plan Checker assigned to this project or **628-652-3407**. If there are any field problems regarding special inspection, please call your District Building Inspector or 628-652-3400 Ext 1.

Before final building inspection is scheduled, documentation of special inspection compliance must be submitted to and approved by the Special Inspection Services staff. To avoid delays in this process, the project owner should request final compliance reports from the architect or engineer of record and/or special inspection agency soon after the conclusion of work requiring special inspection. ***The permit will not be finalized without compliance with the special inspection requirements.***

STRUCTURAL OBSERVATION REQUIREMENTS

Structural observation shall be provided as required per Section 1704.6. **The building permit will not be finalized without compliance with the structural observation requirements.**

Special Inspection Services Contact Information

1. **Telephone: (628) 652-3407**
2. **Email: dbi.specialinspections@sfgov.org**
3. **In person: 49 South Van Ness Ave – Suite 400**

Note: We are moving towards a "paperless" mode of operation. All special inspection submittals, including final letters, may be emailed (preferred) or faxed. We will also be shifting to a paperless fax receipt mode.

Special Inspection Services
49 South Van Ness Ave – Suite 400 – San Francisco CA 94103
Office (628) 652-3407 – www.sfdbi.org

Updated 10/05/2020

SPECIAL INSPECTION AND STRUCTURAL OBSERVATION

A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED STRUCTURAL DRAWING SET

JOB ADDRESS 1077 FELL STREET APPLICATION NO._____ ADDENDUM NO.____

OWNER NAME_____OWNER PHONE NO. (_____)

Employment of Special Inspection is the direct responsibility of the OWNER, or the engineer/architect of record acting as the owner's representative. Special inspector shall be one of those as prescribed in Sec. 1704. Name of special inspector shall be furnished to DBI District Inspector prior to start of the work for which the Special Inspection is required. Structural observation shall be performed as provided by Section 1704.6. A preconstruction conference is recommended for owner/builder or designer/builder projects, complex and high-rise projects, and for projects utilizing new processes or materials.

In accordance with Chapter 17 (SFBC), Special Inspection and/or testing is required for the following work:

1. [x] Concrete (Placement & sampling)
2. [ ] Bolts installed in concrete
3. [ ] Special moment - Resisting concrete frame
4. [x] Reinforcing steel ~~and prestressing tendons~~
5. **Structural welding:**
   A. Periodic visual inspection
   [ ] Single pass fillet welds 5/16" or smaller
   [ ] Steel deck
   [ ] Welded studs
   [ ] Cold formed studs and joists
   [ ] Stair and railing systems
   [ ] Reinforcing steel
   B. Continuous visual inspection and NDT (Section 1704)
   [ ] All other welding (NDT exception: Fillet weld)
   [ ] Reinforcing steel; and [ ] NDT required
   [ ] Moment-resisting frames
   [ ] Others _____
6. [ ] High-strength bolting
7. [ ] Structural masonry
8. [ ] Reinforced gypsum concrete
9. [ ] Insulating concrete fill
10. [ ] Sprayed-on fireproofing
11. [ ] Piling, drilled piers and caissons
12. [ ] Shotcrete
13. [ ] Special grading, excavation and filling (Geo. Engineered)
14. [ ] Smoke-control system
15. [ ] Demolition
16. [ ] Exterior Facing
17. **Retrofit of unreinforced masonry buildings:**
    [ ] Testing of mortar quality and shear tests
    [ ] Inspection of repointing operations
    [ ] Installation inspection of new shear bolts
    [ ] Pre-installation inspection for embedded
    [ ] Pull/torque tests per SFBC Sec.1607C & 1615C
18. **Bolts Installed in existing concrete or masonry:**
    [ ] Concrete [ ] Masonry
    [ ] Pull/torque tests per SFEBC Sec. 507C & 515C
19. [ ] Shear walls and floor systems used as shear diaphragms
20. [ ] Holdowns
21. **Special cases:**
    [ ] Shoring
    [ ] Underpinning;[ ] Not affecting adjacent property
    [ ] Affecting adjacent property: PA_____
    [ ] Others
22. [ ] Crane safety (Apply to the operation of tower cranes on high-rise building) (Section 1705.22)
23. [ ] Others: "As recommended by professional of record"_____
24. **Structural observation per Sec. 1704.6 (SFBC) for the following:** [ ] Foundations [ ] Steel framing
    [ ] Concrete construction [ ] Masonry construction [x] Wood framing
    [ ] Other:_____
25. Certification is required for: [ ] Glu-lam components
26. [ ] Firestops in high-rise building

Prepared by: JEFFERSON CHEN, P.E. Phone: (415) 626 - 3800
Engineer/Architect of Record

Required information:
FAX: (415) 701 -0212 Email jefferson@enertiadesigns.net

Review by: _____ Phone: (628) 652-_____
DBI Engineer or Plan Checker

****

APPROVAL (Based on submitted reports.)

_____
DATE DBI Engineer or Plan Checker / Special Inspection Services Staff

QUESTIONS ABOUT SPECIAL INSPECTION AND STRUCTURAL OBSERVATION SHOULD BE DIRECTED TO:
Special Inspection Services (628) 652-3407; or, dbi.specialinspections@sfgov.org

Updated 10/05/2020

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.626.8300
FAX: 415.701.0212
1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103

REGISTERED PROFESSIONAL ENGINEER JEFFERSON WEN CHEN C057898 Exp. 06/30/24 CIVIL STATE OF CALIFORNIA

	DATE	REVISIONS
1		
2		
3		
4		

TITLE SHEET
GENERAL NOTES

VOLUNTARY STRENGTHENING
1077 FELL STREET
SAN FRANCISCO, CA

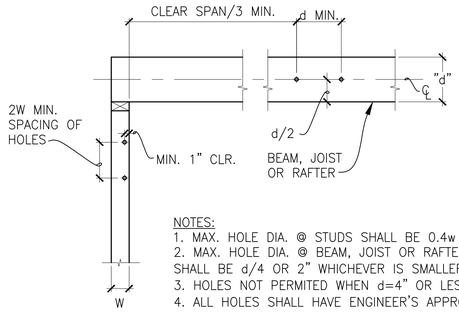
Date: 03-01-2024
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Job No: 23059
Sheet S1.0
Of 7 Sheets

NAILING SCHEDULE (PER CBC 2016, TABLE NO. 2304.10.1)

CONNECTION	NAILING [1]
1. JOIST TO SILL OR GIRDER, TOENAIL	3–8d
2. BRIDGING TO JOIST, TOENAIL EACH END	2–8d
3. 1"X6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2–8d
4. WIDER THAN 1" X 6" SUBFLOOR TO EACH JOIST, FACE NAIL	3–8d
5. 2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2–16d
6. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL	16d AT 16" O.C.
SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	3–16d PER 16"
7. TOP PLATE TO STUD, END NAIL	2–16d
8. STUD TO SOLE PLATE	4–8d, TOENAIL OR 2–16d, END NAIL
9. DOUBLE STUDS, FACE NAIL	16d AT 24" O.C.
10. DOUBLED TOP PLATES, TYPICAL FACE NAIL	16d AT 16" O.C.
DOUBLE TOP PLATES, LAP SPLICE	8–16d
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3–8d
12. RIM JOIST TO TOP PLATE, TOINAIL	8d AT 6" O.C.
13. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2–16d
14. CONTINUOUS HEADER, TWO PIECES	16d AT 16" O.C. ALONG EACH EDGE
15. CEILING JOISTS TO PLATE, TOENAIL	3–8d
16. CONTINUOUS HEADER TO STUD, TOINAIL	4–8d
17. CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3–16d
18. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3–16d
19. RAFTER TO PLATE, TOENAIL	3–8d
20. 1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2–8d
21. 1" X 8" SHEATHING OR LESS TO EACH BEARING, FACE NAIL	2–8d
22. WIDER THAN 1" X 8" SHEATHING TO EACH BEARING, FACE NAIL	3–8d
23. BUILT–UP CORNER STUDS	16d AT 24" O.C.
24. BUILT–UP GIRDER AND BEAMS	20d AT 32" O.C. AT TOP AND BOTTOM AND STAGGERED 2–20d AT ENDS AND AT EACH SPLICE
25. 2" PLANKS	2–16d AT EACH BEARING
26. COLLAR TIE TO RAFTER	3–10d AT FACE NAIL
27. JACK RAFTER TO HIP	2–10d AT TOENAIL AND 2–16d AT FACE NAIL
28. ROOF RAFTER TO 2–BY RIDGE BEAM	2–16d AT TOENAIL AND 2–16d AT FACE NAIL
29. JOIST TO BAND JOIST	3–16d AT FACE NAIL
30. LEDGER STRIP	3–16d AT FACE NAIL AT EACH JOIST
31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD [B] SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING)	
1/2" AND LESS	6d[C,L]
19/32"–3/4"	8d[D] or 6d[E]
7/8"–1"	10d[D] or 8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
COMBINATION SUBFLOOR–UNDERLAYMENT (TO FRAMING):	
3/4" AND LESS	6d[E]
7/8"–1"	8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
32. PANEL SIDING (TO FRAMING):	
1/2" OR LESS	6d[F]
5/8"	8d[F]
33. FIBERBOARD SHEATHING: [G]	
1/2"	6d[D]
25/32"	8d[D]
34. INTERIOR PANELING	
1/4"	4d[J]
3/8"	6d[K]

CBC TABLE 2304.10.1 FASTENING SCHEDULE NOTES

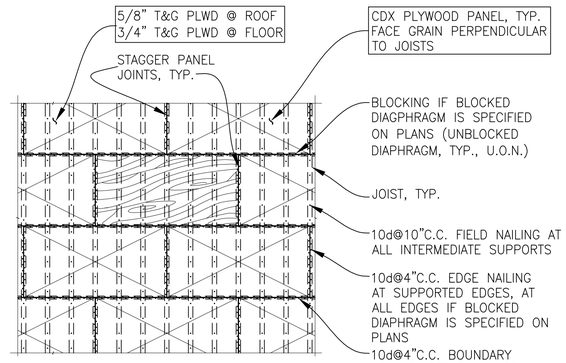
A. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED.
B. NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES AT SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLE BOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
C. COMMON OR DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
D. COMMON (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
E. DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
F. CORROSION–RESISTANT SIDING (6D – 1⅞" X 0.106"; 8D – 2⅜" X 0.128") OR CASING (6D – 2" X 0.099"; 8D – 2½" X 0.113") NAIL.
G. FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS.
H. CORROSION–RESISTANT ROOFING NAILS WITH 7/16–INCH–DIAMETER HEAD AND 1½–INCH LENGTH FOR ½–INCH SHEATHING AND 1¾–INCH LENGTH FOR 25/32–INCH SHEATHING.
I. CORROSION–RESISTANT STAPLES WITH NOMINAL 7/16–INCH CROWN AND 1⅛–INCH LENGTH FOR ½–INCH SHEATHING AND 1½–INCH LENGTH FOR 25/32–INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
J. CASING (1½" X 0.080") OR FINISH (1½" X 0.072") NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
K. PANEL SUPPORTS AT 24 INCHES. CASING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
L. FOR ROOF SHEATHING APPLICATIONS, 8D NAILS (2½" X 0.113") ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.
M. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16 INCH.
N. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.
O. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS SUB FLOOR AND WALL SHEATHING AND 3 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING.
P. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.



NOTES:
1. MAX. HOLE DIA. @ STUDS SHALL BE 0.4w
2. MAX. HOLE DIA. @ BEAM, JOIST OR RAFTER SHALL BE d/4 OR 2" WHICHEVER IS SMALLER.
3. HOLES NOT PERMITTED WHEN d=4" OR LESS.
4. ALL HOLES SHALL HAVE ENGINEER'S APPROVAL.

1 TYPICAL HOLES IN BEAMS, JOISTS, RAFTERS AND STUDS

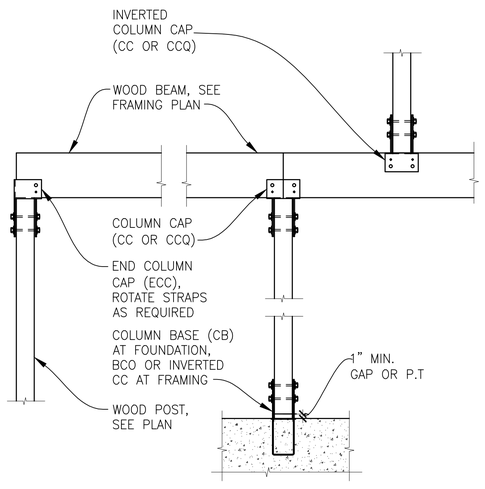
SCALE: 3/4" = 1'–0"



NOTES:
1. SEE PLANS FOR MORE INFORMATION
2. PLYWOOD = WOOD STRUCTURAL PANEL

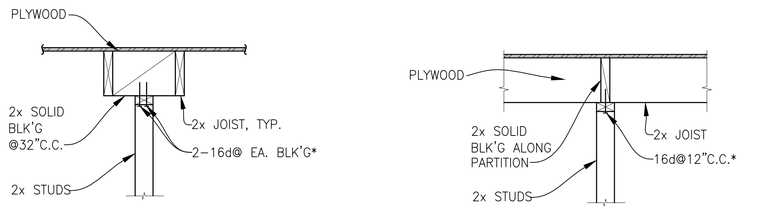
2 TYPICAL PLYWOOD DIAPHRAGM SHEATHING (PLAN VIEW)

SCALE: 3/4" = 1'–0"



3 TYPICAL BEAM TO POST CONNECTION

SCALE: 3/4" = 1'–0"



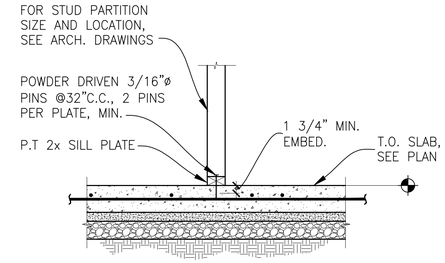
PARTITION PARALLEL TO FLOOR JOISTS

PARTITION PERPENDICULAR TO FLOOR JOISTS

*OPTION: PROVIDE STC CLIP TO ROOF TRUSS OR BEAM

4 TYPICAL NON–BEARING / NON–SHEARWALL SUPPORT @ ROOF

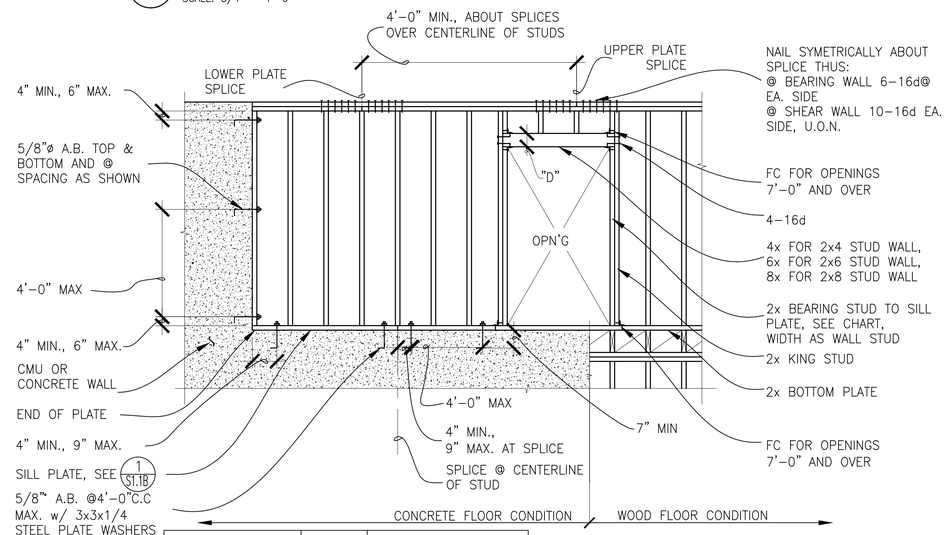
SCALE: 3/4" = 1'–0"



NOTES:
1. FOR SLAB THICKNESS, REINFORCEMENT AND BASE MATERIALS SEE PLAN.
2. AT P.T. SLAB PROVIDE MAX. 3/4" EMBEDMENT.

5 TYPICAL NON–BEARING / NON–SHEARWALL CONNECTION AT CONCRETE SLAB

SCALE: 3/4" = 1'–0"



HEADER SPANS "S"	"D" MIN.	ADDN'L BEARING STUDS
S ⩽ 4'–0"	5 1/2"	0
4'–0" < S ⩽ 8'–0"	7 1/4"	1
8'–0" < S ⩽ 10'–0"	9 1/4"	2
S > 10'–0"	SEE PLAN	3

NOTE:
THIS DETAIL IS NOT FOR SHEARWALLS, SEE 1 S1.1B

6 TYPICAL FRAMING @ OPENINGS, TOP PLATE SPLICES, ETC.

SCALE: 3/4" = 1'–0"

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SAN FRANCISCO, CA 94103

PROFESSIONAL ENGINEER – JEICHEN – C057898 – REG. 05/2024 – CIVIL – STATE OF CALIFORNIA

	DATE	REVISIONS

TYPICAL WOOD DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

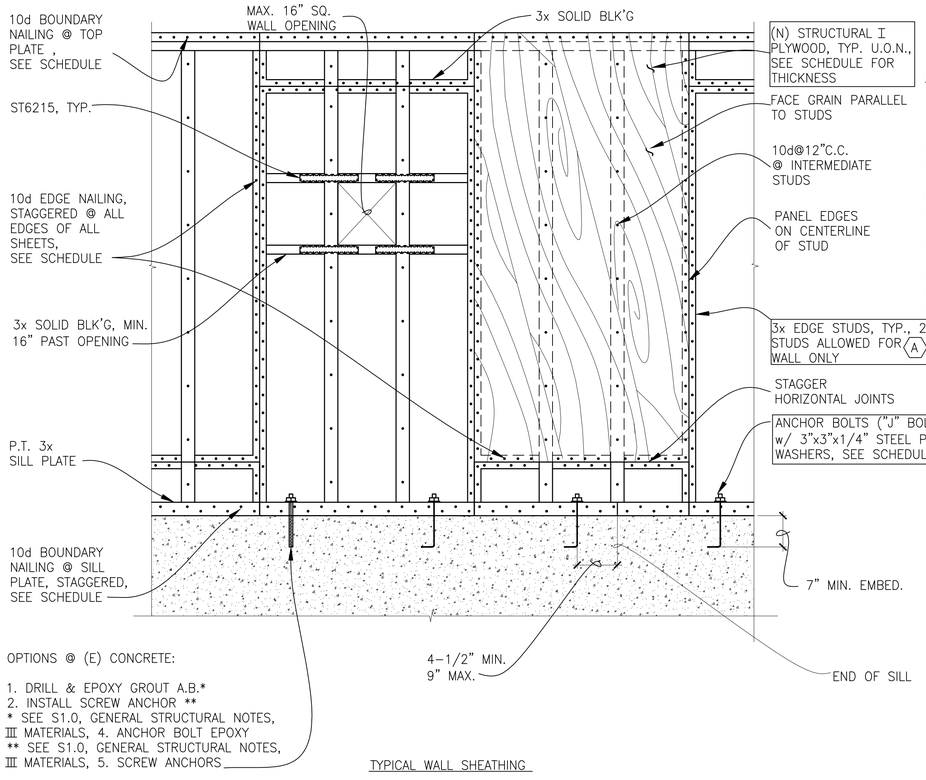
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Sheet S1.1A
Of 7 Sheets

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PLOT DATE: 03-01-24 PLOTTED BY: dangulsonm

SHEARWALL SCHEDULE

SYMBOL	PLWD GRADE	PLWD THICKNESS	PLWD ONE SIDE	PLWD TWO SIDES	PLWD EDGE & BOUNDARY NAILING	CONT. JOIST OR SOLID BLK'G	CLIP SPACING	PLATE NAIL SPACING	SDS 1/4x4 1/2" WOOD SCREW SPACING	A.B. SPACING	CAPACITY (PLF)
⟨A⟩	STRUC I	15/32"	X		10d @ 6"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 16"C.C.	16d @ 4"C.C.	–	5/8"ø @ 32"C.C.	340
⟨B⟩	STRUC I	15/32"	X		10d @ 4"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 12"C.C.	16d @ 3"C.C.	–	5/8"ø @ 24"C.C.	510
⟨C⟩	STRUC I	15/32"	X		10d @ 3"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 9"C.C.	–	6"C.C.	5/8"ø @ 16"C.C.	665
⟨D⟩	STRUC I	15/32"	X		10d @ 2"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 7"C.C.	–	4"C.C.	5/8"ø @ 16"C.C.	870
⟨E⟩	STRUC I	15/32"		X	10d @ 3"C.C.	2–2x's OR 4x OR 3 1/2" PSL	A35 OR LTP4 @ 8"C.C. + (LTP4 @ 8"C.C. OR CONTINUE WALL PLWD UP)	–	3"C.C. STAGGERED	7/8"ø @ 16"C.C.	1330
⟨F⟩	STRUC I	15/32"		X	10d @ 2"C.C.	2–2x's OR 4x OR 3 1/2" PSL	A35 OR LTP4 @ 8"C.C. + (LTP4 @ 8"C.C. OR CONTINUE WALL PLWD UP)	–	2"C.C. STAGGERED	7/8"ø @ 16"C.C.	1740



OPTIONS @ (E) CONCRETE:

1. DRILL & EPOXY GROUT A.B.*
2. INSTALL SCREW ANCHOR **

* SEE S1.0, GENERAL STRUCTURAL NOTES, III MATERIALS, 4. ANCHOR BOLT EPOXY
** SEE S1.0, GENERAL STRUCTURAL NOTES, III MATERIALS, 5. SCREW ANCHORS

TYPICAL WALL SHEATHING

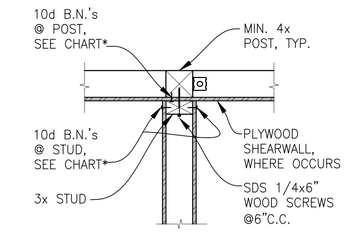
1 TYPICAL PLYWOOD SHEARWALL
SCALE: 3/4" = 1'–0"

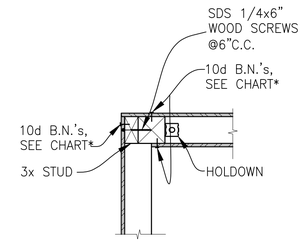
NOTES:
1. PLYWOOD SHALL BE NAILED DIRECTLY TO FRAMING.
2. WHEN PLYWOOD APPLIED TO BOTH FACES, STAGGER SHEETS SO THAT EDGES OCCUR AT DIFFERENT STUDS.
3. DO NOT OVER SHOOT NAILS THROUGH OUTER LAYER OF SHEARWALL PLYWOOD.
4. PLYWOOD = WOOD STRUCTURAL PANEL.
5. ORIENTED STRAND BOARD (OSB) MAY BE USED IN LIEU OF PLYWOOD AT CONTRACTOR'S OPTION.
6. FOR TYPICAL PLYWOOD SHEARWALL INTERSECTION, SEE 3/—
7. USE 3" LONG 10d NAILS.
8. CDX PLYWOOD EXPOSED TO EXTERIOR SHALL BE PRESSURE TREATED.
9. FOR STEEL PLATES, BOLTS, NAILS, SCREWS, ETC. IN CONTACT WITH P.T WOOD, SEE SHEET S1.0, GENERAL STRUCTURAL NOTES, IV EXPOSURE TO WEATHER, B. WOOD

PULL OUT TEST ON HDU HOLDOWNS	
HOLDOWN	PULL OUT VALUE
HDU2	7688 LBS
HDU4	11413 LBS
HDU5	14113 LBS
HDU8	19675 LBS
HDU11	23338 LBS
HDU14	36113 LBS
HD12	28440 LBS
HD19	38140 LBS

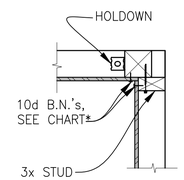
STRAP OPTION	
HOLDOWN	EQUIVALENT STRAP
HDU2	MST60
HDU4	MST60 OR 2–MST37's
HDU5, PHD5 OR HD5A	MST60 OR 2–MST48's
~~PHD6~~ OR ~~HD6A~~	2–MST48's
HDU8, HDQ8	2–MST60's

POST SIZE	LARGEST HOLDDOWN FOR A SINGLE HOLDOWN APPLICATION
4X4 OR (2)2X4	HDU2 TO HDU4
4x6	HDU5 TO HDU8 – HDQ8
6x6	HDU11 TO HDU14 HHDQ11 TO HHDQ14



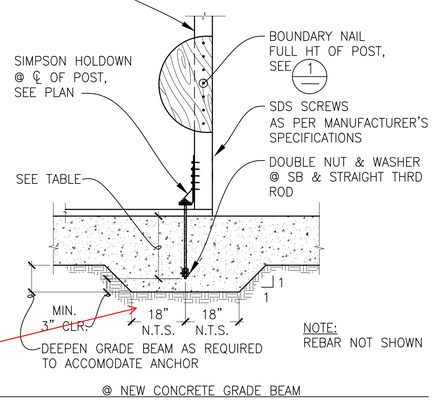


EXTERIOR PLYWOOD (PLAN)



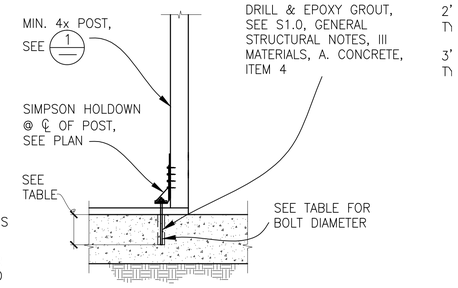
INTERIOR PLYWOOD (PLAN)

3 TYPICAL PLYWOOD SHEARWALL INTERSECTION DETAILS
SCALE: 3/4" = 1'–0"

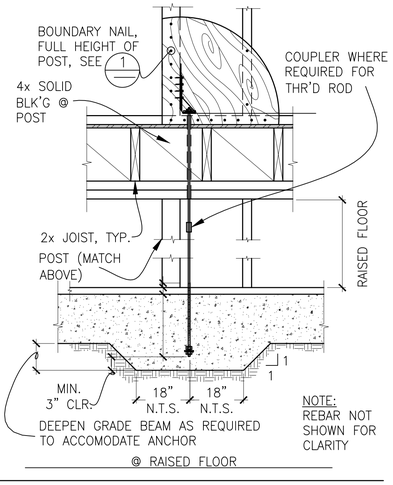


@ NEW CONCRETE GRADE BEAM

NEW FOUNDATION ON PLAN IS NOT 18" ON EITHER SIDE OF HOLDOWN ANCHOR



@ EXISTING CONCRETE



@ RAISED FLOOR

HOLDOWN	ANCHOR DIAMETER	ANCHOR INTO (N) CONC.	MIN. EMBED. INTO (E) CONC.	PLATE @ P.T. SLAB
HDU2 OR HD3B	5/8"	SSTB16	10"	2"x2"x3/8"
HDU4	5/8"	SSTB20	12"	2"x2"x1/2"
HDU5 OR HD5B	5/8"	SSTB24	14"	2"x2"x1/2"
HD7	7/8"	SB 7/8x24	16"	3"x3"x5/8"
HDU8, HDQ8	7/8"	SB 7/8x24	18"	3"x3"x5/8"
HD9B	7/8"	SB 7/8x24	20"	4"x4"x3/4"
HDU11, HHDQ11 OR HD12	1"	SB 1x30	22"	4"x4"x3/4"
HDU14, HHDQ14	1"*	SB 1x30	24"	4"x4"x3/4"
HD19	1 1/4"*	1 1/4"dx30"**	26"	4"x4"x3/4"

* PROVIDE HEAVY HEX ANCHOR NUT
** STRAIGHT THREADED ROD w/ DOUBLE NUT AND WASHER

5 TYPICAL HOLDOWN DETAIL @ CONCRETE FOUNDATION
SCALE: 3/4" = 1'–0"

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	DATE	REVISIONS

TYPICAL WOOD DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
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Date:	03-01-2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	S1.1B
Of	7 Sheets

© DRAWING NAME: C:\...\structural engineering\by-ari\1stDrive\ENERTIA\ENERTIA DESIGNS\Projects\Active Projects\Fell Street\Drawings\Sheets\1077 Fell Street - S1 - 02.26.24.dwg
PLOT DATE: 09-13-24 PLOTTED BY: dangulosmn

CLASS "B" LAP SPLICES					
Fy	BAR SIZE	SPECIFIED CONCRETE STRENGTH, f'c			
		2500	3000	4000	5000
40	#3	1'-4"	1'-3"	1'-1"	11"
40	#4	1'-9"	1'-7"	1'-5"	1'-3"
60	#5	3'-3"	3'-0"	2'-7"	2'-4"
60	#6	3'-11"	3'-7"	3'-1"	2'-9"
60	#7	5'-9"	5'-3"	4'-6"	4'-1"
60	#8	6'-6"	6'-0"	5'-2"	4'-8"
60	#9	7'-4"	6'-9"	5'-10"	5'-3"
60	#10	8'-3"	7'-7"	6'-7"	5'-10"
60	#11	9'-2"	8'-5"	7'-3"	6'-6"
60	#14	11'-1"	10'-1"	8'-9"	7'-10"

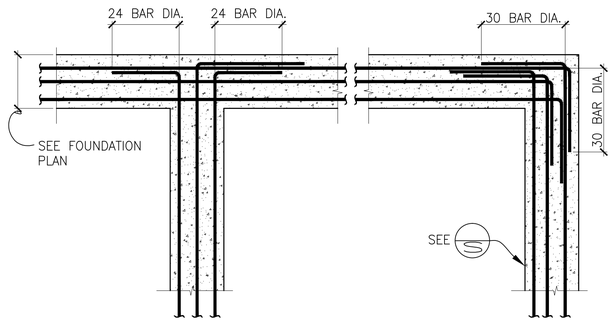
THE ABOVE REQUIREMENTS APPLY TO CONFIGURATIONS WHERE:
1. THE BARS IN QUESTION ARE TOP BARS OR BARS IN LIGHTWEIGHT CONCRETE.
2. BARS ARE UNCOATED
3. CONCRETE IS NORMAL WEIGHT
4. CLEAR SPACING > 2db
   AND CLEAR COVER > db
   OR CLEAR SPACING > db
   AND CLEAR COVER > db
   AND MIN. STIRRUPS OR TIES ARE PROVIDED

FOR OTHER CONFIGURATIONS CONTACT ENGINEER.

DIAMETER OF BENDS	
"D1"	1 1/2" FOR #3 BARS
	2" FOR #4 BARS
	2 1/2" FOR #5 BARS
"D2"	6d FOR #3 THRU #8 BARS
	8d FOR #9 THRU #11 BARS
	10d FOR #4 AND #10 BARS

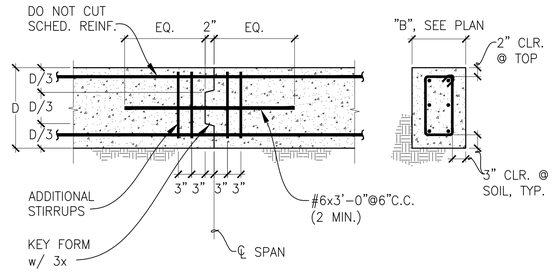
STANDARD HOOK LENGTH				
BAR SIZE	MAIN REINFORCEMENT		STIRRUPS AND TIE HOOKS	
	90°	180°	90°	180°
#3	6"	4"	3	4 1/2"
#4	8"	4"	4"	6"
#5	9 1/2"	4 1/2"	5"	7 1/2"
#6	11 1/2"	5 1/2"	11 1/2"	10"
#7	13 1/2"	6 1/2"	13 1/2"	11 1/2"
#8	15"	7"	15"	13"
#9	18"	9"	–	–
#10	20"	10"	–	–
#11	22"	11"	–	–

NOTES:
"D1" TO BE USED FOR STIRRUPS, TIES & WALLS REINFOCING AT OPENINGS.
"D2" FOR ALL OTHERS

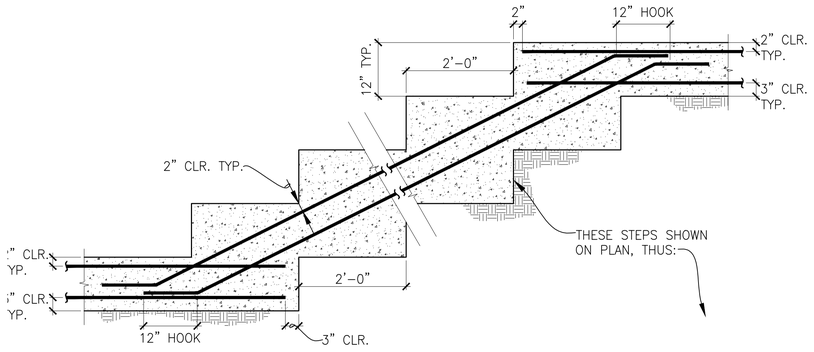


PLAN VIEW

NOTE: STIRRUPS NOT SHOWN

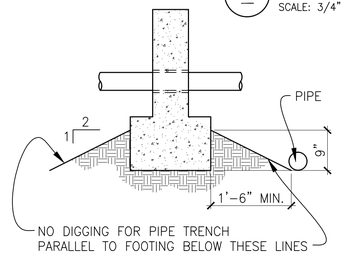


1 TYPICAL OFFSET AND TYPICAL LAP SPLICE
SCALE: 1 1/2" = 1'-0"

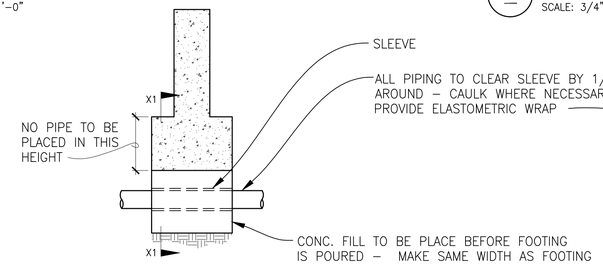


NOTES:
1. DO NOT SLOPE GRADE BEAMS > 1 VERT TO 10 HORIZ.
2. DIMENSIONS AS SHOWN UNLESS OTHERWISE SHOWN ON DRAWINGS

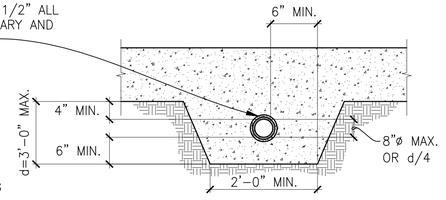
2 STANDARD HOOKS
SCALE: 1 1/2" = 1'-0"



3 TYPICAL GRADE BEAM INTERSECTIONS
SCALE: 3/4" = 1'-0"

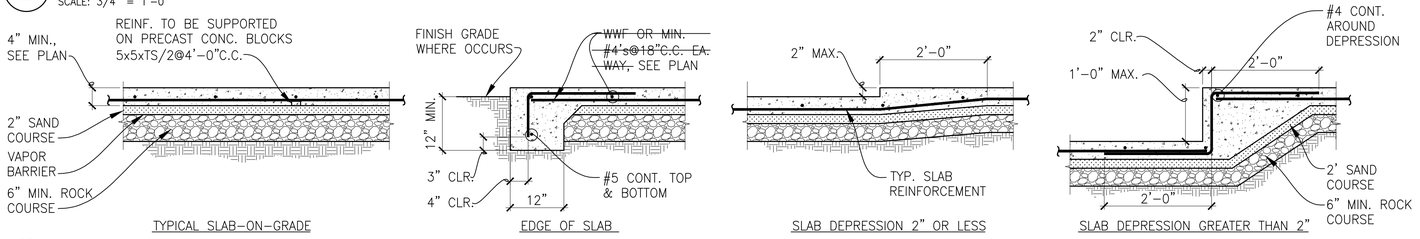


4 TYPICAL GRADE BEAM CONSTRUCTION JOINT
SCALE: 3/4" = 1'-0"



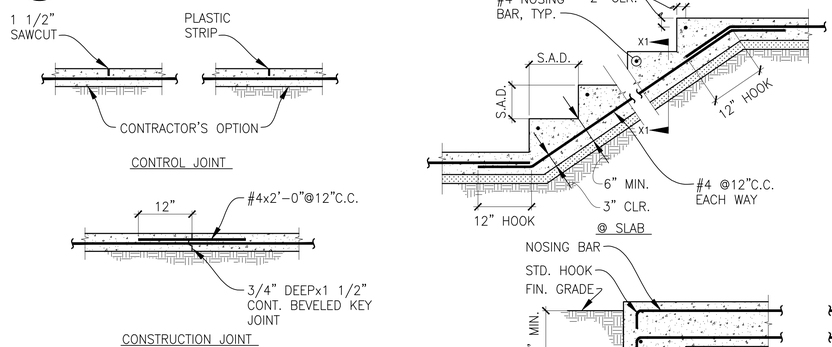
SECTION X1–X1

6 PIPE CLEARANCE AND DETAILS @ FOOTING
SCALE: 3/4" = 1'-0"



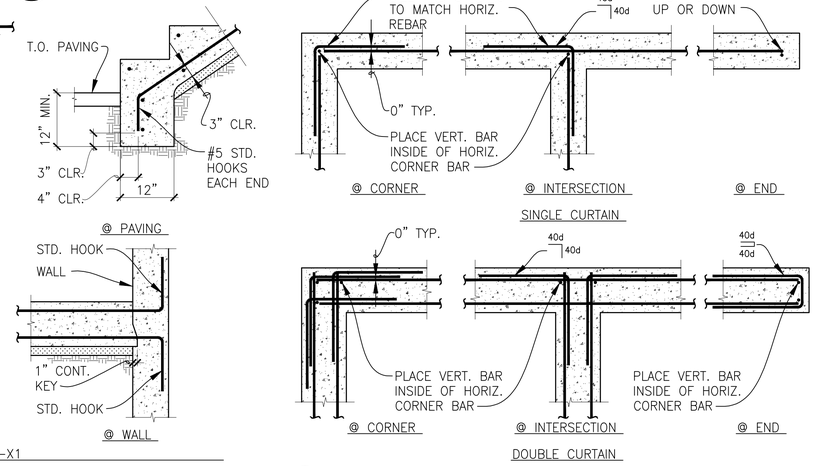
TYPICAL SLAB–ON–GRADE | EDGE OF SLAB | SLAB DEPRESSION 2" OR LESS | SLAB DEPRESSION GREATER THAN 2"

5 TYPICAL STEPS IN GRADE BEAMS AND WALL FOOTING
SCALE: 3/4" = 1'-0"



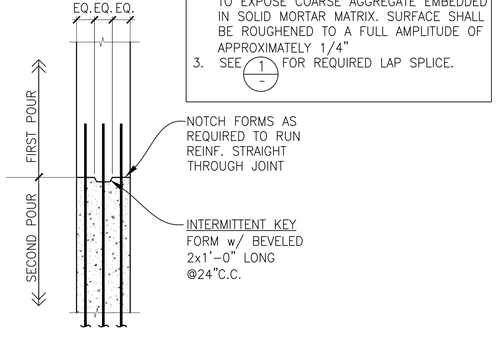
NOTE:
1. LOCATE TO ENCLOSE APPROX. SQUARE AREAS NOT EXCEEDING 400 Q. FT. SUNMIT LAYOUT FOR APPROVAL. LOCATE JOINT UNDER PARTITIONS WHENEVER POSSIBLE

7 TYPICAL SLAB–ON–GRADE DETAILS
SCALE: 3/4" = 1'-0"



SECTION X1–X1

NOTES:
1. PROVIDE LEVEL AND NEAT CONSTRUCTION JOINT.
2. ROUGHEN ALL CONSTRUCTION JOINTS TO EXPOSE COARSE AGGREGATE EMBEDDED IN SOLID MORTAR MATRIX. SURFACE SHALL BE ROUGHENED TO A FULL AMPLITUDE OF APPROXIMATELY 1/4"
3. SEE 1 – FOR REQUIRED LAP SPLICE.



8 TYPICAL CONSTRUCTION JOINT DETAILS @ SLAB–ON–GRADE
SCALE: 3/4" = 1'-0"

9 TYPICAL CONCRETE STAIRS ON GRADE
SCALE: 3/4" = 1'-0"

10 TYPICAL CONCRETE WALL INTERSECTION
SCALE: 3/4" = 1'-0"

11 TYPICAL CONCRETE WALL CONSTRUCTION JOINT
SCALE: 3/4" = 1'-0"

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2		
3		
4		

TYPICAL WOOD DETAILS

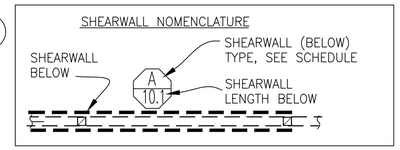
VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date:	03-01-2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	S1.2A
Of	7 Sheets

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PLOT DATE: 09-13-24 PLOTTED BY: dangusonm

SHEARWALL NOMENCLATURE



CLARIFY THE DESIGN LOADING OF THIS SHEARWALL IT'S NOT IDENTIFIED IN THE CALCULATION

(N) 1/2" CDX PLYWD PANEL BELOW w/ 10d @ 4" E.N,TYP.

4'-0" LONG SHEARWALL ALONG LINE A IS MISSING

SSTB24 ANCHOR REQUIRES 20-5/8" EMBEDMENT. INCREASE THE FOOTING DEPTH AS REQUIRED

DETAIL 10/S0.3?

IT SEEMS LIKE POST HAS BEEN RELOCATED TO MISS BRICK FOUNDATION ADJUST SECOND FLOOR FRAMING PLAN AS REQUIRED

LINE B WALL HAS 4936 lbs FORCE ALONG THIS LINE. VERIFY THE IF THE COLLECTOR PROVIDED IS SUFFICIENT OR NOT

CLARIFY IF THE STRAP IS CONTINUOUS THROUGH OUT THE ENTIRE LENGTH OF COLLECTOR. IF NOT, SPECIFY STRAP LENGTH

THIS DETAIL IS SHOWING FOUNDATION TO BE 18" WIDE ON EACH SIDE OF HOLDOWN ANCHOR

JOIST WITH STRAP TOO?

CLARIFY THE DESIGN LOADING OF THIS SHEARWALL IT'S NOT IDENTIFIED IN THE CALCULATION

PROVIDE CONTINUOUS COLLECTOR

PROVIDE DIAPHRAGM TIE TO THE MAIN HOUSE

NEW FOOTING WILL CUT INTO (E) BRICK FOOTING ON WEST SIDE BUT NOT EAST SIDE? VERIFY

VERIFY IF HDU4 IS BEING EPOXY TO (E) BRICK WALL PROVIDE EPOXY CAPACITY CHECK

CALC SHOWS THIS BEAM IS A 5.25"x9.5" PSL VERIFY

ARCHIECTRUAL ELEVATION ON A-1.02 SHOWS GRADEOR DECK ELEVATION TO UNDERSIDE OF 4x10 IS 11'-0" THERE IS ALSO A 6" CURB PER DEAIL 12/S3 FROM GRADEPLEAE DOUBLE CHECK THE STRONGWALL HEIGHT

STRONGWALL CAN'T BE EXPOSED TO WEATHER PROVIDE FINISHES TO ENCLOSE THE STRONGWALL

NO WORK ABOVE THIS LEVEL

NO WORK AT THIS LEVEL

FIRST FLOOR / FOUNDATION PLAN

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

SECOND FLOOR FRAMING PLAN

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

ROOF FRAMING PLAN

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

NORTH

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FIRST FLOOR
FOUNDATION PLAN

SECOND FLOOR FRAMING PLAN
ROOF FRAMING PLAN

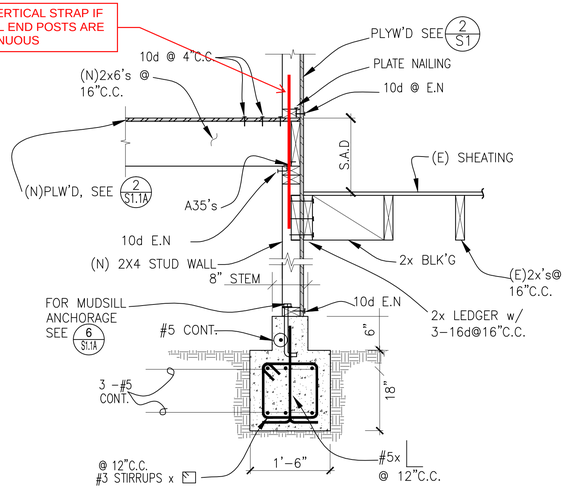
VOLUNTARY STRENGTHENING

1077 FELL STREET
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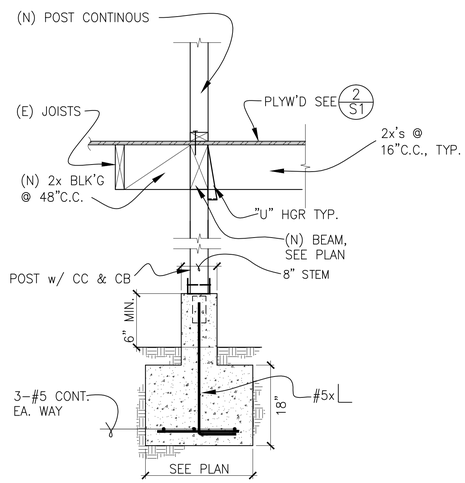
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Job No:	23059
Sheet	S2
Of	7 Sheets

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PLOT DATE: 07-24-24 PLOTTED BY: darquisonm

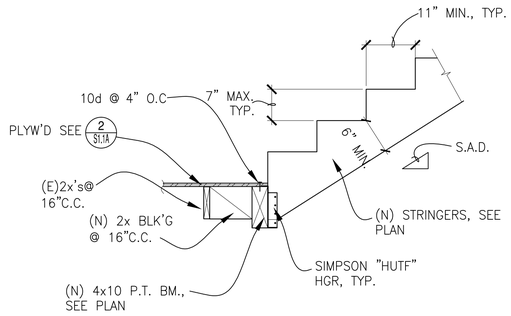
PROVIDE VERTICAL STRAP IF SHEARWALL END POSTS ARE NOT CONTINUOUS



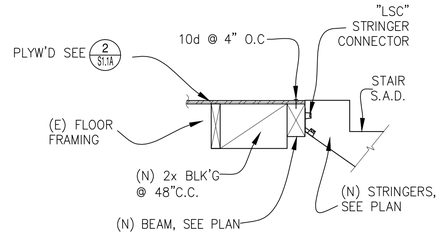
1 SCALE: 3/4" = 1'-0"



2 SCALE: 3/4" = 1'-0"



3 SCALE: 3/4" = 1'-0"



4 SCALE: 3/4" = 1'-0"

5 SCALE: 3/4" = 1'-0"

6 SCALE: 3/4" = 1'-0"

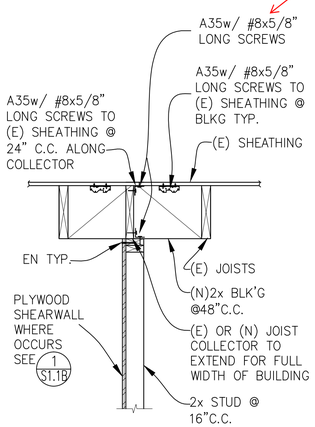
TOP OF GRADE BEAM APPEARS TO BE AT CRAWL SPACE FINISH GRADE OR TOP OF SLAB ON GRADE.
GRADE BEAM WILL BE BELOW THE BOTTOM OF (E) FOUNDATION
ADJUST DETAIL ACCORDINGLY

7 SCALE: 3/4" = 1'-0"

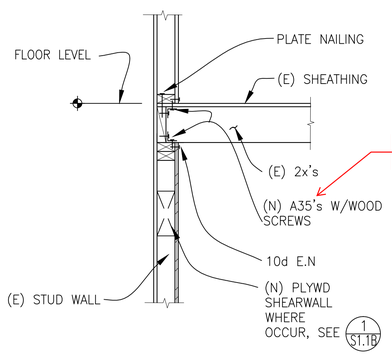
EXISTING FOOTING CONDITION SHOULD BE LIKE DETAIL 6/S3
MODIFY THE NEW FOUNDATION TO ACCOUNT FOR THE EXISTING FOOTING CONDITION. IT SEEMS THE FOOTING WILL BE MORE THAN 1'-6" DEEP

8 SCALE: 3/4" = 1'-0"

CONFIRM SCREW SIZE SIMPSON USES PH612I #6 x 1/2" SCREWS



9 SCALE: 3/4" = 1'-0"



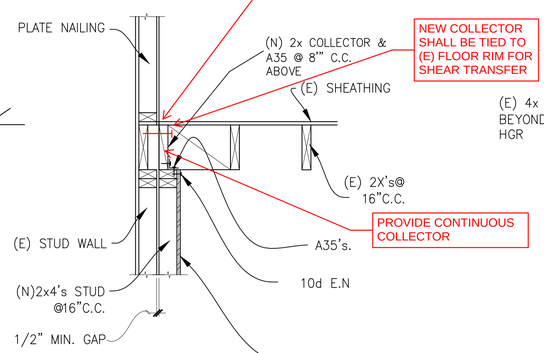
CLARIFY THE AMOUNT OF CLIPS

10 SCALE: 3/4" = 1'-0"

NO WORK ABOVE

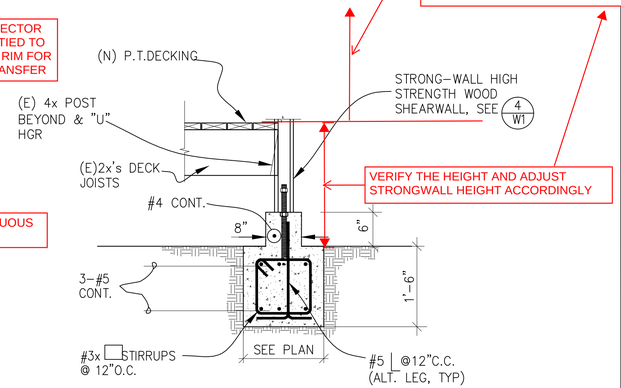
NEW WORK BELOW

PROVIDE CONNECTION TO THE FLOOR SHEATHING ABOVE ADD STRAP AS REQUIRED



11 SCALE: 3/4" = 1'-0"

ARCHIECTRUAL ELEVATION ON A-1.02 SHOWS GRADEOR DECK ELEVATION TO UNDERSIDE OF 4x10 IS 11'-0"
THERE IS ALSO A 6" CURB PER DEAIL 12/S3 FROM GRADEPLEAE DOUBLE CHECK THE STRONGWALL HEIGHT



12 SCALE: 3/4" = 1'-0"

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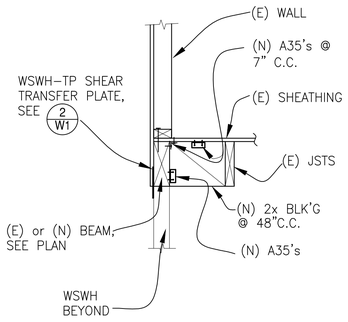
STRUCTURAL DETAILS

VOLUNTARY [illegible]

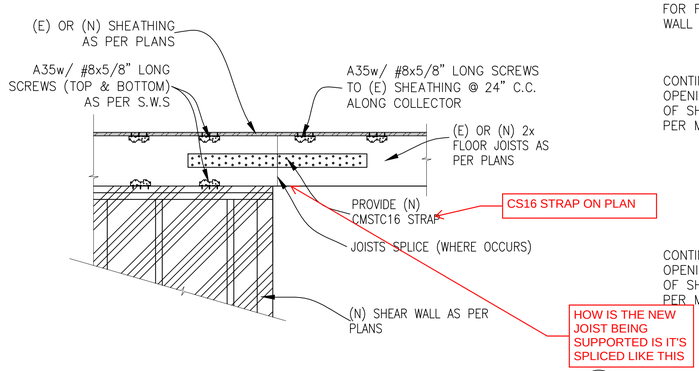
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SAN FRANCISCO, CA

Date:	03/01/2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	S3
Of	7 Sheets

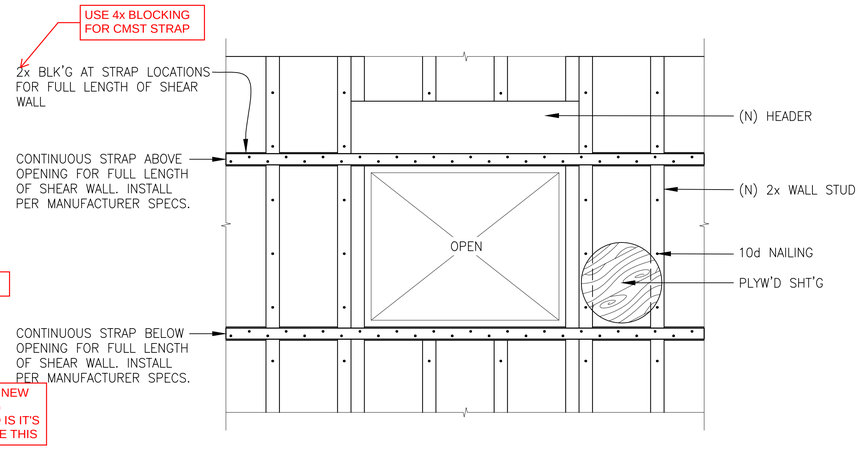
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PLOT DATE: 07-24-24 PLOTTED BY: darquisonm



1 — SCALE: 3/4" = 1'–0"



2 — SCALE: 3/4" = 1'–0"



3 — SCALE: 3/4" = 1'–0"

1

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STRUCTURAL DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date: 03/01/2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet S4
Of 7 Sheets

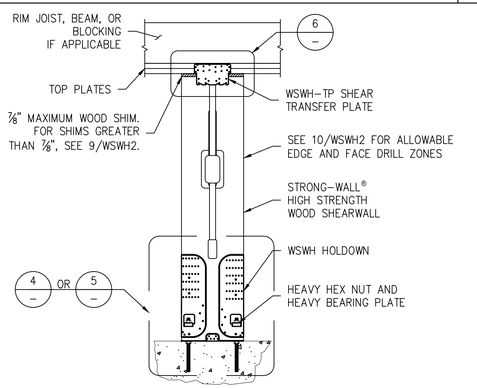
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PLOT DATE: 07-24-24 PLOTTED BY: darquisonm

STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MODELS

MODEL NO.	W (in.)	H (in.)	ANCHOR BOLTS		TOTAL WALL WEIGHT (lb.)
			QUANTITY	DIA. (in.)	
WSWH12x7	12	84	2	1	105
WSWH18x7	18	84	2	1	155
WSWH12x8	12	96	2	1	120
WSWH18x8	18	96	2	1	175
WSWH24x8	24	96	2	1	225
WSWH12x9	12	108	2	1	130
WSWH18x9	18	108	2	1	195
WSWH24x9	24	108	2	1	250
WSWH12x10	12	120	2	1	145
WSWH18x10	18	120	2	1	210
WSWH24x10	24	120	2	1	275
WSWH12x12	12	144	2	1	165
WSWH18x12	18	144	2	1	245
WSWH24x12	24	144	2	1	325
WSWH18x14	18	168	2	1	285
WSWH24x14	24	168	2	1	370
WSWH24x16	24	192	2	1	420
WSWH18x20	18	240	2	1	390
WSWH24x20	24	240	2	1	520

NOTES :
1. FOR HEIGHTS NOT LISTED, ORDER THE NEXT TALLEST PANEL AND TRIM TO FIT. MINIMUM TRIMMED HEIGHT FOR ALL PANELS IS 74¾".
2. ALL PANELS COME WITH PRE-ATTACHED HOLDOWNS, TWO HEAVY HEX NUTS, TWO HEAVY BEARING PLATES, ONE WSWH-TP TOP CONNECTION PLATE WITH REQUIRED FASTENERS AND INSTALLATION INSTRUCTIONS.
3. ALL PANELS ARE 3½" THICK.

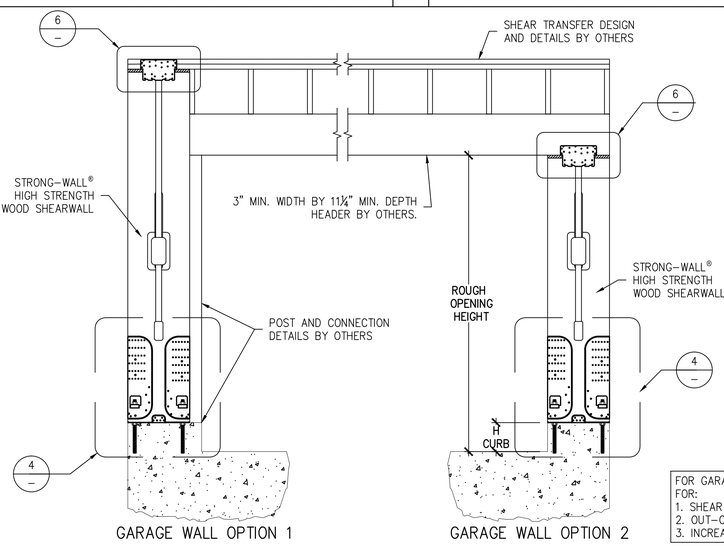
STRONG-WALL® WSWH MODELS | 1



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

ENSURE CONCRETE IS LEVEL AND SMOOTH BENEATH PANEL. GRIND OR FILL AS NECESSARY.

SINGLE STORY WSWH ON CONCRETE | 2



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

WHEN WSWH-PS STRAPS OMITTED, ALLOWABLE SHEAR VALUES FOR STANDARD PANEL APPLY.

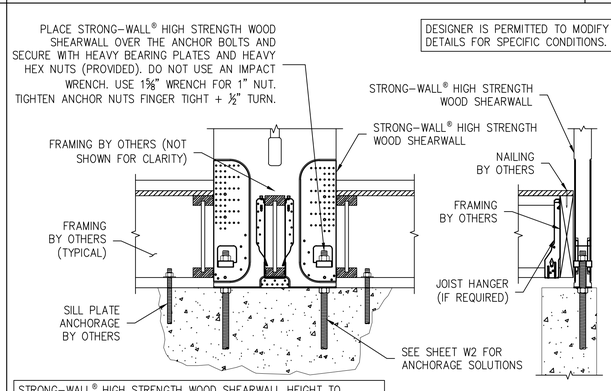
GARAGE HEADER ROUGH OPENING HEIGHT			
MODEL NO.	TRIMMED PANEL HEIGHT	H CURB	ROUGH OPENING HEIGHT
WSWH12x7 WSWH18x7 WSWH24x7	78"	5½"	6'-11½"
		6"	7'-0"
WSWH12x8 WSWH18x8 WSWH24x8	85½"	0"	7'-1½"
	93¼"	5½"	8'-2¾"
		6"	8'-3¼"

NOTES :
1. IF REQUIRED ROUGH OPENING HEIGHT EXCEEDS TABLE VALUE, SPECIFY NEXT TALLER PANEL AND TRIM AS NECESSARY. THE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MAY BE TRIMMED TO A MINIMUM HEIGHT OF 74¾".
2. FURRING DOWN GARAGE HEADER MAY BE REQUIRED FOR CORRECT ROUGH OPENING HEIGHT.

FOR GARAGE WALL OPTION 2, DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

ALTERNATE WSWH GARAGE FRONT OPTIONS | 3

STANDARD INSTALLATION BASE CONNECTION | 4



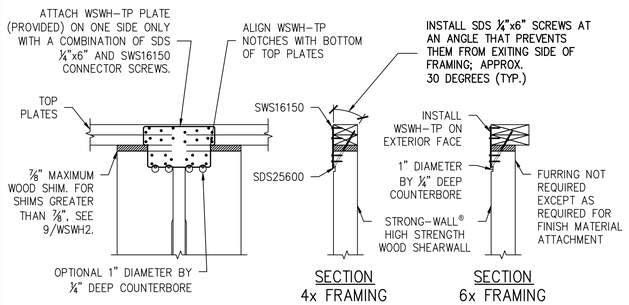
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL HEIGHT TO INCLUDE THE DEPTH OF THE FLOOR SYSTEM AND SHALL BE INSTALLED DIRECTLY ON THE FOUNDATION. SPECIFY PANEL HEIGHT FROM TOP OF FOUNDATION TO UNDERSIDE OF TOP PLATES OR BEAM.

WOOD FLOOR SYSTEM BASE CONNECTION | 5

WSWH-TP CONNECTION		
MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	14	2
WSWH-TP18	26	4
WSWH-TP24	46	8

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



BACK-TO-BACK TOP CONNECTION | 7

QTY. OF SDS¼"x6" SCREWS REQ'D.	
WSWH12	4
WSWH18	8
WSWH24	16

EDGE DISTANCE FOR SCREWS		
SLOPE	A (in.)	B (in.)
0:12-4:12	2	3
5:12-8:12	1½	4½
9:12-12:12	1½	5½

NOTES :
1. MAINTAIN END DISTANCES TO PREVENT SCREWS FROM PENETRATING THROUGH THE OUTER EDGES.
2. INSTALL SCREWS PERPENDICULAR TO THE TOP PLATE.
3. EDGE DISTANCES ASSUME DOUBLE TOP PLATE.

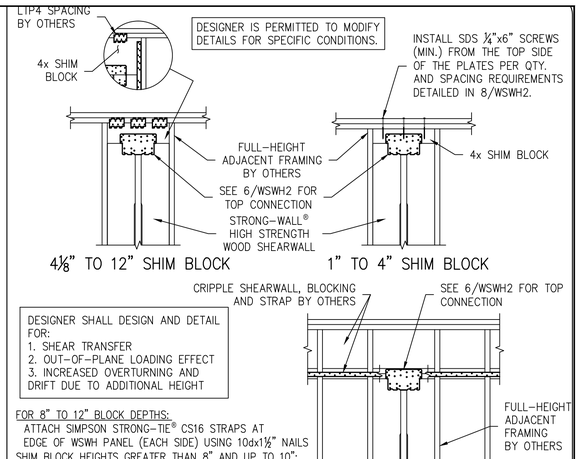
PLAN VIEW
SDS SCREW SPACING

SECTION VIEW
2X6 OR WIDER FRAMING

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

INSTALLATION NOTES :
1. ACTUAL CUT LENGTH (L) MUST BE GREATER THAN OR EQUAL TO PANEL WIDTH (W).
2. THIS DETAIL APPLICABLE FOR SLOPES UP TO 12:12.
3. PANELS TALLER THAN 12' MUST BE DESIGNED FOR THE APPLICATION.

RAKE WALL | 8



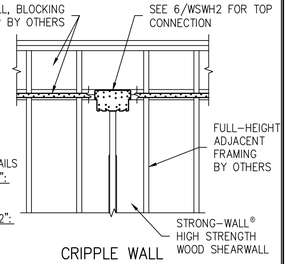
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

FOR 8" TO 12" BLOCK DEPTHS:
ATTACH SIMPSON STRONG-TIE® CS16 STRAPS AT EDGE OF WSWH PANEL (EACH SIDE) USING 10dx1½" NAILS

SHIM BLOCK HEIGHTS GREATER THAN 8" AND UP TO 10":
- 8 NAILS INTO BLOCK
- 8 NAILS INTO WSWH PANEL

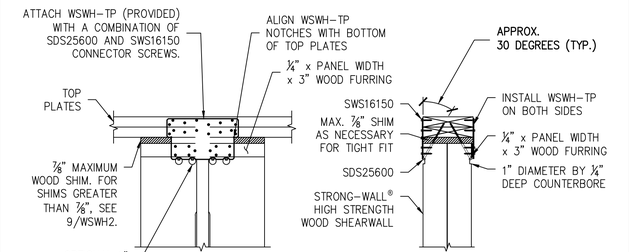
SHIM BLOCK HEIGHTS GREATER THAN 10" AND UP TO 12":
- 10 NAILS INTO BLOCK
- 10 NAILS INTO WSWH PANEL



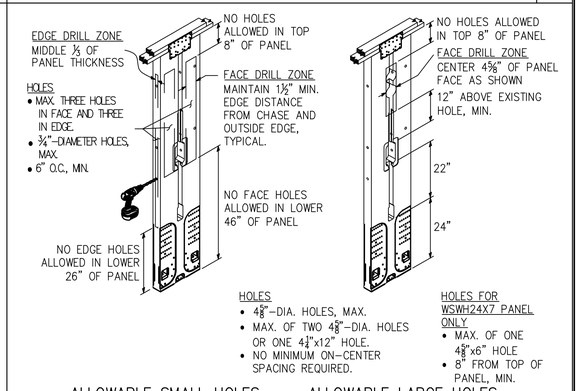
TOP CONNECTION | 6

WSWH-TP CONNECTION		
MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	28	4
WSWH-TP18	52	8
WSWH-TP24	92	16

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



TOP OF WALL HEIGHT ADJUSTMENTS | 9



TRIM ZONE AND ALLOWABLE HOLES | 10

NOTES | 11

1. STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL IS MANUFACTURED AND TRADEMARKED BY "SIMPSON STRONG-TIE COMPANY INC." HOME OFFICE: 5956 W. LAS POSITAS BLVD., PLEASANTON, CA 94588 TEL: (800) 999-5099, FAX: (925) 847-1597. "SIMPSON STRONG-TIE COMPANY INC." IS AN ISO 9001-2008 REGISTERED COMPANY.
2. USE OF THIS PRODUCT IS SUBJECT TO THE APPROVAL OF THE LOCAL BUILDING DEPARTMENT.
3. THIS PRODUCT IS PART OF THE OVERALL LATERAL FORCE RESISTING SYSTEM OF THE STRUCTURE. DESIGN OF THE BUILDING'S LATERAL FORCE RESISTING SYSTEM, INCLUDING THE LOAD PATH TO TRANSFER LATERAL FORCES FROM THE STRUCTURE TO THE GROUND, IS THE RESPONSIBILITY OF THE DESIGNER.
4. ENGINEER OF RECORD IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, ELEVATIONS, ETC. PRIOR TO INSTALLATION OF ANY COMPONENTS FOR THE STRONG-WALL SB SYSTEM. IF ANY DISCREPANCIES ARE FOUND, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
6. INSTALLATION OF PRODUCT SHALL BE DONE IN CONFORMANCE TO THESE DRAWINGS. THE PERFORMANCE OF MODIFIED PRODUCTS OR ALTERED INSTALLATION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE DESIGNER.
7. SIMPSON STRONG-TIE COMPANY INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS, DESIGNS, AND MODELS WITHOUT NOTICE OR LIABILITY FOR SUCH CHANGES.
8. ALL HARDWARE CALLED OUT IS SIMPSON STRONG-TIE.
9. SEE ICC-ES ESR-2652 OR CITY OF LOS ANGELES RR25730 AS APPLICABLE FOR ADDITIONAL INFORMATION.

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.606.8300
FAX: 415.701.0212
1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103

PROFESSIONAL ENGINEER — KINGSON J.E. CHEN — C057898 — 06/30/26 — CIVIL — STATE OF CALIFORNIA

	DATE	REVISIONS
1		
2		
3		
4		

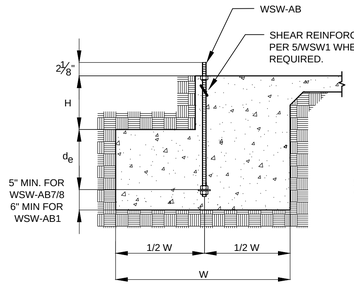
STRUCTURAL DETAILS

VOLUNTARY STRENGTHENING

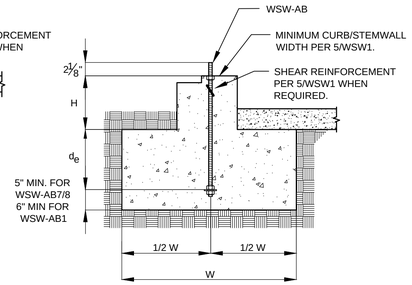
1077 FELL STREET
SAN FRANCISCO, CA

Date:	03/01/2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	W1
Of	7 Sheets

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PLOT DATE: 07-24-24 PLOTTED BY: darquisonm



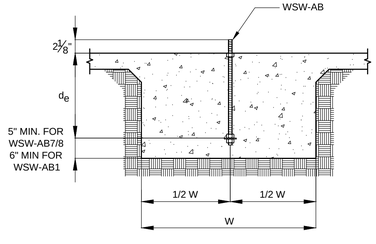
SLAB ON GRADE FOUNDATION



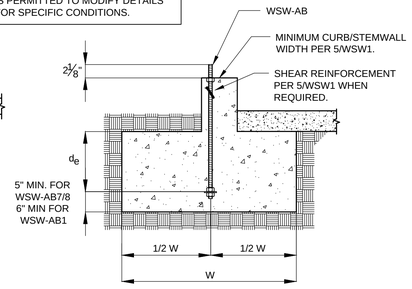
BRICK LEDGE FOUNDATION

NOTES:
1. SEE 2/WSW1 FOR DIMENSIONS AND ADDITIONAL NOTES.
2. SEE 5/WSW1 FOR SHEAR REINFORCEMENT WHEN REQUIRED.
3. MAXIMUM H = l_e - d_e. SEE 3/WSW1 AND 4/WSW1 FOR l_e.

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

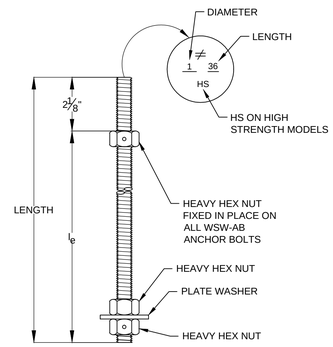


INTERIOR FOUNDATION



CURB OR STEMWALL FOUNDATION

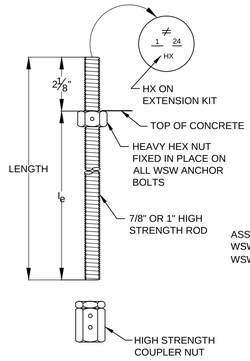
STRONG-WALL® WSW ANCHORAGE - TYPICAL SECTIONS | 1



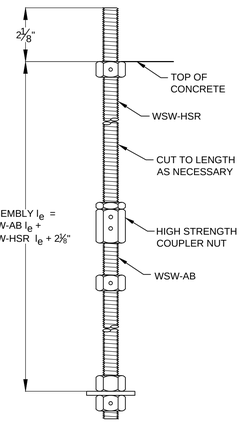
WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSW12 AND WSW18	WSW-AB7/8x24	7/8"	24"	20"
	WSW-AB7/8x24HS	7/8"	24"	20"
	WSW-AB7/8x30	7/8"	30"	26"
	WSW-AB7/8x30HS	7/8"	30"	26"
	WSW-AB7/8x36HS	7/8"	36"	32"
WSW24	WSW-AB1x24	1"	24"	20"
	WSW-AB1x24HS	1"	24"	20"
	WSW-AB1x30	1"	30"	26"
	WSW-AB1x30HS	1"	30"	26"
	WSW-AB1x36HS	1"	36"	32"

WSW ANCHOR BOLTS | 3

WSW-HSR_KT



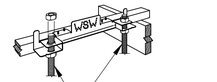
WSW-HSR AND WSW-AB ASSEMBLY



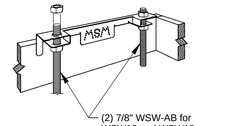
WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSW12 AND WSW18	WSW-HSR7/8x24KT	7/8"	24"	22"
	WSW-HSR7/8x36KT	7/8"	36"	34"
WSW24	WSW-HSR1x24KT	1"	24"	22"
	WSW-HSR1x36KT	1"	36"	34"

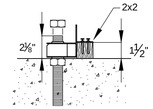
WSW ANCHOR BOLT EXTENSION | 4

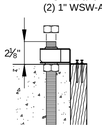
WSW-RT INTERIOR INSTALLATION



WSW-RT EXTERIOR INSTALLATION

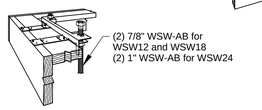


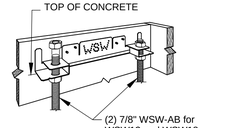




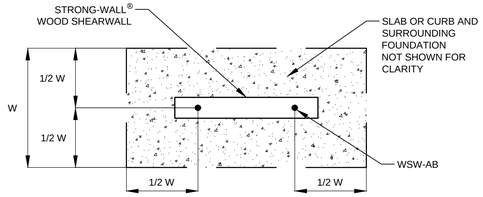
WSW-RTPF PANEL FORM INSTALLATION

WSW-RTBL BRICK LEDGE INSTALLATION





WSW ANCHOR BOLT TEMPLATES | 6



FOUNDATION PLAN VIEW

WSW ANCHORAGE SOLUTIONS FOR 2500 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
1 SEISMIC	CRACKED	STANDARD	11,900	27	9	16,100	33	11
			13,100	29	10	17,100	35	12
		HIGH STRENGTH	24,900	43	15	33,000	51	17
			27,100	46	16	35,300	54	18
	UNCRACKED	STANDARD	12,500	24	8	15,700	28	10
			13,100	25	9	17,100	30	10
		HIGH STRENGTH	25,300	38	13	32,300	44	15
			27,100	40	14	35,300	47	16
WIND	CRACKED	STANDARD	5,100	14	6	6,200	16	6
			8,700	20	7	11,400	24	8
		HIGH STRENGTH	13,100	27	9	17,100	32	11
			15,900	30	10	21,100	36	12
			18,400	33	11	27,300	42	14
			23,100	38	13	31,800	46	16
			27,100	42	14	35,300	50	17
	UNCRACKED	STANDARD	5,000	12	6	6,400	14	6
			9,300	18	6	12,500	22	8
		HIGH STRENGTH	13,100	23	8	17,100	28	10
			15,200	25	9	21,900	32	11
			19,900	30	10	26,400	36	12
			24,000	34	12	31,500	40	14
			27,100	37	13	35,300	43	15

NOTES:
1. ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D AND ACI 318-14 WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF WSW-AB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449).
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C - F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.3 AND ACI 318-14 SECTION 17.2.3.4.3.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
6. REFER TO 1/WSW1 FOR d_e.

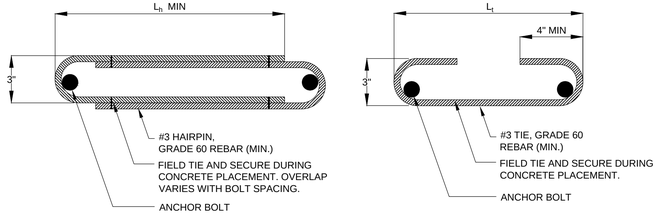
STRONG-WALL® WOOD SHEARWALL TENSION ANCHORAGE SCHEDULE 2,500, 3,000 AND 4,500 PSI | 2

WSW ANCHORAGE SOLUTIONS FOR 3000 PSI CONCRETE

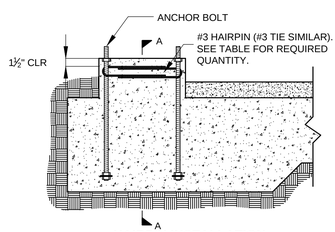
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
SEISMIC	CRACKED	STANDARD	12,300	26	9	16,000	31	11
			13,100	28	10	17,100	33	11
		HIGH STRENGTH	25,200	41	14	32,700	48	16
			27,100	43	15	35,300	51	17
	UNCRACKED	STANDARD	12,000	22	8	16,300	27	9
			13,100	24	8	17,100	28	10
		HIGH STRENGTH	25,300	36	12	32,700	42	14
			27,100	38	13	35,300	44	15
WIND	CRACKED	STANDARD	5,000	13	6	5,600	14	6
			8,800	19	7	10,200	21	7
		HIGH STRENGTH	13,100	25	9	17,100	30	10
			15,700	28	10	20,100	33	11
			19,200	32	11	25,300	38	13
			23,200	36	12	32,300	44	15
			27,100	40	14	35,300	47	16
	UNCRACKED	STANDARD	5,500	12	6	6,200	13	6
			8,500	16	6	12,800	21	7
		HIGH STRENGTH	13,100	22	8	17,100	26	9
			16,600	25	9	21,800	30	10
			19,700	28	10	25,200	33	11
			24,000	32	11	31,700	38	13
			27,100	35	12	35,300	41	14

WSW ANCHORAGE SOLUTIONS FOR 4500 PSI CONCRETE

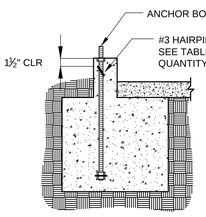
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
SEISMIC	CRACKED	STANDARD	12,600	23	8	16,000	27	9
			13,100	24	8	17,100	29	10
		HIGH STRENGTH	24,800	36	12	32,100	42	14
			27,100	38	13	35,300	45	15
	UNCRACKED	STANDARD	12,700	20	7	15,700	23	8
			13,100	21	7	17,100	25	9
		HIGH STRENGTH	24,600	31	11	32,500	37	13
			27,100	34	12	35,300	39	13
WIND	CRACKED	STANDARD	5,400	12	6	6,800	14	6
			8,300	16	6	11,600	20	7
		HIGH STRENGTH	13,100	22	8	17,100	26	9
			15,300	24	8	21,400	30	10
			19,300	28	10	25,800	34	12
			23,600	32	11	31,000	38	13
			27,100	36	12	35,300	42	14
	UNCRACKED	STANDARD	6,800	12	6	6,800	12	6
			9,400	15	6	12,400	18	6
		HIGH STRENGTH	13,100	19	7	17,100	23	8
			16,800	22	8	21,600	26	9
			20,300	25	9	26,700	30	10
			24,100	28	10	32,200	34	12
			27,100	31	11	35,300	36	12



HAIRPIN SHEAR REINFORCEMENT | **TIE SHEAR REINFORCEMENT**



HAIRPIN INSTALLATION
(GARAGE CURB SHOWN. OTHER FOOTING TYPES SIMILAR.)



SECTION A-A

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

STRONG-WALL® WOOD SHEARWALL SHEAR ANCHORAGE

MODEL	L_t OR L_h (in.)	SEISMIC [3] SHEAR REINFORCEMENT	SEISMIC [3] MINIMUM CURB/ STEMWALL WIDTH (in.)	WIND [4] SHEAR REINFORCEMENT	WIND [4] MINIMUM CURB/ STEMWALL WIDTH (in.)	ASD ALLOWABLE SHEAR LOAD, V (lb.) [6] UNCRACKED	ASD ALLOWABLE SHEAR LOAD, V (lb.) [6] CRACKED
WSW12	10¼	(1) #3 HAIRPIN	8[5]	SEE NOTE 6	6	1,035	740
WSW18	15	(1) #3 HAIRPIN	8[5]	(1) #3 HAIRPIN	6	HAIRPIN REINFORCEMENT ACHIEVES MAXIMUM ALLOWABLE SHEAR LOAD OF THE WSW	
WSW24	19	(2) #3 HAIRPINS	8[5]	(1) #3 HAIRPIN	6		

NOTES:
1. SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-11 AND ACI 318-14 AND ASSUME MINIMUM 2,500 PSI CONCRETE.
2. SHEAR REINFORCEMENT IS NOT REQUIRED FOR INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. WHERE NOTED, MINIMUM CURB/STEMWALL WIDTH IS 6 INCHES WHEN STANDARD STRENGTH ANCHOR BOLT IS USED.
6. USE (1) #3 TIE FOR WSW12 WHEN PANEL DESIGN SHEAR FORCE EXCEEDS TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.
7. #4 GRADE 40 SHEAR REINFORCEMENT MAY BE SUBSTITUTED FOR WSW SHEAR ANCHORAGE SOLUTIONS.

STRONG-WALL® WSW SHEAR ANCHORAGE SCHEDULE AND DETAILS | 5

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.626.8300
FAX: 415.701.0212
1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103

PROFESSIONAL ENGINEER — JEFFREY JON CHEN — C057898 — 05/30/26 — CIVIL — STATE OF CALIFORNIA

	DATE	REVISIONS
1	05/17/24	PC REV1

STRUCTURAL DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date:	03/01/2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	W2
Of	7 Sheets

DRAWING NAME: G:\Archive\Targets by wf\1167&1167&1077\FELL\SAN\Jeff\Drawings\Revised Files\Drawings\Projects 2023\1077 Fell Street\Drawings\Sheet 1\1077 Fell Street - PD 02.29.24.dwg
PLOT DATE: 07-24-24 PLOTTED BY: dangulsonm

EXHIBIT 19

Seismic Retrofitters
Consulting
Structural Engineering
Construction
415-822-4200
www.quakeprep.org
LIC# 745230

Retrofit Now!

Exhibit 19: 9 Pages - HOA contract with Seismic Retrofitters

1075-1077 Fell St.HOA & Soumya Sastry
1075 Fell St.
San Francisco, CA 94117
713-447-1248
soumya.sastry@gmail.com

Owners Engineer Proposal Letter
For Quote # 2408 Rev # 0

November 6, 2024

Thank you for inviting Seismic Retrofitters to evaluate your property. Based on our initial inspection we have prepared the following Owners Engineer proposal specific to your seismic needs.

APPROACH

We offer several levels of retrofits depending ono the seismic vulnerabilities and budget.

Program 1 - Foundation bolting, plywood shear panels and seismic hardware of the existing walls. Engineering Not Required

Program 2 / Soft Story Retrofit -Includes everything in Program 1 plus adds Lateral Bracing (excavation, concrete and lateral bracing). Most older SF wood framed building will fail in the side to side direction not front to back hence lateral bracing. Engineering Required

INSPECTION FINDINGS

On October 28, 2024, we had the opportunity to inspect 1075 Fell St., San Francisco, CA 94117. We are pleased to share the following in regard to your seismic needs.

NOTE

This proposal is based on the inspection that was performed on the ground floor/ garage area and utility area. Any areas on the ground floor that were not accessible at the time of inspection may incur additional costs.

- 3 story 2 Unit TIC residential building
- Type: Attached building with 1 garage opening(s)
- Circa 1890
- Lacking adequate foundation bolts, seismic hardware and shear diaphragms
- Is considered a wood framed "Soft Story Building"
- 3 Gas meter(s)
- Foundation: Unreinforced concrete foundation in Poor condition
- Asbestos was not found on initial inspection but if found during construction will be required to be removed by a certified asbestos removal company

Seismic Retrofitters
Consulting
Structural Engineering
Construction
415-822-4200
www.quakeprep.org
LIC# 745230

Retrofit Now!

Owners Engineer Proposal Letter
For Quote # 2408 Rev # 0

UTILITY RETROFIT

Gas Water Heater:
Gas burning water heater with code compliant seismic strapping.

Gas Supply:
There is no earthquake valve on the PG&E meter. You may be eligible for a discount on your home owners insurance after the installation of the safety valve is completed. Please see this link for the type of https://www.littlefirefighter.com/gas-shutoff-valves/.

Gas Furnace:
Not Applicable

SCOPE OF WORK

The attached contract is based on structural drawings by Enertia Design dated 05/10/24
Exterior siding & Waterproofing excluded

The majority of the work will be completed within the number of weeks specified in the contract. We may need access to your building for one additional week to schedule the final building Inspection.

Please make accommodations to have the garage free of vehicles and personal belongings prior to our start of work.

YOUR PROPOSAL

Attached is a detailed Owners Engineer contract for your review which itemises the materail, labor and managment for the work. 'ESTMATE LETTER'!signed contract and deposit.

We will manage all construction and administrative requirements for your project. We have competed over one thousand projects and counting.

Thank you for choosing Seismic Retrofitters.

Sincerely,

Mark Barbagelata
Seismic Retrofitters

CONFIDENTIAL PROPOSAL

CONSTRUCTION FEES

DATE: 11/06/24

CONTRACT #: 2408 **REVISION #** 0

Seismic Retrofitters
650 Divisadero St
San Francisco, CA 94117
(415) 822-4200
Info@QuakePrep.org
LIC # 745230

CUSTOMER

Name:	1075-1077 Fell St.HOA & Soumya Sastry
Address:	1075 Fell St.
City:	San Francisco, CA 94117
Phone:	713-447-1248 **Alt:**
Email:	soumya.sastry@gmail.com

INITIALS

Svs

I/We, the Owner(s) of the property described above as "Customer Address" authorize Seismic Retrofitters, hereinafter referred to as "Contractor", to furnish all materials and labor necessary to construct and/or improve these premises in a good, workmanlike and substantial manner according to the following terms, specifications, and provisions:

A. LABOR & MATERIALS: Description of the work and materials to be used:

ID	UTILITY PROGRAM FEES	UNIT	QTY.	TOTAL
1	Underground Sewer Pipe Replacement	EA	0	$ -
2	Earthquake gas shut off valve	EA	0	$ -
3	Underground Water Pipe Replacement	EA	0	$ -
4	Electric Vehicle (EV) Charger	EA	0	$ -
5	0	EA	0	$ -
6	0	EA	0	$ -
	UTILITY PROGRAM FEES - TOTAL			**$ -**

ID	SEISMIC CONSTRUCTION FEES	UNIT	QTY.	TOTAL
1	Excavation & Dirt Removal	CuYd	30	$ 10,931
2	Portable Toilet Service	EA	1	$ 523
3	Site Protection / Dust Control		1	$ 550
4	Temp. Building Shoring & or Cribbing (structural support)	LF	40	$ 4,400
5	Removal of substrate material (plaster, drywall)	SF	600	$ 2,475
6	3 x Mudsill PT Wood Blocking	LF	200	$ 4,125
7	Structural Wood Framing	LF	400	$ 23,100
8	Epoxy Foundation Bolts	EA	55	$ 4,159
9	Seismic Hold Down Brackets (HDs)	EA	12	$ 1,856
10	Structural Framing Screws SDS	EA	500	$ 688
11	Seismic Strapping at Framing (Simpson LST1)	EA	0	$ -
12	Limited Access Foundation Plates (UFP-10)	EA	0	$ -
13	Floor Joist Attachments (FJA)	EA	0	$ -
14	Floor-to-Wall Seismic Connectors (Smp. A-35)	EA	300	$ 2,063
15	Wood Post-to-Wood Beam Seismic Braces	EA	0	$ -
16	Concrete Footings-to-Wood Post Hardware	EA	0	$ -
17	Insulation (R-16 or R-30)	SF	0	$ -
18	Sheer Panels over (E) Studs	EA	24	$ 5,940
19	Dywall / Plaster Patch (painting not included)	SF	0	$ -
20	Reinforced Concrete Grade Beam	CbYd	18	$ 14,850
21	New Reinforced Foundation	LF	0	$ -
22	UFER - Underground Grounding Req. by code	EA	0	$ -
23	New Structural Seismic Wall(s)	EA	0	$ -
24	Steel Moment Frame	EA	0	$ -
25	Wiring & Outlets for Electric Vehicle Charger (not incl. charging units or new Service Box)	EA	0	$ -
25	Removal of Debris (Hauling Fees)	CuYd	10	$ 2,063
26	Cleanup	EA	1	$ 413
27	Plumbing (to remove and reconnect)	EA	1	$ 1,650
28	Electrical (to remove and reconnect)	EA	1	$ 1,221
29	Simpson Walls Under Rear Extention	EA	2	$ 5,500
30	OTHER:	LF	0	$ -
	SEISMIC CONSTRUCTION FEES - TOTAL			**$ 86,505**

Note: Quantities are approximate

Engineering Services & Structural Drawings

DATE: 11/06/24
CONTRACT # 2408 **REVISION #** 0

Seismic Retrofitters
650 Divisadero St
San Francisco, CA 94117
(415) 822-4200
Info@QuakePrep.org
LIC # 745230

CUSTOMER		INITIALS
Name:	1075-1077 Fell St.HOA & Soumya Sastry	SVS
Address:	1075 Fell St.	
City:	San Francisco, CA 94117	
Phone:	713-447-1248 **Alt:**	
Email:	soumya.sastry@gmail.com	

B. SUPPLEMENTAL FEES

☐ Program 1: This work included bolting the mudsills to the foundation, reinforcing existing walls and flooring systems (google "cripple wall bracing" for a better understanding of what is involved in our Pro 1 job). Engineering Services are not required for permitting. We are providing a permit submittal package that includes drafting services / foundation plans in order to obtain a permit, if there are fees on line 1 below.

☐ Program 2: Licensed Engineering Services and Structural Drawings are required. Typically, this includes the Pro 1 work as well as additional seismic bracing, addressing the most vulnerable areas of the structure, typically large unsupported openings and soft story conditions. These jobs will always include excavation, concrete and new structural components like Steel Moment Frames, Seismic Brace Walls, and Engineered Seismic Panels. This work will often mitigate the need for a costly Foundation Replacement and will offer better protection against large seismic events.

☒ Owner's Engineer: This indicates that you have hired an engineer and we will work with them to complete the job. You are responsible for all related engineering fees.

	PERMIT DEVELOPMENT & ENGINEERING FEES		PRICE
1	Program 1: Plans Development & Permit Package	0	$ -
2	Program 2: Structural Drawings & Engineering Services	0	$ -
3	Custom Engineering Job (Retaining Wall,Foundation, Deck, Parking / Garage)	0	$ -
	We will start on your permit drawings after we have received this payment	**TOTAL**	**$ -**

The OWNER is responsible for government permit fees. We are unable to determine these exact cost, budget about $1,000 for Pro 1 job and about $5,000 for a pro 2 job.

Special Inspections & Testing: is required by the government (building department) on a Pro 2 or Mandated Retrofits, these services may include concrete strength, structural welding and steel reinforcement to mention of few. We will take care of scheduling and logistics, you are responsible to contract and pay them directly. Budget 2 to 5K for these services.

CONTRACT PAYMENT SCHEDULE

DATE: 11/06/24
CONTRACT #: 2408 **REVISION #:** 0

Seismic Retrofitters
650 Divisadero St
San Francisco, CA 94117
(415) 822-4200
Info@QuakePrep.org
LIC # 745230

CUSTOMER

Name:	1075-1077 Fell St.HOA & Soumya Sastry
Address:	1075 Fell St.
City:	San Francisco, CA 94117
Phone:	713-447-1248 **Alt:**
Email:	soumya.sastry@gmail.com

INITIALS
SVS

FEES SUMMARY

B. WORK AREA: Description of area that will be worked on:

All work to be performed on the ground level.

Utility Fees	$ -
Construction Fees	$ 86,505
Permit Drawings or Engineering Fees	$ -
Construction Management Fees	$ 4,576
PROJECT TOTAL	**$ 91,081**

C. PAYMENT: Contractor proposes to perform the above work, (subject to additions and/or deductions pursuant to authorized change orders), for the following fees:

PAYMENT SCHEDULE

A	CONTRACT DOWN PAYMENT	*To be PAID at CONTRACT signing*	$ 1,000
B	PERMIT SET & ENGINEERING Fees		$ -
C	BUILDING DEPARTMENT PERMIT FEES - Pay at time of PERMITTING	*NOTE 1 OWNER'S RESPONSIBILITY*	TBD
D	3rd PARTY SPECIAL INSPECTION FEES - As required by Building Department	*NOTE 1 OWNER'S RESPONSIBILITY*	TBD
E	START WORK Payment - Due at COMMENCEMENT OF WORK	*NOTE 2*	$ 25,000
0	**CONSTRUCTION PROGRESS PAYMENTS**	*NOTE 3*	
1	Due upon completion of :	*Shoring*	$ 10,000
2	Due upon completion of :	*Excavation*	$ 20,000
3	Due upon completion of :	*Framing*	$ 20,000
4	Due upon completion of :	*Shear Wall*	$ 10,000
5	Due upon completion of :	*Dry Wall (Per Fire Code)*	$ -
6	Due upon down payment for Structural Steel	*Steel Material Order*	$ -
7	Due upon completion of :	*Completion of work*	$ 5,081
		TOTAL	**$ 91,081**

NOTE 1 Permit fees & special Inspections not included. Owner to provide Permit checks made payable to the appropriate Building Department:

[X] **San Francisco - "CCSF-DBI"** [ ] COUNTY:

>> Additional payments may be required for other Tests & Fees which are NOT itemized in this proposal, as needed.

NOTE 2 COMMENCEMENT OF WORK means the physical delivery of materials onto the premises and /or the performance of any labor. Commencement shall be subject to permissible delays as described in PROVISION 6 of the attached LEGAL TERMS.

NOTE 3 PROGRESS PAYMENTS are due within 48 hours of passing each building inspection or project milestone specified. CHANGE ORDERS shall be quoted and invoiced separately. Change Orders to be paid in full at the signing of each Change Order contract.

Approximate Job Length: 10 *Weeks (from building permit approval date)*

Approximate Start Date: TBD **Approximate Completion Date:** TBD

D. ACCEPTANCE: This contract is approved and accepted. I (we) understand there are no oral agreements between the parties of this agreement. The written terms, provisions, plans (if any) and specifications in this contract are the entire agreement between the parties. Changes in agreement shall be by written change order only with the express approval of both Contractor and Owner(s).

This offer is valid for 30 days. Additional contract provisions are on the attached LEGAL TERMS page.

Soumya Sastry (Nov 14, 2024 16:19 PST) 14/11/24
Approved and accepted (owner/agent) date

Approved and accepted (owner/agent) date

Approved and accepted (contractor) 11/6/2024

IMPORTANT:

Owner/Agent, please INITIAL the "NOTICE" section of the "Arbitration of Disputes" (PROVISION 14 of the LEGAL TERMS) to agree to Arbitration.

Note: This contract may be withdrawn after 30 days from contract proposal date.

SEISMIC RETROFITTERS CONTRACT - LEGAL TERMS

1. **Contract, Plans, Specification, Permits and Fees.** The work described in this contract shall be done according to the plans and the plan specifications (if any) except in the case of conflict when the provisions of this contract shall have control over both the plans and the plan specifications. In the event Seismic Retrofitters Inc. has provided a design build contact as noted on page 2 & 3 of the attached contract. Then it is assumed the material type and or count used during the course of design and or construction may change. Building permit fees are NOT included in this contract and will be paid for by Owner. All other charges not covered by this contract including but not limited to, special inspections and testing, taxes, city assessments, and any other fees, required by any government body, utility company or the like shall be paid for by Owner.

Initial Svs _____

2. **Property Lines.** Owner is responsible to locate and inform Contractor of the location of all property lines. At the discretion and direction of Contractor, Owner may be required to provide at Owner's expense, a licensed surveyor's map of the property showing property lines.

Initial Svs _____

3. **Installation.** Owner understands that Contractor may or may not install the materials. Contractor has the right to subcontract any part of, of all of, the work herein.

Initial Svs _____

4. **Change Orders.** Should Owner, construction lender, or any government body or inspector require any modification to the work covered under this contract, any cost incurred by Contractor shall be added to the contract price as extra work and Owner agrees to pay Contractor his normal selling price for such extra work at the time of signing each Change Order. All extra work as well as any other modifications to the original contract shall be specified and approved by both parties in a written change order. All change orders shall become a part of this contract and shall be incorporated herein.

Initial Svs _____

5. **Owner's Responsibility: Insurance etc.** Owner is responsible for the following: (1) to see that all necessary water, electrical power, access to premises are provided on the premises.(2) to provide a storage area on the premises for equipment and materials. (3) to clear the work area of all cars and storage items that prevent Contractor from having free access to the work areas such as but not limited to furniture, appliances, draperies, clothing and other personal effects, vehicles, tools or garden equipment. In the event that Owner fails to relocate such items, Contractor may relocate these items as required but in no way is Contractor responsible for damage to these items during their relocation and during the performance of the work. (4) To obtain permission from the owner(s) of adjacent property (ies) that Contractor must use to gain access to the work areas. Owner agrees to be responsible and to hold Contractor harmless and accept any risks resulting from the use of adjacent property (ies) by Contractor. (5) To correct any existing defects which are recognized during the course of the work. Contractor shall have no liability for correcting any existing defects such as, but not limited to, dry rot, structural defects, or code violations. (6) to maintain property insurance with Fire, Course of Construction, all Physical Loss with Vandalism and Malicious Mischief clauses attached, in a sum at least equal to the contract price, prior to and during performance of this contract. If the project is destroyed or damaged by an accident, disaster, earthquake or calamity, or by theft or vandalism, any work or materials supplied by Contractor in reconstructing or restoring the project shall be paid for by Owner as extra work. (7) to hold Contractor harmless for cracks in walls and ceilings resulting from jacking up and leveling floors. (7) to notify tenants about any situations or events that the Contractor communicates to the owner including but not limited to shut off of water/gas/electricity, need to remove car & storage items from work area(s), possibility of cracks in stucco/plaster in living units due to seismic retrofit work on building ground floor(repair not covered by this contract),

Initial Svs _____

6. **Delay.** Contractor shall not be held responsible for any damage occasioned by delays resulting from work done by Owner's subcontractors, extra work, acts of owner or owner's agent including failure of owner to make timely progress payments or payments for extra work, shortages of material and/or labor, bad weather, fire, strike, war, governmental regulations, or any other

contingencies unforeseen by Contractor of beyond Contractor's reasonable control.

Initial Svs _____

7. **Surplus Materials and Salvage.** Any surplus materials left over after this contract has been completed are the property of Contractor and will be removed by same. No credit is due Owner on returns for any surplus materials because this contract is based upon a complete job. All salvage resulting from work under this contract is the property of Contractor.

Initial Svs _____

8. **Cleanup & Advertising.** Upon completion, and after removing all debris and surplus materials, wherever possible, Contractor will leave premises in a neat, broom clean condition. Owner hereby grants to Contractor the right to display signs and advertise at the job site for the period of time starting at the date of signing of this contract and continuing uninterrupted until fourteen (14) days past the date the job is completed and payment in full has been made. Owner grants Contractor the right to publish the project street address on a "references" list which may be given to prospective customers.

Initial Svs _____

9. **Unanticipated Conditions & Concealed Damage.** Expense incurred because of unusual or unanticipated conditions shall be paid for by owner as extra work (conditions such as, but not limited to, ground conditions that require fill, or unusually hard soil, rocky soil or the presence of ground water). Contractor will inform Owner of any dry rot or other deterioration or unanticipated condition which is concealed and is discovered during the course of the work Contractor is not responsible to repair any such discovered deterioration or condition and any work done by Contractor to remedy such will only be done as extra work in a written Change Order, unless the aforementioned work is included in the original contract. Change Orders are to be paid in full at the time of signing the Change Order. The impact to job schedule will be indicated on each Change Order contract.

Initial Svs _____

10. **Hazardous Substances.** Owner understands that Contractor is not qualified as a Hazardous Material Handler or Inspector or as a Hazardous Material Abatement contractor. Should any asbestos or other hazardous substances be found on the premises, the Owner is responsible for arranging and paying for abatement of these substances before work can begin.

Initial Svs _____

11. **Right to Stop Work and to Withhold Payment on Labor and Materials.** If any payment is not made to Contractor as per this contract, Contractor shall have the right to stop work and keep the job idle until all past due progress payments are received. Contractor is further excused by Owner from paying any material, equipment and/or labor supplies or any subcontractors (hereinafter collectively called "suppliers"), during the period that Owner is in arrears in making payments to Contractor for bills received during that same period. If these same "suppliers" make demand upon Owner for payment, Owner may make such payment on behalf of Contractor and Contractor shall reimburse Owner for this amount at such time that Owner becomes current with Contractor for all past due payments. Owner is responsible to verify the true amounts owed by Contractor to these same "suppliers", prior to making payment on behalf of Contractor. Owner shall not be entitled, under any circumstances, to collect as reimbursement from Contractor any amount greater than that exact amount actually and truly owed by Contractor to these same "suppliers", for work done or materials supplied on Owner's job.

Initial Svs _____

12. **Collection.** Owner agrees to pay all collection fees and charges including but not limited to all legal and attorney fees that result should Owner default in payment of this contract. Overdue accounts are subject to interest charged at the rate of 10% per annum.

Initial Svs _____

13. **Legal Fees.** In the event litigation or arbitration arises out of this contract, prevailing party(ies) are entitled to all legal, arbitration, and attorney fees. The court or arbitrator shall not be bound to award fees based on any

set fee schedule but shall, if it so chooses, aware the true amount of all costs, expenses and attorney fees paid or incurred.

Initial Svs _____

14. **Payment Schedule – Page 3 of Contract.** Payments are made according to the Payment Schedule on Page 3 of the work contract. A "Job Start" date can be reserved only upon receipt of the signed contract, $1000 deposit and, if applicable, the engineering fee to pay for developing the structural engineering retrofit plans for obtaining the building permit. On the first day of work, the "Start Work" check is due. All other payments will be invoiced upon completion of each work milestone as specified in the Payment Schedule on Page 3 of the contract.

Initial Svs _____

15. **Volatility in Market.** Seismic Retrofitters Inc. bears no responsibility for market fluctuation hence material, fuel and labor cost lobar due to pandemics, war and acts not in our control that will cause the cost of goods and services to increase. The aforementioned cost will be charged to you with accordance to the revised pricing. For instance, steel cost from our suppliers are only legitimate for five business days. The sooner we start your job and secure pricing the less likely these cost will increase.

Initial Svs _____

16. **Arbitration of Disputes.** Any controversy or claim arising out of or relating to this proposal/contract, or the breach thereof, shall be settled by arbitration in accordance with the applicable Construction Industry Arbitration Rules of the American Arbitration Association which are in effect at the time the demand for arbitration is filed. A judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof. Any arbitration award shall be subject to correction and/or vacation for the reasons stated in the Cod of Civil Procedure. The arbitrator shall award reasonable attorney fees and expenses to the prevailing party. After being given due notice, should any party fail to appear at or participate in the arbitration proceedings, the arbitrator shall make an award based upon the evidence presented by the party(ies) who do (does) appear and participate. Notwithstanding Contractor's right to arbitrate, Contractor does not waive any of its lien rights. **NOTICE:** By initialing in the space below you are agreeing to have any dispute arising out of the matters included in the "arbitration of disputes" provision decided by neutral arbitration as provided by California Law and you are giving up any rights you might possess to have the dispute litigated in a court or jury trial. By initialing in the space below you are giving up your judicial rights to discovery and appeal, unless those rights are specifically, included in the "arbitration of disputes" provision. If you refuse to submit to arbitration after agreeing to this provision, you may be compelled to arbitrate under the authority of the Business and Professions Code or other applicable laws. Your agreement to this arbitration provision is voluntary.

We have read and understand the foregoing and agree to submit disputes arising out of the matters included in the "arbitration of disputes" provision to neutral arbitration.

I Agree to Arbitration: Svs _____
(Initials Owner)

I Agree to Arbitration: MB _____
(Initials Contractor)

Contractors are required by law to be licensed and regulated by the Contractors' State License Board which has jurisdiction to investigate complaints against contractors if a complaint regarding a patent act or omission is filed within four years of the date of the alleged violation. A complaint regarding a latent act or omission pertaining to structural defects must be filed within 10 years of the date of the alleged violation. Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board, P.O. Box 26000, Sacramento, CA 95826.

1077 Fell St Contract Ready to Sign

Final Audit Report 2024-11-15

Created:	2024-11-14
By:	Mark Barbagelata (barbcon1@gmail.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAYrC4eXH3sFxgmCXXWvV2hwuGDyVl4JXx

"1077 Fell St Contract Ready to Sign" History

Document created by Mark Barbagelata (barbcon1@gmail.com)
2024-11-14 - 11:36:19 PM GMT- IP address: 162.245.23.254

Document emailed to Soumya Sastry (soumya.sastry@gmail.com) for signature
2024-11-14 - 11:36:24 PM GMT

Email viewed by Soumya Sastry (soumya.sastry@gmail.com)
2024-11-14 - 11:36:31 PM GMT- IP address: 66.249.84.74

Document e-signed by Soumya Sastry (soumya.sastry@gmail.com)
Signature Date: 2024-11-15 - 0:19:20 AM GMT - Time Source: server- IP address: 162.245.23.33

Agreement completed.
2024-11-15 - 0:19:20 AM GMT

EXHIBIT 20

Exhibit 20: 2 Pages

D. P. DORING S.E., INC.
STRUCTURAL ENGINEER
216 CLEVELAND COURT • MILL VALLEY, CALIFORNIA 94941 • Cell (415) 847-4814 • Email det@dpdoringse.com

July 7, 2025

Jefferson Jie Chen
c/o Enertia Designs
1167 Mission St., Floor 1
San Francisco, CA 94103

Re: Structural review 1075 & 1077 Fell Street HOA & Soumya Sastry
1075 Fell Street
San Francisco, CA 94117

Dear Mr Chen:

I was hired by the 1075 & 1077 Fell Street HOA and Ms. Sastry to review some of the structural work that is being done on the 1075-1077 Fell St building.

I understand that you received a set of redlined drawings and calculations from Mr. Yeh indicating concerns of the work being done. Mr. Yeh is currently out of the Country and I have offered to move this forward since construction apparently is still going on. Even if it was not, the liability issues here are substantial and this should not be ignored.

I have reviewed Mr. Yeh's comments and find that especially some will require review by your office since they directly relate to life safety issues. In particular, but not limited to, are the following:

1. Missing earthquake overturning forces for the footing along Line E supporting two Simpson Strong walls. Overturning forces may be substantial since the shear walls are about 11.5 ft or so tall.
2. Calculations call for a 4 ft SW along Line A, but that is missing. If you are strengthening the building in one direction, it is required to do it throughout to address torsional forces.
3. Shear walls in the long (NS) direction are also shown. Since you are adding SW's, why are they not designed for the calculated loads?
4. Dry rot repair was done, but I have not found any calculations for the repairs.

Mr. Yeh is making very good points about other items and it would be prudent to review these and provide comments and remedies for all of these. I reiterate strongly that this is not ignored because my Clients and your Clients safety should be a concern for all of us.

I am attaching Mr. Yeh's redlines again for your record. If these issues have already been addressed in some way, please send me documentation for review. I am looking forward to hearing from you soon so I will not have to take this any further.

Sincerely,



Detlev Doring

Structural Engineer

EXHIBIT 21

Gmail

soumya sastry <soumya.sastry@gmail.com>

Exhibit 21: 2 pages - discussing June - July engineering questions

No response from enertia.

soumya sastry <soumya.sastry@gmail.com> Wed, Jul 9, 2025 at 3:28 PM
To: Kathleen Gevertz <kathleen@kagdesigns.com>
Cc: Steven Huang <thestevenhuang@gmail.com>, Alex Gevertz <alex@kagdesigns.com>, haraprasad sastry <haraprasadsastry@yahoo.com>

Also, somebody deleted all of the questions that I had put in the Questions for our engineers plan. I'm not sure why. Also, my rights to edit that document have been disabled. I'm fine with continuing to communicate to email. Here is the list of what has been deleted:

- ASCE 7-16? Need to see all documents reference current CBC and ASCE. Verify latest CBC and adopted ASCE used- different documents have different citations. Provide corrected documents.
- I expected to see a total package with new calculations, not just the new elements.
- Line B now has 4398 lbs (before 4936 lbs). What is the collector? Is it sufficient.
- Darquison said that Line B would need new Hold Downs
- Heights need to be verified.
- I don't see the adjustments that were made for Shear Wall at line A being missing. The totals at the bottom of the table still reflect Line A. Line A had the largest tributary area. Calculations to be provided with no Line A.
-
- Provide verification in field for all elements that said VIF. (including footing, mean, posts, but need large print out at site to walk through)
- Use accurate beam at cantilevered floor in calculations as verified in field. provide revision. Post is 6 x6?
- Are hold downs and collectors correct for Line B with original V total
- Heights of the shearwalls in the seismic load distribution tables need to be verified. And lengths
- N-S shearwalls need to be reflected with design intent
- Simpson Strong combined wall footing does not have "Seismic Loads/ Overturning from the Strongwall."
- Better framing diagrams around 2 doors, considering where the dry rot was and the framing Mark cut.
- Need better documentation of what's intended with the 7 by 7 beam
- Reflect in drawings that shear wall at line 1 is not continous and there is no shearwall at the brick chimney
- Did they assume that the foundation is brick/ unreinforced for the calculations? Or do the concrete footings bring it up to minimum requirements for the calculations?
- Do anchors match assumption for hold down strength?
- Veriy beam at E2B1- dimensions, span, and fully braced
- Veriy beam at E1B1- dimensions, span, and fully braced
- Veriy beam at N1B2- dimensions, span, and fully braced, wood type
- Verify beam at N 2 by 6 joists, dimensions, span, and fully braced, wood type
- stringer
- Verify total footing length, length between posts
- Chiawang peer review
- Det letter

On Wed, Jul 9, 2025 at 3:17 PM soumya sastry <soumya.sastry@gmail.com> wrote:
> That's strange. Steven told me that you had and to look there.
>
> On Wed, Jul 9, 2025 at 3:15 PM Kathleen Gevertz <kathleen@kagdesigns.com > wrote:
> > Hi,
> >
> > To clarify, I have not commented nor have I placed any responses into the tracker. Thank you.
> >
> > Cheers,
> >
> > Kathleen A Gevertz
> > KAG Designs and Construction LLC

Lic# 1103702
415 271 5243
Please reply to all when responding to emails. My phone is on M-F 7:30-6:00 PST

KAG logo 01.pdf

On Jul 9, 2025, at 3:01 PM, soumya sastry <soumya.sastry@gmail.com> wrote:

Could it be that there's another version of the calculations after March 2024? Please see what Det said below.

---------- Forwarded message ---------
From: **Detlev Doring** <det@dpdoringse.com>
Date: Wed, Jul 9, 2025 at 2:17 PM
Subject: RE: No response from enertia.
To: soumya sastry <soumya.sastry@gmail.com>, haraprasad sastry <haraprasadsastry@yahoo.com>

Hi Soumya:

The responses they provided are not accurate and are incomplete.

1. The calculations we were provided clearly do not have the overturning forces on the footing. See March 12, 2024 calculations pg. 27 of 35. The calculations Rev. 05.27.25 have nothing foundation calcs.
2. The 4 ft SW along Line A is called as a Type F. Please verify that the existing wall is adequate and capable to redist Type F forces. A comment that the existing wall remains adequate- no change needed is not proof and is insufficient. It looks like the wall height was also reduced from 9 ft previously to 8 ft. (5.27.25 calcs) but Arch dwgs show 11 ft wall height. Justify that also.
3. Your drawings indicate new SW along Line 1 and 2 with 10d@4" ctrs P.E. If no seismic strengthening is done in that direction, these walls should not be shown because it is misleading. If you are strengthening in the long direction, the Type A 11 ft long along Line 2 is way overstressed.
4. There is no such thing as a standard framing repair. Please reference the code section to educate me. Otherwise provide a splice calculation to justify the size and fastener spacing.

There are a number of other comments that have not been addresses. As I mentioned this is a life safety issue and should be resolved in a proper manner.

Detlev Doring S.E.

Sent from my Verizon, Samsung Galaxy smartphone

On Wed, Jul 9, 2025 at 10:38 AM soumya sastry <soumya.sastry@gmail.com> wrote:

Hi Det,

Enertia Has thus far not responded to my email to me. Apparently they've given Kathleen, Steven's owners rep, some responses, but they do not want to respond to me. I want the responses in writing from them to me and you. The answers that Kathleen has put in the tracker also seem kind of half assed.

Det Doring 1) Missing earthquake overturning forces for the footing along Line E supporting two Simpson Strong walls. Overturning forces may be substantial since the shear walls are about 11.5 ft or so tall.	The grade beam was already calculated for overturning — this is covered in our original calcs.
Det Doring 2) Calculations call for a 4 ft SW along Line A, but that is missing. If you are strengthening the building in one direction, it is required to do it throughout to address torsional forces.	No new openings along Line A — the existing shear wall remains adequate, no changes needed.
Det Doring 3) Shear walls in the long (NS) direction are also shown. Since you are adding SW's, why are they not designed for the calculated loads?	The long E-W walls are unchanged and already resist seismic loads well — no reinforcement required
Det Doring 4) 4. Dry rot repair was done, but I have not found any calculations for the repairs.	This is a standard framing repair for the contractor unless a structural replacement is required.
	"

EXHIBIT 22

Exhibit 22: 1 Page

D. P. DORING S.E., INC.
STRUCTURAL ENGINEER
216 CLEVELAND COURT • MILL VALLEY, CALIFORNIA 94941 • Cell (415) 847-4814 • Email det@dpdoringse.com

July 20, 2025

Department of Building Inspection
City of San Francisco
49 South Van Ness Ave., 5th Floor
San Francisco, CA 94103

Re: Structural issues with work at 1075 & 1077 Fell Street HOA
San Francisco, CA 94117

Permit No: 2024-0517-2393

I was hired by the 1075 & 1077 Fell Street HOA and Ms. Sastry to review some of the structural work that is being done on the 1075-1077 Fell St Building.

A peer review of the permit documents S1.0 3/1/24, S1.1A 3/1/24, S1.1B 3/1/24, S1.2A 3/1/24, S2 5/10/24, S3 3/1/24, S4 3/1/24, W1 3/1/24 and W2 3/1/24 was done by Chiawang Yeh. See the attached redlined drawings and calculations indicating concerns of the permitted work being done. Mr. Yeh is currently out of the Country and I have offered to my services to help coordinate resolution to some of these items which in my mind are life safety concerns for my client.

Ms. Sastry has been writing letters and emails over the last year or so to Enertia Designs, Architectural Engineering & Interior in charge of this project, but have not received a satisfactory reply.

Below I have summarized the more important issues I believe should be addressed. In particular, but not limited to, are the following:

1. Missing earthquake overturning forces for the footing along Line E supporting two Simpson Strong walls on Sh. S2, Calc. Sh. 27. Overturning forces may be substantial since the shear walls are about 11.0 ft with floor height at 12 ft tall although seismic building load distribution on Calc Sh. 15 shows them as only 9 ft.
2. Calculations call for a 4 ft SW along Line A, but that is missing from the drawings Sh. S2.
3. I believe total work at the lower level exceeds the 10% allowable seismic demand ratio allowed in the SFBC, so full seismic upgrade of at least the lower level should be considered. If however strengthening the building in one direction is agreed to, it is required to do it also in the front to address torsional forces.
4. Shear walls in the long (NS) direction are shown, but if not full seismic is done, then these walls should not be shown. If full lower story seismic strengthening is done, which I believe is required by code, then these new shear walls should be designed for full forces as calculated on Calc Sh. 15.
5. Drag struts and ties to the building are not calculated or shown on the drawings.
6. Please review the remaining redlines because I believe they have merit.

I would be available for a meeting after Aug. 7 if it becomes necessary.

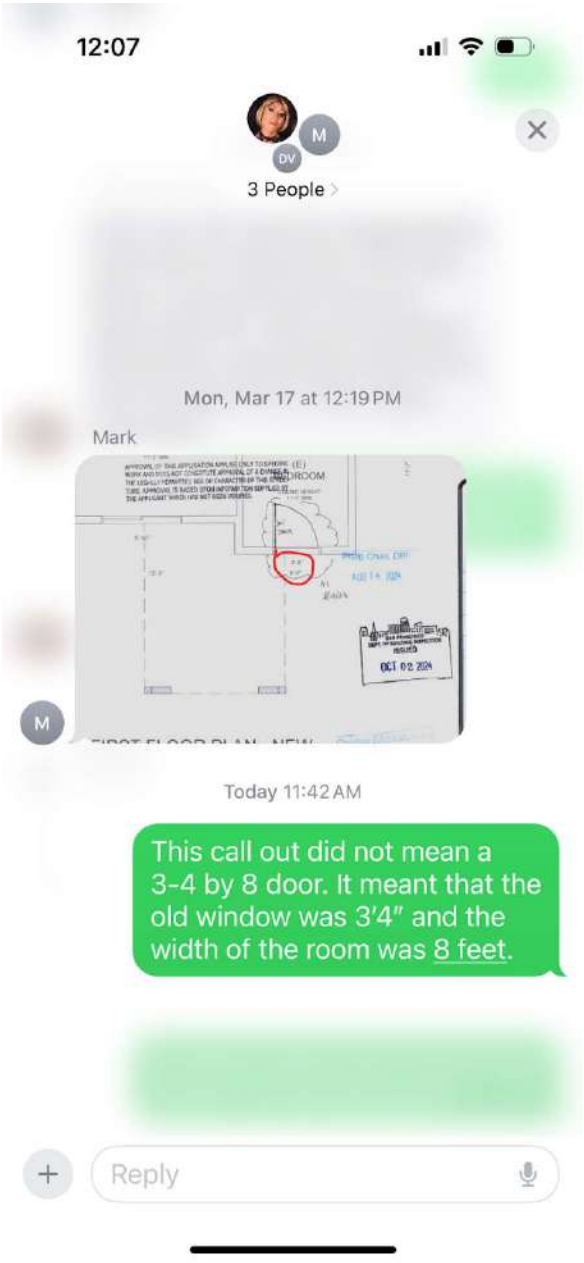
Sincerely,

Detlev Doring
Structural Engineer

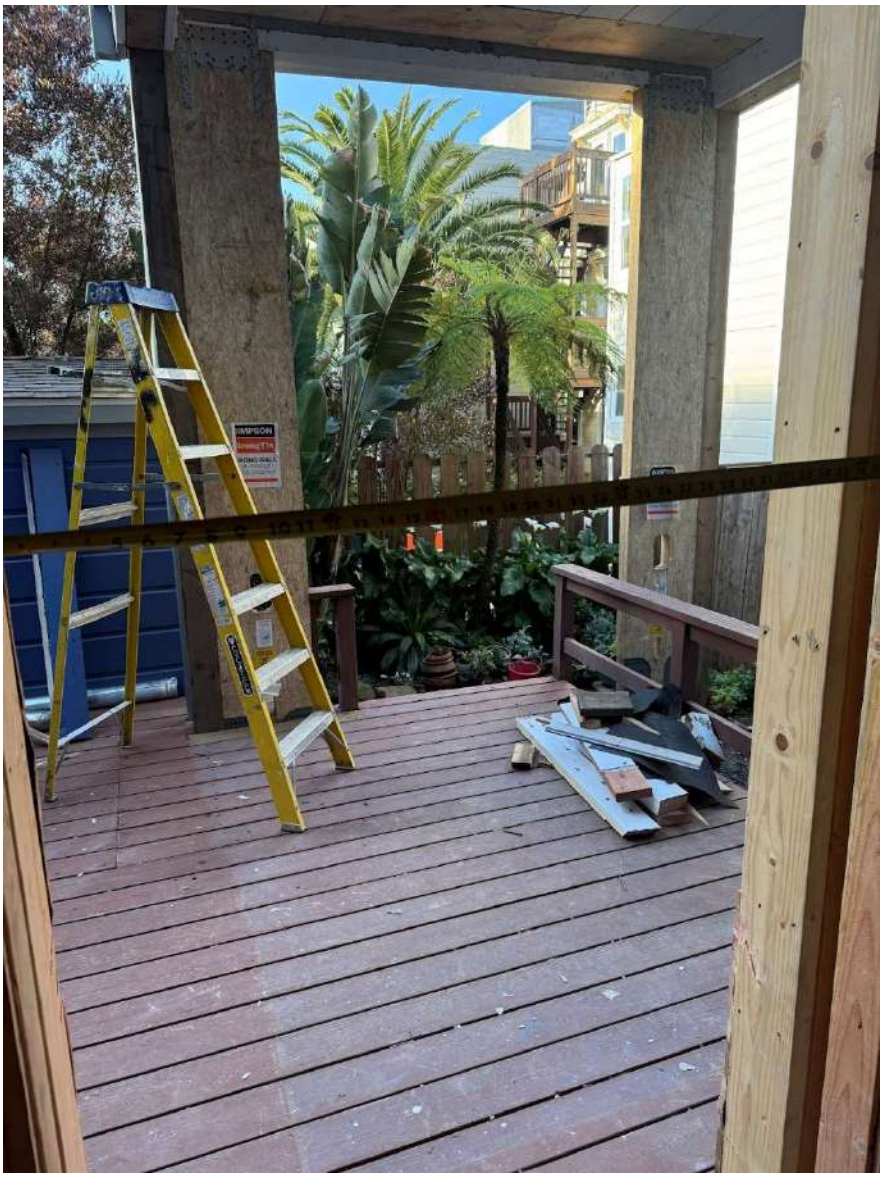
EXHIBIT 23

Exhibit 23: Pictures of Rough Opening

23.1 Text Exchange between Appellant, Applicant, Seismic Retrofitters and Velox. After talking to the architect, Appellant informs Applicant, Seismic Retrofitters, and Velox that the 100 inch by 42 inch rough opening was not on the plans.



23.2 Pictures of Rough Opening- Prior to cutting the opening, Seismic Retrofitters said that this size would not leave enough shear wall above. They then cut the opening thinking it was on the plans when it was not.




86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102


38 39 40 41 42 43


20
19
18
17

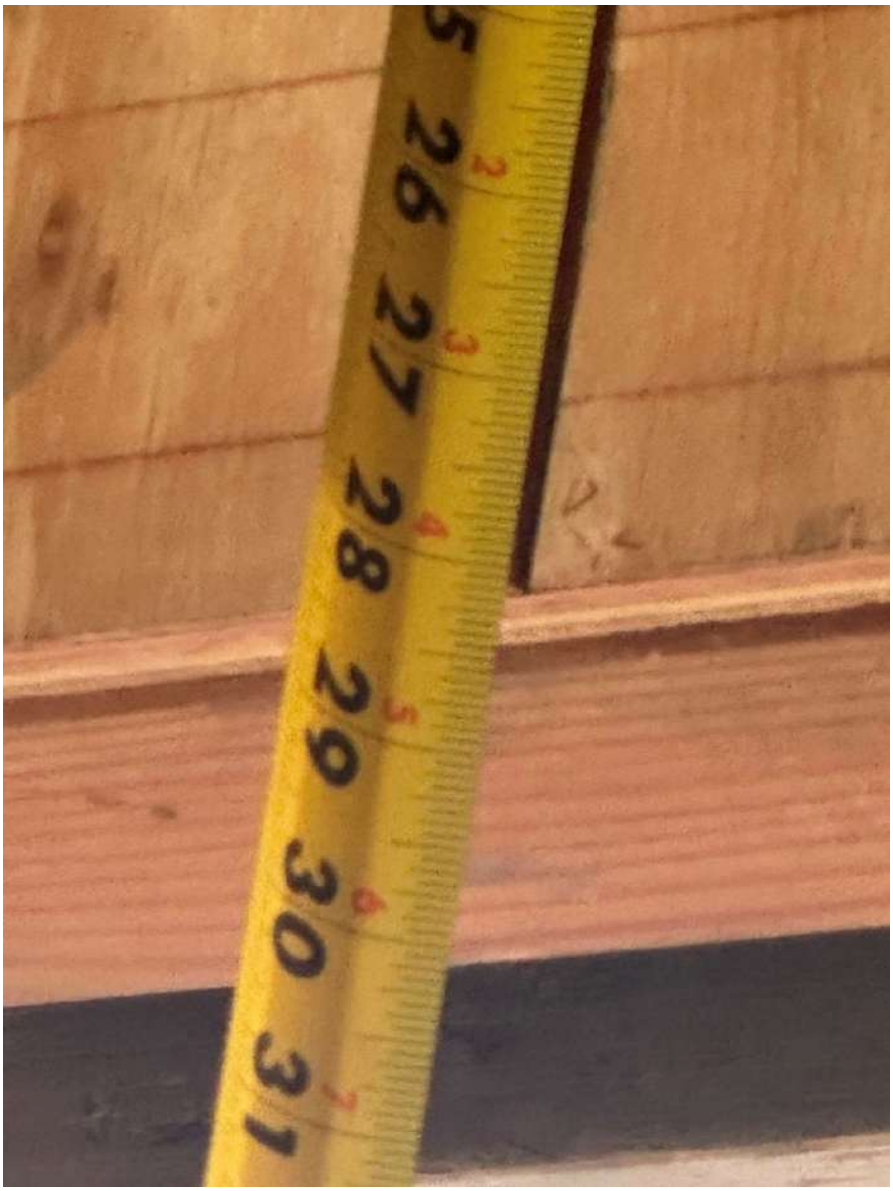

26
27
28
29
30
31

EXHIBIT 24

Exhibit 24: 21 Pages - Enertia June 2025 calculations

STRUCTURAL CALCULATIONS FOR:

REMODEL
(FIELD REVISION)

1077 FELL STREET
SAN FRANCISCO, CA

REPORT PREPARED BY:

ENERTIA DESIGNS
1167 MISSION STREET, FL.1
SAN FRANCISCO, CA 94103
P: (415) 626-8300
F: (415) 701-0212



ED PROJECT #23059

DATE: May 27, 2025

1077 FELL STREET
ED PROJECT #23059

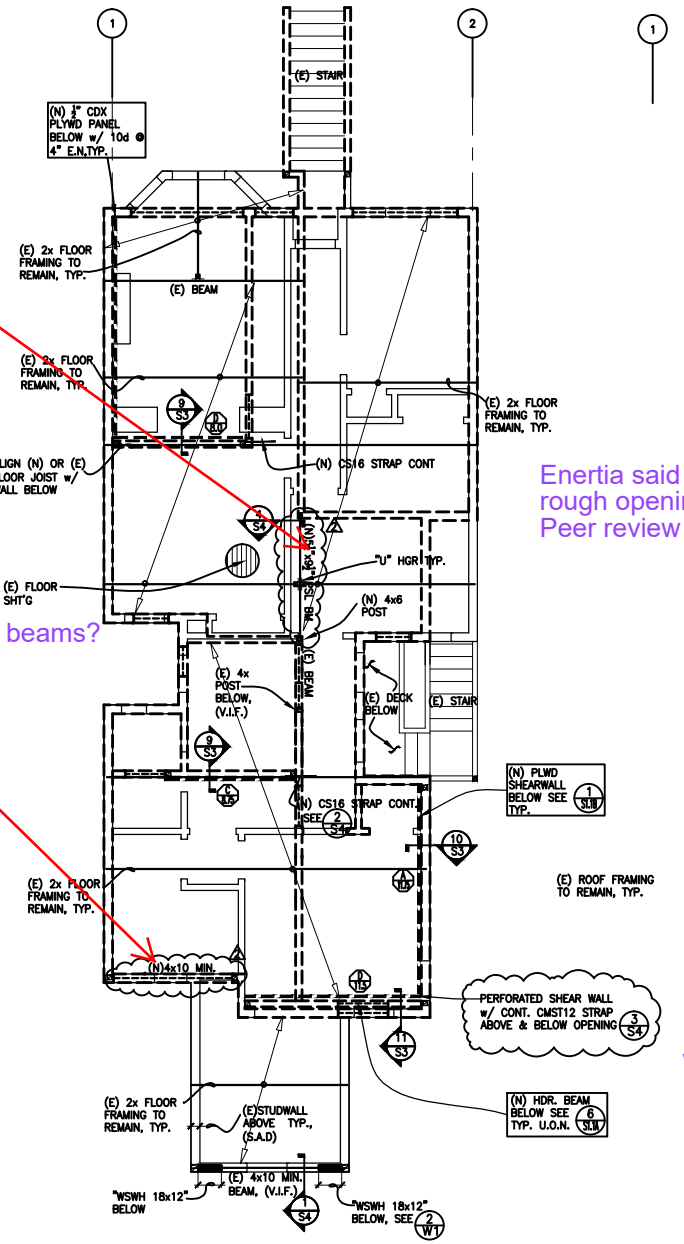
TABLE OF CONTENTS

DESCRIPTION	PAGE NUMBER
FRAMING KEY PLANS	1
ASCE HAZARDS SITE SEISMIC MAP	2 – 5
LATERAL ANALYSIS:	
Design Criteria and Lateral base shear	6 –11
Shear Wall and Holdowns	12 –13
Legend	14
Perforated Shear Wall	15
GRAVITY:	
Beams	16 – 19

2B2

2B3

Plan for new beam unclear- removing 2 existing beams?



SECOND FLOOR FRAMING PLAN

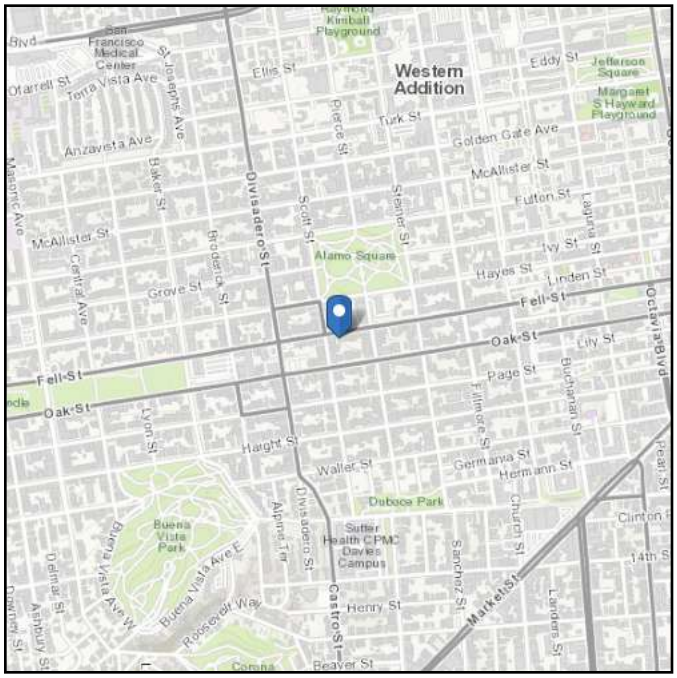
Enertia said more hold downs at line B would be needed for 42 by 100 in rough opening.
Peer review had questions on this line.

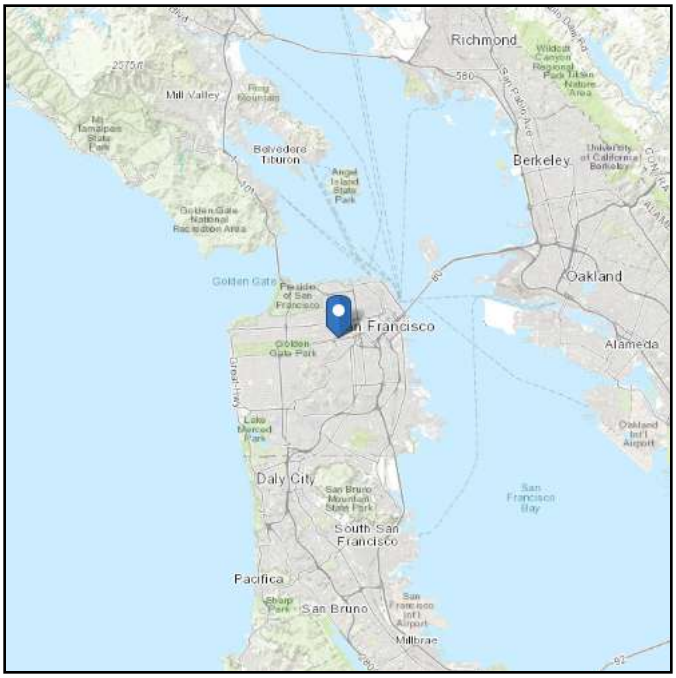
Plan does not reflect connectors to cantilever floor that were cut. Enertia said these were structural

ASCE Hazards Report

Address:
1077 Fell St
San Francisco, California
94117

Standard:	ASCE/SEI 7-22	**Latitude:**	37.774145
Risk Category:	II	**Longitude:**	-122.435446
Soil Class:	Default	**Elevation:**	195.3952831817827 ft (NAVD 88)





Seismic

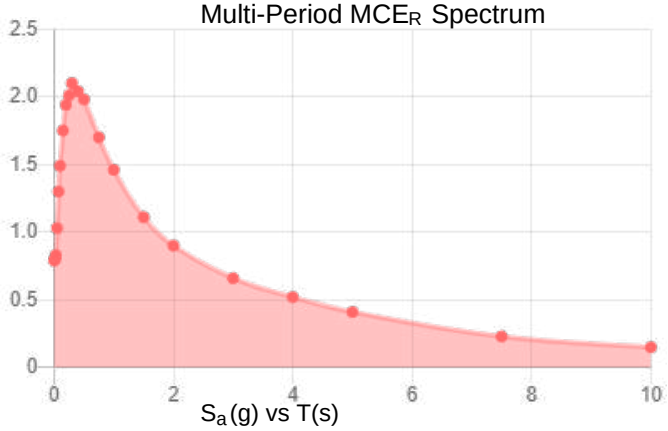
Site Soil Class: Default

Results:

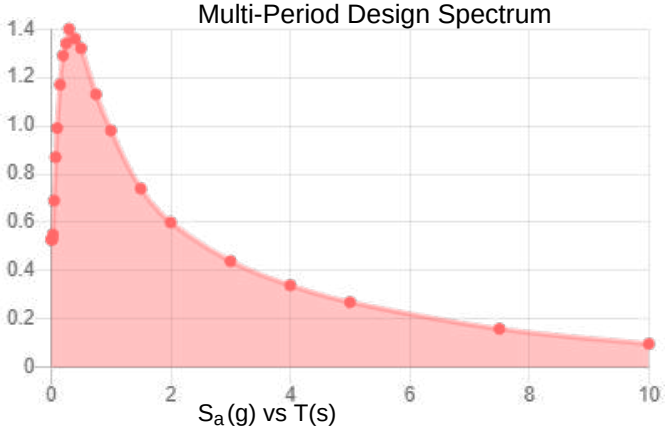
PGA_M :	0.66	T_L :	12
S_{MS} :	1.89	S_S :	1.66
S_{M1} :	1.85	S_1 :	0.62
S_{DS} :	1.26	V_{S30} :	260
S_{D1} :	1.24		

Seismic Design Category: D

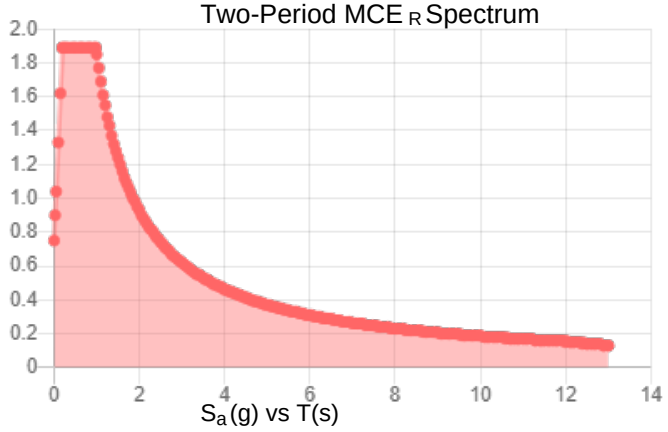
Multi-Period MCE_R Spectrum



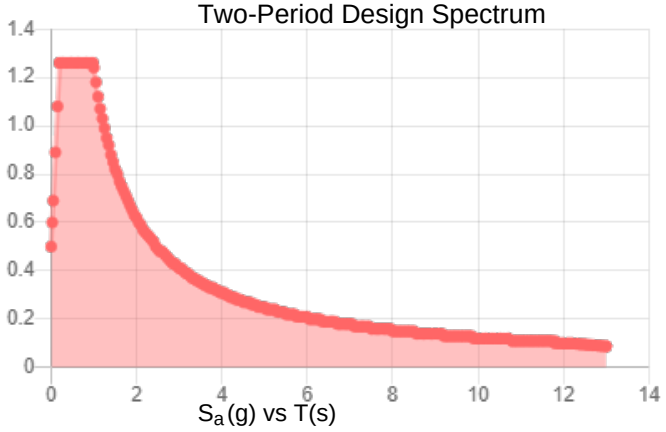
Multi-Period Design Spectrum



Two-Period MCE_R Spectrum



Two-Period Design Spectrum



MCE_R Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.

Design Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.

Data Accessed: Tue Feb 27 2024

Date Source:
USGS Seismic Design Maps based on ASCE/SEI 7-22 and ASCE/SEI 7-22 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-22 Ch. 21 are available from USGS.

The ASCE Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE Hazard Tool.

Where is the calculation to show that the calculation for over/ under 30% impact per 403.13.2?

PROJECT:	SHEET NO	
VOLUNTARY STRENGTHENING	JOB No.	0
1077 FELL STREET	REV. NO.	DATE
94117	02	05/27/25

Design Criteria **2022 California Building Code based on 2021 IBC**

2024 plan was based on ASCE 7-16 so expected full set of calculations with revision, addressing peer review

1. MATERIAL SPECIFICATIONS

1.1 Concrete f'c = 2500 psi (28 day compressive strength)

1.2 Concrete Block f'm = 1500 psi (Type N or S)

1.3 Reinforcing Steel
Grade 40 : #4 and smaller
Grade 60 : #5 and larger

1.4 Lumber

2" to 4" thick		DF No.2	Fb= 900 psi	
2" to 4" wide		DF No.1	Fb= 1000 psi	
Roof/ Ceiling Joist		DF No.2	Fb= 900 psi	
Beam/ Post	4x	DF No.2	Fb= 875 psi	Fc= 600 psi
	6x	DF No.1	Fb= 1350 psi	Fc= 925 psi
Mudsill		DF Pressure Treated		
Glu-Lam Beam		DF/ DF Simple Span		24F-V4
		DF/ DF Cantilever		24F-V8
Parallam (PSL)		2.2 E Truss Joist MacMillan		
Micro-Lam (ML)		2.0 E Truss Joist MacMillan		
Floor I-Joist (TJI)		Manufactured by Trus Joist Corporation		

1.5 Plywood Diaphragm Roof 1/2" CDX APA(32/16)
Floor 3/4" T&G CDX APA(48/24)

1.6 Structural Steel ASTM A-992 or per latest AISC provision

1.7 Manufactured Shear Panels Simpson Strongwall: Manufactured by Simpson Strong-Tie
Hardy Frame Panels: Manufactured by Mitek Company

2. FOUNDATION PARAMETERS

2.1 Minimum Building Code Requirements **USED**

2.2

Geotechnical Engineer:	N.A.
Project Reference No.:	N.A.
Date:	N.A.
Telephone No.	N.A.

Allowable Soil Bearing Capacity	1500	psf
Allowable Pier Skin Friction	N.A.	psf

Do the concrete footing enable the brick to count as "minimum buiding code?"

PROJECT:	SHEET NO	
VOLUNTARY STRENGTHENING	JOB No.	0
1077 FELL STREET	REV. NO.	DATE
94117	02	05/27/25

3. GRAVITY LOADS

3.1 Live Load / Snow Load

LLr =	20	psf	(Roof Live Load)	Roof Slope	0.0	: 12
LL =	40	psf	(Floor Live Load)	Slope Factor	1.00	
S =	0	psf	(Snow Load)			

3.2 Dead Load

3.21 Roof

Five-ply felt and gravel	10.0	psf	
5/8" Plywood Sheathing	2.0	psf	
2x8 @ 16" Framing	2.2	psf	
Insulation	1.0	psf	
Ceiling/ 1 Layers of G.B.	2.7	psf	
Miscellaneous	1.0	psf	
Total =	19.0	x 1	
	19.0	psf	

3.22 Lower Roof/ Roof Deck

5.0	psf
2.0	psf
2.2	psf
1.0	psf
2.7	psf
1.0	psf
14.0	psf

3.23 Floors

Hard Wood Flooring	4.0	psf
3/4" Plywood Sheathing	2.5	psf
2x10 @ 16" Framing	2.9	psf
Insulation	1.0	psf
Ceiling 1 Layes of G.B.	2.7	psf
Miscellaneous	1.5	psf
Total =	**14.6**	psf

3.24 Deck/Balcony

4.0	psf
2.5	psf
2.9	psf
1.0	psf
2.7	psf
1.5	psf
14.6	psf

3.25 Exterior Walls

Stucco	9.0	psf
1/2" thk Plywd sht'g	2.0	psf
2x Studs	2.5	psf
Gypboard	2.0	psf
Miscellaneous	1.5	psf
Total =	**17.0**	psf

3.26 Interior Walls

	-	-
→	2	psf
→	2.0	psf
→	4.0	psf
→	2.0	psf
	10.0	psf

Does it account for lath & plaster on second floor?

PROJECT:	SHEET NO	
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4. LATERAL LOADS ASD

4.1 Seismic Parameters

Site Class (Use deafult 'D1' if no Soil Report)		D1
Occupancy Category		II
Seismic Design Category **(SDC)**		D
Response Modification Coefficient **(R)**	R=	6.50
Importance Factor **(I)**	I=	1.00
Site Coordinates	37.774 ° N	-122.435 ° W
Short Period Response **(S_S)**	S_S=	1.66
One Second Period Response **(S_1)**	S_1=	0.62

4.2 Wind Parameters

Exposure Type		B
Basic Wind Speed		95 mph

15. Light frame (wood) walls sheathed with wo

Location

5.1 Wind Forces

Exposure Type =	B		**Kd =**	0.85	**Cp =** 0.80
Basic Wind Speed =	95	mph	**K_{ZT} =**	1.00	**GCpi =** 0.18
Occupancy Category =	II		**G =**	0.85	

Z	**15'-0"**	**20'-0"**	**25'-0"**	**30'-0"**	**40'-0"**	**60'-0"**
Z_{min}	30	30	30	30	40	60
Zg	1200	1200	1200	1200	1200	1200
α	7.00	7.00	7.00	7.00	7.00	7.00
Kz	0.70	0.70	0.70	0.70	0.76	0.85
qz	8.26	8.26	8.26	8.26	8.96	10.06
P (psf)	**7.10**	**7.10**	**7.10**	**7.10**	**7.71**	**8.65**

$Kz = 2.01\ (Z/Zg)^{(2/\alpha)}$

$qz = 0.00256\ K_Z K_{ZT} K_d V^2$

$P = qz\ (GCp + GCpi)$

5.2 Seismic Forces

5.21 Site Coefficients

Site Coefficient (Fa)

SITE CLASS	Ss < 0.25	0.50	0.75	1.00	1.25	>1.5
A	0.8	0.8	0.8	0.8	0.8	0.8
B	0.9	0.9	0.9	0.9	0.9	0.9
C	1.3	1.3	1.2	1.2	1.2	1.2
D	1.6	1.4	1.2	1.1	1.0	1.0
E	2.4	1.7	1.3	SEE SEC 11.4.8		

Table 1613.5.3 (1)

Site Coefficient (Fv)

SITE CLASS	S1 < 0.1	0.2	0.3	0.4	0.5	0.6
A	0.8	0.8	0.8	0.8	0.8	0.8
B	0.8	0.8	0.8	0.8	0.8	0.8
C	1.5	1.5	1.5	1.5	1.5	1.4
D	2.4	2.2	2.0	1.9	1.8	1.7
E	4.2	SEE SECTION 11.4.8				

Table 1613.5.3 (2)

Tabulated Result

Site Class =	**D1**
S_S=	**1.66**
S_1=	**0.62**
By Interpolation:	
Fa =	**1.20**
Fv =	**3.00**

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5.22 Spectral Response Acceleration

S_{MS}=	Fa S_S =	1.20 x 1.66=	1.89	**S_{DS}=**	2/3 (S_{MS}) =	**1.26**
S_{M1}=	Fv S_1 =	3.00 x 0.62=	1.85	**S_{D1}=**	2/3 (S_{M1}) =	**1.24**

5.23 Horizontal Sismic Load Effect w/ Overstrength Load Combinations (ASCE 12.4.3.1)

Ωo = **2.50**

LC 5: (1.0 + 0.14 S_{DS})D + 0.7 Ωo Qe = **1.18D+2.5Qe**

LC 6: (1.0 + 0.15 S_{DS})D + 0.525 Ωo Qe +0.75L +0.75 LLr = **1.19D+1.88Qe+0.75(LL+LLr)**

LC 8: (0.6 - 0.14 S_{DS})D - 0.7 Ωo Qe = **0.43D+2.5Qe**

5.24 Design Base Shear

R =	6.50	**C_r =**	**0.020**	All other structural system	
I =	1.00	**x =**	0.75		
TL =	8.00	sec	**h_n =**	23.0	ft
Redundancy Factor **ρ =**	**1.30**		**T =**	$C_r (h_n)^X$ =	0.210

ASCE (12.8-2)	*ASCE (12.8-3)*	*ASCE (12.8-4)*	*ASCE (12.8-6)*	*ASCE (12.8-5)*
	($T \le$ TL)	($T >$ TL)	$S_1 \ge$ 0.60	
$Cs = \frac{S_{DS}}{(R/I)}$	$Cs_{max} = \frac{S_{D1}}{T\,(R/I)}$	$Cs_{max} = \frac{S_{D1}\,T_L}{T^2\,(R/I)}$	$Cs_{min} = \frac{0.5\,S_1}{(R/I)}$	Cs_{min}= 0.01
Cs = 0.194	**Cs =** 0.908	**Cs =** 0.000	**Cs =** 0.048	**Cs =** 0.01
		NOT USED		

Use **Cs =** **0.194**

V = Cs W **Apply 0.7 Reduction for ASD*

GOVERNING DESIGN BASE SHEAR **V = 0.136W ASD**

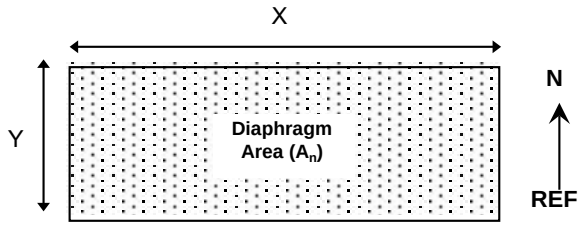
6. BUILDING PARAMETERS

6.1 Building Dimensions

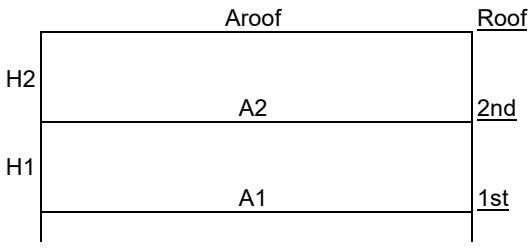
No. of Floor/s Levels 2

Total building height 25.0 ft

Basement/Crawl Space 3.00 ft



PLAN



SECTION

Nomenclature:

n	Subscript for floor levels
Xn	Building width
Yn	Building length
An	Diaphragm area
Hn	Floor height between levels

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6.2 Roof /Floor Areas

Floor Level	Area A_n (ft^2)	Low Roof Area A_n (ft^2)	Deck Area A_n (ft^2)	Bldg Length X_n (ft)	Bldg Width Y_n (ft)
Roof	1406	~~0~~	~~0~~	56	25
2nd floor	1212		193	48	25

6.3 Wall Heights

First floor wall heights not correct

Floor Level	Floor Height H_n (ft)	Exterior Wall Length (ft)	Interior Wall Length (ft)	Tributary Ext. Wall (ft^2)	Tributary Int. Wall (ft^2)	Height of Diaphragm
Roof	~~0~~	~~0~~	~~0~~	996	942	23.0
2nd floor	11.0	181	171	1664	1420	11.0
1st floor	8.0	167	120	668	478	3.0
				0	0	0.0
				0	0	

6.3 Building Weights

6.3a Roof weight

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Roof	1406	19.0	26714
Ext Walls	996	17.0	16924
Int Walls	942	10.0	9416
Misc			0

Level Weight = **53,054** lbs

NOT USED

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Floor	0	14.6	0
Low Roof	0	14.0	0
Deck	0	14.6	0
Ext Walls	0	17.0	0
Int Walls	0	10.0	0
Misc			0

Level Weight = **0** lbs

6.3b 2nd floor

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Floor	1212	14.6	17695
Low Roof	0	14.0	0
Deck	193	14.6	2821
Ext Walls	1664	17.0	28280
Int Walls	1420	10.0	14196
Misc			0

Level Weight = **62,992** lbs

NOT USED

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Floor			
Low Roof			
Deck			
Ext Walls			
Int Walls			
Misc			

Level Weight = **0** lbs

6. 4 Building Weight Summary

Floor Level	Level Weights (lbs)	S Weights (lbs)
Roof	53,054	53,054
2nd floor	62,992	116,046
	-	-
	-	-
S	**116,046**	

6. 5 Base Shear

Vu = 0.136 x 116,046

V =	**15,747 lbs**
V x ρ =	**20.470 kips**
	ASD

2nd floor - lath and plaster? Roof is gravel

building height listed as 25 ft earlier

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7. LATERAL FORCES

T= 0.210

k= 1.00

7.1 Seismic Forces

7.1a Lateral Force Distribution

C_{vx} $F_x = C_{vx} V$

Floor Level (x)	h_x (ft)	h^k_x (ft)	Wx (kips)	$h^k x$ Wx (kip-ft)	$\frac{h^k x \text{ Wx}}{S\, h^k x \text{ Wx}}$	Fx (kips)	Diaphragm Area (ft^2)	Fx / Area (lbs/ ft^2)
Roof	23.0	23.0	53.05	1220.23	0.64	13.06	1406	**9.29**
2nd floor	11.0	11.0	62.99	692.91	0.36	7.41	1405	**5.28**
0	0.0	0.0	0.0	0.0	0.00	0.00	0	**0.00**
0	0.0	0.0	0.0	0.0	0.00	0.00	0	**0.00**
		SUM	116.0	1913.1	1.00	**20.47**		

7.1b Lateral Diaphragm Force Distribution

$Fpx\ max = 0.4 S_{DS}\ I\ wpx$ = 0.50 wpx (%)

$Fpx\ min = 0.2 S_{DS}\ I\ wpx$ = 0.25 wpx (%)

S_{DS}= 1.26

I= 1.00

Floor Level	Fx (kips)	S Forces (kips)	S Weights (kips)	S Forces / S Weights (% Level)	% Level Fpx min Fpx max	Level Weight (kips)	Level Diaphragm Force (kips)	Fx / Area (lbs/ ft^2)
Roof	13.06	13.06	53.05	0.25	0.25	53.05	13.37	**9.51**
2nd floor	7.41	20.47	116.05	0.18	0.25	62.99	15.87	**11.30**
0	0.00	0.0	0.0	0.0	0.00	0.00	0.00	**0.00**
0	0.00	0.0	0.0	0.0	0.00	0.00	0.00	**0.00**

7.2 Wind Load

	North -South Direction			East West Direction	
Floor Level	Wind Height Projection (ft)	Building Length X_n (ft)	Projected Wind Area (ft^2)	Building Length Y_n (ft)	Projected Wind Area (ft^2)
Roof	8.5	56.2	478.0	25.0	212.5
2nd floor	9.5	48.5	460.6	25.0	237.5
0	0.0	0.0	0.0	0.0	0.0
0	0.0	0.0	0.0	0.0	0.0

*** (See 5.1 for wind pressures)*

	North -South Direction				East West Direction		
Floor Level	Floor Level Height (ft)	Projected Wind Area (ft^2)	Wind Pressure** (psf)	**Wind Force (kip)**	Projected Wind Area (ft^2)	Wind Pressure** (psf)	**Wind Force (kip)**
Roof	23.0	478.0	7.10	**3.39**	212.5	7.10	**1.51**
2nd floor	11.0	460.6	7.10	**3.27**	237.5	7.10	**1.69**
0	0.0	0.0	0.00	**0.00**	0.0	0.00	**0.00**
0	0.0	0.0	0.00	**0.00**	0.0	0.00	**0.00**
			S	**6.66**		**S**	**3.19**

SEISMIC LOAD GOVERNS

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SEISMIC LOAD DISTRIBUTION TO SHEARWALL & FRAMES

Distribution of Seismic Forces per Tributary Area (**for Story Levels from Roof to 1st Floor**) ** With Wood Diaphragm

Total Seismic Base Shear, **V =** **20.47** kips

Lateral Force F_{roof} = **13.06** kips

$V3r_d$ = **13.06** kips

A_{roof} = **1,406** ft^2

Allowable Aspect Ratio = 3.5 : 1

(See AF & PA ADPWS Table 4.3.4 Note '1' on blocked Shearwall panel aspect ratio greater than 2)

Reduction on Allowable Shear Value = $\frac{2w}{h}$ (V_{allow})

DL reduction per 1605.3 of CBC 2010 and ASCE 7 12.4 (0.6 -0.14Sds)DL= **0.42**

Seismic Load Distribution to Shear Walls & Frames in N-S direction

Line	System	Tributary Area (ft^2)	Wall properties: Length (ft)	Height	Aspect Ratio	$V_{allowable}$ (plf)	$V_{all} > V_{demand}$	Portion of Area (%)	Wall loading and capacity:		Σv_x (lbs)	v_{total} (lbs)	v_{demand} (plf)	Wall Type	For Hold Down use Simpson PHD/MST: Wall wt. (psf)	Tri. Width for DL (ft)	DL (lbs)		OTM(V_i) (kip-ft)	OTM(DL) (kip-ft)	T (kip)	H.D.
A	PW	399	3	11	**3.7**	**363**	**870**	**14%**			**1853**	**1853**	**618**	***D***	17	**1.30**	**627**		**20.38**	**0.85**	**6.51**	***HDU8***
A	PW		3	11	**3.7**	**363**	**870**	**14%**			**1853**	**1853**	**618**	***D***	17	**1.30**	**627**		**20.38**	**0.85**	**6.51**	***HDU8***
B	PW	302	6.5	11	**1.7**	**510**	**OK**	**21%**			**2804**	**2804**	**431**	***B***	17	**1.30**	**1359**		**30.85**	**3.98**	**4.13**	***HDU4***
C	PW	226	4.5	11	**2.4**	**510**	**OK**	**16%**			**2099**	**2099**	**466**	***D***	17	**1.30**	**941**		**23.09**	**1.91**	**4.71**	***HDU5***
D	PW	216	3	11	**3.7**	**278**	**665**	**8%**			**1075**	**1075**	**358**	***C***	17	**1.30**	**627**		**11.82**	**0.85**	**3.66**	***HDU4***
	PW		2.6	11	**4.2**	**241**	**665**	**7%**			**931**	**931**	**358**	***C***	17	**1.30**	**544**		**10.24**	**0.64**	**3.70**	***HDU4***
E	PW	263	3.5	11	**3.1**	**340**	**OK**	**9%**			**1140**	**1140**	**326**	***A***	17	**1.30**	**732**		**12.54**	**1.15**	**3.25**	***HDU4***
	PW		4	11	**2.8**	**340**	**OK**	**10%**			**1303**	**1303**	**326**	***A***	17	**1.30**	**836**		**14.33**	**1.51**	**3.21**	***HDU4***
		1406						100%			13056	13056										

FOR REFERENCE ONLY

Wall aspect ratio need to be checked. Heights are not all correct.

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SEISMIC LOAD DISTRIBUTION TO SHEARWALL & FRAMES

Lateral Force **F3rd =** **7.41** kips
V2nd = **20.47** kips
A3rd = **1,405** ft^2

Seismic Load Distribution to Shear Walls & Frames in N-S direction

Line	System	Tributary Area (ft^2)	Wall properties: Length (ft)	Height	Aspect Ratio	$V_{allowable}$ (plf)	$V_{all} > V_{demand}$	Portion of partial area (%)	Wall loading and capacity: Σv_{Above} roof		Σv_x (lbs)	v_{total} (lbs)	v_{demand} (plf)	Wall Type	For Hold Down use Simpson PHD/MST: Wall wt. (psf)	Tri. Width for DL (ft)	DL (lbs)	$DL_{(above)}$	$OTM(V_i)$ (kip-ft)	OTM(DL) (kip-ft)	T (kip)	H.D.
A	PW	399	4	8	**2.0**	**1740**	**OK**	**28%**	3705		**2105**	**5810**	**1453**	***F***	17	**8.00**	**1024**	**1255**	**50.19**	**2.47**	**11.93**	***HDU14***
															FOR REFERENCE ONLY							
B	PW	302	8	8	**1.0**	**665**	**OK**	**21%**	2804		**1593**	**4398**	**550**	***C***	17	**8.00**	**2048**	**1359**	**52.01**	**8.05**	**5.49**	***HDU5***
C	PW	226	8.75	8	**0.9**	**510**	**OK**	**16%**	2099		**1192**	**3291**	**376**	***B***	17	**8.00**	**2240**	**941**	**45.22**	**9.29**	**4.11**	***HDU4***
D	PW	216	11.5	8	**0.7**	**340**	**OK**	**15%**	2006		**1140**	**3145**	**274**	***A***	17	**8.00**	**2944**	**1171**	**43.22**	**15.82**	**2.38**	***HDU2***
E	**WSWH**	263	1.5	8	**N.A.**	**N.A.**	**N.A.**	**9%**	1140		**694**	**1834**	**1222**		17	**8.00**	**384**	**732**	**24.93**	**0.63**	**16.20**	
	WSWH		1.5	8	**N.A.**	**N.A.**	**N.A.**	**9%**	1303		**694**	**1996**	**1331**		17	**8.00**	**384**	**836**	**27.69**	**0.68**	**18.01**	
		1406						100%	13056		7418.1	20474.4										

Wall heights/ aspect ratios need to be checked. Heights are not all correct. Should the table add up to 100%? Wall at line A does not exist in plan.

Line B had 4936 pounds before? does that mean it is less strong now?

See perforated Shear Wall (page 15)

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LEGEND

HF	HARDY FRAME
TS	TUBE STEEL (CANTILEVER COLUMN)
PW	PLYWOOD SHEARWALL
MF	STEEL MOMENT FRAME
SW	STRONGWALL
SSW	STL. STRONGWALL
CMU	CONRETE MASONRY
CON.	CONCRETE WALL
L	LENGTH OF WALL
BETA (β)	FACTOR TO ACCOUNT TO ANGLE VARIATION OF LATERAL
OTM (V_i)	OVERTURNING MOMENT DUE TO TOTAL SHEAR FORCE ON SHEARWALL
OTM (DL)	RESISTING MOMENT DUE TO TOTAL DEADWEIGHT OF WALL

NOTE :

1. PLYWOOD SHEARWALLS WITH CAPACITY OF 300LBS/FT SHALL BE INSPECTED BY A DEPUTY INSPECTOR
2. PLYWOOD SHALL BE AT LEAST 4-PLY 3-PLY SHALL ONLY HAVE A MAX CAP OF 200LBS/FT
3. USE ONLY COMMON NAILS FOR PLYWOOD SHEARWALLS AND DIAPRAGHM

SHEARWALL SCHEDULE

MARK	TYPE	MATERIALS	NAILING	ALLOW. SHEAR PLF
1	A	1/2" STRUC 1	10d @6 oc	340
2	B	1/2" STRUC 1	10d @4 oc	510
3	C	1/2" STRUC 1	10d @3 oc	665
4	D	1/2" STRUC 1	10d @2 oc	870
5	E	1/2", PLY STRUC 1 BOTH SIDES	10d @4 oc ea side	1330
6	F	1/2", PLY STRUC 1 BOTH SIDES	10d @3 oc ea side	1740

HOLDOWN CAPACITIES

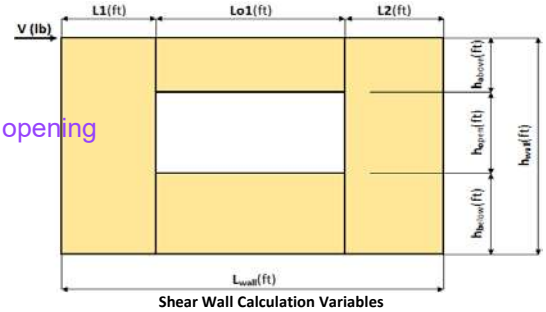
FOUNDATION		UPPER FLOOR	
(SIMPSON) (ICC ESR 2330	4x4 POST kips	(SIMPSON)	4x4 POST kips
HDU2	3.080	MST37	5.080
HDU4	4.560	MST48	5.310
HDU5	5.645	MST60	6.730
HDU8	6.97	2-MST48	10.620
HDU11	9.54	2-MST60	13.46
HDU14	14.37		
HD12	15.51		
HD19	19.07		

Note : For HDU14, HD12, HD19 : Capacity is based on 6x6 wood post

Project Information

Code:	**Date:** 5/27/2025
Designer:	DM
Client:	
Project:	1077 Fell Street, San Francisco
Wall Line:	Grid line D- 1st floor

Dimensions to be checked for the
100 inch tall by 42 inch wide rough opening



Shear Wall Calculation Variables

V	3145 lbf	Opening 1	
L1	4.42 ft	h_a	2.00 ft
L2	4.42 ft	h_o	8.00 ft
h_{wall}	11.58 ft	h_b	1.58 ft
L_{wall}	11.84 ft	Lo1	3.00 ft

Adj. Factor Method =	1.25-0.125h/bs
Wall Pier Aspect Ratio	Adj. Factor
P1=h_o/L1= 1.81	N/A
P2=h_o/L2= 1.81	N/A

1. Hold-down forces: H = Vh_{wall}/L_{wall} 3076 lbf

2. Unit shear above + below opening

First opening: va1 = vb1 = H/(h_a+h_b) = 859 plf

3. Total boundary force above + below openings

First opening: O1 = va1 x (Lo1) = 2578 lbf

4. Corner forces

F1 = O1(L1)/(L1+L2) = 1289 lbf
F2 = O1(L2)/(L1+L2) = 1289 lbf

5. Tributary length of openings

T1 = (L1*Lo1)/(L1+L2) = 1.50 ft
T2 = (L2*Lo1)/(L1+L2) = 1.50 ft

6. Unit shear beside opening

v1 = (V/L)(L1+T1)/L1 = 356 plf
v2 = (V/L)(T2+L2)/L2 = 356 plf
Check v1*L1+v2*L2=V? 3145 lbf **OK**

7. Resistance to corner forces

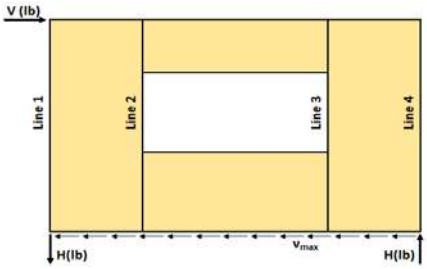
R1 = v1*L1 = 1573 lbf
R2 = v2*L2 = 1573 lbf

8. Difference corner force + resistance

R1-F1 = 284 lbf
R2-F2 = 284 lbf

9. Unit shear in corner zones

vc1 = (R1-F1)/L1 = 64 plf
vc2 = (R2-F2)/L2 = 64 plf



Check Summary of Shear Values for One Opening

Line 1: vc1(h_a+h_b)+v1(h_o)=H?		230	2846	3076 lbf
Line 2: va1(h_a+h_b)-vc1(h_a+h_b)-v1(h_o)=0?	3076	230	2846	0
Line 3: va1(h_a+h_b)-vc2(h_a+h_b)-v1(h_o)=0?	3076	230	2846	0
Line 4: vc2(h_a+h_b)+v2(h_o)=H?		230	2846	3076 lbf

Design Summary*

Req. Sheathing Capacity	859 plf	**4-Term Deflection**		**3-Term Deflection**	
Req. Strap Force	1289 lbf	**4-Term Story Drift %**		**3-Term Story Drift %**	
Req. HD Force (H)	3076 lbf				
Req. Shear Wall Anchorage Force (v_{max})	266 plf				

***The Design Summary assumes that the shear wall is designed as blocked.**

unsure- recent building code?

Project Title:
Engineer:
Project ID:
Project Descr:

Type text here

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.10.30 Enertia Designs Inc. (c) ENERCALC, LLC 1982-2025

DESCRIPTION: 2B3

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, SDPWS 2015

Load Combination Set : ASCE 7-16

Material Properties

Analysis Method : Allowable Stress Design
Load Combination : ASCE 7-16

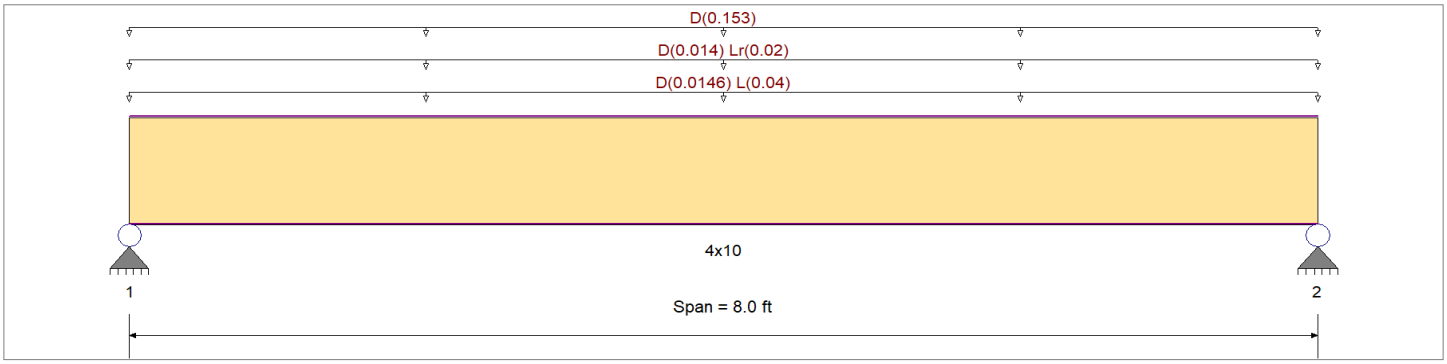
Wood Species : Douglas Fir-Larch
Wood Grade : No.2

Beam Bracing : Beam is Fully Braced against lateral-torsional buckling

Fb +	900.0 psi
Fb -	900.0 psi
Fc - Prll	1,350.0 psi
Fc - Perp	625.0 psi
Fv	180.0 psi
Ft	575.0 psi

E : Modulus of Elasticity

Ebend- xx	1,600.0 ksi
Eminbend - xx	580.0 ksi
Density	31.210 pcf



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Uniform Load : D = 0.01460, L = 0.040 ksf, Tributary Width = 1.0 ft, (FLOOR LOAD)
Uniform Load : D = 0.0140, Lr = 0.020 ksf, Tributary Width = 1.0 ft, (ROOF LOAD)
Uniform Load : D = 0.0170 ksf, Tributary Width = 9.0 ft, (WALL)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.509 : 1	Maximum Shear Stress Ratio	=	0.238 : 1
Section used for this span		4x10	Section used for this span		4x10
fb: Actual	=	439.72 psi	fv: Actual	=	34.33 psi
F'b	=	864.00 psi	F'v	=	144.00 psi
Load Combination		+D+L	Load Combination		+D+L
Location of maximum on span	=	4.000 ft	Location of maximum on span	=	7.241 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.011 in	Ratio =	9084 >=300	Span: 1 : L Only
Max Upward Transient Deflection	0 in	Ratio =	0 <300	n/a
Max Downward Total Deflection	0.062 in	Ratio =	1555 >=400	Span: 1 : +D+0.750Lr+0.750L
Max Upward Total Deflection	0 in	Ratio =	0 <400	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 8.0 ft	1	0.467	0.219	0.90	1.00	1.00	1.00	1.200	1.00	0.80	1.00	1.51	362.8	777.6	0.61	28.3	129.6
+D+L					1.00	1.00	1.00	1.200	1.00	0.80	1.00			0.0	0.00	0.0	0.0
Length = 8.0 ft	1	0.509	0.238	1.00	1.00	1.00	1.00	1.200	1.00	0.80	1.00	1.83	439.7	864.0	0.74	34.3	144.0
+D+Lr					1.00	1.00	1.00	1.200	1.00	0.80	1.00			0.0	0.00	0.0	0.0
Length = 8.0 ft	1	0.372	0.174	1.25	1.00	1.00	1.00	1.200	1.00	0.80	1.00	1.67	401.3	1,080.0	0.68	31.3	180.0
+D+0.750Lr+0.750L					1.00	1.00	1.00	1.200	1.00	0.80	1.00			0.0	0.00	0.0	0.0

Wood Beam

LIC# : KW-06019663, Build:20.24.10.30 Enertia Designs Inc. (c) ENERCALC, LLC 1982-2025

DESCRIPTION: 2B3

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
Length = 8.0 ft	**1**	0.416	0.195	1.25	1.00	1.00	1.00	1.200	1.00	0.80	1.00	1.87	449.3	1,080.0	0.76	35.1	180.0
+D+0.750L					1.00	1.00	1.00	1.200	1.00	0.80	1.00			0.0	0.00	0.0	0.0
Length = 8.0 ft	**1**	0.423	0.198	1.15	1.00	1.00	1.00	1.200	1.00	0.80	1.00	1.75	420.5	993.6	0.71	32.8	165.6
+0.60D					1.00	1.00	1.00	1.200	1.00	0.80	1.00			0.0	0.00	0.0	0.0
Length = 8.0 ft	**1**	0.157	0.074	1.60	1.00	1.00	1.00	1.200	1.00	0.80	1.00	0.91	217.7	1,382.4	0.37	17.0	230.4

Overall Maximum Deflections

Span	Load Combination	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
1	+D+0.750Lr+0.750L	0.0617	4.029		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	0.934	0.934
Max Upward from Load Combinations	0.934	0.934
Max Upward from Load Cases	0.754	0.754
D Only	0.754	0.754
+D+L	0.914	0.914
+D+Lr	0.834	0.834
+D+0.750Lr+0.750L	0.934	0.934
+D+0.750L	0.874	0.874
+0.60D	0.453	0.453
Lr Only	0.080	0.080
L Only	0.160	0.160

What was the strength of the 2 beams before to this solution?
Scope said "recessed steel beam." Is this recessed?
What about the connections to the existing beam that will not be replaced?

Project Title:
Engineer:
Project ID:
Project Descr:

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.10.30 Enertia Designs Inc. (c) ENERCALC, LLC 1982-2025

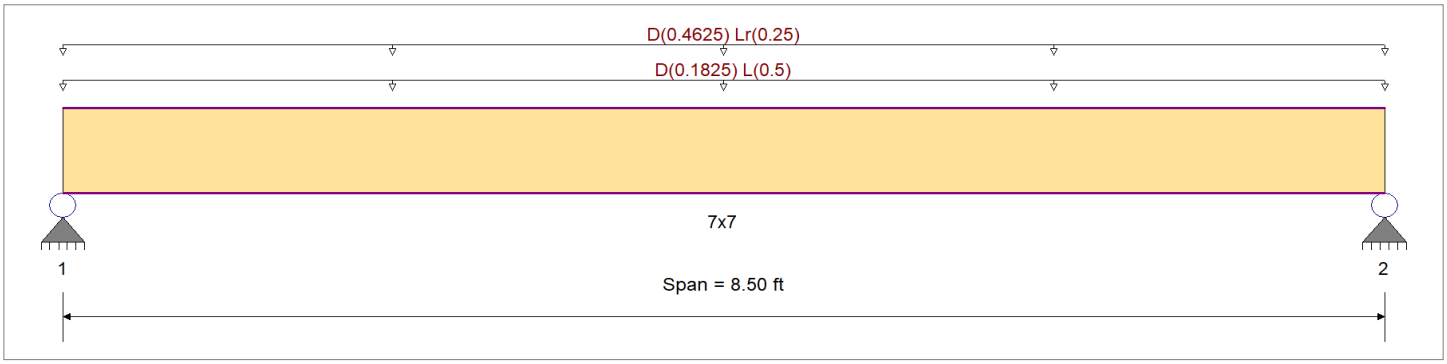
DESCRIPTION: 2B2

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, SDPWS 2015
Load Combination Set : ASCE 7-16

Material Properties

Analysis Method :	Allowable Stress Design	Fb +	2,900.0 psi	*E : Modulus of Elasticity*	
Load Combination :	ASCE 7-16	Fb -	2,900.0 psi	Ebend- xx	2,000.0 ksi
		Fc - Prll	2,900.0 psi	Eminbend - xx	1,016.54 ksi
Wood Species :	iLevel Truss Joist	Fc - Perp	750.0 psi		
Wood Grade :	Parallam PSL 2.0E	Fv	290.0 psi		
		Ft	2,025.0 psi	Density	45.070 pcf
Beam Bracing :	Beam is Fully Braced against lateral-torsional buckling				



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Uniform Load : D = 0.01460, L = 0.040 ksf, Tributary Width = 12.50 ft, (FLOOR LOAD)
Uniform Load : D = 0.0370, Lr = 0.020 ksf, Tributary Width = 12.50 ft, (ROOF LOAD)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.714 : 1	Maximum Shear Stress Ratio	=	0.452 : 1
Section used for this span		7x7	Section used for this span		7x7
fb: Actual	=	2,199.73 psi	fv: Actual	=	131.13 psi
F'b	=	3,078.80 psi	F'v	=	290.00 psi
Load Combination		+D+L	Load Combination		+D+L
Location of maximum on span	=	4.250 ft	Location of maximum on span	=	0.000 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.155 in	Ratio =	656	>=360	Span: 1 : L Only
Max Upward Transient Deflection	0 in	Ratio =	0	<360	n/a
Max Downward Total Deflection	0.380 in	Ratio =	268	>=240	Span: 1 : +D+0.750Lr+0.750L
Max Upward Total Deflection	0 in	Ratio =	0	<240	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 8.50 ft	1	0.452	0.286	0.90	1.00	1.00	1.00	1.062	1.00	1.00	1.00	5.96	1,251.8	2,770.9	2.44	74.6	261.0
+D+L					1.00	1.00	1.00	1.062	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 8.50 ft	1	0.714	0.452	1.00	1.00	1.00	1.00	1.062	1.00	1.00	1.00	10.48	2,199.7	3,078.8	4.28	131.1	290.0
+D+Lr					1.00	1.00	1.00	1.062	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 8.50 ft	1	0.448	0.284	1.25	1.00	1.00	1.00	1.062	1.00	1.00	1.00	8.22	1,725.8	3,848.5	3.36	102.9	362.5
+D+0.750Lr+0.750L					1.00	1.00	1.00	1.062	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 8.50 ft	1	0.602	0.381	1.25	1.00	1.00	1.00	1.062	1.00	1.00	1.00	11.04	2,318.2	3,848.5	4.51	138.2	362.5

Project Title:
Engineer:
Project ID:
Project Descr:

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.10.30 Enertia Designs Inc. (c) ENERCALC, LLC 1982-2025

DESCRIPTION: 2B2

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
+D+0.750L					1.00	1.00	1.00	1.062	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 8.50 ft	**1**	0.554	0.351	1.15	1.00	1.00	1.00	1.062	1.00	1.00	1.00	9.35	1,962.8	3,540.6	3.82	117.0	333.5
+0.60D					1.00	1.00	1.00	1.062	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 8.50 ft	**1**	0.152	0.096	1.60	1.00	1.00	1.00	1.062	1.00	1.00	1.00	3.58	751.1	4,926.1	1.46	44.8	464.0

Overall Maximum Deflections

Span	Load Combination	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
1	+D+0.750Lr+0.750L	0.3800	4.281		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	5.197	5.197
Max Upward from Load Combinations	5.197	5.197
Max Upward from Load Cases	2.806	2.806
D Only	2.806	2.806
+D+L	4.931	4.931
+D+Lr	3.869	3.869
+D+0.750Lr+0.750L	5.197	5.197
+D+0.750L	4.400	4.400
+0.60D	1.684	1.684
Lr Only	1.063	1.063
L Only	2.125	2.125

EXHIBIT 25

GENERAL STRUCTURAL NOTES

Exhibit 25: 9 pages June 2025 structural plan

I GENERAL

A. ALL CONSTRUCTION SHALL CONFORM TO THE CALIFORNIA BUILDING CODE 2019 EDITION w/ AMENDMENTS BY LOCAL JURISDICTIONS.
B. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT JOB SITE BEFORE COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT OR ENGINEER.
C. OMISSIONS OR CONFLICT BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
D. DO NOT USE SCALED DIMENSIONS; USE WRITTEN DIMENSIONS OR WHERE NO DIMENSION IS PROVIDED, CONSULT THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
E. DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS WHETHER SPECIFICALLY CALLED OUT OR NOT.
F. FOR WATERPROOFING, FIREPROOFING, ETC. REFER TO DRAWINGS OTHER THAN STRUCTURAL.
G. SEE DRAWINGS OTHER THAN STRUCTURAL FOR: KINDS OF FLOOR FINISH AND THEIR LOCATION, FOR DEPRESSIONS IN FLOOR SLABS, FOR OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MECHANICAL FEATURES, FOR ROADWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC.
H. HOLES AND OPENINGS THROUGH WALLS AND FLOORS FOR DUCTS, PIPING AND VENTILATION SHALL BE CHECKED BY THE CONTRACTOR, WHO SHALL VERIFY SIZES AND LOCATION OF SUCH HOLES OR OPENINGS WITH THE PLUMBING HEATING, VENTILATING AND ELECTRICAL DRAWINGS AND THESE SUB-CONTRACTORS.
I. NO PIPES AND DUCTS SHALL BE PLACED IN SLABS OR WALLS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ARCHITECT.
J. DRAWINGS AND SPECIFICATIONS REPRESENT FINISHED STRUCTURE. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION INCLUDING BUT NOT LIMITED TO SHORING AND TEMPORARY BRACING. THE SUBCONTRACTOR SHALL UNDERTAKE ALL NECESSARY MEASURES TO INSURE SAFETY OF ALL PERSONS AND STRUCTURES AT THE SITE AND ADJACENT TO THE SITE. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT, ENGINEER SHALL NOT RELIEVE THE SUBCONTRACTOR OF SUCH RESPONSIBILITY.
K. NOTE THAT SHEET S1 IS A STANDARD COVER SHEET AND AS SUCH, NOT ALL TYP. DETAILS AND OR NOTES APPLY TO EVERY PROJECT.

II DESIGN CRITERIA

A. APPLICABLE CODE: CALIFORNIA BUILDING CODE 2019 & SFBC 2019.
B. VERTICAL LIVE LOADS: (REDUCIBLE). ROOF: 20 PSF. FLOOR: 40 PSF. HALLWAYS & CORRIDORS: 100 PSF.
C. LATERAL LOADS:
   1. WIND: 110 MPH. BASIC WIND SPEED, EXPOSURE: "B"
   2. SEISMIC: SITE CLASS 'D'
      MAPPED SPECTRAL ACCELERATIONS: S_S= S_1=
      Fa=1.0 Fv=1.5 S_{ds}= .xxx S_{d1}= .xxx
      BASE SHEAR 'V' = .xx W (ASD)
      SEISMIC DESIGN CATEGORY: D
      RESPONSE MODIFICATION FACTOR, R=6.5
      ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
      IMPORTANCE FACTOR=1 OCCUPANCY CATEGORY=II

III MATERIALS

A. CONCRETE:
   1. REINFORCING STEEL: ASTM A615, GRADE 60, #4 AND SMALLER, GRADE 40.
   2. CONCRETE: NORMAL WEIGHT U.O.N. WITH COMPRESSIVE STRENGTH OF THE FOLLOWING AT 28 DAYS:
      FOOTINGS, ~~MAT SLAB~~ & DRILLED PIERS 2500 psi
      ~~WALLS, COLUMNS 5000 psi~~
      ~~STRUCTURAL SLAB (L.W. P.T. SEE S3.2) 5000 psi~~
   3. MINIMUM CONCRETE COVER FOR REINFORCING STEEL:
      a. SURFACE POURED AGAINST GROUND 3"
      b. FORMED SURFACES BELOW GRADE 2"
      c. SURFACES EXPOSED TO WEATHER 2"
      d. BEAM BARS (INCLUDING STIRRUPS) 1-1/2"
      e. ALL OTHER 1"
   4. ANCHOR BOLT EPOXY*: HILTI HIT-RE 500-SD. (ICC ESR-2322) OR SIMPSON SET-XP (ICC ESR-2508)
   5. SCREW ANCHORS*: SIMPSON TITEN HD (ICC ESR-2713)
      * USE COMPRESSED AIR TO BLOW THE DUST OUT OF ANCHOR BOLT HOLES.
   6. PNEUMATICALLY PLACED CONCRETE (SHOTCRETE) NOTES
      a. ALL CONCRETE WALLS MAY BE SHOTCRETED AT CONTRACTOR'S OPTION. VERIFY COMPATIBILITY OF SHOTCRETE WITH WATE PROOFINGCONTRACTOR.
      b. ALL SHOTCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 506.2 AND CBC SECTION 1924.
      c. ALL SHOTCRETE SHALL TEST NOT LESS THAN 4000 PSI AT 28 DAYS.
      d. MAXIMUM AGGREGATE SIZE SHALL BE 3/8 INCH.
      e. LAP ALL REINFORCING BARS 40 DIAMETERS AT SPLICES. SPLICE BARS BY THE NON-CONTACT LAP SPLICE METHOD WITH 2 INCHES CLEAR BETWEEN BARS.
      f. ANY REBOUND SHALL BE REMOVED PRIOR TO PLACING OF CONCRETE.
      g. IN-PLACE SHOTCRETE WHICH SHOW SAGS OR SLOUGHS, SEGREGATION, HONEY COMBING, SAND POCKETS OR OTHER OBVIOUS DEFECTS SHALL BE REMOVED AND REPLACED.
      h. CURE SHOTCRETE BY KEEPING CONTINUOUSLY MOIST FOR A MINIMUM OF 7 DAYS UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER.
      i. TEST PANELS: SHOOT ONE TEST PANEL, 18 INCHES SQUARE ,FOR EACH 50 CUBIC YARDS OF SHOTCRETE PLACED, BUT NOT LESS THAN ONE PANEL PER SHIFT. CURE PANELS UNDER SAME CONDITIONS AS THE WORK. TESTING AGENCY SHALL TAKE A MINIMUM OF THREE 2" DIAMETER CORES FROM EACH PANEL. WATER SOAK SPECIMENS 24 HOURS BEFORE TESTING. TEST IN ACCORDANCE WITH UNIFORM BUILDING CODE STANDARD NO. 26-10.
      j. A MINIMUM OF THREE 3" DIAMETER CORES SHALL BE TAKEN FROM THE WORK AT LOCATIONS SPECIFIED BY THE STRUCTURAL ENGINEER. THE SPECIAL INSPECTOR SHALL VISUALLY EXAMINE CORES FOR STRUCTURAL SOUNDNESS AND SUBMIT A REPORT TO THE STRUCTURAL ENGINEER AND THE BUILDING INSPECTION DEPARTMENT.
      k. INSPECTION: PROVIDE CONTINUOUS SPECIAL INSPECTION OF SHOTCRETING OPERATION.

B. CMU: UNITS 1500 PSI, MORTAR (TYPE 'S'), GROUT 2000 PSI

C. STEEL
   1. SHAPES AND PLATES: ASTM A36; TUBES: ASTM A500, GRADE B.
   2. MOMENT FRAMES (BEAMS, COLUMNS): ASTM A992 OR A913 (50 ksi) MOMENT FRAMES (PLATES): A572, GRADE 50.
   3. METAL STUDS, SEE S1.4, NOTES
   4. METAL JOISTS, 50 ksi
   5. BOLTS: ASTM A307, U.O.N.
   6. WELDING ELECTRODES: E-70 FOR FULL PEN WELDS USE CHARPY V-NOTCH WIRE, MIN. 20 ft # @ 0°F
   7. METAL DECKING, SEE S1.5

D. WOOD
   1. FRAMING LUMBER - DOUGLAS FIR LARCH
      a. HEADERS, PLATES, JOISTS: NO.1
      b. STUDS, BLOCKING: NO.2
      c. ALL LUMBER IN CONTACT WITH CONCRETE: PRESERVATIVE TREATED DOUGLAS FIR, (NOT CCA-C)
      d. POSTS AND BEAMS: NO.1
   2. PLYWOOD SHEATHING
      a. SHEARWALL PLYWOOD : 1/2 INCH STRUCTURAL I, C-D EXTERIOR, APA RATED 32/16.
      b. ROOF SHEATHING: 5/8 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 32/16
      c. FLOOR SHEATHING: 3/4 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 48/24
   3. FRAMING HARDWARE AND JOIST HANGERS: AS MANUFACTURED BY SIMPSON STRONGTIE CO. OR APPROVED EQUAL. SIMPSON DESIGNATIONS USED. USE NAILS PER I.C.C. APPROVAL FOR EACH DEVICE.
   4. COMMON NAILS, UNLESS OTHERWISE NOTED. SHORT NAILS MAY BE USED PROVIDED THEY HAVE COMMON CODE SPECIFIED MINIMUM EMBEDMENT. ALL NAILING TO BE PER IBC TABLE NO. 2304.9.1 UNLESS NOTED OTHERWISE.
   5. GLU-LAM BEAMS: 24F-V4 (Fb=2400 PSI)
   6. PARALLAM & MICROLLAM BEAMS AND TJI's TO BE FABRICATED BY TRUS JOIST:
      PARALLAM BEAMS: 2.2E (Fb=2900PSI)
      MICROLLAM BEAMS: 2.0E (Fb=2600PSI)
   7. FOR MICROLLAMS SEE CODE EVALUATION: ICC-ES ESR-1387
   8. FOR TJI JOISTS SEE CODE EVALUATION: ICC-ES ESR-1153

IV EXPOSURE TO WEATHER:

A. STEEL:
   1. ALL EXPOSED MEMBERS SHALL BE COATED WITH A ZINC RICH PRIMER.
   2. BOLTS, NUTS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED.

B. WOOD:
   1. ALL EXTERIOR TIMBER AND GLU-LAM BEAMS SHALL BE PRESSURE TREATED (BUT NOT CHROMATED COPPER ARSENATE) OR WOOD OF NATURAL RESISTANCE TO DECAY.
   2. ALL EXTERIOR HANGERS AND OTHER SIMPSON TYPE PRODUCTS SHALL BE GALVANIZED.
   3. ALL PLYWOOD SHALL BE OF AN EXTERIOR GRADE.
   4. METAL CONNECTORS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED w/ MIN. ZINC COATING OF G185.
   5. ALL NAILS & ANCHOR BOLTS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED.

V ABBREVIATIONS

B.N. — BOUNDARY NAILING
DIA. — DIAMETER
E.N. — EDGE NAILING
H.P. — HIGH POINT
L.P. — LOW POINT
LVL — LAMINATED VENEER LUMBER
L.W. — LIGHT WEIGHT
M.L. — MICROLLAM
PLWD — PLYWOOD SHEATHING
PSL — PARALLEL STRAND LUMBER
P.T. — PRESSURE TREATED OR POST-TENSIONED
S.A.D. — SEE ARCHITECTURAL DRAWINGS
S.O.G. — SLAB-ON-GRADE
S.S. — STAINLESS STEEL
T.O. — TOP OF
TYP. — TYPICAL
U.O.N. — UNLESS OTHERWISE NOTED
V.I.F. — VERIFY IN FIELD
W.W.F. — WELDED WIRE FABRIC

SYMBOLS

(E) WALL BELOW
(E) WALL ABOVE
(N) CONC. WALL ABOVE
BRICK OR CMU WALL ABOVE
WOOD SHEARWALL (BELOW)
WOOD JOIST HANGER (HUS TYPE, U.O.N.)
WOOD POST BELOW
WOOD POST ABOVE (OR ABOVE & BELOW)
HOLDOWN @ WOOD POST
STEEL COLUMN ABOVE
STEEL COLUMN BELOW
MOMENT CONNECTION
CONCRETE TOPPING OVER PLYWOOD
CONCRETE TOPPING OVER CORRUGATED METAL DECK
CONCRETE COLUMN ABOVE
CONCRETE COLUMN BELOW w/ DROPCAP
DRILLED CONCRETE PIER
PRECAST, PRESTRESSED CONCRETE PILE
DIAGONAL ABOVE
DIAGONAL BELOW

PROJECT NAME: VOLUNTARY STRENGTHENING
ADDRESS: 1077 FELL STREET
BLOCK/LOT: ----
CITY: SAN FRANCISCO, CA

DRAWING INDEX:

S1.0 — TITLE SHEET
S1.1A — TYPICAL WOOD DETAILS
S2 — FOUNDATION PLAN/ 1ST, 2ND AND ROOF FLOOR FRAMING
S3-S4 — STRUCTURAL DETAILS
W1-W2 — STRONG SIMPSOM WALL

City and County of San Francisco
Department of Building Inspection

London Breed, Mayor
Patrick O'Riordan, Interim Director

Attachment A

SLOPE AND SEISMIC HAZARD ZONE PROTECTION CHECKLIST

A COPY OF THIS DOCUMENT SHALL BE SUBMITTED WITH THE PERMIT APPLICATION

JOB ADDRESS 1077 FELL STREET APPLICATION NO. _____ ADDENDUM NO. ____
OWNER NAME _____ OWNER PHONE NO. (___) _____

1: PROPERTY LOCATION	YES	NO
EARTHQUAKE INDUCED LANDSLIDE AREA ON THE STATE OF CALIFORNIA DEPARTMENT OF CONSERVATION DIVISION OF MINES AND GEOLOGY (CDMG) SEISMIC HAZARD ZONES MAP FOR SAN FRANCISCO, RELEASED NOVEMBER 17, 2000.	☐	☑

2: AVERAGE SLOPE OF PROPERTY	YES	NO
PROPERTY EXCEEDING AN AVERAGE SLOPE OF 4H:1V (25%) GRADE *(APPLICANT WILL NEED TO INCLUDE PLANS ILLUSTRATING SLOPE OF THE PROPERTY AND/OR INCLUDE A SURVEY VERIFYING THE SLOPE OF THE PROPERTY)*	☐	☑

3: PROPOSED CONSTRUCTION	YES	NO
CONSTRUCTION OF NEW BUILDING OR STRUCTURE HAVING OVER 1000 SQFT OF NEW PROJECTED ROOF AREA	☐	☑
HORIZONTAL OR VERTICAL ADDITIONS HAVING OVER 500 SQFT OF NEW PROJECTED ROOF AREA	☐	☑
SHORING	☐	☑
UNDERPINNING	☐	☑
GRADING, INCLUDING EXCAVATION OR FILL, OF OVER 50 CUBIC YARDS OF EARTH MATERIAL	☐	☑
CONSTRUCTION ACTIVITY LISTED BELOW DETERMINED BY THE BUILDING OFFICIAL THAT MAY HAVE A SUBSTANTIAL IMPACT ON THE SLOPE STABILITY:		
RETAINING WALL:	☐	☑
OTHERS: _____	☐	☑

SECTION 4: LICENSED DESIGN PROFESSIONAL VERIFICATION AND SIGNATURES

Under penalty of perjury, I certify that the information provided on this form is based on my personal review of the building and its records, or review by others acting under my direct supervision, and is correct to the best of my knowledge.

Prepared by: JEFFERSON CHEN, P.E.
Engineer/Architect of Record

(415) 626 - 8300 Telephone
jefferson@enertiadesigns.net Email
Signature
Date

REGISTERED PROFESSIONAL ENGINEER JEFFERSON MING CHEN C057898 Exp. 06/30/24 CIVIL STATE OF CALIFORNIA

Permit Services Division
49 South Van Ness Avenue, Suite 500 - San Francisco CA 94103
Phone (628) 652-3600 – www.sfdbi.org

INFORMATION SHEET S-19 ATTACHMENT A — Slope Protection Checklist

FOR DBI USE ONLY

ASSIGNMENT OF REVIEW TIER

EXEMPTED: Reports per Section E and Third Party Peer Review Not Required

☐ If the box in Section 1 "Property Location" **AND** the box in Section 2 "Average Slope of Property" are marked "No" **OR** if all the boxes in Section 3 "Proposed Construction" are marked "No", reports per Section E and Third Party Peer Review are exempted by the SSPA.

TIER I: Reports per Section E Required but Third Party Peer Review Not Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property does not lie within any areas of potential landslide hazard, DBI shall require mandatory submittal of reports per Section E only.

TIER II: Reports per Section E and Third Party Peer Review Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property lies in the vicinity of mapped landslides, DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to a third party peer review. At the discretion of the SSPA Review Committee, the peer review may be followed by the establishment of a Structural Advisory Committee (SAC) with the project reassigned to Tier III.

If the DBI Plan Review Engineer (or the SSPA Review Committee, if established), in their discretion, determines from the submitted documents that the project has a substantial impact on the slope stability of the site or creates a potential for earthquake induced landslide hazards, DBI may require that the third party peer review be followed by the establishment of a Structural Advisory Committee (SAC) and re-assigned the project to Tier III.

TIER III: Structural Advisory Committee (SAC) Review

☐ If the box in Section 1 "Property Location" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes", DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to review by a Structural Advisory Committee (SAC), as defined by SFBC Section 105A.6.

Tier assigned by: _____ Phone: (628) _____
DBI Plan Review Engineer

Comment:

City and County of San Francisco
Department of Building Inspection

London N. Breed, Mayor
Patrick O'Riordan, Interim Director

NOTICE

SPECIAL INSPECTION REQUIREMENTS

Please note that the Special Inspections shown on the approved plans and checked on the Special Inspections form issued with the permit are required for this project. The employment of special inspectors is the direct responsibility of the owner or the engineer/architect of record acting as the owner's representative.

These special inspections are required *in addition to* the called inspections performed by the Department of Building Inspection. The name of the special inspector shall be furnished to the district building inspector prior to start of work for which special inspection is required.

For questions regarding the details or extent of required inspection or tests, please call the Plan Checker assigned to this project or **628-652-3407**. If there are any field problems regarding special inspection, please call your District Building Inspector or 628-652-3400 Ext 1.

Before final building inspection is scheduled, documentation of special inspection compliance must be submitted to and approved by the Special Inspection Services staff. To avoid delays in this process, the project owner should request final compliance reports from the architect or engineer of record and/or special inspection agency soon after the conclusion of work requiring special inspection. ***The permit will not be finalized without compliance with the special inspection requirements.***

STRUCTURAL OBSERVATION REQUIREMENTS

Structural observation shall be provided as required per Section 1704.6. **The building permit will not be finalized without compliance with the structural observation requirements.**

Special Inspection Services Contact Information

1. **Telephone: (628) 652-3407**
2. **Email: dbi.specialinspections@sfgov.org**
3. **In person: 49 South Van Ness Ave – Suite 400**

Note: We are moving towards a "paperless" mode of operation. All special inspection submittals, including final letters, may be emailed (preferred) or faxed. We will also be shifting to a paperless fax receipt mode.

Special Inspection Services
49 South Van Ness Ave – Suite 400 – San Francisco CA 94103
Office (628) 652-3407 – www.sfdbi.org

Updated 10/05/2020

SPECIAL INSPECTION AND STRUCTURAL OBSERVATION

A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED STRUCTURAL DRAWING SET

JOB ADDRESS 1077 FELL STREET APPLICATION NO. _____ ADDENDUM NO. ____

OWNER NAME _____ OWNER PHONE NO. (_____) _____

Employment of Special Inspection is the direct responsibility of the OWNER, or the engineer/architect of record acting as the owner's representative. Special inspector shall be one of those as prescribed in Sec. 1704. Name of special inspector shall be furnished to DBI District Inspector prior to start of the work for which the Special Inspection is required. Structural observation shall be performed as provided by Section 1704.6. A preconstruction conference is recommended for owner/builder or designer/builder projects, complex and high-rise projects, and for projects utilizing new processes or materials.

In accordance with Chapter 17 (SFBC), Special Inspection and/or testing is required for the following work:

1. [√] Concrete (Placement & sampling)
2. [ ] Bolts installed in concrete
3. [ ] Special moment - Resisting concrete frame
4. [√] Reinforcing steel ~~and prestressing tendons~~
5. **Structural welding:**
   A. Periodic visual inspection
   [ ] Single pass fillet welds 5/16" or smaller
   [ ] Steel deck
   [ ] Welded studs
   [ ] Cold formed studs and joists
   [ ] Stair and railing systems
   [ ] Reinforcing steel
   B. Continuous visual inspection and NDT (Section 1704)
   [ ] All other welding (NDT exception: Fillet weld)
   [ ] Reinforcing steel; and [ ] NDT required
   [ ] Moment-resisting frames
   [ ] Others_____
6. [ ] High-strength bolting
7. [ ] Structural masonry
8. [ ] Reinforced gypsum concrete
9. [ ] Insulating concrete fill
10. [ ] Sprayed-on fireproofing
11. [ ] Piling, drilled piers and caissons
12. [ ] Shotcrete
13. [ ] Special grading, excavation and filling (Geo. Engineered)
14. [ ] Smoke-control system
15. [ ] Demolition
16. [ ] Exterior Facing
17. **Retrofit of unreinforced masonry buildings:**
    [ ] Testing of mortar quality and shear tests
    [ ] Inspection of repointing operations
    [ ] Installation inspection of new shear bolts
    [ ] Pre-installation inspection for embedded
    [ ] Pull/torque tests per SFBC Sec.1607C & 1615C
18. **Bolts Installed in existing concrete or masonry:**
    [ ] Concrete [ ] Masonry
    [ ] Pull/torque tests per SFEBC Sec. 507C & 515C
19. [ ] Shear walls and floor systems used as shear diaphragms
20. [ ] Holdowns
21. **Special cases:**
    [ ] Shoring
    [ ] Underpinning; [ ] Not affecting adjacent property
    [ ] Affecting adjacent property; PA_____
    [ ] Others
22. [ ] Crane safety (Apply to the operation of tower cranes on high-rise building) (Section 1705.22)
23. [ ] Others: "As recommended by professional of record"_____
24. **Structural observation per Sec. 1704.6 (SFBC) for the following:** [ ] Foundations [ ] Steel framing [ ] Concrete construction [ ] Masonry construction [√] Wood framing [ ] Other:_____
25. Certification is required for: [ ] Glu-lam components
26. [ ] Firestops in high-rise building

Prepared by: JEFFERSON CHEN, P.E. Phone: (415) 626 - 3800
Engineer/Architect of Record

Required information:
FAX: (415) 701 -0212 Email jefferson@enertiadesigns.net

Review by: _____ Phone: (628) 652-_____
DBI Engineer or Plan Checker

****

APPROVAL (Based on submitted reports.)

_____ _____
DATE DBI Engineer or Plan Checker / Special Inspection Services Staff

QUESTIONS ABOUT SPECIAL INSPECTION AND STRUCTURAL OBSERVATION SHOULD BE DIRECTED TO:
Special Inspection Services (628) 652-3407; or, dbi.specialinspections@sfgov.org

Updated 10/05/2020

Jefferson told me that the only reason this was called voluntary was because it is not part of the Mandatory soft story program and that the design intent was a full seismic upgrade of the first floor to latest building code

ENERTIA DESIGNS
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1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103

REGISTERED PROFESSIONAL ENGINEER JEFFERSON MING CHEN C057898 Exp. 06/30/24 CIVIL STATE OF CALIFORNIA

	DATE	REVISIONS
1		
2		
3		
4		

TITLE SHEET
GENERAL NOTES

VOLUNTARY STRENGTHENING
1077 FELL STREET
SAN FRANCISCO, CA

Date: 03-01-2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet S1.0
Of 7 Sheets

DRAWING NAME: S1 structural general by ed Ueha Ed:eCWWS:AIA Ia.pr0:pDrive:Documents:Projects:VOLUNTARY FELL Street:Drawings:Structural:S1 GENERAL NOTES.dwg 03-01-24 10:22:24

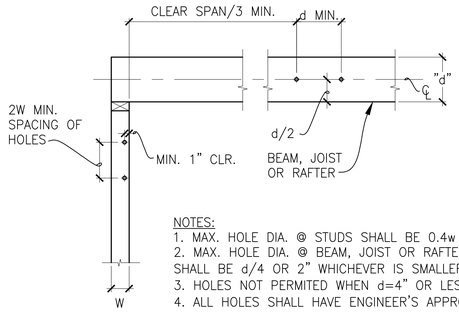
PLOT DATE: 03-01-24 PLOTTED BY: darquisnm

NAILING SCHEDULE (PER CBC 2016, TABLE NO. 2304.10.1)

CONNECTION	NAILING [1]
1. JOIST TO SILL OR GIRDER, TOENAIL	3–8d
2. BRIDGING TO JOIST, TOENAIL EACH END	2–8d
3. 1"X6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2–8d
4. WIDER THAN 1" X 6" SUBFLOOR TO EACH JOIST, FACE NAIL	3–8d
5. 2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2–16d
6. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL	16d AT 16" O.C.
SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	3–16d PER 16"
7. TOP PLATE TO STUD, END NAIL	2–16d
8. STUD TO SOLE PLATE	4–8d, TOENAIL OR 2–16d, END NAIL
9. DOUBLE STUDS, FACE NAIL	16d AT 24" O.C.
10. DOUBLED TOP PLATES, TYPICAL FACE NAIL	16d AT 16" O.C.
DOUBLE TOP PLATES, LAP SPLICE	8–16d
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3–8d
12. RIM JOIST TO TOP PLATE, TOINAIL	8d AT 6" O.C.
13. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2–16d
14. CONTINUOUS HEADER, TWO PIECES	16d AT 16" O.C. ALONG EACH EDGE
15. CEILING JOISTS TO PLATE, TOENAIL	3–8d
16. CONTINUOUS HEADER TO STUD, TOINAIL	4–8d
17. CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3–16d
18. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3–16d
19. RAFTER TO PLATE, TOENAIL	3–8d
20. 1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2–8d
21. 1" X 8" SHEATHING OR LESS TO EACH BEARING, FACE NAIL	2–8d
22. WIDER THAN 1" X 8" SHEATHING TO EACH BEARING, FACE NAIL	3–8d
23. BUILT–UP CORNER STUDS	16d AT 24" O.C.
24. BUILT–UP GIRDER AND BEAMS	20d AT 32" O.C. AT TOP AND BOTTOM AND STAGGERED 2–20d AT ENDS AND AT EACH SPLICE
25. 2" PLANKS	2–16d AT EACH BEARING
26. COLLAR TIE TO RAFTER	3–10d AT FACE NAIL
27. JACK RAFTER TO HIP	2–10d AT TOENAIL AND 2–16d AT FACE NAIL
28. ROOF RAFTER TO 2–BY RIDGE BEAM	2–16d AT TOENAIL AND 2–16d AT FACE NAIL
29. JOIST TO BAND JOIST	3–16d AT FACE NAIL
30. LEDGER STRIP	3–16d AT FACE NAIL AT EACH JOIST
31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD [B] SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING)	
1/2" AND LESS	6d[C,L]
19/32"–3/4"	8d[D] or 6d[E]
7/8"–1"	10d[D] or 8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
COMBINATION SUBFLOOR–UNDERLAYMENT (TO FRAMING):	
3/4" AND LESS	6d[E]
7/8"–1"	8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
32. PANEL SIDING (TO FRAMING):	
1/2" OR LESS	6d[F]
5/8"	8d[F]
33. FIBERBOARD SHEATHING: [G]	
1/2"	6d[D]
25/32"	8d[D]
34. INTERIOR PANELING	
1/4"	4d[J]
3/8"	6d[K]

CBC TABLE 2304.10.1 FASTENING SCHEDULE NOTES

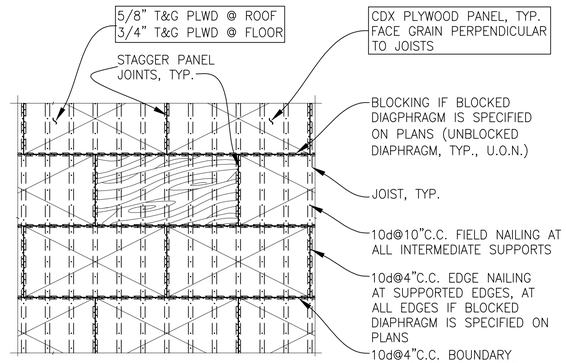
A. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED.
B. NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES AT SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLE BOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
C. COMMON OR DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
D. COMMON (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
E. DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
F. CORROSION–RESISTANT SIDING (6D – 1⅞" X 0.106"; 8D – 2⅜" X 0.128") OR CASING (6D – 2" X 0.099"; 8D – 2½" X 0.113") NAIL.
G. FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS.
H. CORROSION–RESISTANT ROOFING NAILS WITH 7/16–INCH–DIAMETER HEAD AND 1½–INCH LENGTH FOR ½–INCH SHEATHING AND 1¾–INCH LENGTH FOR 25/32–INCH SHEATHING.
I. CORROSION–RESISTANT STAPLES WITH NOMINAL 7/16–INCH CROWN AND 1⅛–INCH LENGTH FOR ½–INCH SHEATHING AND 1½–INCH LENGTH FOR 25/32–INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
J. CASING (1½" X 0.080") OR FINISH (1½" X 0.072") NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
K. PANEL SUPPORTS AT 24 INCHES. CASING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
L. FOR ROOF SHEATHING APPLICATIONS, 8D NAILS (2½" X 0.113") ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.
M. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16 INCH.
N. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.
O. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS SUB FLOOR AND WALL SHEATHING AND 3 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING.
P. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.



NOTES:
1. MAX. HOLE DIA. @ STUDS SHALL BE 0.4w
2. MAX. HOLE DIA. @ BEAM, JOIST OR RAFTER SHALL BE d/4 OR 2" WHICHEVER IS SMALLER.
3. HOLES NOT PERMITTED WHEN d=4" OR LESS.
4. ALL HOLES SHALL HAVE ENGINEER'S APPROVAL.

1 TYPICAL HOLES IN BEAMS, JOISTS, RAFTERS AND STUDS

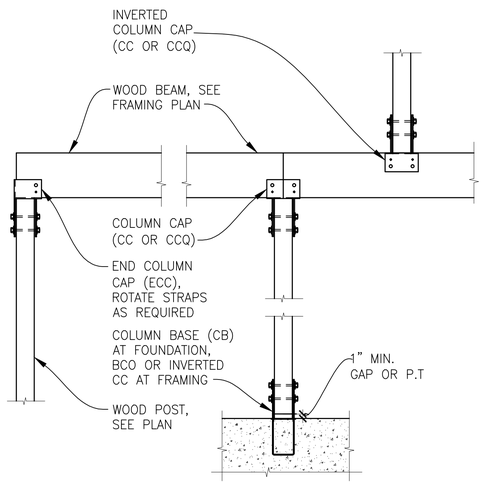
SCALE: 3/4" = 1'–0"



NOTES:
1. SEE PLANS FOR MORE INFORMATION
2. PLYWOOD = WOOD STRUCTURAL PANEL

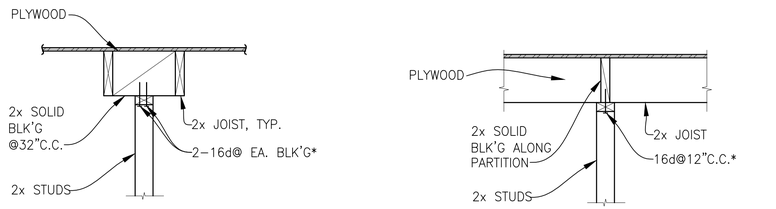
2 TYPICAL PLYWOOD DIAPHRAGM SHEATHING (PLAN VIEW)

SCALE: 3/4" = 1'–0"



3 TYPICAL BEAM TO POST CONNECTION

SCALE: 3/4" = 1'–0"



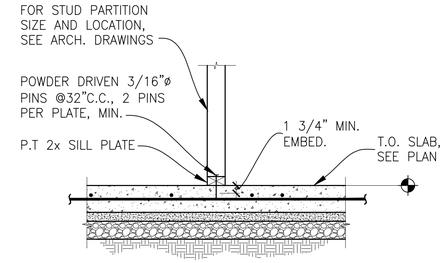
PARTITION PARALLEL TO FLOOR JOISTS

PARTITION PERPENDICULAR TO FLOOR JOISTS

*OPTION: PROVIDE STC CLIP TO ROOF TRUSS OR BEAM

4 TYPICAL NON–BEARING / NON–SHEARWALL SUPPORT @ ROOF

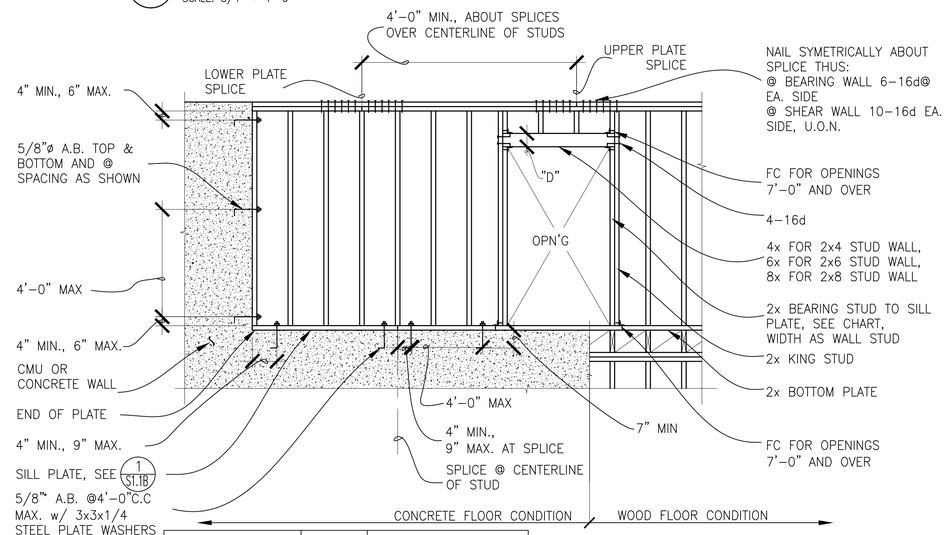
SCALE: 3/4" = 1'–0"



NOTES:
1. FOR SLAB THICKNESS, REINFORCEMENT AND BASE MATERIALS SEE PLAN.
2. AT P.T. SLAB PROVIDE MAX. 3/4" EMBEDMENT.

5 TYPICAL NON–BEARING / NON–SHEARWALL CONNECTION AT CONCRETE SLAB

SCALE: 3/4" = 1'–0"



HEADER SPANS "S"	"D" MIN.	ADDN'L BEARING STUDS
S ⩽ 4'–0"	5 1/2"	0
4'–0" < S ⩽ 8'–0"	7 1/4"	1
8'–0" < S ⩽ 10'–0"	9 1/4"	2
S > 10'–0"	SEE PLAN	3

NOTE:
THIS DETAIL IS NOT FOR SHEARWALLS, SEE 1 S1.1B

6 TYPICAL FRAMING @ OPENINGS, TOP PLATE SPLICES, ETC.

SCALE: 3/4" = 1'–0"

ENERTIA DESIGNS
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1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103

PROFESSIONAL ENGINEER – JEICHEN – C057898 – REG. 05/2024 – CIVIL – STATE OF CALIFORNIA

	DATE	REVISIONS

TYPICAL WOOD DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date: 03-01-2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059

Sheet S1.1A
Of 7 Sheets

DRAWING NAME: G:\Archive\Projects by ref\1UNFA\1STAFF\SAMUrgh\Desktop\new folder\Drawings\Projects\2023\1077 Fell Street\Drawings\Struct\1077 Fell Street - S1.1A 24.dwg
PLOT DATE: 03-01-24 PLOTTED BY: dangulsonm

CLASS "B" LAP SPLICES					
Fy	BAR SIZE	SPECIFIED CONCRETE STRENGTH, f'c			
		2500	3000	4000	5000
40	#3	1'-4"	1'-3"	1'-1"	11"
40	#4	1'-9"	1'-7"	1'-5"	1'-3"
60	#5	3'-3"	3'-0"	2'-7"	2'-4"
60	#6	3'-11"	3'-7"	3'-1"	2'-9"
60	#7	5'-9"	5'-3"	4'-6"	4'-1"
60	#8	6'-6"	6'-0"	5'-2"	4'-8"
60	#9	7'-4"	6'-9"	5'-10"	5'-3"
60	#10	8'-3"	7'-7"	6'-7"	5'-10"
60	#11	9'-2"	8'-5"	7'-3"	6'-6"
60	#14	11'-1"	10'-1"	8'-9"	7'-10"

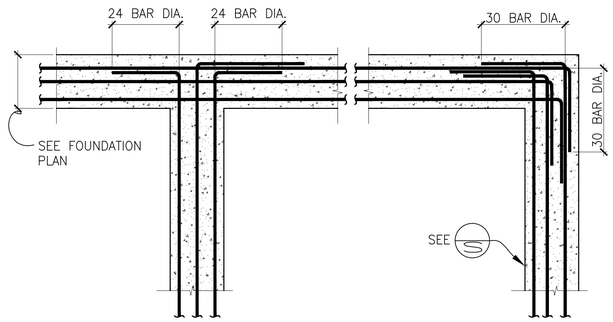
THE ABOVE REQUIREMENTS APPLY TO CONFIGURATIONS WHERE:
1. THE BARS IN QUESTION ARE TOP BARS OR BARS IN LIGHTWEIGHT CONCRETE.
2. BARS ARE UNCOATED
3. CONCRETE IS NORMAL WEIGHT
4. CLEAR SPACING > 2db
   AND CLEAR COVER > db
   OR CLEAR SPACING > db
   AND CLEAR COVER > db
   AND MIN. STIRRUPS OR TIES ARE PROVIDED

FOR OTHER CONFIGURATIONS CONTACT ENGINEER.

DIAMETER OF BENDS	
"D1"	1 1/2" FOR #3 BARS
	2" FOR #4 BARS
	2 1/2" FOR #5 BARS
"D2"	6d FOR #3 THRU #8 BARS
	8d FOR #9 THRU #11 BARS
	10d FOR #4 AND #10 BARS

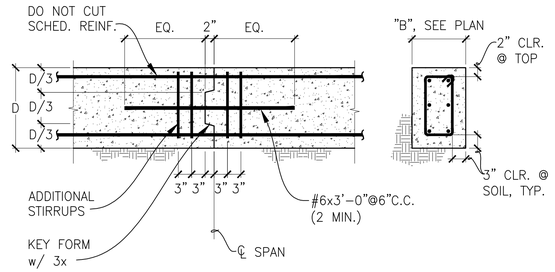
STANDARD HOOK LENGTH				
BAR SIZE	MAIN REINFORCEMENT		STIRRUPS AND TIE HOOKS	
	90°	180°	90°	180°
#3	6"	4"	3	4 1/2"
#4	8"	4"	4"	6"
#5	9 1/2"	4 1/2"	5"	7 1/2"
#6	11 1/2"	5 1/2"	11 1/2"	10"
#7	13 1/2"	6 1/2"	13 1/2"	11 1/2"
#8	15"	7"	15"	13"
#9	18"	9"	–	–
#10	20"	10"	–	–
#11	22"	11"	–	–

NOTES:
"D1" TO BE USED FOR STIRRUPS, TIES & WALLS REINFOCING AT OPENINGS.
"D2" FOR ALL OTHERS

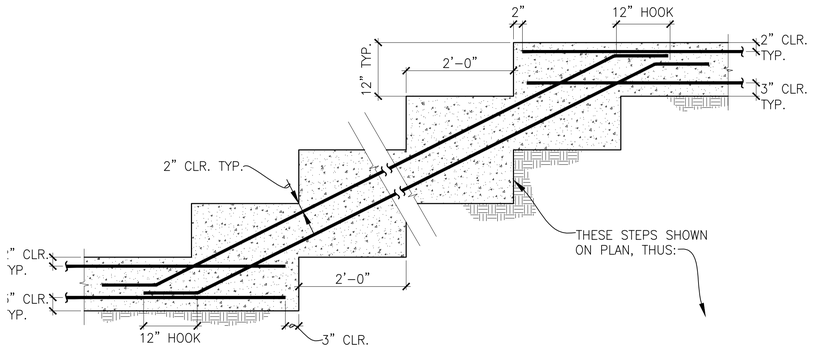


PLAN VIEW

NOTE: STIRRUPS NOT SHOWN

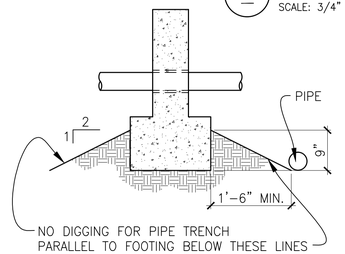


1 TYPICAL OFFSET AND TYPICAL LAP SPLICE
SCALE: 1 1/2" = 1'-0"

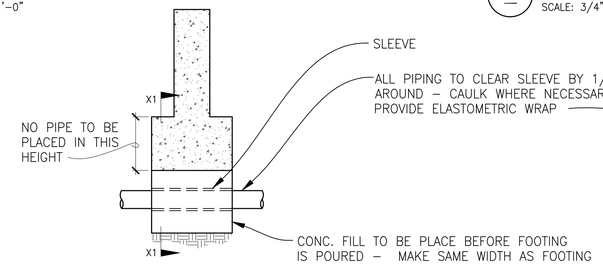


NOTES:
1. DO NOT SLOPE GRADE BEAMS > 1 VERT TO 10 HORIZ.
2. DIMENSIONS AS SHOWN UNLESS OTHERWISE SHOWN ON DRAWINGS

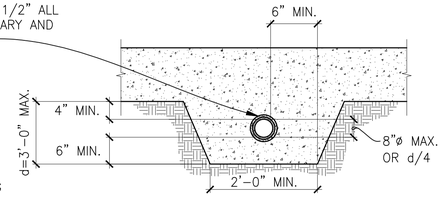
2 STANDARD HOOKS
SCALE: 1 1/2" = 1'-0"



3 TYPICAL GRADE BEAM INTERSECTIONS
SCALE: 3/4" = 1'-0"

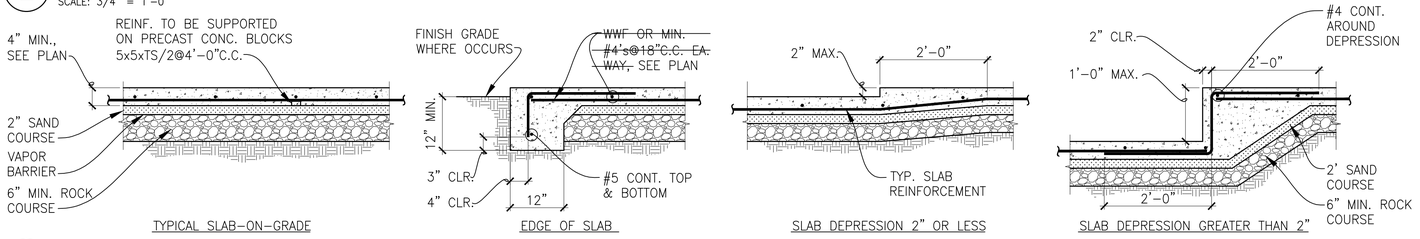


4 TYPICAL GRADE BEAM CONSTRUCTION JOINT
SCALE: 3/4" = 1'-0"



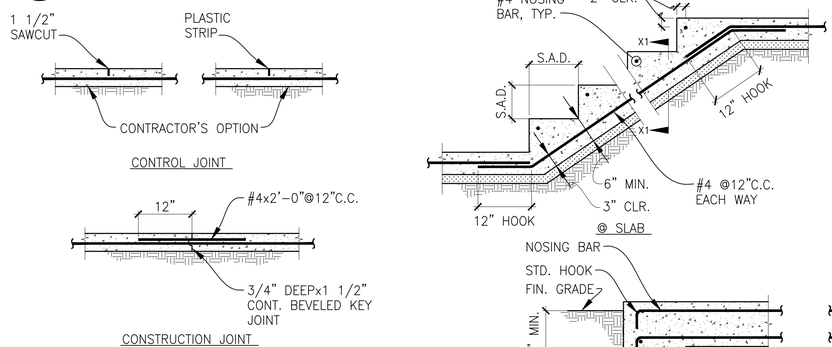
SECTION X1–X1

6 PIPE CLEARANCE AND DETAILS @ FOOTING
SCALE: 3/4" = 1'-0"



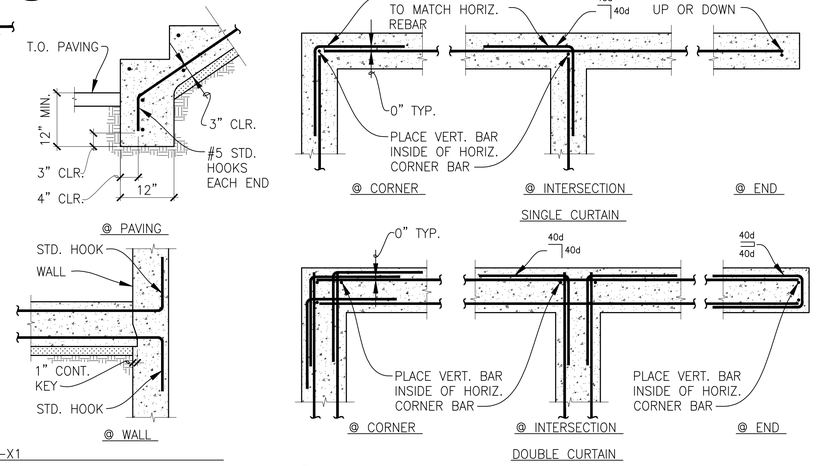
TYPICAL SLAB–ON–GRADE | EDGE OF SLAB | SLAB DEPRESSION 2" OR LESS | SLAB DEPRESSION GREATER THAN 2"

5 TYPICAL STEPS IN GRADE BEAMS AND WALL FOOTING
SCALE: 3/4" = 1'-0"



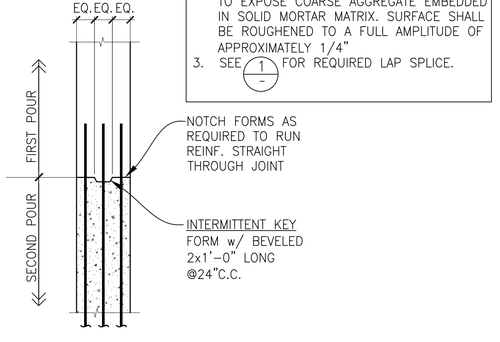
NOTE:
1. LOCATE TO ENCLOSE APPROX. SQUARE AREAS NOT EXCEEDING 400 Q. FT. SUNMIT LAYOUT FOR APPROVAL. LOCATE JOINT UNDER PARTITIONS WHENEVER POSSIBLE

7 TYPICAL SLAB–ON–GRADE DETAILS
SCALE: 3/4" = 1'-0"



SECTION X1–X1

NOTES:
1. PROVIDE LEVEL AND NEAT CONSTRUCTION JOINT.
2. ROUGHEN ALL CONSTRUCTION JOINTS TO EXPOSE COARSE AGGREGATE EMBEDDED IN SOLID MORTAR MATRIX. SURFACE SHALL BE ROUGHENED TO A FULL AMPLITUDE OF APPROXIMATELY 1/4"
3. SEE 1 – FOR REQUIRED LAP SPLICE.



8 TYPICAL CONSTRUCTION JOINT DETAILS @ SLAB–ON–GRADE
SCALE: 3/4" = 1'-0"

9 TYPICAL CONCRETE STAIRS ON GRADE
SCALE: 3/4" = 1'-0"

10 TYPICAL CONCRETE WALL INTERSECTION
SCALE: 3/4" = 1'-0"

11 TYPICAL CONCRETE WALL CONSTRUCTION JOINT
SCALE: 3/4" = 1'-0"

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	DATE	REVISIONS
1		
2		
3		
4		

TYPICAL WOOD DETAILS

VOLUNTARY STRENGTHENING

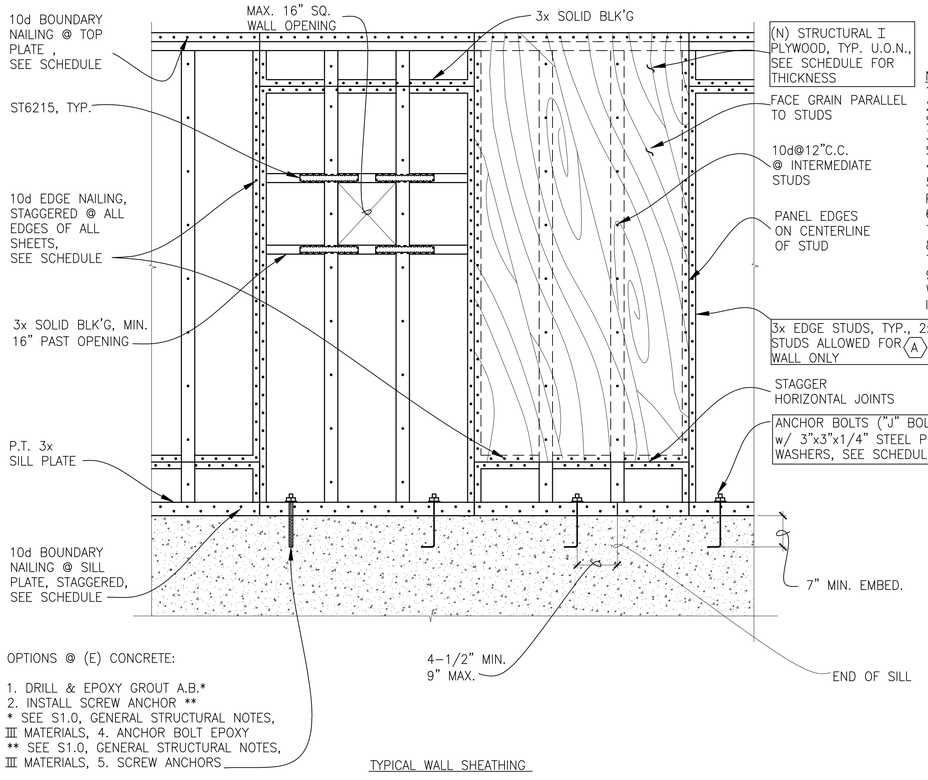
1077 FELL STREET
SAN FRANCISCO, CA

Date:	03-01-2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	S1.2A
Of	7 Sheets

DRAWING NAME: S1 structural targeting all rev1.dwg ACAD VERSION: A3 Adlg by: Jie Chen ACAD Plot Style Name: Full Scale Plot Time: 2023-10-17 Fell Street Drawings Revs 1 0177 Fell Street - S1 - S2 - S3 - S4.dwg
PLOT DATE: 09-13-24 PLOTTED BY: dangusonm

SHEARWALL SCHEDULE

SYMBOL	PLWD GRADE	PLWD THICKNESS	PLWD ONE SIDE	PLWD TWO SIDES	PLWD EDGE & BOUNDARY NAILING	CONT. JOIST OR SOLID BLK'G	CLIP SPACING	PLATE NAIL SPACING	SDS 1/4x4 1/2" WOOD SCREW SPACING	A.B. SPACING	CAPACITY (PLF)
⟨A⟩	STRUC I	15/32"	X		10d @ 6"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 16"C.C.	16d @ 4"C.C.	–	5/8"ø @ 32"C.C.	340
⟨B⟩	STRUC I	15/32"	X		10d @ 4"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 12"C.C.	16d @ 3"C.C.	–	5/8"ø @ 24"C.C.	510
⟨C⟩	STRUC I	15/32"	X		10d @ 3"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 9"C.C.	–	6"C.C.	5/8"ø @ 16"C.C.	665
⟨D⟩	STRUC I	15/32"	X		10d @ 2"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 7"C.C.	–	4"C.C.	5/8"ø @ 16"C.C.	870
⟨E⟩	STRUC I	15/32"		X	10d @ 3"C.C.	2–2x's OR 4x OR 3 1/2" PSL	A35 OR LTP4 @ 8"C.C. + (LTP4 @ 8"C.C. OR CONTINUE WALL PLWD UP)	–	3"C.C. STAGGERED	7/8"ø @ 16"C.C.	1330
⟨F⟩	STRUC I	15/32"		X	10d @ 2"C.C.	2–2x's OR 4x OR 3 1/2" PSL	A35 OR LTP4 @ 8"C.C. + (LTP4 @ 8"C.C. OR CONTINUE WALL PLWD UP)	–	2"C.C. STAGGERED	7/8"ø @ 16"C.C.	1740



OPTIONS @ (E) CONCRETE:

1. DRILL & EPOXY GROUT A.B.*
2. INSTALL SCREW ANCHOR **

* SEE S1.0, GENERAL STRUCTURAL NOTES, III MATERIALS, 4. ANCHOR BOLT EPOXY
** SEE S1.0, GENERAL STRUCTURAL NOTES, III MATERIALS, 5. SCREW ANCHORS

TYPICAL WALL SHEATHING

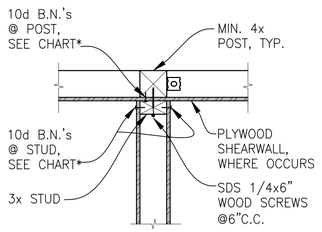
1 — TYPICAL PLYWOOD SHEARWALL
SCALE: 3/4" = 1'–0"

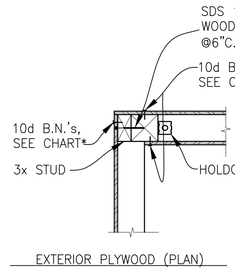
NOTES:
1. PLYWOOD SHALL BE NAILED DIRECTLY TO FRAMING.
2. WHEN PLYWOOD APPLIED TO BOTH FACES, STAGGER SHEETS SO THAT EDGES OCCUR AT DIFFERENT STUDS.
3. DO NOT OVER SHOOT NAILS THROUGH OUTER LAYER OF SHEARWALL PLYWOOD.
4. PLYWOOD = WOOD STRUCTURAL PANEL.
5. ORIENTED STRAND BOARD (OSB) MAY BE USED IN LIEU OF PLYWOOD AT CONTRACTOR'S OPTION.
6. FOR TYPICAL PLYWOOD SHEARWALL INTERSECTION, SEE 3/—
7. USE 3" LONG 10d NAILS.
8. CDX PLYWOOD EXPOSED TO EXTERIOR SHALL BE PRESSURE TREATED.
9. FOR STEEL PLATES, BOLTS, NAILS, SCREWS, ETC. IN CONTACT WITH P.T WOOD, SEE SHEET S1.0, GENERAL STRUCTURAL NOTES, IV EXPOSURE TO WEATHER, B. WOOD

PULL OUT TEST ON HDU HOLDOWNS	
HOLDOWN	PULL OUT VALUE
HDU2	7688 LBS
HDU4	11413 LBS
HDU5	14113 LBS
HDU8	19675 LBS
HDU11	23338 LBS
HDU14	36113 LBS
HD12	28440 LBS
HD19	38140 LBS

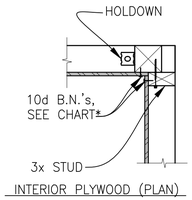
STRAP OPTION	
HOLDOWN	EQUIVALENT STRAP
HDU2	MST60
HDU4	MST60 OR 2–MST37's
HDU5, PHD5 OR HD5A	MST60 OR 2–MST48's
~~PHD6~~ OR ~~HD6A~~	2–MST48's
HDU8, HDQ8	2–MST60's

POST SIZE	LARGEST HOLDDOWN FOR A SINGLE HOLDOWN APPLICATION
4X4 OR (2)2X4	HDU2 TO HDU4
4x6	HDU5 TO HDU8 – HDQ8
6x6	HDU11 TO HDU14 HHDQ11 TO HHDQ14



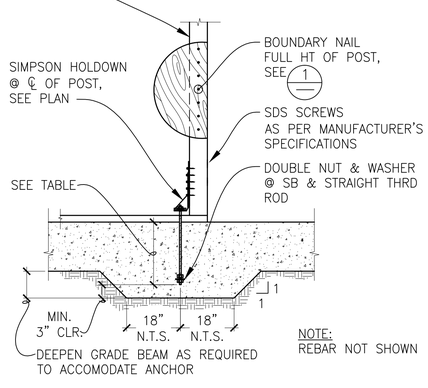


EXTERIOR PLYWOOD (PLAN)



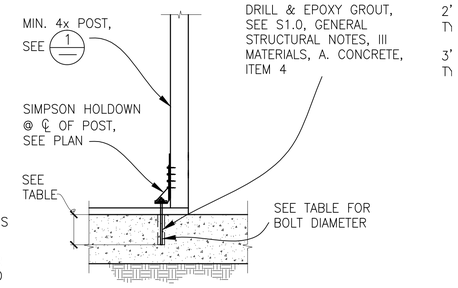
INTERIOR PLYWOOD (PLAN)

3 — TYPICAL PLYWOOD SHEARWALL INTERSECTION DETAILS
SCALE: 3/4" = 1'–0"

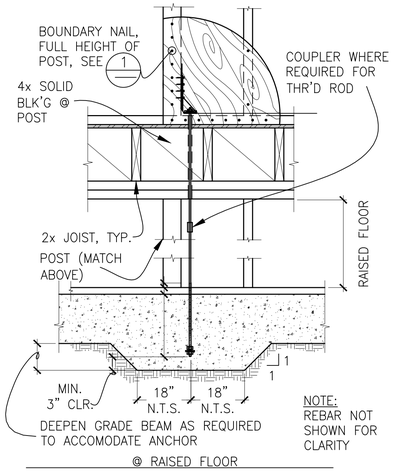


NOTE: REBAR NOT SHOWN

@ NEW CONCRETE GRADE BEAM



@ EXISTING CONCRETE



NOTE: REBAR NOT SHOWN FOR CLARITY

@ RAISED FLOOR

HOLDOWN	ANCHOR DIAMETER	ANCHOR INTO (N) CONC.	MIN. EMBED. INTO (E) CONC.	PLATE @ P.T. SLAB
HDU2 OR HD3B	5/8"	SSTB16	10"	2"x2"x3/8"
HDU4	5/8"	SSTB20	12"	2"x2"x1/2"
HDU5 OR HD5B	5/8"	SSTB24	14"	2"x2"x1/2"
HD7	7/8"	SB 7/8x24	16"	3"x3"x5/8"
HDU8, HDQ8	7/8"	SB 7/8x24	18"	3"x3"x5/8"
HD9B	7/8"	SB 7/8x24	20"	4"x4"x3/4"
HDU11, HHDQ11 OR HD12	1"	SB 1x30	22"	4"x4"x3/4"
HDU14, HHDQ14	1"*	SB 1x30	24"	4"x4"x3/4"
HD19	1 1/4"*	1 1/4"dx30"**	26"	4"x4"x3/4"

* PROVIDE HEAVY HEX ANCHOR NUT
** STRAIGHT THREADED ROD w/ DOUBLE NUT AND WASHER

5 — TYPICAL HOLDOWN DETAIL @ CONCRETE FOUNDATION
SCALE: 3/4" = 1'–0"

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	DATE	REVISIONS

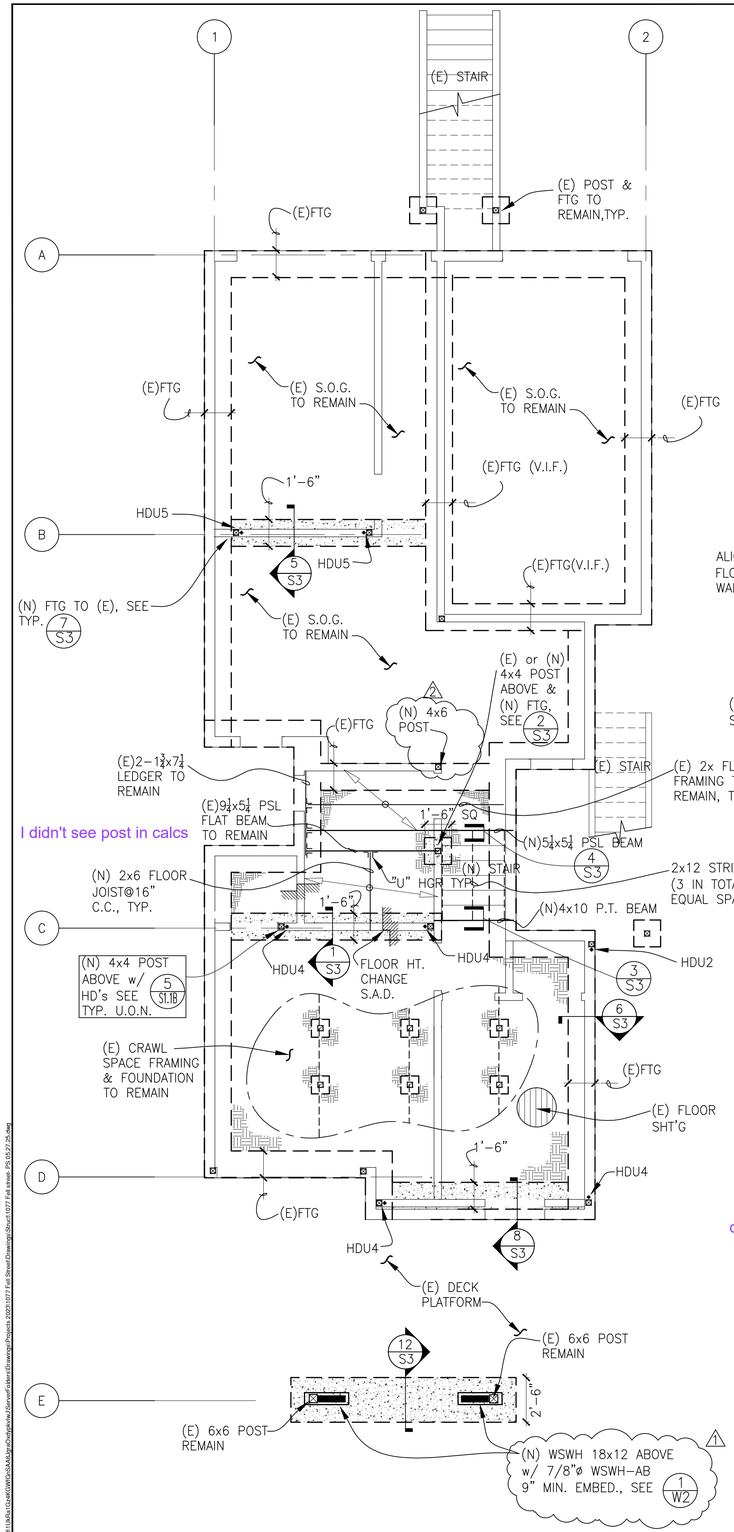
TYPICAL WOOD DETAILS

VOLUNTARY STRENGTHENING

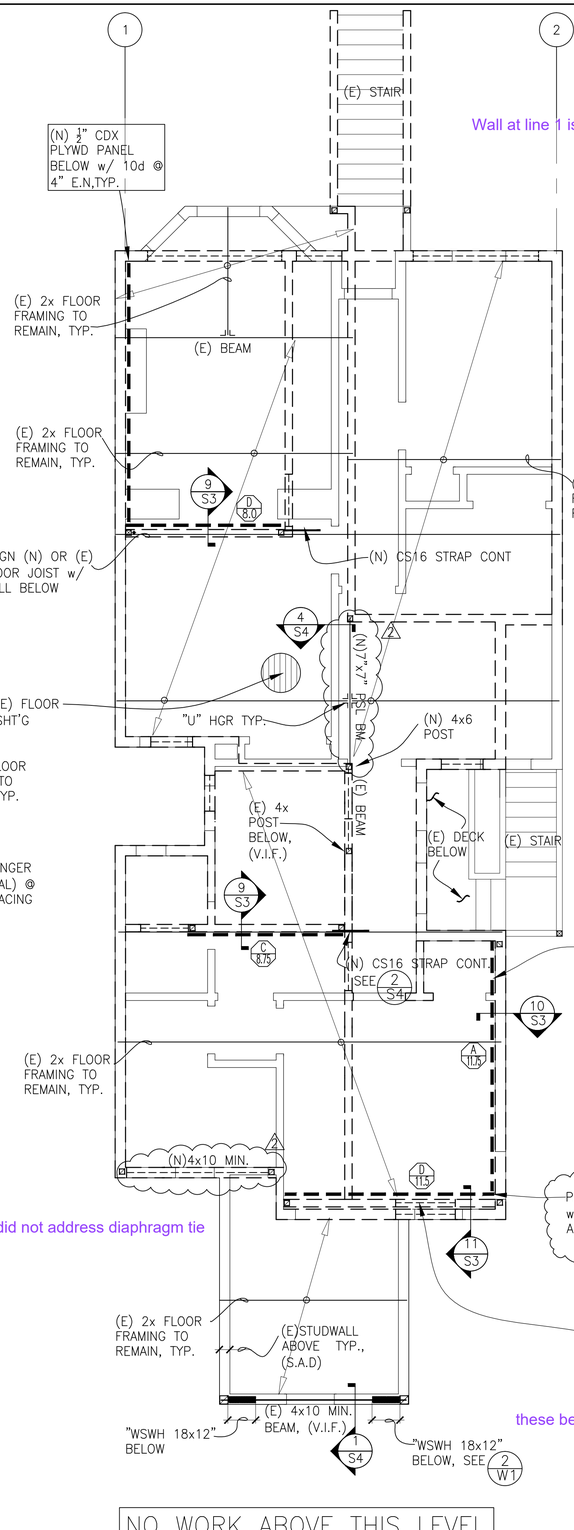
1077 FELL STREET
SAN FRANCISCO, CA

Date: 03-01-2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet S1.1B
Of 7 Sheets

© DRAWING NAME: C:\...\shearwall samples.jpg ACTIVE FILE:\\ENERTIA-SAN\Jobs\Active Jobs\Fell Street\Drawings\Projects 2023\1077 Fell Street_S1-1.02.26.24.dwg
PLOT DATE: 09-13-24 PLOTTED BY: dangulsonm



I didn't see post in calcs



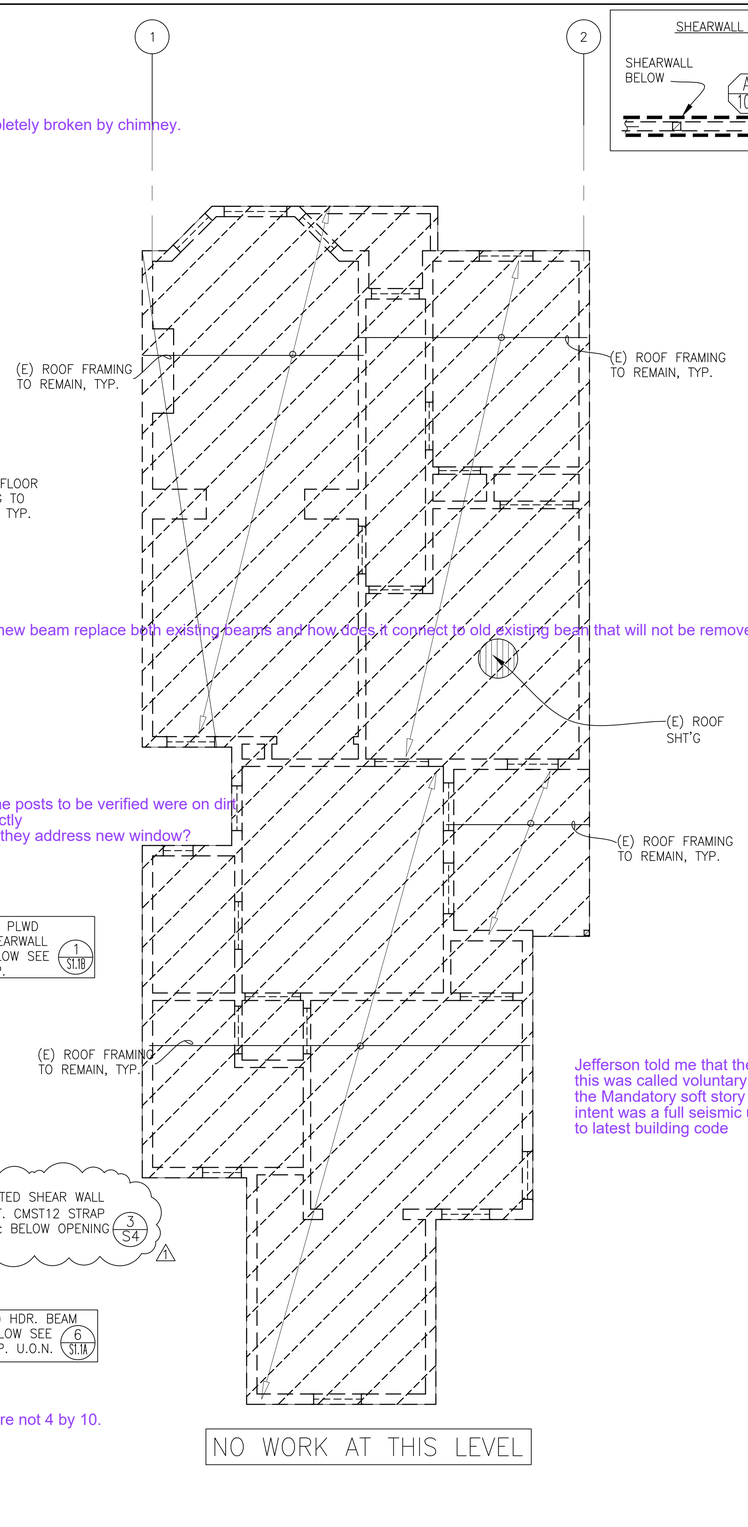
Wall at line 1 is completely broken by chimney.

does new beam replace both existing beams and how does it connect to old existing beam that will not be removed?

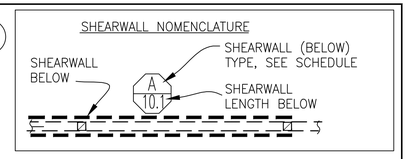
some posts to be verified were on dirt directly
Did they address new window?

did not address diaphragm tie

these beams are not 4 by 10.



SHEARWALL NOMENCLATURE



Jefferson told me that the only reason this was called voluntary was because it is not part of the Mandatory soft story program and that the design intent was a full seismic upgrade of the first floor to latest building code

NO WORK ABOVE THIS LEVEL

NO WORK AT THIS LEVEL

FIRST FLOOR / FOUNDATION PLAN
SCALE: 1/4"=1'-0"

SECOND FLOOR FRAMING PLAN
SCALE: 1/4"=1'-0"

ROOF FRAMING PLAN
SCALE: 1/4"=1'-0"

NORTH

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REGISTERED PROFESSIONAL ENGINEER JEFFERSON J.E. CHEN CIVIL STATE OF CALIFORNIA Exp 6/30/26 No. C057898

	DATE	REVISIONS
1	05/17/24	PC REV1
2	05/27/25	FIELD REV

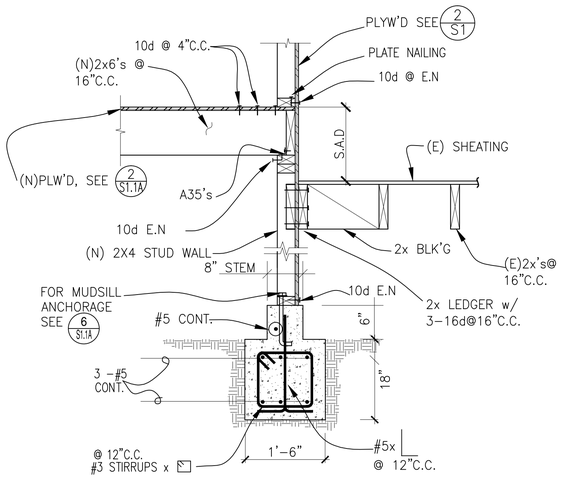
FIRST FLOOR
FOUNDATION PLAN
SECOND FLOOR FRAMING PLAN
ROOF FRAMING PLAN

VOLUNTARY STRENGTHENING

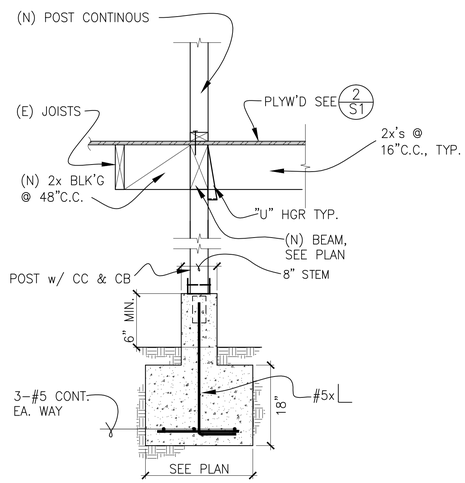
1077 FELL STREET
SAN FRANCISCO, CA

Date: 05/10/2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet S2
Of 7 Sheets

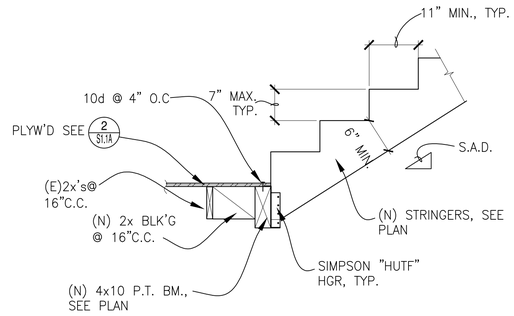
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PLOT DATE: 06-18-25 PLOTTED BY: dariquisonm



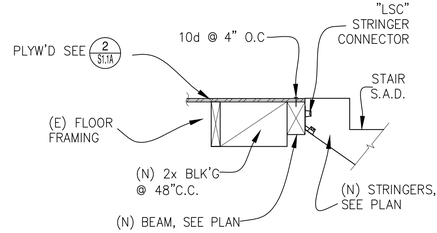
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2 — SCALE: 3/4" = 1'-0"



3 — SCALE: 3/4" = 1'-0"



4 — SCALE: 3/4" = 1'-0"

5 — SCALE: 3/4" = 1'-0"

6 — SCALE: 3/4" = 1'-0"

7 — SCALE: 3/4" = 1'-0"

8 — SCALE: 3/4" = 1'-0"

9 — SCALE: 3/4" = 1'-0"

10 — SCALE: 3/4" = 1'-0"

11 — SCALE: 3/4" = 1'-0"

12 — SCALE: 3/4" = 1'-0"

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	DATE	REVISIONS
1	05/17/24	PC REV1

STRUCTURAL DETAILS

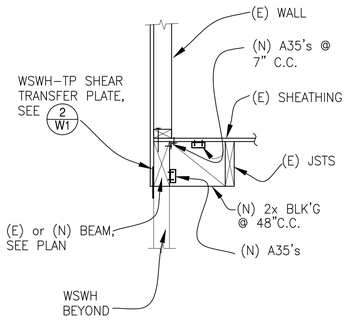
VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

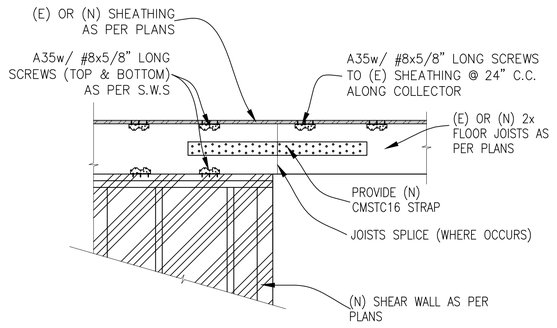
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Drawn By:	DM
Job No:	23059
Sheet	S3
Of	7 Sheets

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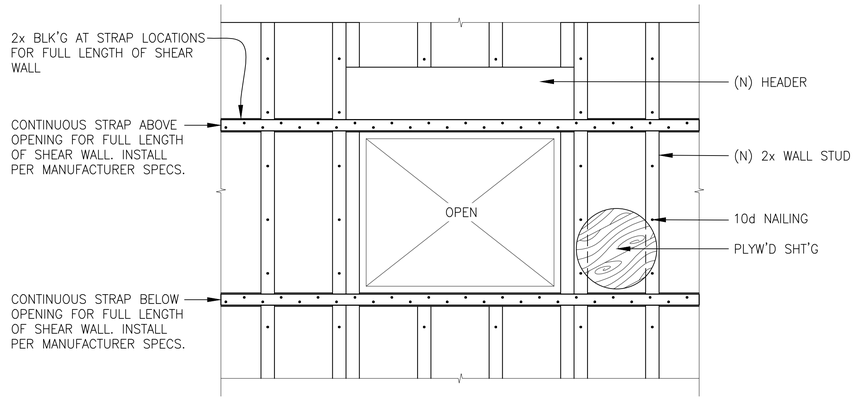
PLOT DATE: 06-17-25 PLOTTED BY: darquisonm



1 — SCALE: 3/4" = 1'–0"

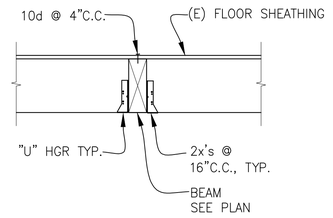


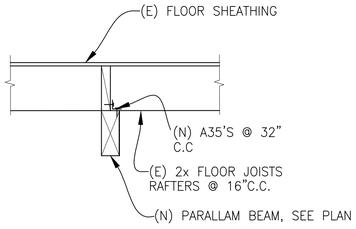
2 — SCALE: 3/4" = 1'–0"



3 — SCALE: 3/4" = 1'–0"

1





(N) PARALLAM BEAM, SEE PLAN

4 — SCALE: 3/4" = 1'–0"

2

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.826.8300
FAX: 415.701.0212
1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103

PROFESSIONAL ENGINEER — RONG JIE CHEN — C057898 — 05/30/26 — CIVIL — STATE OF CALIFORNIA

	DATE	REVISIONS
1	05/17/24	PC REV1
2	05/27/25	FIELD REV

STRUCTURAL DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date: 03/01/2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet S4
Of 7 Sheets

DRAWING NAME: G:\Active Projects_All Folders\GRAPHICS\AAA.dgn (Default)\Arch\Sheet Folders\Drawings\Projects 2023\1077 Fell Street\Drawings\Struct\1077 Fell Street - 05.30.25.dwg
PLOT DATE: 06-17-25 PLOTTED BY: dargulsonm

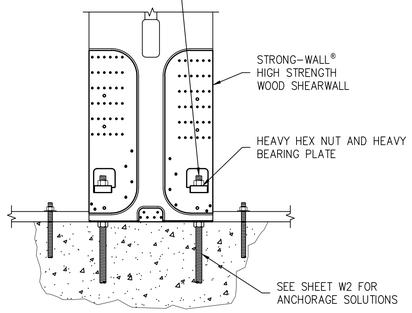
STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MODELS

MODEL NO.	W (in.)	H (in.)	ANCHOR BOLTS		TOTAL WALL WEIGHT (lb.)
			QUANTITY	DIA. (in.)	
WSWH12x7	12	84	2	1	105
WSWH18x7	18	84	2	1	155
WSWH12x8	12	96	2	1	120
WSWH18x8	18	96	2	1	175
WSWH24x8	24	96	2	1	225
WSWH12x9	12	108	2	1	130
WSWH18x9	18	108	2	1	195
WSWH24x9	24	108	2	1	250
WSWH12x10	12	120	2	1	145
WSWH18x10	18	120	2	1	210
WSWH24x10	24	120	2	1	275
WSWH12x12	12	144	2	1	165
WSWH18x12	18	144	2	1	245
WSWH24x12	24	144	2	1	325
WSWH18x14	18	168	2	1	285
WSWH24x14	24	168	2	1	370
WSWH24x16	24	192	2	1	420
WSWH18x20	18	240	2	1	390
WSWH24x20	24	240	2	1	520

NOTES :
1. FOR HEIGHTS NOT LISTED, ORDER THE NEXT TALLEST PANEL AND TRIM TO FIT. MINIMUM TRIMMED HEIGHT FOR ALL PANELS IS 74¾".
2. ALL PANELS COME WITH PRE-ATTACHED HOLDOWNS, TWO HEAVY HEX NUTS, TWO HEAVY BEARING PLATES, ONE WSWH-TP TOP CONNECTION PLATE WITH REQUIRED FASTENERS AND INSTALLATION INSTRUCTIONS.
3. ALL PANELS ARE 3½" THICK.

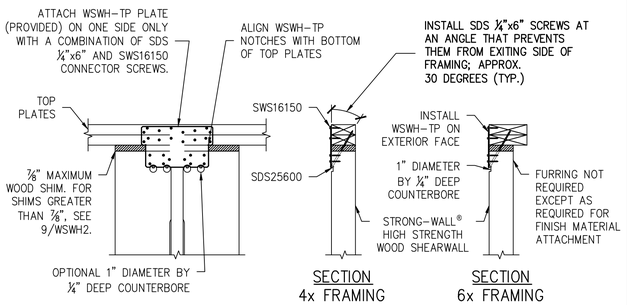
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

PLACE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL OVER THE ANCHOR BOLTS AND SECURE WITH HEAVY BEARING PLATES AND HEAVY HEX NUTS (PROVIDED). DO NOT USE AN IMPACT WRENCH. USE 1⅝" WRENCH FOR 1" NUT. TIGHTEN ANCHOR NUTS FINGER TIGHT + ½" TURN.

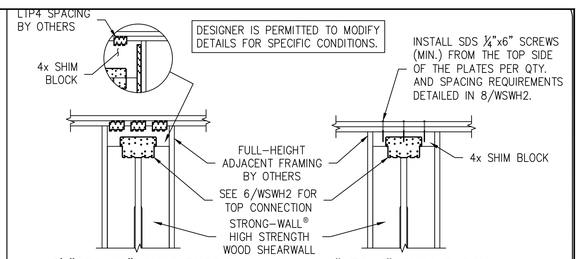


MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	14	2
WSWH-TP18	26	4
WSWH-TP24	46	8

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

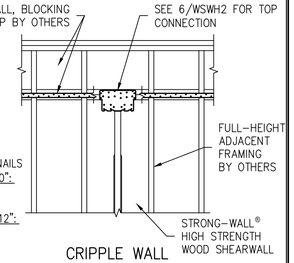


DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

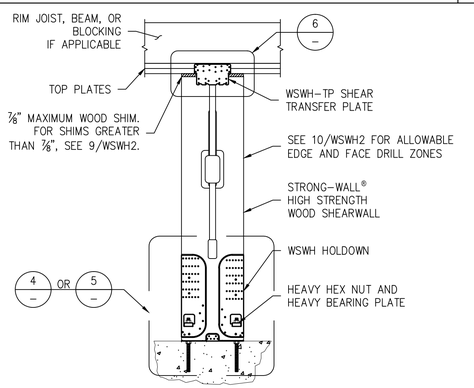
FOR 8" TO 12" BLOCK DEPTHS:
ATTACH SIMPSON STRONG-TIE® CS16 STRAPS AT EDGE OF WSWH PANEL (EACH SIDE) USING 10dx1½" NAILS

SHIM BLOCK HEIGHTS GREATER THAN 8" AND UP TO 10":
- 8 NAILS INTO BLOCK
- 8 NAILS INTO WSWH PANEL

SHIM BLOCK HEIGHTS GREATER THAN 10" AND UP TO 12":
- 10 NAILS INTO BLOCK
- 10 NAILS INTO WSWH PANEL



STRONG-WALL® WSWH MODELS | 1



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

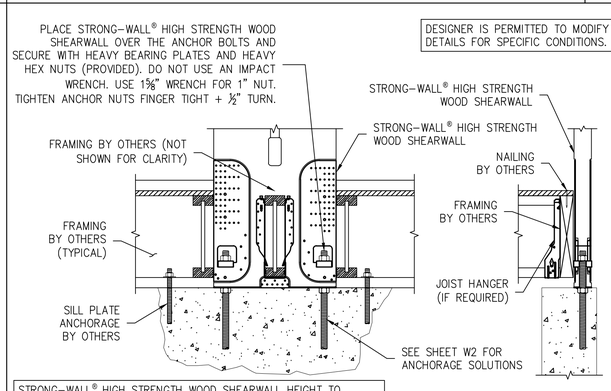
ENSURE CONCRETE IS LEVEL AND SMOOTH BENEATH PANEL. GRIND OR FILL AS NECESSARY.

SINGLE STORY WSWH ON CONCRETE | 2

STANDARD INSTALLATION BASE CONNECTION | 4

PLACE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL OVER THE ANCHOR BOLTS AND SECURE WITH HEAVY BEARING PLATES AND HEAVY HEX NUTS (PROVIDED). DO NOT USE AN IMPACT WRENCH. USE 1⅝" WRENCH FOR 1" NUT. TIGHTEN ANCHOR NUTS FINGER TIGHT + ½" TURN.

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



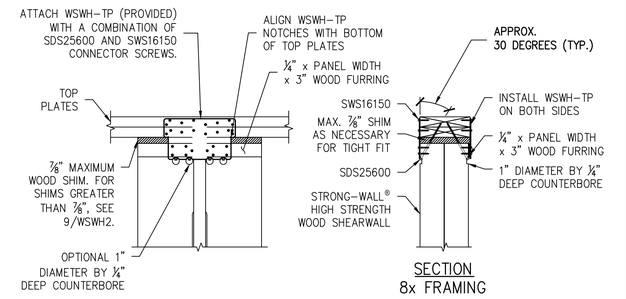
STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL HEIGHT TO INCLUDE THE DEPTH OF THE FLOOR SYSTEM AND SHALL BE INSTALLED DIRECTLY ON THE FOUNDATION. SPECIFY PANEL HEIGHT FROM TOP OF FOUNDATION TO UNDERSIDE OF TOP PLATES OR BEAM.

WOOD FLOOR SYSTEM BASE CONNECTION | 5

TOP CONNECTION | 6

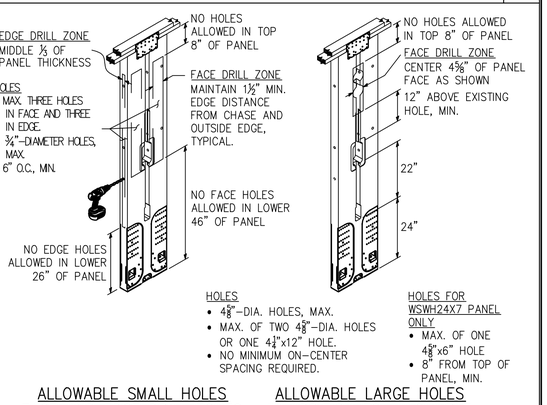
MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	28	4
WSWH-TP18	52	8
WSWH-TP24	92	16

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



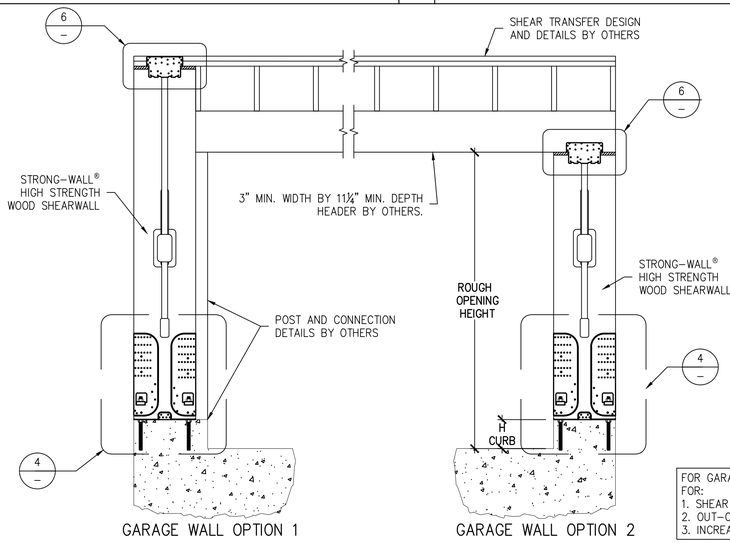
BACK-TO-BACK TOP CONNECTION | 7

TOP OF WALL HEIGHT ADJUSTMENTS | 9



TRIM ZONE AND ALLOWABLE HOLES | 10

ALTERNATE WSWH GARAGE FRONT OPTIONS | 3



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

WHEN WSWH-PS STRAPS OMITTED, ALLOWABLE SHEAR VALUES FOR STANDARD PANEL APPLY.

GARAGE HEADER ROUGH OPENING HEIGHT

MODEL NO.	TRIMMED PANEL HEIGHT	H CURB	ROUGH OPENING HEIGHT
WSWH12x7 WSWH18x7 WSWH24x7	78"	5½"	6'-11½"
		6"	7'-0"
WSWH12x8 WSWH18x8 WSWH24x8	85½"	0"	7'-1½"
	93¼"	5½"	8'-2¾"
		6"	8'-3¼"

NOTES :
1. IF REQUIRED ROUGH OPENING HEIGHT EXCEEDS TABLE VALUE, SPECIFY NEXT TALLER PANEL AND TRIM AS NECESSARY. THE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MAY BE TRIMMED TO A MINIMUM HEIGHT OF 74¾".
2. FURRING DOWN GARAGE HEADER MAY BE REQUIRED FOR CORRECT ROUGH OPENING HEIGHT.

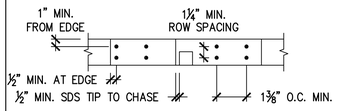
FOR GARAGE WALL OPTION 2, DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

RAKE WALL | 8

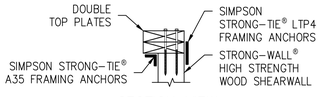
QTY. OF SDS¼"x6" SCREWS REQ'D.	
WSWH12	4
WSWH18	8
WSWH24	16

EDGE DISTANCE FOR SCREWS		
SLOPE	A (in.)	B (in.)
0:12-4:12	2	3
5:12-8:12	1½	4½
9:12-12:12	1½	5½

NOTES :
1. MAINTAIN END DISTANCES TO PREVENT SCREWS FROM PENETRATING THROUGH THE OUTER EDGES.
2. INSTALL SCREWS PERPENDICULAR TO THE TOP PLATE.
3. EDGE DISTANCES ASSUME DOUBLE TOP PLATE.

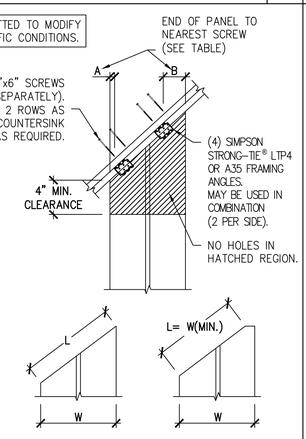


PLAN VIEW
SDS SCREW SPACING



SECTION VIEW
2X6 OR WIDER FRAMING

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



INSTALLATION NOTES :
1. ACTUAL CUT LENGTH (L) MUST BE GREATER THAN OR EQUAL TO PANEL WIDTH (W).
2. THIS DETAIL APPLICABLE FOR SLOPES UP TO 12:12.
3. PANELS TALLER THAN 12' MUST BE DESIGNED FOR THE APPLICATION.

NOTES | 11

1. STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL IS MANUFACTURED AND TRADEMARKED BY "SIMPSON STRONG-TIE COMPANY INC." HOME OFFICE: 5956 W. LAS POSITAS BLVD., PLEASANTON, CA 94588 TEL: (800) 999-5099, FAX: (925) 847-1597. "SIMPSON STRONG-TIE COMPANY INC." IS AN ISO 9001-2008 REGISTERED COMPANY.
2. USE OF THIS PRODUCT IS SUBJECT TO THE APPROVAL OF THE LOCAL BUILDING DEPARTMENT.
3. THIS PRODUCT IS PART OF THE OVERALL LATERAL FORCE RESISTING SYSTEM OF THE STRUCTURE. DESIGN OF THE BUILDING'S LATERAL FORCE RESISTING SYSTEM, INCLUDING THE LOAD PATH TO TRANSFER LATERAL FORCES FROM THE STRUCTURE TO THE GROUND, IS THE RESPONSIBILITY OF THE DESIGNER.
4. ENGINEER OF RECORD IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, ELEVATIONS, ETC. PRIOR TO INSTALLATION OF ANY COMPONENTS FOR THE STRONG-WALL SB SYSTEM. IF ANY DISCREPANCIES ARE FOUND, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
6. INSTALLATION OF PRODUCT SHALL BE DONE IN CONFORMANCE TO THESE DRAWINGS. THE PERFORMANCE OF MODIFIED PRODUCTS OR ALTERED INSTALLATION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE DESIGNER.
7. SIMPSON STRONG-TIE COMPANY INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS, DESIGNS, AND MODELS WITHOUT NOTICE OR LIABILITY FOR SUCH CHANGES.
8. ALL HARDWARE CALLED OUT IS SIMPSON STRONG-TIE.
9. SEE ICC-ES ESR-2652 OR CITY OF LOS ANGELES RR25730 AS APPLICABLE FOR ADDITIONAL INFORMATION.

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
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OFFICE: 415.606.8300
FAX: 415.701.0212
1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103

PROFESSIONAL ENGINEER — KRISTOFFER JON JECHEN — C057898 — 06/30/26 — CIVIL — STATE OF CALIFORNIA

	DATE	REVISIONS

STRUCTURAL DETAILS

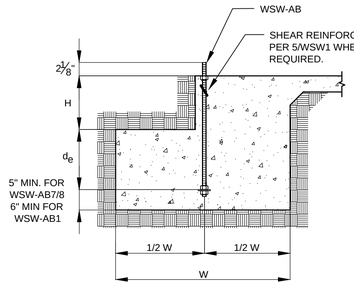
VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

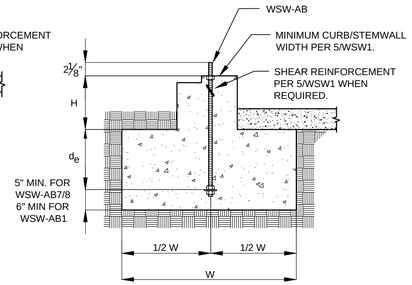
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Job No:	23059
Sheet	W1
Of	7 Sheets

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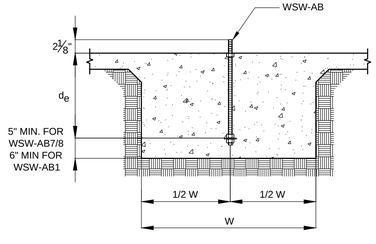
SLAB ON GRADE FOUNDATION



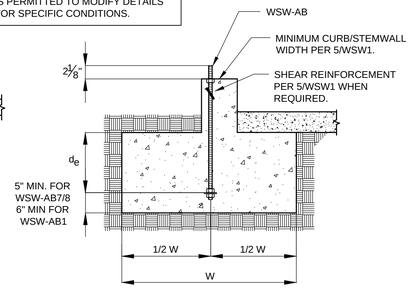
BRICK LEDGE FOUNDATION

NOTES:
1. SEE 2/WSW1 FOR DIMENSIONS AND ADDITIONAL NOTES.
2. SEE 5/WSW1 FOR SHEAR REINFORCEMENT WHEN REQUIRED.
3. MAXIMUM H = l_e - d_e. SEE 3/WSW1 AND 4/WSW1 FOR l_e.

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

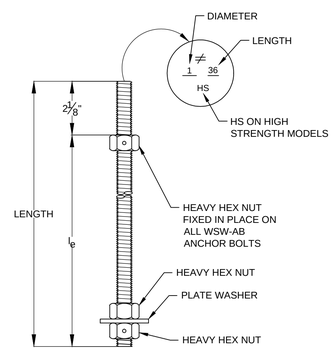


INTERIOR FOUNDATION



CURB OR STEMWALL FOUNDATION

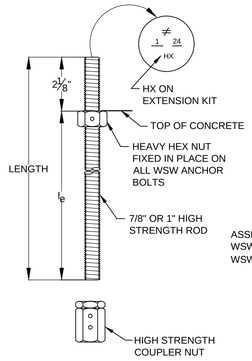
STRONG-WALL® WSW ANCHORAGE - TYPICAL SECTIONS | 1



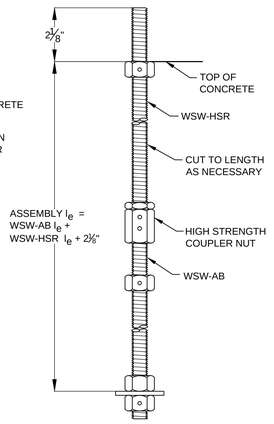
WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSW12 AND WSW18	WSW-AB7/8x24	7/8"	24"	20"
	WSW-AB7/8x24HS	7/8"	24"	20"
	WSW-AB7/8x30	7/8"	30"	26"
	WSW-AB7/8x30HS	7/8"	30"	26"
	WSW-AB7/8x36HS	7/8"	36"	32"
WSW24	WSW-AB1x24	1"	24"	20"
	WSW-AB1x24HS	1"	24"	20"
	WSW-AB1x30	1"	30"	26"
	WSW-AB1x30HS	1"	30"	26"
	WSW-AB1x36HS	1"	36"	32"

WSW ANCHOR BOLTS | 3

WSW-HSR_KT



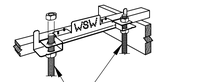
WSW-HSR AND WSW-AB ASSEMBLY



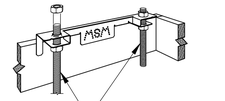
WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSW12 AND WSW18	WSW-HSR7/8x24KT	7/8"	24"	22"
	WSW-HSR7/8x36KT	7/8"	36"	34"
WSW24	WSW-HSR1x24KT	1"	24"	22"
	WSW-HSR1x36KT	1"	36"	34"

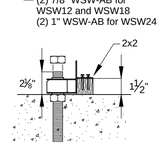
WSW ANCHOR BOLT EXTENSION | 4

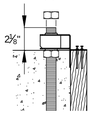
WSW-RT INTERIOR INSTALLATION



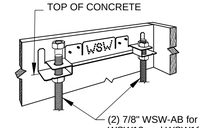
WSW-RT EXTERIOR INSTALLATION



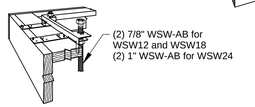




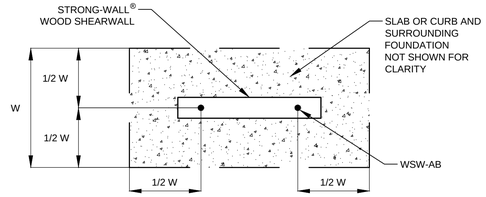
WSW-RTPF PANEL FORM INSTALLATION



WSW-RTBL BRICK LEDGE INSTALLATION



WSW ANCHOR BOLT TEMPLATES | 6



FOUNDATION PLAN VIEW

WSW ANCHORAGE SOLUTIONS FOR 2500 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
1 SEISMIC	CRACKED	STANDARD	11,900	27	9	16,100	33	11
			13,100	29	10	17,100	35	12
		HIGH STRENGTH	24,900	43	15	33,000	51	17
			27,100	46	16	35,300	54	18
	UNCRACKED	STANDARD	12,500	24	8	15,700	28	10
			13,100	25	9	17,100	30	10
		HIGH STRENGTH	25,300	38	13	32,300	44	15
			27,100	40	14	35,300	47	16
WIND	CRACKED	STANDARD	5,100	14	6	6,200	16	6
			8,700	20	7	11,400	24	8
		HIGH STRENGTH	13,100	27	9	17,100	32	11
			15,900	30	10	21,100	36	12
			18,400	33	11	27,300	42	14
			23,100	38	13	31,800	46	16
			27,100	42	14	35,300	50	17
	UNCRACKED	STANDARD	5,000	12	6	6,400	14	6
			9,300	18	6	12,500	22	8
		HIGH STRENGTH	13,100	23	8	17,100	28	10
			15,200	25	9	21,900	32	11
			19,900	30	10	26,400	36	12
			24,000	34	12	31,500	40	14
			27,100	37	13	35,300	43	15

NOTES:
1. ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D AND ACI 318-14 WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF WSW-AB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449).
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C - F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.3 AND ACI 318-14 SECTION 17.2.3.4.3.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
6. REFER TO 1/WSW1 FOR d_e.

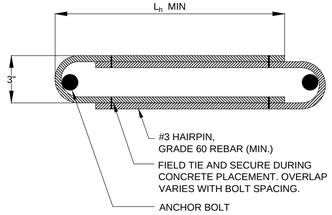
STRONG-WALL® WOOD SHEARWALL TENSION ANCHORAGE SCHEDULE 2,500, 3,000 AND 4,500 PSI | 2

WSW ANCHORAGE SOLUTIONS FOR 3000 PSI CONCRETE

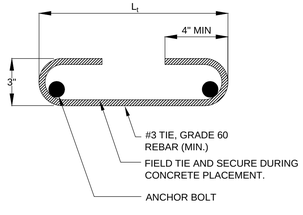
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
SEISMIC	CRACKED	STANDARD	12,300	26	9	16,000	31	11
			13,100	28	10	17,100	33	11
		HIGH STRENGTH	25,200	41	14	32,700	48	16
			27,100	43	15	35,300	51	17
	UNCRACKED	STANDARD	12,000	22	8	16,300	27	9
			13,100	24	8	17,100	28	10
		HIGH STRENGTH	25,300	36	12	32,700	42	14
			27,100	38	13	35,300	44	15
WIND	CRACKED	STANDARD	5,000	13	6	5,600	14	6
			8,800	19	7	10,200	21	7
		HIGH STRENGTH	13,100	25	9	17,100	30	10
			15,700	28	10	20,100	33	11
			19,200	32	11	25,300	38	13
			23,200	36	12	32,300	44	15
			27,100	40	14	35,300	47	16
	UNCRACKED	STANDARD	5,500	12	6	6,200	13	6
			8,500	16	6	12,800	21	7
		HIGH STRENGTH	13,100	22	8	17,100	26	9
			16,600	25	9	21,800	30	10
			19,700	28	10	25,200	33	11
			24,000	32	11	31,700	38	13
			27,100	35	12	35,300	41	14

WSW ANCHORAGE SOLUTIONS FOR 4500 PSI CONCRETE

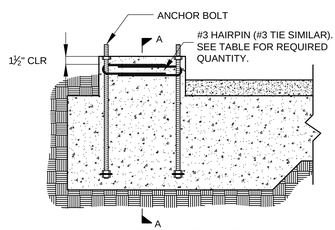
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
SEISMIC	CRACKED	STANDARD	12,600	23	8	16,000	27	9
			13,100	24	8	17,100	29	10
		HIGH STRENGTH	24,800	36	12	32,100	42	14
			27,100	38	13	35,300	45	15
	UNCRACKED	STANDARD	12,700	20	7	15,700	23	8
			13,100	21	7	17,100	25	9
		HIGH STRENGTH	24,600	31	11	32,500	37	13
			27,100	34	12	35,300	39	13
WIND	CRACKED	STANDARD	5,400	12	6	6,800	14	6
			8,300	16	6	11,600	20	7
		HIGH STRENGTH	13,100	22	8	17,100	26	9
			15,300	24	8	21,400	30	10
			19,300	28	10	25,800	34	12
			23,600	32	11	31,000	38	13
			27,100	36	12	35,300	42	14
	UNCRACKED	STANDARD	6,800	12	6	6,800	12	6
			9,400	15	6	12,400	18	6
		HIGH STRENGTH	13,100	19	7	17,100	23	8
			16,800	22	8	21,600	26	9
			20,300	25	9	26,700	30	10
			24,100	28	10	32,200	34	12
			27,100	31	11	35,300	36	12



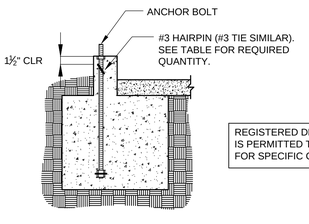
HAIRPIN SHEAR REINFORCEMENT



TIE SHEAR REINFORCEMENT



HAIRPIN INSTALLATION
(GARAGE CURB SHOWN. OTHER FOOTING TYPES SIMILAR.)



SECTION A-A

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

STRONG-WALL® WOOD SHEARWALL SHEAR ANCHORAGE

MODEL	L_t OR L_h (in.)	SEISMIC [3] SHEAR REINFORCEMENT	SEISMIC [3] MINIMUM CURB/ STEMWALL WIDTH (in.)	WIND [4] SHEAR REINFORCEMENT	WIND [4] MINIMUM CURB/ STEMWALL WIDTH (in.)	ASD ALLOWABLE SHEAR LOAD, V (lb.) [6] UNCRACKED	ASD ALLOWABLE SHEAR LOAD, V (lb.) [6] CRACKED
WSW12	10¼	(1) #3 HAIRPIN	8[5]	SEE NOTE 6	6	1,035	740
WSW18	15	(1) #3 HAIRPIN	8[5]	(1) #3 HAIRPIN	6	HAIRPIN REINFORCEMENT ACHIEVES MAXIMUM ALLOWABLE SHEAR LOAD OF THE WSW	
WSW24	19	(2) #3 HAIRPINS	8[5]	(1) #3 HAIRPIN	6		

NOTES:
1. SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-11 AND ACI 318-14 AND ASSUME MINIMUM 2,500 PSI CONCRETE.
2. SHEAR REINFORCEMENT IS NOT REQUIRED FOR INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. WHERE NOTED, MINIMUM CURB/STEMWALL WIDTH IS 6 INCHES WHEN STANDARD STRENGTH ANCHOR BOLT IS USED.
6. USE (1) #3 TIE FOR WSW12 WHEN PANEL DESIGN SHEAR FORCE EXCEEDS TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.
7. #4 GRADE 40 SHEAR REINFORCEMENT MAY BE SUBSTITUTED FOR WSW SHEAR ANCHORAGE SOLUTIONS.

STRONG-WALL® WSW SHEAR ANCHORAGE SCHEDULE AND DETAILS | 5

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.626.8300
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1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103

PROFESSIONAL ENGINEER — JEREMY JOSEPH CHEN — C057898 — 05/30/26 — CIVIL — STATE OF CALIFORNIA

	DATE	REVISIONS
1	05/17/24	PC REV1

STRUCTURAL DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date:	03/01/2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	W2
Of	7 Sheets

DRAWING NAME: G:\Archive\Targets by wf\1167x1\04WSW\5-SAMJ\prf\Drafting\Revit\Files\Drawings\Projects 2023\1077 Fell Street\Drawings\Sheet 1077 Fell Street - R5 02.29.24.dwg
PLOT DATE: 06-17-25 PLOTTED BY: danguisonm

BRIEF SUBMITTED BY THE PERMIT HOLDER(S)

Summary Outline of Response Brief

0. Introductory Statement for Appeal 25-029, Sastry vs. DBI
1. Allegation 1: “Serious structural and life safety concerns remain unaddressed.”
    a. Response: Inspector David Lara Azaira completed a Site Verification inspection on August 22, 2025. No Notice of Violation was issued and no structural or life safety concerns were found. DBI found the work compliant with existing permits and building code.
2. Allegation 2.1: “Representations by Applicant, Velox, and Enertia Designs that the work constituted a full seismic/soft story upgrade.” Allegation 2.2: “The Permit should not have been issued since it is not compliant with applicable provisions of the San Francisco Building Code.” Allegation 2.3: The permit “‘arguably’ meets the definition of a substantial structural alteration pursuant to SFEBC Sections 403.13.2.”
    a. Response to 2.1: The Appellant was provided physical and digital plans always labeled “Voluntary Strengthening.” She interviewed 8 contractors, chose the contractor, and signed the contract; fully aware that this scope has always been voluntary strengthening.
    b. Response to 2.2: Permits have passed through full permitting review and have been structurally engineered to meet safety and code compliance. The appellant holds an incorrect assertion that DBI was negligent in issuing the permit and in enforcing their own building codes.
    c. Response to 2.3: The approved plans do not qualify as a substantial structural alteration. Even if a threshold was met, the plans would be exempted per Building Code 503.11 Exception 1 that the approved plans do not qualify as a “substantial

structural alteration." The Appellant does not provide real evidence and cited unapplicable, outdated building codes.

3. Allegation 3.1: "Applicant and his contractors have failed to adequately address any of Appellant's concerns." Allegation 3.2: "Seismic Retrofitters work introduced issues potentially conflicting with the previous engineering design and dry rot solutions."
    a. Response to 3.1: A stamped letter from the licensed structural engineer of record was provided, stating approved plans will not impair the structural integrity or mechanical systems of the property. Appellant's concerns come from a misunderstanding of building codes, an unlicensed contractor, engineers who had not visited the property, and AI-generated inspection reports. Nevertheless, each member of the construction team has adequately responded. All concerns in the Appellant's brief are addressed in this response brief.
    b. Response to 3.2 from Seismic Retrofitters**:** "What was cut was cladding covering the structural element that offers zero structural integrity. Your claims are incorrect, derogatory and completely without merit. The EOR or the building inspector can request structure corrections directly with me if needed."
4. Allegation 4: "Applicant filed for the Permit against Appellant's objections."
    a. Response: Appellant's objections were an unreasonable 50-point list of demands labeled "Needs to be resolved before any work starts/Plan approval." These are procedural allegations beyond DBI's scope of review.
5. Conclusion: Request of Board to uphold the permit with no new conditions.

Introductory Statement

In Appeal No. 25-029, Sastry vs. DBI, the Appellant alleges that DBI, Enertia Designs, Seismic Retrofitters and Velox Construction have each acted negligently to create unsafe structural conditions. She also alleges that procedural errors were committed by KAG Designs and Construction in their capacity as owner's representation.

This united construction team of 1077 Fell Street (Enertia Designs, Seismic Retrofitters, Velox Construction, KAG Designs & Construction) has addressed these defamatory allegations to protect their reputation; each has a decades-long career working in San Francisco. They have designed, submitted, and completed over a thousand similar projects (e.g. remodels, voluntary strengthening) with San Francisco's DBI and want only to complete work that has been fully approved and permitted. They have adhered to all laws, complied with all applicable codes, and followed DBI's normal processes. As a result, all inspections confirm that no serious structural concerns exist.

The Appellant erroneously believes that DBI was negligent in approving the plans and that inspectors have been negligent in enforcing them. Her fears are driven by an unlicensed contractor (Pedro Alfonso Paez Jimenez), an engineer who has reviewed prior plans and has inexplicably not visited the Property (Chiaweng Yeh), and through AI-generated inspections. Ironically, it is the Appellant that has instructed her own unlicensed contractor to do structural work in the building, which will be subject to a civil suit in short order.

These allegations will be countered with technical evidence and process documentation during our September 3rd Board of Appeals hearing with San Francisco's firm, fair, and level-headed DBI representatives.

Allegation 1: The basis for this appeal is that “serious structural and life safety concerns remain unaddressed.”

1. The Appellant has filed a complaint to the city based on these concerns. On August 22, 2025, Inspector David Lara Azaira visited the property, listened to her concerns, and completed a site inspection Exhibit 1. He is familiar with the property, having visited for past inspections (Simpson Strong Wall, Shear Wall, Reinforcing Steel- all passed). This confirms the work completed to date complies with existing plans and permits. No Notice of Violation has ever been issued.
2. The Appellant distrusts DBI inspectors and stated that she would not approve plans or allow work to continue until she chose her own “process for QC- the city is not sufficient” for Appellant. [2]
    a. The Appellant interrupted a city inspection on July 21, 2025; trespassing into 1077 Fell Street and portraying herself as the homeowner (she was not), to dismiss city inspector Matthew Sum.[3]
3. The Appellant has expressed distrust and contempt towards licensed professionals: 1077 Fell’s contractor, 1077 Fell’s owner’s representative, our EOR, our seismic contractor, *her own* plumber, *her own* electrician, and *her own* (unlicensed) contractor, while describing herself as an “unlicensed GC / structural truffle pig” that “will die on the hill of S1.1B if necessary.”[4]

Allegation 2.1: “Representations by Applicant, Velox, and Enertia Designs that the work constituted a full seismic/soft story upgrade.”

1. The Appellant was the primary driver of this voluntary strengthening effort; chose and interviewed 8 potential contractors [5], ultimately selected Seismic Retrofitters [6], was the

sole signatory of the contract [7], and had physical and digital copies of the plans clearly labeled *Voluntary Strengthening* [8]. The claim that she was intentionally deceived and/or plans were misrepresented are an utter fabrication by an unstable individual.

2. 1077 Fell Street is not on SF's public "Soft Stories Property List" [9]
3. Plans and calculations were approved [8, 10], correctly permitted and labeled *Voluntary Strengthening*. No additional work is being proposed beyond what has been submitted. The Board should therefore consider this scope in its proper context: a voluntary strengthening layered onto a remodel project, not a mandatory seismic upgrade.

Allegation 2.2: "The Permit should not have been issued since it is not compliant with applicable provisions of the San Francisco Building Code."

1. Per DBI policy, every building permit is fully reviewed for life safety and building code compliance; including structural plans and calculations. If any serious structural error had been noted in Enertia Design's work (i.e. a "structural irregularity", or a trigger for mandatory seismic upgrade), DBI would have withheld approval (Cf. SFDBI guidance that unpermitted or unsafe conditions are enforced through formal NOVs.)[11]
2. The following DBI representatives have seen and approved plans from their respective stations[12]: David Szeto, Janae Brown, Richard, Soenksen, Ed Masck, Jia Jian (Peter) Tan, Cheng Chan, James Lo, Elizabeth Mau, Edgar Oropeza, Philip Chan, Christian Gilmartin, Grace Imson, Roger Ly, Maggie Laush, David Jones, and Stephen Liu.
    a. The Appellant unfathomably asserts that, collectively, these 17 DBI representatives were all individually negligent in enforcing proper building codes, while Appellant, with no construction background whatsoever, is righteous in her plight.

b. The Appellant believes that inspector David Lara Azaira acted negligently by not identifying deviations or omissions in the field, and did not enforce compliance with the permitted scope of work.

3. My team attests that they have been thoroughly engaged and truthful with the planning department. [19]

Allegation 2.3: “The permit ‘arguably’ meets the definition of a substantial structural alteration pursuant to SFEBC Sections 403.13.2. and 202.” [Appellant cites an outdated 2016 Building Code; this brief will address SFEBC Section §503.11.]

1. Enertia Designs, the engineer of record, states:
   a. “This scope involved no removal or replacement of existing bearing walls. The vertical load paths remained unchanged throughout construction. In accordance with SFEBC §503.11, voluntary strengthening does not trigger the full compliance requirements of Chapter 2. Therefore, the newly added shear walls should be reviewed strictly for their intended lateral strengthening role, without being considered a change to gravity load–bearing systems.”
   b. In response to appellant’s concern that the plans created an irregularity: “The front wall was not touched and was never in the scope of work, it is an existing condition. The remaining system is still a compliant configuration because calculations and detailing for this voluntary strengthening followed used a seismic redundancy factor (ρ) of 1.3 ensuring that the shear wall at Line B could accommodate the forces from Line A when connected by a diaphragm in the field; located 14 feet apart.
2. Tom Biggs, an independent licensed architect who has never worked with Enertia Designs, was brought on to review the project.

a. He agreed that DBI made the correct determination of voluntary strengthening, due to Exception 1 of the code: “Since this building is a wood frame building, type VB construction, two stories, two parcels, and two dwellings, it is exempt under Exception 1.”[13] The exceptions afforded by voluntary strengthening exist specifically to encourage this type of work without facing new-building standards, otherwise no would attempt them.
b. He states that the work has not weakened the structure: “From my site visit on Friday, 8/23/25, I viewed the current state of the project with rough framing at or near completion. I viewed plywood sheathed shear walls at reasonable intervals, within the work scope area. Further, I have worked on enough of these types of renovations, to know a well-conceived project, and this is one of them. The engineering documents are comprehensive, and include all measures of accommodation for lateral forces, which would exceed code minimums, and that are appropriate for the work. As a result of the work, the building is left in a much stronger structural state.”[13]

3. DBI specifically evaluated the question of voluntary strengthening vs. substantial structural alteration during permit review of this design. They approved this *Voluntary Strengthening* design, confirming compliance with applicable code provisions.

Allegation 3.1: “Applicant and his contractors have failed to adequately address any of Appellant’s concerns.”

1. The Appellant started erroneously questioning Seismic Retrofitters in January 2025 [14]. The Appellant ran the work through an AI program, and decided that said AI program should override California State licensed engineers, and took this a step further by

sending defamatory AI-generated inspection reports about Seismic Retrofitter's work to other partners [15]. In both cases, the timely, complete responses were provided.[14-15]

2. Concerns surfaced by Chiaweng Yeh's peer review [16-17] are from old calculations (March 2025) that have since been revised and are not the calculations used in this permit. They ask to verify site conditions and clarify measurements because he never visited the property and thus is not qualified to make claims about life safety. He never reached out to any member of the 1077 Fell team and tellingly made no statement in support of Appellant for this utterly baseless appeal.
3. Detlev Doring's admitted "opinion" in his letter to DBI (Page 8 Line 1 of Appellant's Brief) was generated based on Chiaweng Yeh's peer review, although Mr. Doring had not yet visited the property nor had he spoken to Mr. Yeh. He advocates for a "full lower story seismic strengthening which [he] believes is required by code." (Exhibit 22 of Appellant's Brief). As proven earlier in this brief, the Appellant team's comprehension of building code is at best, poor. Without visiting the site, his concerns are extraneous:
    a. "No calculations are provided for the anchorage of the perforated shear wall into the existing concrete." - The shear wall is anchored into a *new* concrete footing, not the existing *brick* foundation.
    b. "No calculations or details verifying the [dry rot] repair method have been provided." - The city did not require a calculation for a standard framing repair.
    c. "The foundation for the Simpson Strong-walls at Line E has not been designed for seismic forces." - This was not required by DBI because of the design of the concrete footing and that the Simpson Strong-walls only reinforce a small building extension. For good measure, the grade beam had already been calculated for overturning.

d. “Concerns as to whether this new (PSL) beam” is sufficient in “replacing two original load bearing beams.” - Provided on Page 20-21 of approved calculations. [10]

e. “Actual conditions (of Perforated Shear Wall) placed closer to 13.5 ft +/- tall.” - The Appellant presents no evidence this is true (likely because it is not); unsurprising given no measurements were taken during his 30-minute visit.

f. “Second Floor Framing Plan show[s] an additional wall being built inside the exterior wall with plywood on the inside.” - The dashed line represents the wall below, as there is no work on the 2nd floor. Walls are accurately represented on Sh.S2. [10]

g. “No calculations or details were provided to show that the existing overhang diaphragm for a two story building will work.” - It should be self-evident that Simpson Strong Walls and new footings enhanced the lateral system beyond the original construction, which only supports a small building extension.

h. “Perforated SW resting on the floor does not allow the installation of the CW straps above and below opening as called for on the plan.” - Because the shear wall is a continuous wall, the collector below the opening is accomplished through clips and nailing. This would have been reviewed by Matthew Sum if the appellant did not interrupt the inspection. [3]

i. “Drag struts tying the upper floor between Line D and E into the building are missing. Drag struts in N/S and E/W direction are missing.” - Drag struts were not included or required in this voluntary strengthening scope. CMST12 and clips/nailing on the continuous shear wall accomplishes this purpose.

4. A stamped letter from the licensed structural engineer of record was provided, stating that all work in the past and in the latest city approved plans will not impair the structural integrity or mechanical systems of the property.[18]

5. KAG Designs and Construction was hired as an owner's representative to answer the Appellant's questions and address her concerns; this is still an option for the Appellant today. The appellant chooses not to engage with KAG Designs and Construction.[19]

Allegation 3.2: "Seismic Retrofitter's work introduced issues potentially conflicting with the previous engineering design and dry rot solutions."

1. The Appellant claims the rough opening constructed by Seismic Retrofitters "by mistake," "does not appear on the stamped plans," and "remains a hazard". The opening is on city-approved plans. [8, 10] As a rough opening, it was cut 4 inches taller and wider than the door it is approved for, which the Appellant cites as one of "many inconsistencies between site conditions, the structural calculations, and the Permit." It is not uncommon for inconsequential drafting or calculation discrepancies to exist as field adjustments. DBI inspector David Lara Azaira was made aware of this discrepancy and since the safety of the structure is not impacted; no fundamental code violation exists.
2. Seismic Retrofitters has previously responded to a past allegation that "framing elements that had been repaired to address the dry rot were cut" with a statement [20]: "The 2x6 in question is cladding over the structural beam and offers zero structural integrity. Your claims are incorrect, derogatory and completely without merit. Please refrain from further contact with Seismic Retrofitters. The EOR or the building inspector can request structure corrections directly with me if needed." The appellant filed an arbitration case against Seismic Retrofitters [21] (and subsequently withdrew, as her claims against Seismic Retrofitters had no merit.)

Seismic Retrofitters wrote to Appellant that : "**Several individuals have observed behavior from you that raises concerns about your ability to engage in these matters**

constructively and responsibly. If you're experiencing difficulties, I sincerely encourage you to seek appropriate support. I strongly urge you to take a more measured and safety-focused approach. This includes allowing licensed professionals to carry out their work in accordance with approved plans, codes, and engineering best practices." [21.]

Allegation 4: Appellant acknowledges that she "received the permit revision calculations and drawings" but declares "Applicant filed for the Permit against Appellant's objections."

1. Her objections stem from an unreasonable 50-point list of demands with the label "Needs to be resolved before any work starts/Plan approval"[2]. These extend beyond DBI's scope of review, but give underlying context into the launch of this appeal. Among the demands:
    a. A process for quality control because "city inspections are not sufficient."[2]
    b. An executed CC&R Amendment [22] that creates common space in a "vertical zone extending below the bottom of the floor joists of 1075 Fell *(into 1077 Fell St)* to a depth equal to the greater of (a) sixteen (16) inches, or (b) the depth of the floor joist plus six (6) inches [2 x 10 joists]," an easement into my unit, and undetermined monetary fines."
    c. That she would be provided a key to my unit. [2]
    d. That the team paint a garage door and remove existing gas lines from her garage. [2]
    e. That she would have access to private emails between my engineer and contractor.[2]
2. Unfortunately, this appeal stems from an ongoing HOA dispute that pre-date this construction project. Ironically, Appellant continues to use her unlicensed contractor, Pedro Alfonso Paez Jimenez, for actual structural work, despite repeated warnings. [23]

Conclusion

The construction team looks forward to the hearing on September 3rd to help the Board of Appeals understand whether DBI erred in issuing Permit No. 2025-0626-9586. We hope to affirm DBI followed all required procedures, the work is code-compliant, and multiple licensed professionals confirm that conditions are safe and match permitted plans.

Our engineering team would not risk their licensure by submitting unsafe plans. San Francisco's DBI would not violate their own procedures and codes by approving an unsafe plan. Our seismic team would not risk their reputation by completing shoddy work. The appellant's claims are based on speculation, outdated or inapplicable code references, and inconsistent statements.

We apologize that the Board has to waste their valuable time based upon the unsupported and readily baseless musings of an unstable Appellant.

No extraordinary errors occurred that would justify revoking the permit. We request the board to deny this appeal and uphold the approved permit with no new conditions.

Respectfully submitted,

- Steven Huang, applicant of permit in Appeal 25-029 with input and review from Jefferson Chen, M.S, P.E. Principal, Enertia Designs Inc., EOR of permit in Appeal 025-29

Exhibit 0 - Table of Exhibits

Table of Exhibits

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Exhibit 1 - Inspection Confirmation

Permit Details Report

Report Date: **8/25/2025 9:44:47 PM**

Application Number:	202405172393
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	REV TO 202304266513; (E) BATHROOM LAYOUT CHANGED; (E) KITCHEN LAYOUT CHANGED; ADDITION - LIGHTING UPGRADE WHOLE UNIT; REPLACE 2-WINDOWS - LIKE TO LIKE, NOT VISIBLE FROM STREET. REF TO PA# 202306099711 & 202309267475
Cost:	$45,000.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
5/17/2024	TRIAGE	
5/17/2024	FILING	
5/17/2024	FILED	
10/2/2024	APPROVED	
10/2/2024	ISSUED	

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
INTAKE		5/17/24	5/17/24			5/17/24	BUFKA SUSAN	Administrative	
CP-ZOC		6/12/24	6/12/24			6/12/24	MAU ELIZABETH	Administrative	N/A - interior work only, increase in habitable space less than 800 sqft. No change to unit count. No work to the exterior. (E) garage space being converted to habitable space leaves a (N) garage that still meets dimensions of compact car.
CP-ZOC		7/15/24	7/15/24			7/15/24	OROPEZA EDGAR	Not Applicable	N/A E.O 7/15/2024
BLDG		7/15/24	7/15/24			7/15/24	CHAN PHILIP	Issued Comments	Comments OTC
BLDG	1	8/12/24	8/12/24			8/12/24	CHAN PHILIP	Approved	Approved OTC
MECH		8/12/24	8/12/24			8/12/24	GILMARTIN CHRISTIAN	Approved	OTC
BLDG		8/14/24	8/14/24			8/14/24	CHAN PHILIP	Approved	Approved OTC. EG-02
SFPUC		8/12/24	8/12/24			8/12/24	IMSON GRACE	Approved	08/12/2024 - APPROVED. Capacity Charge not applicable. No change in meter size, not enough fixtures added to warrant a larger meter. Route to MECH
SFFD		8/12/24	8/12/24			8/12/24	LY ROGER	Issued Comments	ISSUED COMMENT
SFFD	1	8/14/24	8/14/24			8/14/24	LY ROGER	Approved	APPROVED OTC PLANS WITH APPLICANT NO INSPECTION REQUIRED
CPB		10/2/24	10/2/24			10/2/24	SAPHONIA COLLINS	Administrative	

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots
8/22/2025	AM	CS	Clerk Scheduled	ROUGH FRAME	1
7/21/2025	PM	CS	Clerk Scheduled	SHEAR WALL	1
5/14/2025	PM	CS	Clerk Scheduled	OK TO COVER	1
1 2					

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status
8/22/2025	David Lara Araiza	ROUGH FRAME	SITE VERIFICATION
7/21/2025	Matthew Sum	SHEAR WALL	CANCELLATION FOR INSPECTION SCHEDULE
5/14/2025	David Lara Araiza	OK TO COVER	ROUGH FRAME, PARTIAL
1 2			

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks
0			1	CONCRETE (PLACEMENT & SAMPLING)	
0			4	REINFORCING STEEL AND PRETRESSING TENDONS	reinforcing steel
0			18A	BOLTS INSTALLED IN EXISTING CONCRETE	
0			24E	WOOD FRAMING	
0			19	SHEAR WALLS AND FLOOR SYSTEMS USED AS SHEAR DIAPHRAGMS	
0			20	HOLDOWNS	
0			24C	CONCRETE CONSTRUCTION	
0			18C	PULL/TORQUE TESTS PER SFBC SEC.1607C & 1615C	

For information, or to schedule an inspection, call 628-652-3400 between 8:30 am and 3:00 pm.

Station Code Descriptions and Phone Numbers

Online Permit and Complaint Tracking home page.

Technical Support for Online Services

If you need help or have a question about this service, please visit our FAQ area.

City and County of San Francisco © 2025

Gmail

Steven Huang <thestevenhuang@gmail.com>

Enertia contract

soumya sastry <soumya.sastry@gmail.com> Sun, Jun 29, 2025 at 10:44 AM
To: Kathleen Gevertz <kathleen@kagdesigns.com>
Cc: Steven Huang <thestevenhuang@gmail.com>, Alex Gevertz <alex@kagdesigns.com>, "kagevertz@gmail.com" <kagevertz@gmail.com>, haraprasad sastry <haraprasadsastry@yahoo.com>

Hi all, as a reminder (and this is in our google doc), here are all the to do items for Steven's team. Many of these items can be addressed now. I wouldn't spend time addressing all of these individually by email- I'm looking for action and resolution. Steven, these are all items we have discussed in the last 3 months, so nothing should be that surprising, but let me know if you don't understand anything and we can cover in our next check in.

1. Formal owners meeting with physical full size copy of updated structural and architectural plans
    a. Ariel plans from 6/2 are not updated or accurate. See comments Soumya provided 6/24.
    b. Architectural plans are not approved.
    c. Architectural plans of full building - paid for by HOA
2. Physical full size copy of previous structural and architectural plan
3. Correspondence with Enertia - what were the errors that Doug had found
4. Updated Enertia Scope detailing direct Q&A, site visits, construction admin, diaphragm connection (cut 2 by 6s), referencing the design standard
5. Original Scope of work from Enertia- unless the new scope completely supplants the old scope and says that affirmatively.
6. Signed agreement from Velox that HOA will be cc'd on any emails with Structural Engineers

Engineered work:

- Explicit citation to the standards that the design intent is supposed to meet.
    - Structural support for the cantilevered floor, including diaphragm tie to the main structure
      Updated calculations
    - support wood directly on ground.
    - Ceiling height

Hourly work:

- Response to all peer review comments
- definition of the special inspection scope and process & expectations
- Availability for construction administration (both Seismic and Velox) and Q&A during execution directly from homeowners and not via Doug

Needs to be resolved before any work starts/ Plan approval (some overlap with the above)

- Updated Enertia Scope: Separate HOA contract with Enertia that will be reimbursed via Reimbursement Assessment
- forwards/ cc ing of Enerta communication
- HOA and Soumya as Additional Insured for Doug

- Velox indemnity to HOA: A short rider or indemnity agreement signed by Velox that says:
    - Velox is doing work affecting common/structural elements
    - Velox indemnifies and holds harmless the HOA and both Owners from liability, claims, or costs caused by their work or negligence
    - They carry appropriate insurance
- Velox indemnity agreement with Soumya on 1075 plumbing
- Copies of old Enertia/ Ariel Scopes
- Architect plans
- Ceiling height - need Architectural plan for agreement about ceiling height
- CCR/ formal HOA updates status [for door swinging inward, use restrictions, and interstitial space]
- Update on schedule of subfloor so that HOA can get work done
- Kathleen/ Doug to provide date when debris in crawlspace will be cleaned up.
- Crawlspace moisture control work
- Insulation under floor
- Memorandum of Process [communication, scheduling, construction administration, access protocol]
    - Master schedule of order of operations
    - Weekly schedule
    - Doug agreed to tell Soumya in advance of inspections. The expectation is that Soumya will be at inspections for now.
    - Process for QC- city is not sufficient.
    - Process for being more responsive
    - Process for additional construction admin
    -
- Emergency key- and permission to use WITH 72 hours notice if nobody is onsite
- Follow up on receipts for previous HOA money spent with Velox, Reimbursement for PSL beam
    - For new scope of work (both Enertia and Det): 1077 will bear all costs for any new beam, increased door heights. HOA will bear as related to cantilevered floor.
- Update on garage door- Velox may need to buy paint. Garage needs to be pressure washed before paint can be applied. Who will do it?
- Electrical follow ups
- Shed electricity
- Kink out of panel box
- Soumya's electrical covers
- Plumbing inspection schedule
- Spray foam schedule plan follow up
- New plumbing/ gas line/ shelf in meter closet, removing dead lines from my garage and from subfloor- provide dates
- Access to crawlspace
- Access panel in closet?
- Date of Velox work in light well (new venting, sealing around plumbing)
- Velox to rotate exhaust vent so that paint is facing out or paint exhaust vent.
- 8 ft door and sliding door approval process

[Quoted text hidden]

Exhibit 3 - Interrupting City Inspection

Gmail

Steven Huang <thestevenhuang@gmail.com>

1077 Fell St. Shearwall Inspection (07/21)

Jacob Dobson <jacob@seismicretrofitters.com> Mon, Jul 21, 2025 at 1:27 PM
To: Doug Burrows <doug@veloxsf.com>
Cc: Mark Barbagelata <mark@quakeprep.com>, Steven Huang <thestevenhuang@gmail.com>, kathleen gevertz <kagevertz@gmail.com>

Hello Doug,

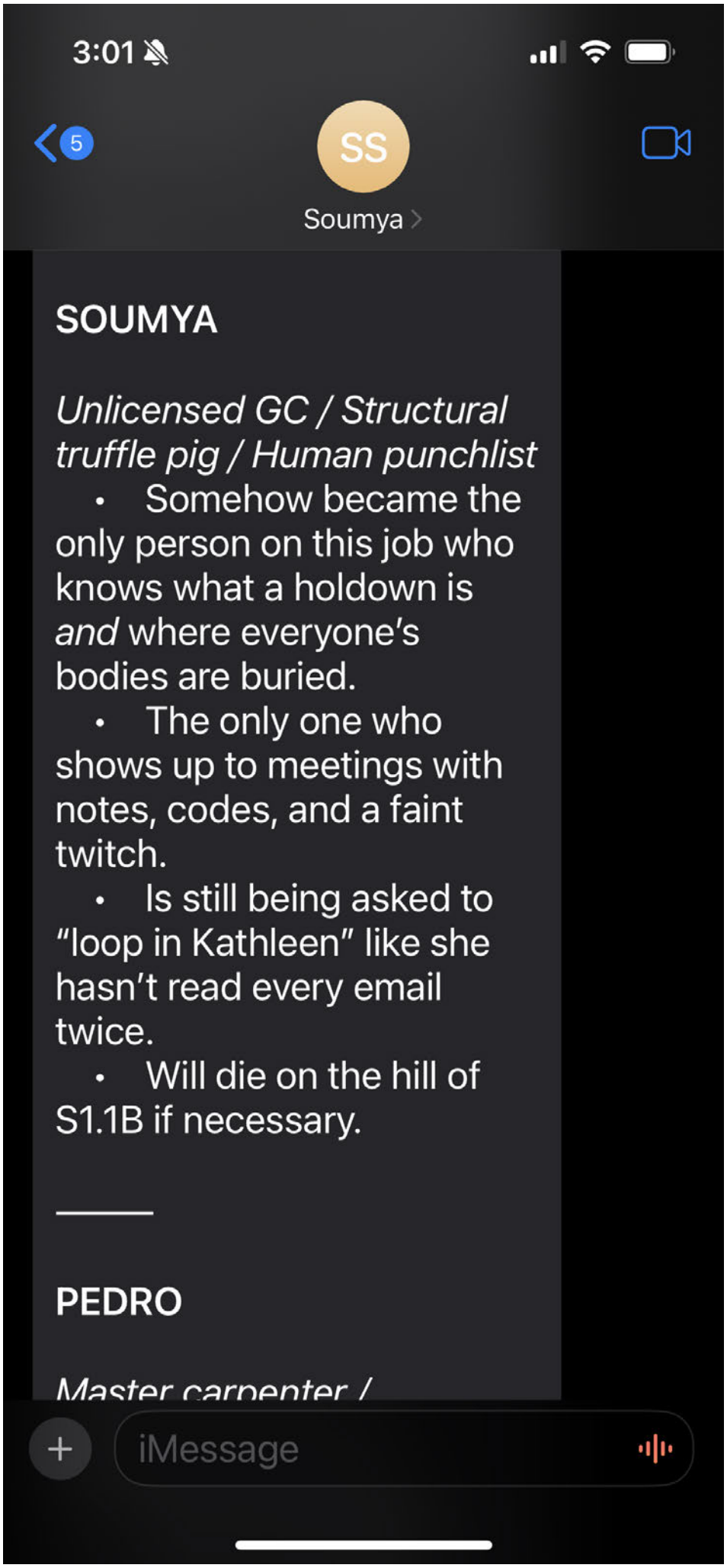
The following is a summary of the building inspection that took place July 21st 2025 at 1077 Fell St.

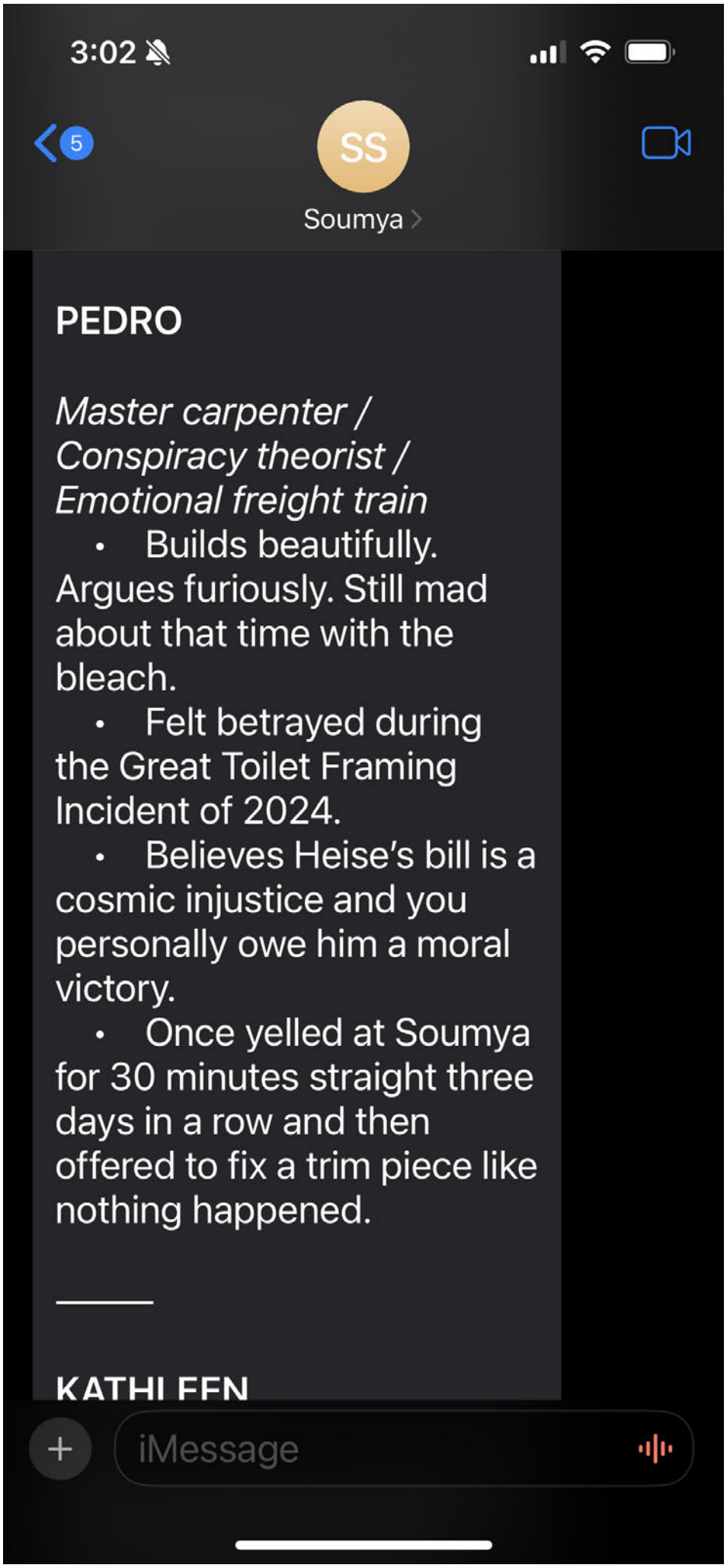
I met with inspector Matthew Sum around 12:55pm for the shearwall nailing inspection. While we were looking at the plans in what is going to be the dining room area Soumya came into the garage asking who was there and what was going on.

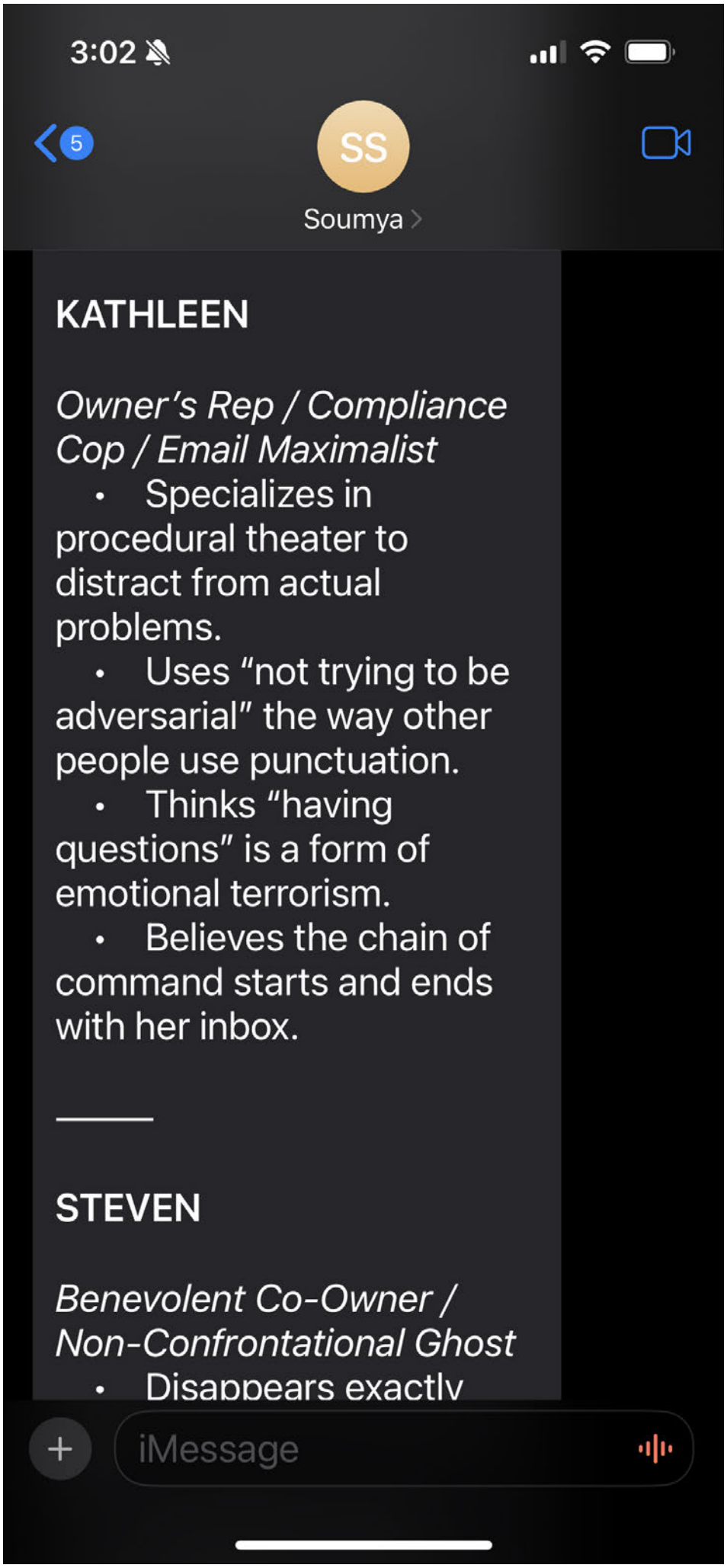
After learning that an inspection was taking place Soumya stated that that there should not be any inspections without her approval, and that since she hadn't approved of this inspection we would have to stop immediately. After clarifying that she was a homeowner inspector Matthew complied with her request and cancelled the inspection.

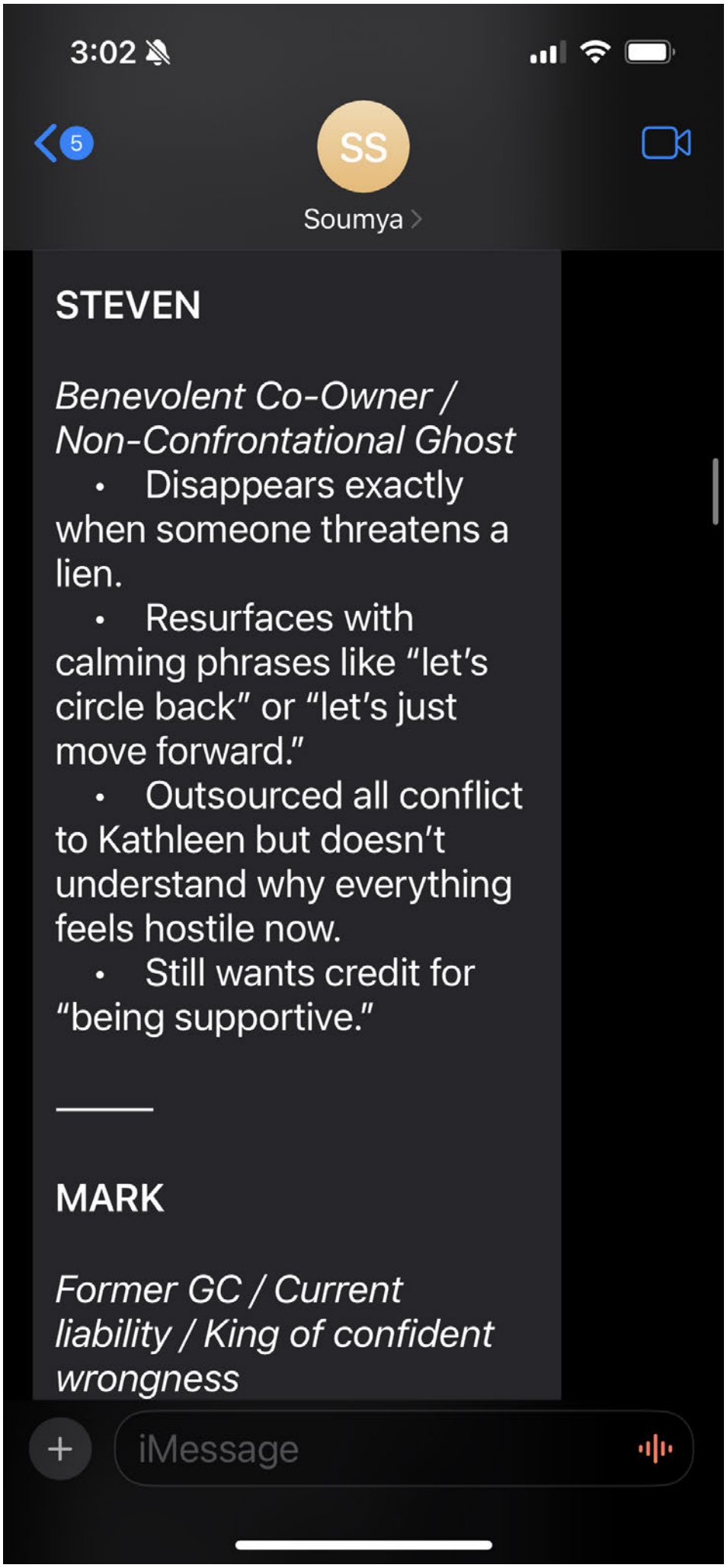
Thank you,
-Jacob, Seismic Retrofitters
415-509-0552

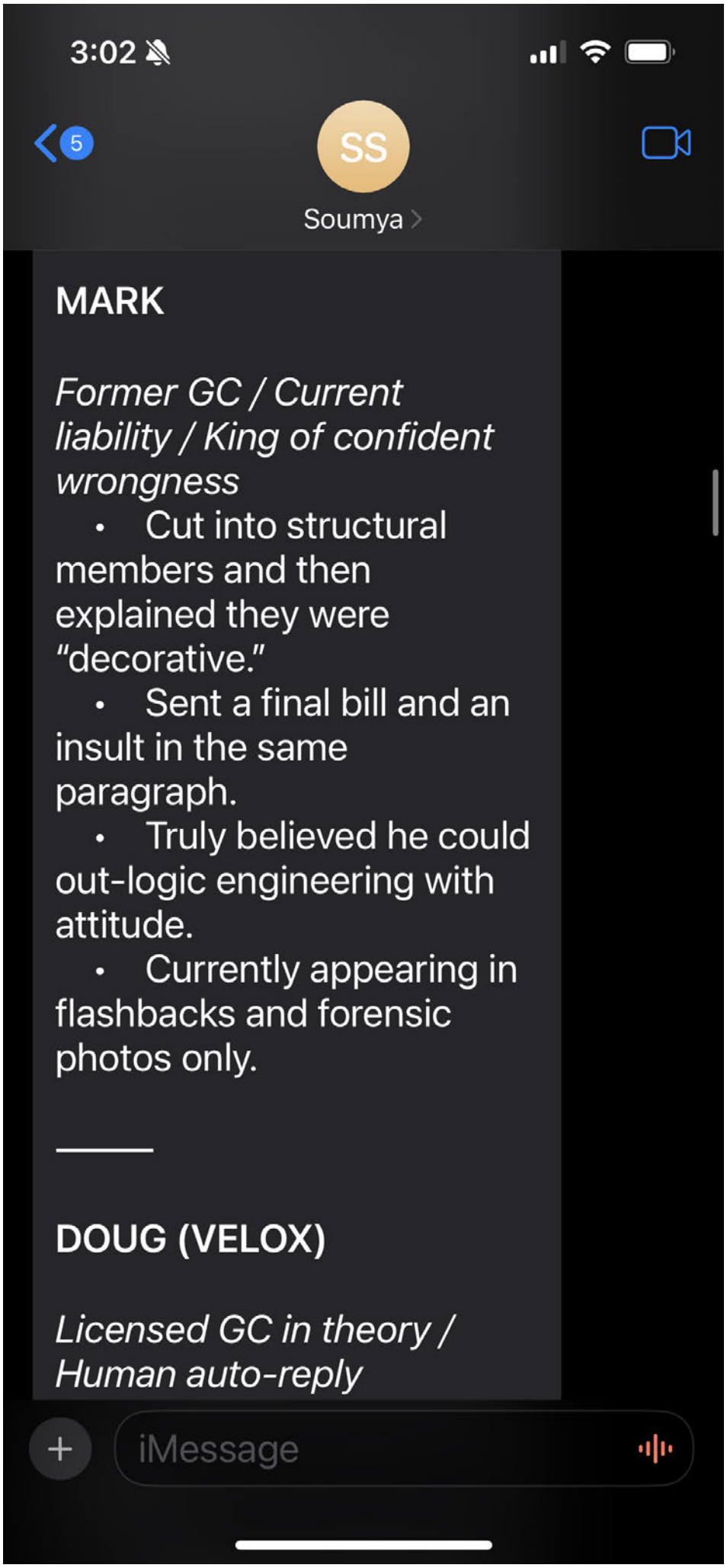
Exhibit 4 - Unhinged Text Messages

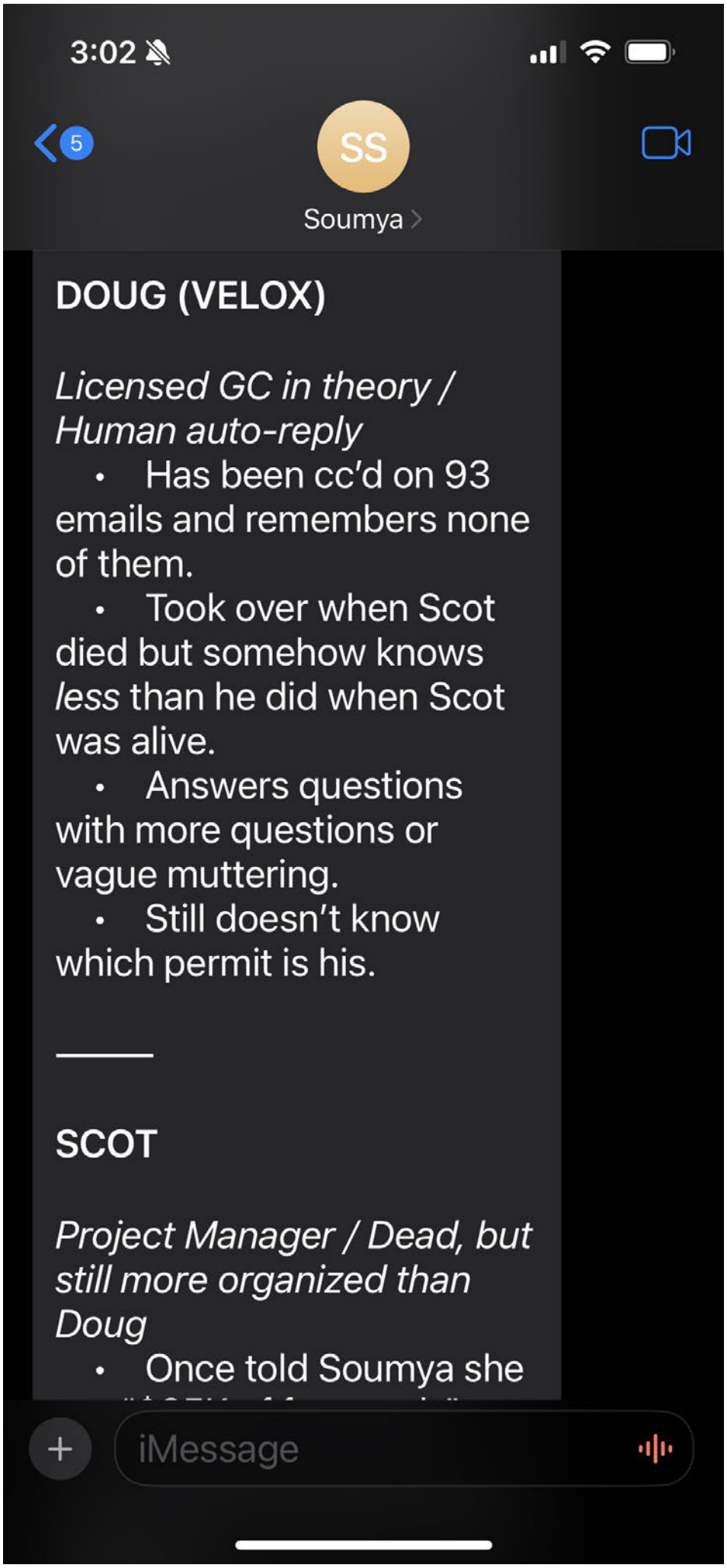


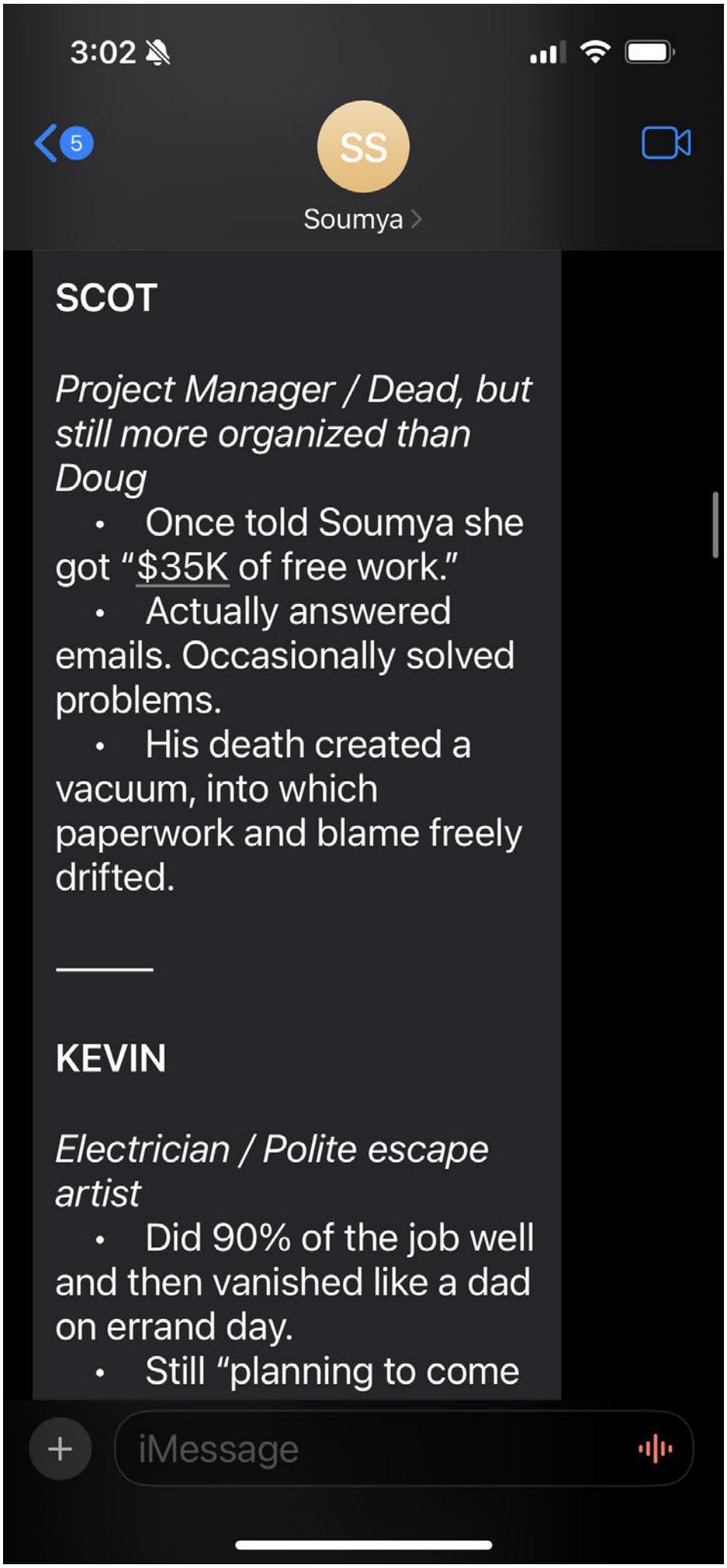

3:02
5
SS
Soumya
PEDRO
Master carpenter / Conspiracy theorist / Emotional freight train
• Builds beautifully. Argues furiously. Still mad about that time with the bleach.
• Felt betrayed during the Great Toilet Framing Incident of 2024.
• Believes Heise's bill is a cosmic injustice and you personally owe him a moral victory.
• Once yelled at Soumya for 30 minutes straight three days in a row and then offered to fix a trim piece like nothing happened.
———
KATHI FFN
iMessage

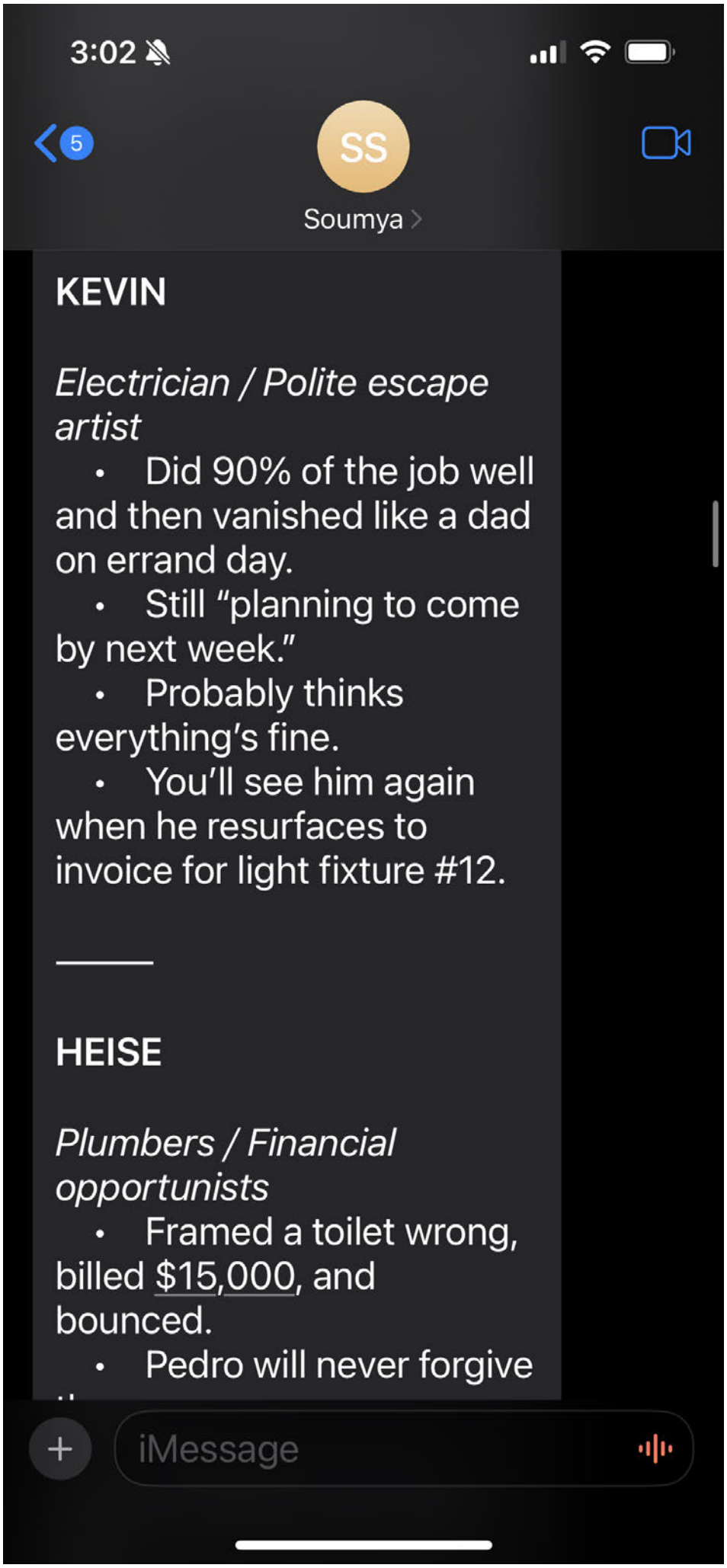

3:02
5
SS
Soumya
KATHLEEN
Owner's Rep / Compliance Cop / Email Maximalist
• Specializes in procedural theater to distract from actual problems.
• Uses "not trying to be adversarial" the way other people use punctuation.
• Thinks "having questions" is a form of emotional terrorism.
• Believes the chain of command starts and ends with her inbox.
———
STEVEN
Benevolent Co-Owner / Non-Confrontational Ghost
• Disappears exactly
iMessage

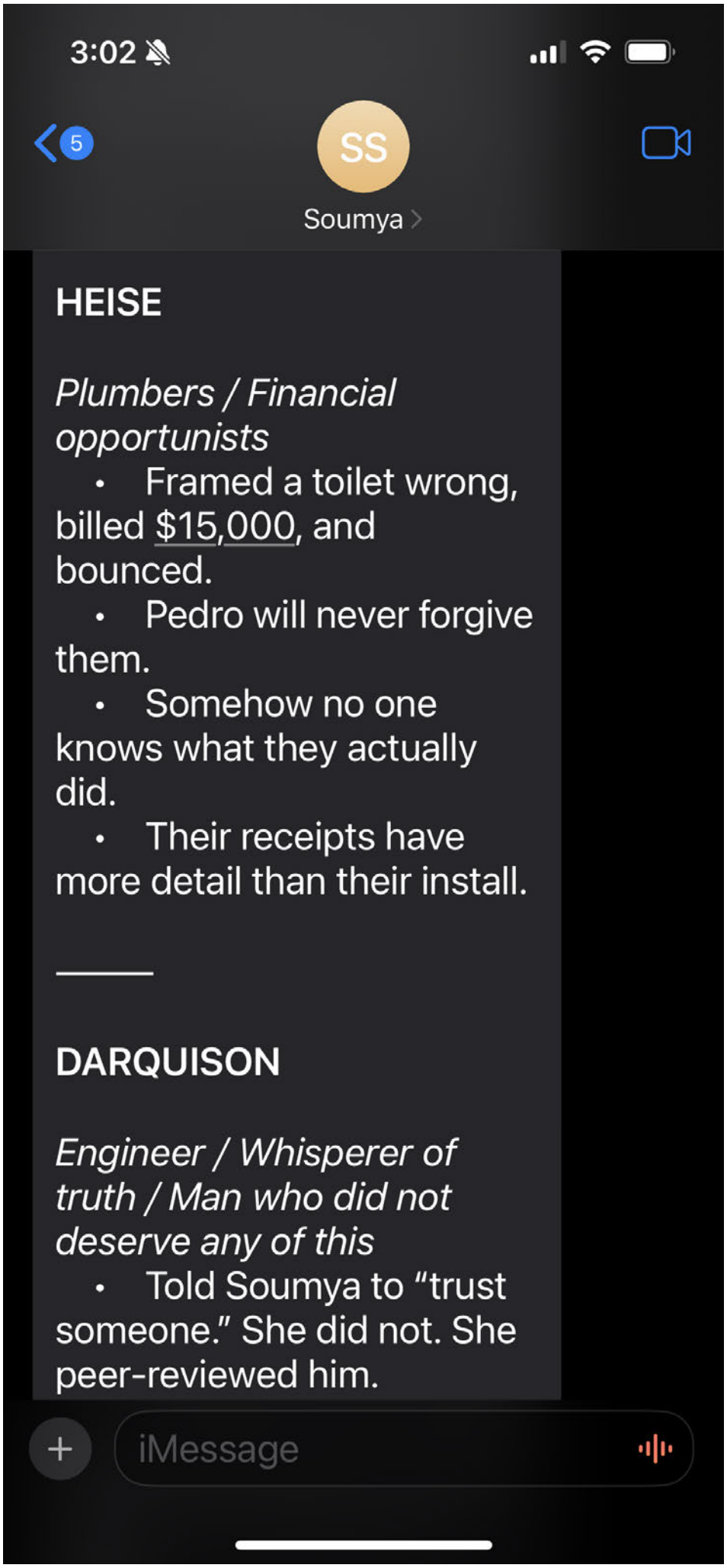

3:02
5
SS
Soumya
STEVEN
Benevolent Co-Owner / Non-Confrontational Ghost
• Disappears exactly when someone threatens a lien.
• Resurfaces with calming phrases like “let’s circle back” or “let’s just move forward.”
• Outsourced all conflict to Kathleen but doesn’t understand why everything feels hostile now.
• Still wants credit for “being supportive.”
MARK
Former GC / Current liability / King of confident wrongness
iMessage


3:02
5
SS
Soumya
MARK
Former GC / Current liability / King of confident wrongness
• Cut into structural members and then explained they were "decorative."
• Sent a final bill and an insult in the same paragraph.
• Truly believed he could out-logic engineering with attitude.
• Currently appearing in flashbacks and forensic photos only.
———
DOUG (VELOX)
Licensed GC in theory / Human auto-reply
iMessage


3:02
5
SS
Soumya
DOUG (VELOX)
Licensed GC in theory / Human auto-reply
• Has been cc'd on 93 emails and remembers none of them.
• Took over when Scot died but somehow knows *less* than he did when Scot was alive.
• Answers questions with more questions or vague muttering.
• Still doesn't know which permit is his.
———
SCOT
Project Manager / Dead, but still more organized than Doug
• Once told Soumya she
iMessage


3:02
5
SS
Soumya
SCOT
Project Manager / Dead, but still more organized than Doug
• Once told Soumya she got "$35K of free work."
• Actually answered emails. Occasionally solved problems.
• His death created a vacuum, into which paperwork and blame freely drifted.
KEVIN
Electrician / Polite escape artist
• Did 90% of the job well and then vanished like a dad on errand day.
• Still "planning to come
iMessage


3:02
5
SS
Soumya
KEVIN
Electrician / Polite escape artist
• Did 90% of the job well and then vanished like a dad on errand day.
• Still "planning to come by next week."
• Probably thinks everything's fine.
• You'll see him again when he resurfaces to invoice for light fixture #12.
HEISE
Plumbers / Financial opportunists
• Framed a toilet wrong, billed $15,000, and bounced.
• Pedro will never forgive
iMessage


3:02
5
SS
Soumya
HEISE
Plumbers / Financial opportunists
• Framed a toilet wrong, billed $15,000, and bounced.
• Pedro will never forgive them.
• Somehow no one knows what they actually did.
• Their receipts have more detail than their install.
DARQUISON
Engineer / Whisperer of truth / Man who did not deserve any of this
• Told Soumya to "trust someone." She did not. She peer-reviewed him.
iMessage

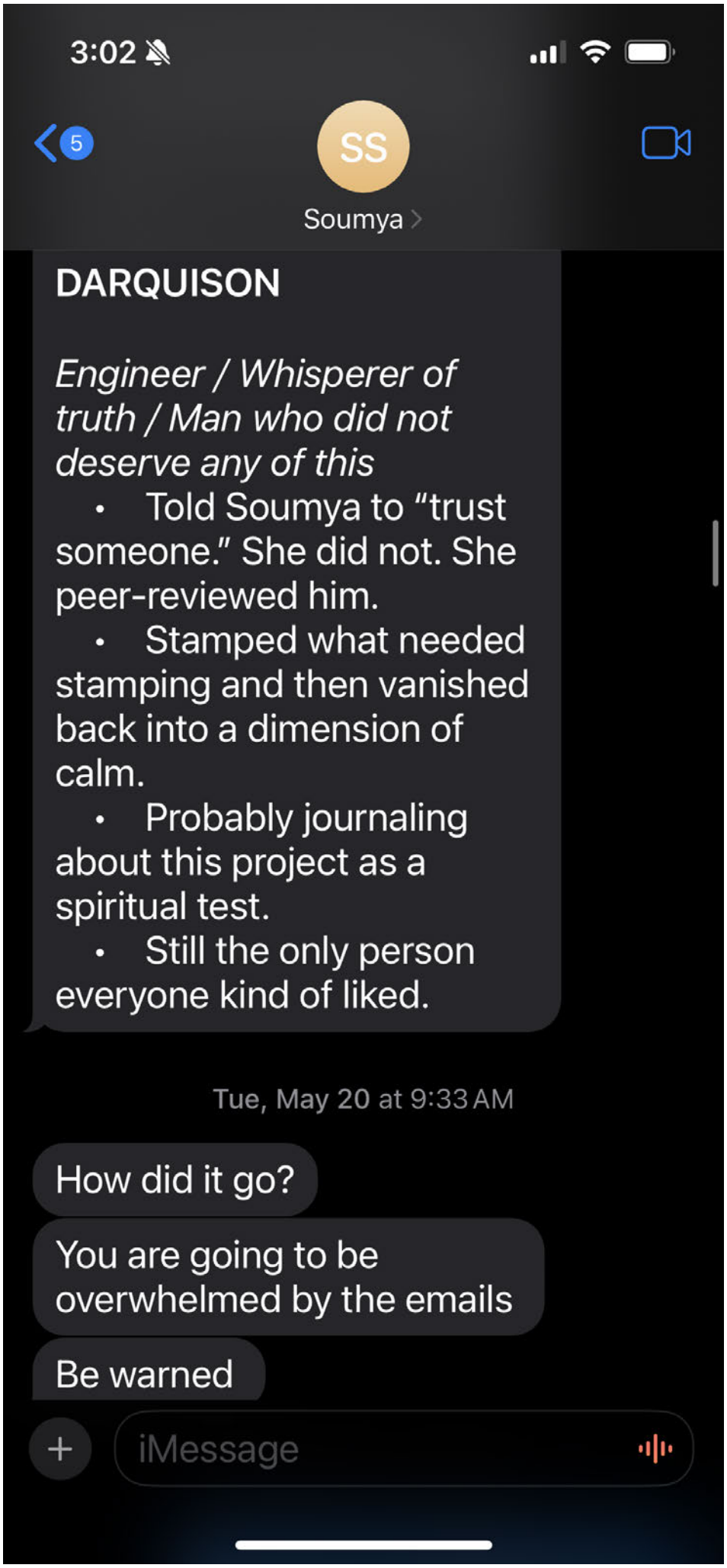

3:02
5
SS
Soumya
DARQUISON
Engineer / Whisperer of truth / Man who did not deserve any of this
• Told Soumya to "trust someone." She did not. She peer-reviewed him.
• Stamped what needed stamping and then vanished back into a dimension of calm.
• Probably journaling about this project as a spiritual test.
• Still the only person everyone kind of liked.
Tue, May 20 at 9:33 AM
How did it go?
You are going to be overwhelmed by the emails
Be warned
iMessage

Exhibit 5 - Interviewing 8 Potential Contractors

Gmail

Steven Huang <thestevenhuang@gmail.com>

structural contractors in the mix

Sastry, Soumya <SVS6@pge.com> Thu, Oct 24, 2024 at 4:24 PM
To: Steven Huang <thestevenhuang@gmail.com>
Cc: soumya sastry <soumya.sastry@gmail.com>

Classification: Public

Hi Steven,

While I know that the quote is important, I would love your input on these contractors. It has become clearer and clearer to me that we can't use Velox to do the work. I don't believe that they have the skills set. Both contractors who visited today pointed out problems in the framing work that they had done.

- Alvarado structural steel- https://alvaradostructuralsteel.com/ [I don't know if I loved in the end, perhaps they are more focused on steel then our needs]
- Peace of Mind - https://earthquakefoundation.com/ (would use experienced sub RH Construction and Structural, by far spent the longest time here really understanding the space, so perhaps my favorite- no quote yet)
- Crestlake Construction- https://www.instagram.com/crestlakeinc/ [this is a small, messy job for them, highest quote, waiting for updated quote]
- Micky Fitzpatrick-https://www.fitzpatrickconstruction.net/portfolio-1 [unclear feedback, smaller business, might take longer]
- Connor Daly- https://connordalyconstruction.com/ [liked him!]
- BNO Builders- https://bnobuilders.com/ [I don't think they are specialists, I just contacted them earlier on]
- Marc @ https://www.seismicretrofitters.com/ [Coming Monday]

Also:

- Peter at ABEI did not follow up.
- Kathleen, though I did not follow up with given what you said

Best,

Soumya Sastry (she/ her)

This correspondence is for discussion purposes only. Any agreements between the parties are subject to PG&E senior management approval and the prior execution of definitive documents.

You can read about PG&E's data privacy practices at PGE.com/privacy.

Gmail

Steven Huang <thestevenhuang@gmail.com>

Re: 1075-77 Fell Structural Contract

soumya sastry <soumya.sastry@gmail.com> Wed, Nov 6, 2024 at 7:43 PM
To: Steven Huang <thestevenhuang@gmail.com>

Steven, I trust that mark knows what he's doing and he's in range. I'd like to proceed with him.

---------- Forwarded message ---------
From: **Mark B** <barbcon1@gmail.com>
Date: Wed, Nov 6, 2024 at 4:47 PM
Subject: 1075-77 Fell Structural Contract
To: soumya sastry <soumya.sastry@gmail.com>

Soumya,

Please see the attached contract. I provided discounts where possible. The grand total is on page 3.

Jacob will drop off the permit package at your convenience.

I will need a stampede approved drawings before we can start the work. Feel free to call me if you have any questions.

Mark

Seismic Retrofitters Inc.
415-822-4200
SeismicRetrofitters.com

5 attachments

- **1077 Fell St Inspection Letter.pdf** 145K
- **p1. 1077 Fell St.pdf** 78K
- **p2. 1077 Fell St.pdf** 106K
- **p3. 1077 Fell St.pdf** 74K
- **p4-6. LEGAL TERMS - initials req.pdf** 467K

Seismic Retrofitters
Consulting
Structural Engineering
Construction
415-822-4200
www.quakeprep.org
LIC# 745230

Retrofit Now!

1075-1077 Fell St.HOA & Soumya Sastry
1075 Fell St.
San Francisco, CA 94117
713-447-1248
soumya.sastry@gmail.com

Owners Engineer Proposal Letter
For Quote # 2408 Rev # 0

November 6, 2024

Thank you for inviting Seismic Retrofitters to evaluate your property. Based on our initial inspection we have prepared the following Owners Engineer proposal specific to your seismic needs.

APPROACH

We offer several levels of retrofits depending ono the seismic vulnerabilities and budget.

Program 1 - Foundation bolting, plywood shear panels and seismic hardware of the existing walls. Engineering Not Required

Program 2 / Soft Story Retrofit -Includes everything in Program 1 plus adds Lateral Bracing (excavation, concrete and lateral bracing). Most older SF wood framed building will fail in the side to side direction not front to back hence lateral bracing. Engineering Required

INSPECTION FINDINGS

On October 28, 2024, we had the opportunity to inspect 1075 Fell St., San Francisco, CA 94117. We are pleased to share the following in regard to your seismic needs.

NOTE

This proposal is based on the inspection that was performed on the ground floor/ garage area and utility area. Any areas on the ground floor that were not accessible at the time of inspection may incur additional costs.

- 3 story 2 Unit TIC residential building
- Type: Attached building with 1 garage opening(s)
- Circa 1890
- Lacking adequate foundation bolts, seismic hardware and shear diaphragms
- Is considered a wood framed "Soft Story Building"
- 3 Gas meter(s)
- Foundation: Unreinforced concrete foundation in Poor condition
- Asbestos was not found on initial inspection but if found during construction will be required to be removed by a certified asbestos removal company

Seismic Retrofitters

Consulting
Structural Engineering
Construction

415-822-4200

www.quakeprep.org
LIC# 745230

Retrofit Now!

Owners Engineer Proposal Letter
For Quote # 2408 Rev # 0

UTILITY RETROFIT

Gas Water Heater:
Gas burning water heater with code compliant seismic strapping.

Gas Supply:
There is no earthquake valve on the PG&E meter. You may be eligible for a discount on your home owners insurance after the installation of the safety valve is completed. Please see this link for the type of https://www.littlefirefighter.com/gas-shutoff-valves/.

Gas Furnace:
Not Applicable

SCOPE OF WORK

The attached contract is based on structural drawings by Enertia Design dated 05/10/24
Exterior siding & Waterproofing excluded

The majority of the work will be completed within the number of weeks specified in the contract. We may need access to your building for one additional week to schedule the final building Inspection.

Please make accommodations to have the garage free of vehicles and personal belongings prior to our start of work.

YOUR PROPOSAL

Attached is a detailed Owners Engineer contract for your review which itemises the materail, labor and managment for the work. 'ESTMATE LETTER'!signed contract and deposit.

We will manage all construction and administrative requirements for your project. We have competed over one thousand projects and counting.

Thank you for choosing Seismic Retrofitters.

Sincerely,

Mark Barbagelata
Seismic Retrofitters

CONFIDENTIAL PROPOSAL

CONSTRUCTION FEES

DATE: 11/06/24

CONTRACT #: 2408 **REVISION #** 0

Seismic Retrofitters
650 Divisadero St
San Francisco, CA 94117
(415) 822-4200
Info@QuakePrep.org
LIC # 745230

CUSTOMER

Name:	1075-1077 Fell St.HOA & Soumya Sastry
Address:	1075 Fell St.
City:	San Francisco, CA 94117
Phone:	713-447-1248 **Alt:**
Email:	soumya.sastry@gmail.com

INITIALS

Svs

I/We, the Owner(s) of the property described above as "Customer Address" authorize Seismic Retrofitters, hereinafter referred to as "Contractor", to furnish all materials and labor necessary to construct and/or improve these premises in a good, workmanlike and substantial manner according to the following terms, specifications, and provisions:

A. LABOR & MATERIALS: Description of the work and materials to be used:

ID	UTILITY PROGRAM FEES	UNIT	QTY.	TOTAL
1	Underground Sewer Pipe Replacement	EA	0	$ -
2	Earthquake gas shut off valve	EA	0	$ -
3	Underground Water Pipe Replacement	EA	0	$ -
4	Electric Vehicle (EV) Charger	EA	0	$ -
5	0	EA	0	$ -
6	0	EA	0	$ -
	UTILITY PROGRAM FEES - TOTAL			**$ -**

ID	SEISMIC CONSTRUCTION FEES	UNIT	QTY.	TOTAL
1	Excavation & Dirt Removal	CuYd	30	$ 10,931
2	Portable Toilet Service	EA	1	$ 523
3	Site Protection / Dust Control		1	$ 550
4	Temp. Building Shoring & or Cribbing (structural support)	LF	40	$ 4,400
5	Removal of substrate material (plaster, drywall)	SF	600	$ 2,475
6	3 x Mudsill PT Wood Blocking	LF	200	$ 4,125
7	Structural Wood Framing	LF	400	$ 23,100
8	Epoxy Foundation Bolts	EA	55	$ 4,159
9	Seismic Hold Down Brackets (HDs)	EA	12	$ 1,856
10	Structural Framing Screws SDS	EA	500	$ 688
11	Seismic Strapping at Framing (Simpson LST1)	EA	0	$ -
12	Limited Access Foundation Plates (UFP-10)	EA	0	$ -
13	Floor Joist Attachments (FJA)	EA	0	$ -
14	Floor-to-Wall Seismic Connectors (Smp. A-35)	EA	300	$ 2,063
15	Wood Post-to-Wood Beam Seismic Braces	EA	0	$ -
16	Concrete Footings-to-Wood Post Hardware	EA	0	$ -
17	Insulation (R-16 or R-30)	SF	0	$ -
18	Sheer Panels over (E) Studs	EA	24	$ 5,940
19	Dywall / Plaster Patch (painting not included)	SF	0	$ -
20	Reinforced Concrete Grade Beam	CbYd	18	$ 14,850
21	New Reinforced Foundation	LF	0	$ -
22	UFER - Underground Grounding Req. by code	EA	0	$ -
23	New Structural Seismic Wall(s)	EA	0	$ -
24	Steel Moment Frame	EA	0	$ -
25	Wiring & Outlets for Electric Vehicle Charger (not incl. charging units or new Service Box)	EA	0	$ -
25	Removal of Debris (Hauling Fees)	CuYd	10	$ 2,063
26	Cleanup	EA	1	$ 413
27	Plumbing (to remove and reconnect)	EA	1	$ 1,650
28	Electrical (to remove and reconnect)	EA	1	$ 1,221
29	Simpson Walls Under Rear Extention	EA	2	$ 5,500
30	OTHER:	LF	0	$ -
	SEISMIC CONSTRUCTION FEES - TOTAL			**$ 86,505**

Note: Quantities are approximate

Engineering Services & Structural Drawings

DATE: 11/06/24
CONTRACT # 2408 **REVISION #** 0

Seismic Retrofitters
650 Divisadero St
San Francisco, CA 94117
(415) 822-4200
Info@QuakePrep.org
LIC # 745230

CUSTOMER		INITIALS
Name:	1075-1077 Fell St.HOA & Soumya Sastry	SVS
Address:	1075 Fell St.	
City:	San Francisco, CA 94117	
Phone:	713-447-1248 **Alt:**	
Email:	soumya.sastry@gmail.com	

B. SUPPLEMENTAL FEES

☐ Program 1: This work included bolting the mudsills to the foundation, reinforcing existing walls and flooring systems (google “cripple wall bracing” for a better understanding of what is involved in our Pro 1 job). Engineering Services are not required for permitting. We are providing a permit submittal package that includes drafting services / foundation plans in order to obtain a permit, if there are fees on line 1 below.

☐ Program 2: Licensed Engineering Services and Structural Drawings are required. Typically, this includes the Pro 1 work as well as additional seismic bracing, addressing the most vulnerable areas of the structure, typically large unsupported openings and soft story conditions. These jobs will always include excavation, concrete and new structural components like Steel Moment Frames, Seismic Brace Walls, and Engineered Seismic Panels. This work will often mitigate the need for a costly Foundation Replacement and will offer better protection against large seismic events.

☒ Owner's Engineer: This indicates that you have hired an engineer and we will work with them to complete the job. You are responsible for all related engineering fees.

	PERMIT DEVELOPMENT & ENGINEERING FEES		PRICE
1	Program 1: Plans Development & Permit Package	0	$ -
2	Program 2: Structural Drawings & Engineering Services	0	$ -
3	Custom Engineering Job (Retaining Wall,Foundation, Deck, Parking / Garage)	0	$ -
	We will start on your permit drawings after we have received this payment	**TOTAL**	**$ -**

The OWNER is responsible for government permit fees. We are unable to determine these exact cost, budget about $1,000 for Pro 1 job and about $5,000 for a pro 2 job.

Special Inspections & Testing: is required by the government (building department) on a Pro 2 or Mandated Retrofits, these services may include concrete strength, structural welding and steel reinforcement to mention of few. We will take care of scheduling and logistics, you are responsible to contract and pay them directly. Budget 2 to 5K for these services.

CONTRACT PAYMENT SCHEDULE

DATE: 11/06/24
CONTRACT #: 2408 **REVISION #:** 0

Seismic Retrofitters
650 Divisadero St
San Francisco, CA 94117
(415) 822-4200
Info@QuakePrep.org
LIC # 745230

CUSTOMER

Name:	1075-1077 Fell St.HOA & Soumya Sastry
Address:	1075 Fell St.
City:	San Francisco, CA 94117
Phone:	713-447-1248 **Alt:**
Email:	soumya.sastry@gmail.com

INITIALS
Svs

FEES SUMMARY

B. WORK AREA: Description of area that will be worked on:

All work to be performed on the ground level.

Utility Fees	$ -
Construction Fees	$ 86,505
Permit Drawings or Engineering Fees	$ -
Construction Management Fees	$ 4,576
PROJECT TOTAL	**$ 91,081**

C. PAYMENT: Contractor proposes to perform the above work, (subject to additions and/or deductions pursuant to authorized change orders), for the following fees:

PAYMENT SCHEDULE

A	CONTRACT DOWN PAYMENT	*To be PAID at CONTRACT signing*	$ 1,000
B	PERMIT SET & ENGINEERING Fees		$ -
C	BUILDING DEPARTMENT PERMIT FEES - Pay at time of PERMITTING	*NOTE 1 OWNER'S RESPONSIBILITY*	TBD
D	3rd PARTY SPECIAL INSPECTION FEES - As required by Building Department	*NOTE 1 OWNER'S RESPONSIBILITY*	TBD
E	START WORK Payment - Due at COMMENCEMENT OF WORK	*NOTE 2*	$ 25,000
0	**CONSTRUCTION PROGRESS PAYMENTS**	*NOTE 3*	
1	Due upon completion of :	*Shoring*	$ 10,000
2	Due upon completion of :	*Excavation*	$ 20,000
3	Due upon completion of :	*Framing*	$ 20,000
4	Due upon completion of :	*Shear Wall*	$ 10,000
5	Due upon completion of :	*Dry Wall (Per Fire Code)*	$ -
6	Due upon down payment for Structural Steel	*Steel Material Order*	$ -
7	Due upon completion of :	*Completion of work*	$ 5,081
		TOTAL	**$ 91,081**

NOTE 1 Permit fees & special Inspections not included. Owner to provide Permit checks made payable to the appropriate Building Department:

[X] **San Francisco - "CCSF-DBI"** [ ] COUNTY:

>> Additional payments may be required for other Tests & Fees which are NOT itemized in this proposal, as needed.

NOTE 2 COMMENCEMENT OF WORK means the physical delivery of materials onto the premises and /or the performance of any labor. Commencement shall be subject to permissible delays as described in PROVISION 6 of the attached LEGAL TERMS.

NOTE 3 PROGRESS PAYMENTS are due within 48 hours of passing each building inspection or project milestone specified. CHANGE ORDERS shall be quoted and invoiced separately. Change Orders to be paid in full at the signing of each Change Order contract.

Approximate Job Length: 10 *Weeks (from building permit approval date)*

Approximate Start Date: TBD **Approximate Completion Date:** TBD

D. ACCEPTANCE: This contract is approved and accepted. I (we) understand there are no oral agreements between the parties of this agreement. The written terms, provisions, plans (if any) and specifications in this contract are the entire agreement between the parties. Changes in agreement shall be by written change order only with the express approval of both Contractor and Owner(s).

This offer is valid for 30 days. Additional contract provisions are on the attached LEGAL TERMS page.

Soumya Sastry (Nov 14, 2024 16:19 PST)
Approved and accepted (owner/agent) 14/11/24 date

Approved and accepted (owner/agent) date

Approved and accepted (contractor) 11/6/2024

IMPORTANT:

Owner/Agent, please INITIAL the "NOTICE" section of the "Arbitration of Disputes" (PROVISION 14 of the LEGAL TERMS) to agree to Arbitration.

Note: This contract may be withdrawn after 30 days from contract proposal date.

SEISMIC RETROFITTERS CONTRACT - LEGAL TERMS

1. **Contract, Plans, Specification, Permits and Fees.** The work described in this contract shall be done according to the plans and the plan specifications (if any) except in the case of conflict when the provisions of this contract shall have control over both the plans and the plan specifications. In the event Seismic Retrofitters Inc. has provided a design build contact as noted on page 2 & 3 of the attached contract. Then it is assumed the material type and or count used during the course of design and or construction may change. Building permit fees are NOT included in this contract and will be paid for by Owner. All other charges not covered by this contract including but not limited to, special inspections and testing, taxes, city assessments, and any other fees, required by any government body, utility company or the like shall be paid for by Owner.

Initial Svs_____

2. **Property Lines.** Owner is responsible to locate and inform Contractor of the location of all property lines. At the discretion and direction of Contractor, Owner may be required to provide at Owner's expense, a licensed surveyor's map of the property showing property lines.

Initial Svs_____

3. **Installation.** Owner understands that Contractor may or may not install the materials. Contractor has the right to subcontract any part of, of all of, the work herein.

Initial Svs_____

4. **Change Orders.** Should Owner, construction lender, or any government body or inspector require any modification to the work covered under this contract, any cost incurred by Contractor shall be added to the contract price as extra work and Owner agrees to pay Contractor his normal selling price for such extra work at the time of signing each Change Order. All extra work as well as any other modifications to the original contract shall be specified and approved by both parties in a written change order. All change orders shall become a part of this contract and shall be incorporated herein.

Initial Svs_____

5. **Owner's Responsibility: Insurance etc.** Owner is responsible for the following: (1) to see that all necessary water, electrical power, access to premises are provided on the premises.(2) to provide a storage area on the premises for equipment and materials. (3) to clear the work area of all cars and storage items that prevent Contractor from having free access to the work areas such as but not limited to furniture, appliances, draperies, clothing and other personal effects, vehicles, tools or garden equipment. In the event that Owner fails to relocate such items, Contractor may relocate these items as required but in no way is Contractor responsible for damage to these items during their relocation and during the performance of the work. (4) To obtain permission from the owner(s) of adjacent property (ies) that Contractor must use to gain access to the work areas. Owner agrees to be responsible and to hold Contractor harmless and accept any risks resulting from the use of adjacent property (ies) by Contractor. (5) To correct any existing defects which are recognized during the course of the work. Contractor shall have no liability for correcting any existing defects such as, but not limited to, dry rot, structural defects, or code violations. (6) to maintain property insurance with Fire, Course of Construction, all Physical Loss with Vandalism and Malicious Mischief clauses attached, in a sum at least equal to the contract price, prior to and during performance of this contract. If the project is destroyed or damaged by an accident, disaster, earthquake or calamity, or by theft or vandalism, any work or materials supplied by Contractor in reconstructing or restoring the project shall be paid for by Owner as extra work. (7) to hold Contractor harmless for cracks in walls and ceilings resulting from jacking up and leveling floors. (7) to notify tenants about any situations or events that the Contractor communicates to the owner including but not limited to shut off of water/gas/electricity, need to remove car & storage items from work area(s), possibility of cracks in stucco/plaster in living units due to seismic retrofit work on building ground floor(repair not covered by this contract),

Initial Svs_____

6. **Delay.** Contractor shall not be held responsible for any damage occasioned by delays resulting from work done by Owner's subcontractors, extra work, acts of owner or owner's agent including failure of owner to make timely progress payments or payments for extra work, shortages of material and/or labor, bad weather, fire, strike, war, governmental regulations, or any other

contingencies unforeseen by Contractor of beyond Contractor's reasonable control.

Initial Svs _____

7. **Surplus Materials and Salvage.** Any surplus materials left over after this contract has been completed are the property of Contractor and will be removed by same. No credit is due Owner on returns for any surplus materials because this contract is based upon a complete job. All salvage resulting from work under this contract is the property of Contractor.

Initial Svs _____

8. **Cleanup & Advertising.** Upon completion, and after removing all debris and surplus materials, wherever possible, Contractor will leave premises in a neat, broom clean condition. Owner hereby grants to Contractor the right to display signs and advertise at the job site for the period of time starting at the date of signing of this contract and continuing uninterrupted until fourteen (14) days past the date the job is completed and payment in full has been made. Owner grants Contractor the right to publish the project street address on a "references" list which may be given to prospective customers.

Initial Svs _____

9. **Unanticipated Conditions & Concealed Damage.** Expense incurred because of unusual or unanticipated conditions shall be paid for by owner as extra work (conditions such as, but not limited to, ground conditions that require fill, or unusually hard soil, rocky soil or the presence of ground water). Contractor will inform Owner of any dry rot or other deterioration or unanticipated condition which is concealed and is discovered during the course of the work Contractor is not responsible to repair any such discovered deterioration or condition and any work done by Contractor to remedy such will only be done as extra work in a written Change Order, unless the aforementioned work is included in the original contract. Change Orders are to be paid in full at the time of signing the Change Order. The impact to job schedule will be indicated on each Change Order contract.

Initial Svs _____

10. **Hazardous Substances.** Owner understands that Contractor is not qualified as a Hazardous Material Handler or Inspector or as a Hazardous Material Abatement contractor. Should any asbestos or other hazardous substances be found on the premises, the Owner is responsible for arranging and paying for abatement of these substances before work can begin.

Initial Svs _____

11. **Right to Stop Work and to Withhold Payment on Labor and Materials.** If any payment is not made to Contractor as per this contract, Contractor shall have the right to stop work and keep the job idle until all past due progress payments are received. Contractor is further excused by Owner from paying any material, equipment and/or labor supplies or any subcontractors (hereinafter collectively called "suppliers"), during the period that Owner is in arrears in making payments to Contractor for bills received during that same period. If these same "suppliers" make demand upon Owner for payment, Owner may make such payment on behalf of Contractor and Contractor shall reimburse Owner for this amount at such time that Owner becomes current with Contractor for all past due payments. Owner is responsible to verify the true amounts owed by Contractor to these same "suppliers", prior to making payment on behalf of Contractor. Owner shall not be entitled, under any circumstances, to collect as reimbursement from Contractor any amount greater than that exact amount actually and truly owed by Contractor to these same "suppliers", for work done or materials supplied on Owner's job.

Initial Svs _____

12. **Collection.** Owner agrees to pay all collection fees and charges including but not limited to all legal and attorney fees that result should Owner default in payment of this contract. Overdue accounts are subject to interest charged at the rate of 10% per annum.

Initial Svs _____

13. **Legal Fees.** In the event litigation or arbitration arises out of this contract, prevailing party(ies) are entitled to all legal, arbitration, and attorney fees. The court or arbitrator shall not be bound to award fees based on any

set fee schedule but shall, if it so chooses, aware the true amount of all costs, expenses and attorney fees paid or incurred.

Initial Svs _____

14. **Payment Schedule – Page 3 of Contract.** Payments are made according to the Payment Schedule on Page 3 of the work contract. A "Job Start" date can be reserved only upon receipt of the signed contract, $1000 deposit and, if applicable, the engineering fee to pay for developing the structural engineering retrofit plans for obtaining the building permit. On the first day of work, the "Start Work" check is due. All other payments will be invoiced upon completion of each work milestone as specified in the Payment Schedule on Page 3 of the contract.

Initial Svs _____

15. **Volatility in Market.** Seismic Retrofitters Inc. bears no responsibility for market fluctuation hence material, fuel and labor cost lobar due to pandemics, war and acts not in our control that will cause the cost of goods and services to increase. The aforementioned cost will be charged to you with accordance to the revised pricing. For instance, steel cost from our suppliers are only legitimate for five business days. The sooner we start your job and secure pricing the less likely these cost will increase.

Initial Svs _____

16. **Arbitration of Disputes.** Any controversy or claim arising out of or relating to this proposal/contract, or the breach thereof, shall be settled by arbitration in accordance with the applicable Construction Industry Arbitration Rules of the American Arbitration Association which are in effect at the time the demand for arbitration is filed. A judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof. Any arbitration award shall be subject to correction and/or vacation for the reasons stated in the Cod of Civil Procedure. The arbitrator shall award reasonable attorney fees and expenses to the prevailing party. After being given due notice, should any party fail to appear at or participate in the arbitration proceedings, the arbitrator shall make an award based upon the evidence presented by the party(ies) who do (does) appear and participate. Notwithstanding Contractor's right to arbitrate, Contractor does not waive any of its lien rights. **NOTICE:** By initialing in the space below you are agreeing to have any dispute arising out of the matters included in the "arbitration of disputes" provision decided by neutral arbitration as provided by California Law and you are giving up any rights you might possess to have the dispute litigated in a court or jury trial. By initialing in the space below you are giving up your judicial rights to discovery and appeal, unless those rights are specifically, included in the "arbitration of disputes" provision. If you refuse to submit to arbitration after agreeing to this provision, you may be compelled to arbitrate under the authority of the Business and Professions Code or other applicable laws. Your agreement to this arbitration provision is voluntary.

We have read and understand the foregoing and agree to submit disputes arising out of the matters included in the "arbitration of disputes" provision to neutral arbitration.

I Agree to Arbitration: Svs _____
(Initials Owner)

I Agree to Arbitration: MB _____
(Initials Contractor)

Contractors are required by law to be licensed and regulated by the Contractors' State License Board which has jurisdiction to investigate complaints against contractors if a complaint regarding a patent act or omission is filed within four years of the date of the alleged violation. A complaint regarding a latent act or omission pertaining to structural defects must be filed within 10 years of the date of the alleged violation. Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board, P.O. Box 26000, Sacramento, CA 95826.

1077 Fell St Contract Ready to Sign

Final Audit Report 2024-11-15

Created:	2024-11-14
By:	Mark Barbagelata (barbcon1@gmail.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAYrC4eXH3sFxgmCXXWvV2hwuGDyVl4JXx

"1077 Fell St Contract Ready to Sign" History

Document created by Mark Barbagelata (barbcon1@gmail.com)
2024-11-14 - 11:36:19 PM GMT- IP address: 162.245.23.254

Document emailed to Soumya Sastry (soumya.sastry@gmail.com) for signature
2024-11-14 - 11:36:24 PM GMT

Email viewed by Soumya Sastry (soumya.sastry@gmail.com)
2024-11-14 - 11:36:31 PM GMT- IP address: 66.249.84.74

Document e-signed by Soumya Sastry (soumya.sastry@gmail.com)
Signature Date: 2024-11-15 - 0:19:20 AM GMT - Time Source: server- IP address: 162.245.23.33

Agreement completed.
2024-11-15 - 0:19:20 AM GMT

Exhibit 8 - Delivered & Approved Plans (2024-0517-2393)

Gmail

Steven Huang <thestevenhuang@gmail.com>

Re: 1077 Fell St Permit Drawings

Doug Burrows <doug@veloxsf.com> Mon, Oct 28, 2024 at 4:01 PM
To: Trent Kloppenburg <trent@veloxsf.com>
Cc: soumya sastry <soumya.sastry@gmail.com>, mark@quakeprep.com, Steven Huang <thestevenhuang@gmail.com>

Trent, thanks for adding me here,

Attached is a digital approved set of drawings from SFDBI. I have the original set and a color copy we can provide to the owner when requested.

Thank you,

24246937.zip

[Quoted text hidden]

--

Douglas J Burrows
Velox Design & Construction
442 Haight St San Francisco,
CA 94117
CSLB lic #1059825
Ph: (415) 416-0177
Web: www.veloxsf.com/projects

We build out commercial Spaces, take a look at the brand Mr. Charlies Thats us!

Our latest VELOX projects sold below

166 Meadowbrook Dr San Francisco

1648 Sweetwood Dr., Daly city

363 Scott St San Francisco

Thank you,

LIC 1059825
Business Logo

VELOX
DESIGN + CONSTRUCTION

companyLogoSmall.png
8K

Gmail Steven Huang <thestevenhuang@gmail.com>

Re: 1077 Fell St Permit Drawings

Doug Burrows <doug@veloxsf.com> Tue, Oct 29, 2024 at 3:56 PM
To: soumya sastry <soumya.sastry@gmail.com>
Cc: mark@quakeprep.com, Trent Kloppenburg <trent@veloxsf.com>, Steven Huang <thestevenhuang@gmail.com>

Happy to drop the plans off tomorrow to you Soumya after 1 PM,

Let me know if you're available,

Thank you,
[Quoted text hidden]



companyLogoSmall.png
8K

ATTACHMENT A

DEPARTMENT OF BUILDING INSPECTION
City & County of San Francisco
49 South Van Ness Ave, 5th Floor, San Francisco, California 94103

REQUEST FOR APPROVAL OF LOCAL EQUIVALENCY FOR MODIFICATION OR ALTERNATE MATERIALS, DESIGN OR METHODS OF CONSTRUCTION

DATE SUBMITTED 8/14/2024 [Note: This form shall be recorded as part of the permanent construction records of the property]

If no permit application has been filed, a Preapplication Review Fee is required for review of a request for local equivalency or modification, per SFBC Table 1A-B, Item 5. Additional fees may be required by Fire Department and other City review agencies.

If a permit application has been filed, no additional fees are required for this review.

Permit Application # 2024-0517-2393

Property Address: 1077 FELL St.

Block and Lot: 0825 / 050 Occupancy Group: R3 Type of Construction: V-B No. of Stories:

Describe Use of Building DUPLEX

RECEIVED
AUG 14 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN SET MEETS THE QUALITY STANDARD FOR IMAGING
ACCEPTED

Under the authority of the San Francisco Building Code, Sections 104A.2.7 and 104A.2.8; the San Francisco Mechanical Code, Section 302.2; the San Francisco Electrical Code, Section 89.117; and the San Francisco Plumbing Code, Section 301.3; the undersigned requests modifications of the provisions of these codes and/or approval of alternate materials, designs or methods of construction. Two copies of supporting documents, including plans showing the proposed modifications or alternate materials, design or methods of construction, are attached.

Regular Code Requirement (specify Code and Sections)

~~CBC~~ ~~1031~~ CBC 1031 - EERO

THE SFFD CAN PERFORM A RESCUE WITH A 27' STRAIGT LADDER FROM THE PUBLIC WAY THROUGH THE FRONT DOOR ~~OR GARAGE OR SIDE CORRIDOR/WALKWAY/TRADESMAN~~, THROUGH THE FAMILY ROOM, THROUGH THE ~~BEDROOM~~ OUT THE ~~SLIDING~~ DOOR TO THE REAR YARD/~~LIGHTWELL/COURTYARD~~; RAISED TO ALL BEDROOM EERO'S WITHOUT OBSTRUCTION

Proposed Modification or Alternate

REPLACE (E) WINDOW BY A (N) DOOR FACING THE REAR YARD.

Case-by-Case Basis of Request - Describe the practical difficulties presented in meeting the specific conditions of the code and how the proposed modification or alternate meets the intent of the code. A separate form should be filled for each requested modification or alternate. Attach copies of any Administrative Bulletin, Code Ruling, reference, test reports, expert opinions, etc., which support this request. The Department may require that an approved consultant be hired by the applicant to perform tests or analysis and to submit an evaluation report to the Department for consideration.

LAND LOCK TO ACCESS REAR YARD.

	PROJECT SPONSOR	ARCHITECT/ENGINEER
Requested by:		
Print Name:	ARIEL LORENZALE	
Signature:		[PROFESSIONAL STAMP HERE]
Telephone:	415-505-5288	

Roger Ly, SFFD
AUG 14 2024

PLAN REVIEWER COMMENTS:

RECOMMENDATIONS: Approve Approve with conditions Disapprove

[signed off/dated by:]

Plan Reviewer: Philip Chan, DBI AUG 14 2024

Division Manager: David Jones, DBI Reviewed & Approved for ESCAPE ONLY

for Director of Bldg. Inspection: AUG 14 2024

for Fire Marshal: Dee Lau, SFFD AUG 14 2024 Fire Access Only

CONDITIONS OF APPROVAL or OTHER COMMENTS

RECEIVED
AUG 14 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR IMAGING
ACCEPTED

Roger Ly, SFFD
AUG 14 2024

GENERAL CONSTRUCTION NOTES

1. ANY ERRORS, OMISSIONS, OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
2. THE GENERAL CONTRACTOR AND ANY SUBCONTRACTORS SHALL IMMEDIATELY EXAMINE THE SITE AND PORTIONS THEREOF WHICH WILL AFFECT THIS WORK. CONTRACTORS SHALL COMPARE IT WITH THE DRAWINGS AND SATISFY THEMSELVES AS TO CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE GENERAL CONTRACTOR SHALL VERIFY THAT NO CONFLICTS EXIST IN LOCATIONS OF ANY AND ALL MECHANICAL, TELEPHONE, ELECTRICAL, PLUMBING (TO INCLUDE ALL PIPING, DUCT WORK, AND CONDUIT) AND THAT ALL REQUIRED CLEARANCES FOR INSTALLATION AND MAINTENANCE OF ABOVE EQUIPMENT ARE PROVIDED. EXPOSED OR CONCEALED ELEMENTS SHALL BE DETERMINED AND REVIEWED WITH ARCHITECT PRIOR TO CONSTRUCTION PROCEEDING.
3. WRITTEN DIMENSIONS TAKE PRECEDENCE. DO NOT SCALE DRAWINGS. DETAILS SHALL GOVERN OVER PLANS AND ELEVATIONS
4. ALL DIMENSIONS ARE TO FACE OF STUD, UNLESS OTHERWISE NOTED. DIMENSIONS NOTED AS "CLR" OR "CLEAR" ARE TO BE PRECISELY MAINTAINED. DIMENSIONS ARE NOT ADJUSTABLE WITHOUT ARCHITECT'S APPROVAL UNLESS OTHERWISE NOTED AS "+/-"
5. ALL DIMENSIONS NOTED AS "V.I.F." ARE TO BE CHECKED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IMMEDIATELY REPORT ANY DISCREPANCIES TO THE ARCHITECT.
6. ALL DIMENSIONS, NOTES, AND DETAILS SHOWN ON ONE PORTION OF THE DRAWING SHALL APPLY TYPICALLY TO ALL OPPOSITE HAND AND/OR SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. VERIFY ALL EQUIPMENT SIZES BEFORE BEGINNING WORK.
8. FURNISH AND INSTALL ALL MISCELLANEOUS AND STRUCTURAL ITEMS (STEEL, ALUMINUM, ETC. INCLUDING MATERIALS FOR SEPARATION OF DISSIMILAR MATERIALS) FOR EXTERIOR WALL SYSTEMS, WINDOWS, ARCHITECTURAL GLASS, RAILINGS, PARAPET WALLS, ETC. ASSOCIATED WITH THE BUILDING ENVELOPE AND ROOF.
9. COORDINATE LOCATION- AND PROVIDE BLOCKING, BACKING, AND/OR REINFORCEMENTS IN PARTITIONS FOR ALL CABINETS, COUNTERTOPS, AND ANY WALL-MOUNTED ITEMS. REFER TO ELEVATIONS AND DETAILS FOR LOCATIONS OF WALL STANDARDS AND OTHER SUPPORTS.
10. NEW WALL SURFACES SHALL ALIGN WITH EXISTING, ADJACENT, OR ADJOINING SURFACES, U.O.N. JOINTS SHALL BE TAPED AND SANDED SMOOTH WITH NO VISIBLE JOINTS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY FRAMING, BRACING, AND STRUCTURING ALL WALL, BULKHEAD, AND OTHER DRYWALL CONSTRUCTION IN ACCORDANCE WITH APPLICABLE TYPICAL DETAILS CONTAINED IN THE DRAWINGS WHETHER OR NOT SPECIFICALLY REFERENCED IN THE PLANS.
12. PROVIDE BLOCKING/BACKING AND REINFORCEMENT ABOVE FOR SUPPORT OF LIGHT FIXTURES, EQUIPMENT, OR ANY OTHER CEILING-MOUNTED ITEMS.
13. ALL WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS WHICH SHALL INCLUDE THE OUTLINE SPECIFICATIONS, THE DRAWINGS, AND ALL ADDENDA AND MODIFICATIONS ISSUED BY THE ARCHITECT.
14. GRID LINES AND COLUMN CENTER LINES ARE SHOWN FOR REFERENCE ONLY. VERIFY EXACT LOCATION IN FIELD.
15. IN CASE OF CONFLICT OR DISCREPANCIES IN CONTRACT DOCUMENTS, CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY.
16. FEATURES OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME CHARACTER AS SHOWN FOR SIMILAR CONDITIONS.
17. "TYPICAL" OR "TYP." SHALL MEAN THAT THE CONDITION IS REPRESENTATIVE FOR SIMILAR CONDITIONS THROUGHOUT, UNLESS OTHERWISE NOTED. DETAILS ARE USUALLY KEYED AND NOTED "TYP" ONLY ONCE, WHEN THEY FIRST OCCUR.
18. "SIMILAR" OR "SIM." MEANS COMPARABLE CHARACTERISTICS FOR THE CONDITIONS NOTED. VERIFY DIMENSIONS, ORIENTATION, AND CONDITIONS ON PLANS AND ELEVATIONS
19. WHERE REQUIRED BY INSTALLATION OF NEW CONSTRUCTION, REPLACE AND OR PROVIDE NEW BATT INSULATION AT ALL EXTERIOR ASSEMBLIES AS INDICATED BELOW. SEE T.24 FOR ADDITIONAL REQUIREMENTS.
WALLS/CEILING: R-19
20. IF ANY MATERIALS SUSPECTED OF CONTAINING ASBESTOS ARE ENCOUNTERED, DO NOT DISTURB THE MATERIALS. IMMEDIATELY NOTIFY THE ARCHITECT AND THE OWNER.
21. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR JOBSITE SAFETY AT ALL TIMES, INCLUDING BUT NOT LIMITED TO SAFETY OF PERSONS AND PROPERTY, AND MEANS AND METHODS OF CONSTRUCTION.

APPLICABLE CODES

All construction work shall comply with the 2022 California Code of Regulations Title 24, including:

1. 2022 California Building Code.
2. 2022 California Plumbing Code.
3. 2022 California Mechanical Code.
4. 2022 California Electrical Code.
5. 2022 California Building Energy Code.
6. 2022 California Fire Code.
7. 2022 California Green Building Standards.
8. 2022 Residential Building Code.

PROJECT INFORMATION

Owner: Steven Huang
Address: 1077 Fell St, San Francisco, CA 94117
Phone: 425-876-1946

SCOPE OF WORK

REVISION TO PERMIT #2023-0426-6513 / #2023-0609-9711 / #2023-0926-7475

- (E) BATHROOM LAYOUT CHANGE.
- (E) KITCHEN LAYOUT CHANGE AND ADDITION.
- LIGHTING UPGRADE WHOLE UNIT.
- REPLACE 2 WINDOWS. LIKE FOR LIKE. NOT VISIBLE FROM STREET.

1077 FELL ST, SAN FRANCISCO, CA

Green Halo Tracking Number Required

SHEET INDEX

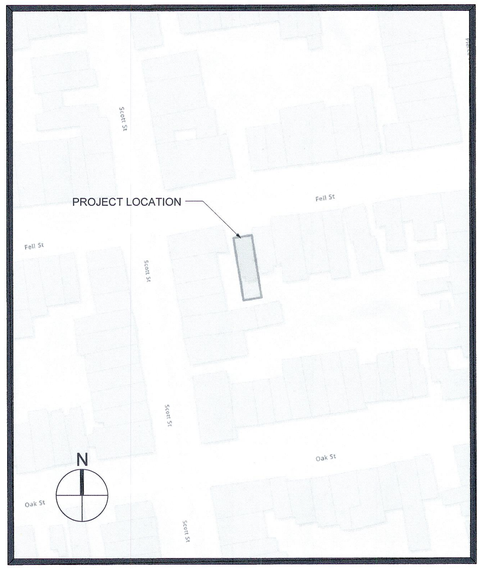
ARCHITECTURAL

A-0.00	COVER SHEET
A-1.01	FLOOR PLANS - EXISTING AND NEW
A-1.02	ELEVATIONS - EXISTING AND NEW
E-1.01	ELECTRICAL PLANS
EN-1.01	TITLE 24
EN-1.02	TITLE 24
EN-1.03	GS5 FORM

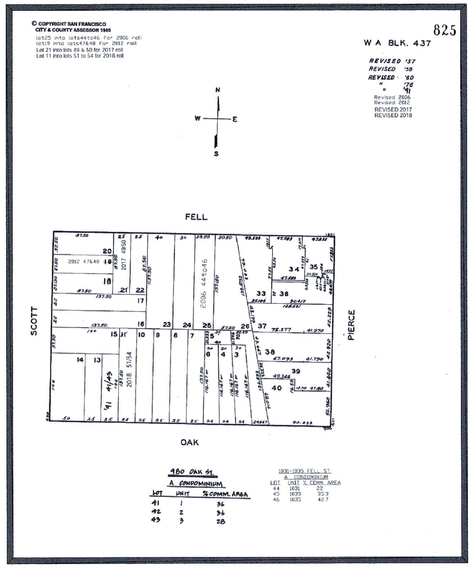
STRUCTURAL

S1.0	GENERAL NOTES
S1.A	TYPICAL WOOD DETAILS
S2	FOUNDATION PLAN
S3	STRUCTURAL DETAILS
S4	STRUCTURAL DETAILS
W1	STRUCTURAL DETAILS
W2	STRUCTURAL DETAILS

VICINITY MAP (No scale)

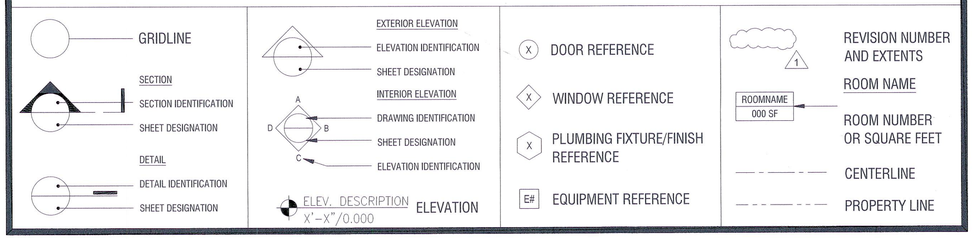


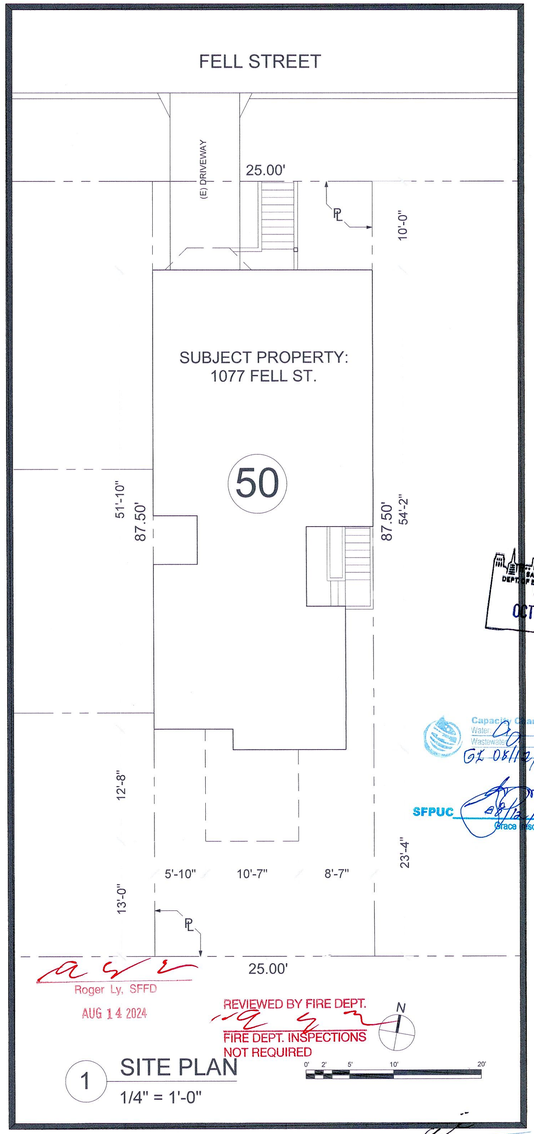
ASSESSOR'S MAP



BUILDING DATA			
Type of Construction	V-B	Ground Floor (E) Conditioned Area	721 sf
Type of Occupancy	R3	Ground Floor (N) Conditioned Area	45 sf
Parcel (Block/Lot)	0825/050	Ground Floor TOTAL Conditioned Area	766 sf
Sprinklers	NO		
Stories	2		
Basements	0		
Units	2		

REFERENCE SYMBOLS





1 SITE PLAN
1/4" = 1'-0"

Roger Ly, SFFD
AUG 14 2024

REVIEWED BY FIRE DEPT.
FIRE DEPT. INSPECTIONS NOT REQUIRED

PLAN REVIEW BY SFFD LIMITED TO:
1. FIRE DEPARTMENT ACCESS
2. FIRE FLOW REQUIREMENTS

Christian Gilmartin, DBI MECH
AUG 12 2024

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CA 94117

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SPECIAL INSPECTION REQUIRED PER SFBC SECTION 1704

Philip Chan, DBI
AUG 12 2024
Philip Chan, DBI
AUG 14 2024

RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR IMAGING ACCEPTED

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED
OCT 02 2024

Capacity Charges
Water
Wastewater
02 08/12/24

SFPUC 08/12/2024
Grace Hinson

REVISIONS	
date	by

drawn: A. Lorenzale
checked:
date: 8/2/2024
scale: AS NOTED
project No: 0445
drawing title

COVER SHEET

sheet
A-0.00

1 of 14 sheets.

2024-0517363

CONTRUCTION NOTES

1. CONTRACTOR IS TO VERIFY ALL (E) DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION.
2. CARE SHALL BE TAKEN TO ELIMINATE DAMAGE TO (E) MATERIALS AND SURFACES DURING CONSTRUCTION. ANY DAMAGES TO (E) CONSTRUCTION SHALL BE REPLACED OR REPAIRED AT NO ADDITIONAL COST.
3. CONTRACTOR SHALL REPAIR ANY DAMAGE TO (E) WALLS AND FLOORS CAUSED BY DEMOLITION OF (E) PARTITIONS & CEILING.
4. ALL DIMENSIONS ARE TO FACE OF FINISH OR CENTERLINE, U.N.O.
5. ALL BLOCKING AND FURRING SHALL BE FIRE TREATED AS REQUIRED BY BUILDING CODE.
6. ALL PARTITIONS ABUTTING EXISTING BUILDING CONSTRUCTION SHALL ALIGN FINISH FACE TO FINISH FACE U.N.O.
7. ALL PARTITIONS SHALL BE BRACED PER THE REQUIREMENTS OF CURRENT LOCAL SEISMIC CODE.
8. ALL DOORS TO BE UNDERCUT AS REQUIRED TO CLEAR FINISH FLOOR BY 1/4".
9. ALL WORK TO BE INSTALLED PLUMB, LEVEL, SQUARE, AND TRUE AND IN PROPER ALIGNMENT.
10. CONTRACTOR TO PROTECT FINISHES IN PATH OF TRAVEL TO AREA OF WORK.

PLUMBING NOTES

P1. Gas vent terminations shall meet the requirements of CMC 802.6 & SFMC 802.6.2.

P2. Combustion air shall meet the requirements of CMC Chapter 7.

P3. Environmental air ducts shall terminate 3 feet from the property line and 3 feet from openings into the building per CMC 504.5 and provide with back-draft dampers per CMC Table 504.1.

P4. Clothes dryer exhaust shall be a minimum 4", terminate to the outside of the building, shall be equipped with a back-draft damper and meet the requirements of CMC 504.3. Provide 100 sq. in. minimum make-up air opening for domestic dryers.

P5. 100% of the construction waste generated by this project shall be recycled or salvaged for use.

P6. Plastic Plumbing Pipe shall not be used for domestic water supply or sanitary waste system within the building.

P7. Shower and Tub-Shower combinations shall be pressure balanced or thermostatic mixing type control valves per CPC 418.

P8. Shower shall be 1024 sq. in. Min. Must encompass a 30" circle. Shower door Min. 22" clear opening.

P9. Control valves and Showerheads shall be located on sidewall of shower compartment or otherwise arranged so that the showerhead does not discharge directly at the entrance to the compartment so that the bather can adjust valves prior to stepping into the shower spray.

P10. Minimum 26 gage steel heating supply ducts shall be installed between the garage and new habitable spaces.

P11. Provide insulation on all new domestic hot water piping in new accessory units, rooms down additions and new buildings. The insulation shall be the same thickness of the water piping up to 2" water piping size.

P12. Water Heater shall be raised 18" above the Floor.

P13. Seismically strap the water heater with two straps (one 1/3 down from the top of the tank and one strap 4" above the controls)

P14. R-6.0 duct insulation shall be installed if 40 feet or less of new ducts are installed in unconditioned space.

P15. 1 inch insulation shall be installed on first 5 feet of cold water pipes at the water heater.

P16. All interior spaces intended for human occupancy shall be provided with space heating per CBC 1204.1.

EGRESS WINDOW REQUIREMENTS

A finished sill height above the finished floor of 44" or less.
A minimum opening of 5.7 square feet net clear area.
A minimum net clear opening dimension of 20" in width.
A minimum net clear opening dimension of 24" in height.

WINDOW TYPE ABBREVIATION

DH: DOUBLE HUNG
CS: CASEMENT
FX: FIXED
SL: SLIDDER

WATER CONSERVATION REQUIREMENTS

W1. Water closets shall not exceed 1.28 gallons per effective flush.

W2. Single showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi.

W3. Multiple showerheads serving one shower shall have a combined flow rate of not more than 1.8 gallons per minute at 80 psi.

W4. Bathroom faucets shall have a maximum flow rate of not more than 1.2 gallons per minute at 60 psi.

W5. Maximum water factor equal to or less than 6.0 for clothes washers.

WALLS AND INTERIOR PARTITIONS, WOOD FRAMED

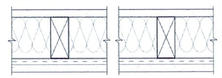
GA FILE NO. WP 3242	GENERIC	1 HOUR FIRE	50 to 54 STC SOUND

GYPSUM WALLBOARD, RESILIENT CHANNELS, MINERAL OR GLASS FIBER INSULATION, WOOD STUDS

Resilient channels 16" o.c. attached at right angles to ONE SIDE of 2 x 4 wood studs 24" o.c. with 1¼" Type S drywall screws. One layer ⅝" type X gypsum wallboard or gypsum veneer base applied at right angles to channels with 1" Type S drywall screws 8" o.c. with vertical joints located midway between studs. 3" mineral or glass fiber insulation in stud space.

OPPOSITE SIDE: One layer ⅝" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to studs with 6d cement coated nails, 1⅞" long, 0.0915" shank, 15/64" heads, 7" o.c.

Vertical joints staggered 24" on opposite sides. **(LOAD-BEARING)**

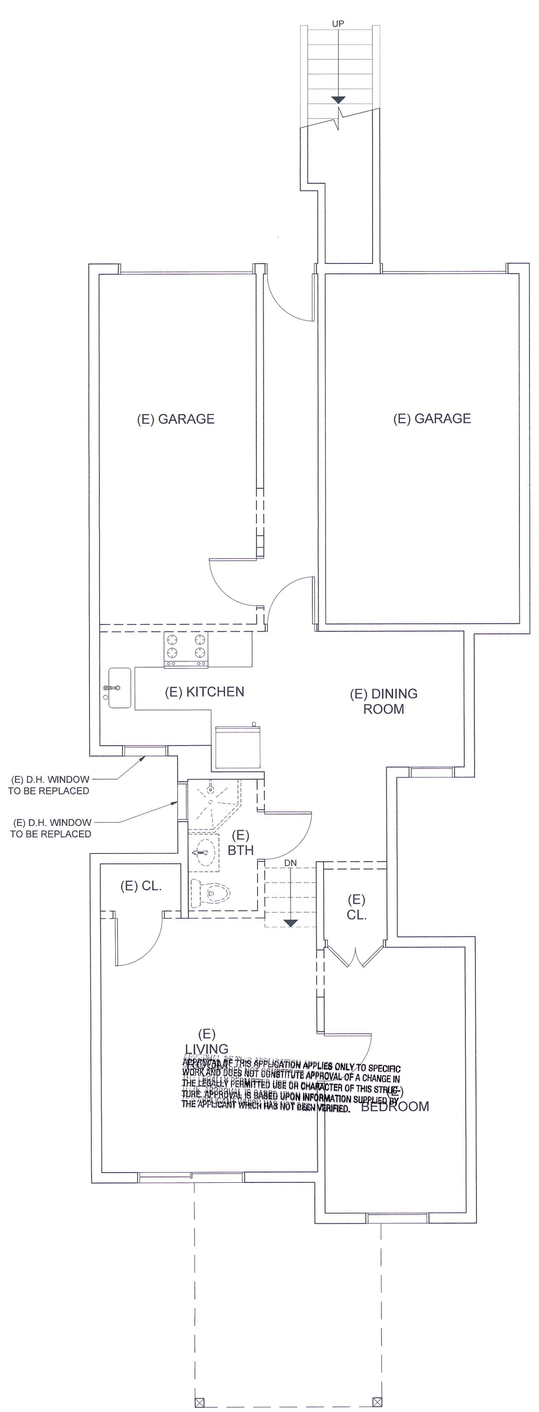


Thickness: 5⅜"
Approx. Weight: 7 psf
Fire Test: Based on UL R14196, 05NK05371, 2-15-05, UL Design U309
Sound Test: NRCC TL 93-098, IRC-IR-761, 3/98

3 FIRE RATED WALL

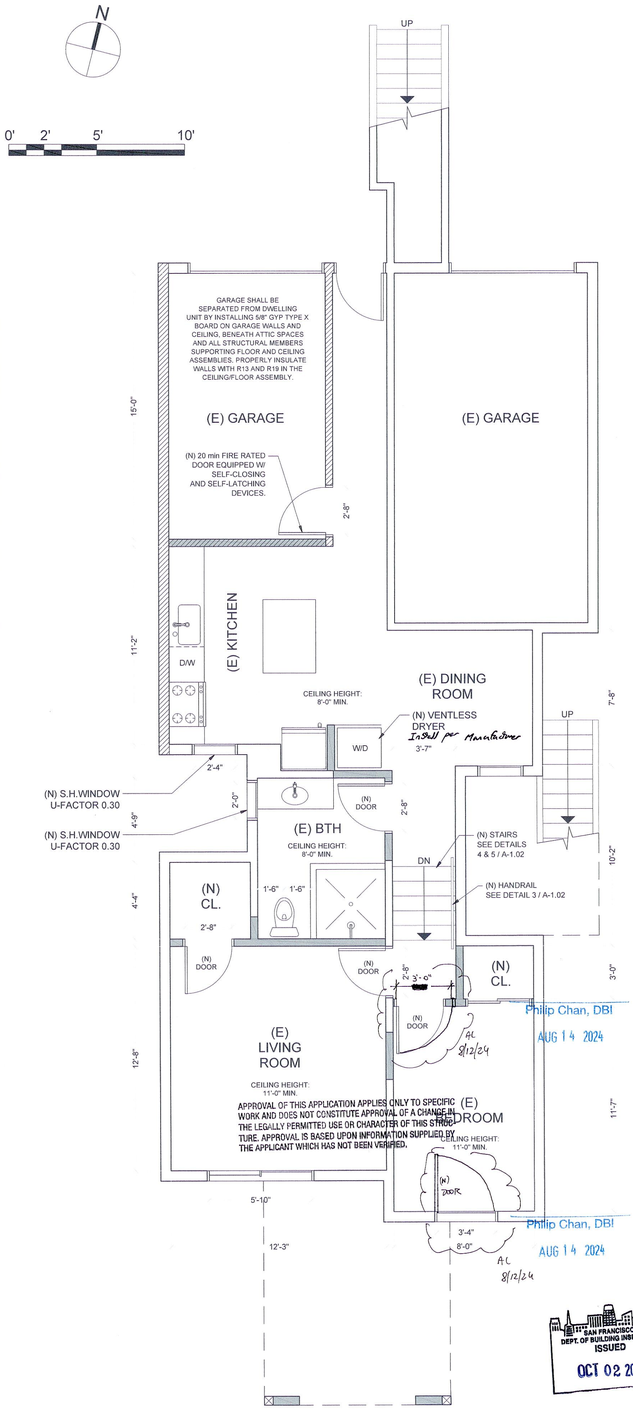
WALL TYPE

- EXISTING WALL
- DEMO WALL
- SOFFIT
- NEW WALL
- 1 HOUR FIRE RATED WALL



1 FIRST FLOOR PLAN - EXISTING
1/4" = 1'-0"

Roger Ly, SFFD
AUG 14 2024



2 FIRST FLOOR PLAN - NEW
1/4" = 1'-0"

Christian Gilmartin, DBI Assistant
AUG 12 2024

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED
OCT 02 2024

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RECEIVED
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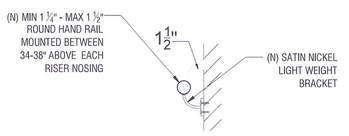
Philip Chan, DBI
AUG 12 2024

REVISIONS		
No	date	by

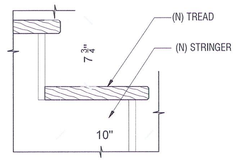
drawn: A. Lorenzale
checked:
date: 8/2/2024
scale: 1/4" = 1'-0"
project No: 0445
drawing title

FLOOR PLANS EXISTING AND NEW

sheet
A-1.01



3 TYPICAL HANDRAIL DETAIL



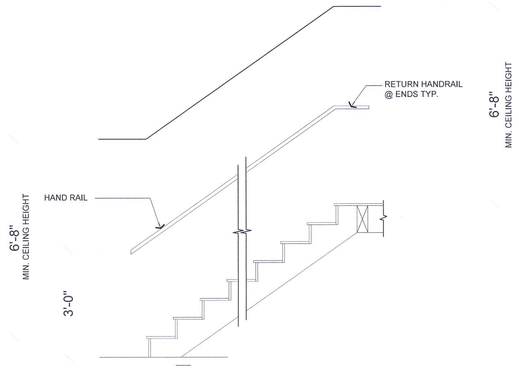
4 TYPICAL RISER/TREAD AT STAIR

NOSING PROJECTION TO BE NOT LESS THAN 3/4" AND NOT MORE THAN 1-1/4" FROM THE SOLID RISER. PER CRC R311.7.5.3.

NOTES:

1. PROVIDE 2x NOMINAL LUMBER IN CONCEALED SPACE BETWEEN STAIR STRINGERS @ TOP & BOT. OF THE RUN & BETWEEN STUDS ALONG AND IN LINE WITH THE RUN OF STAIRS IF THE WALL UNDER STAIRS ARE UNFINISHED.

2. HANDRAIL MUST EXTEND NOT LESS THAN 6 INCHES BEYOND THE TOP AND BOTTOM RISERS. THE END OF HANDRAILS ARE TO BE RETURNED TO THE WALL OR SHALL TERMINATE IN NEWEL POST OR OTHER SIMILAR SAFETY TERMINALS.



5 STAIRS DETAILS



1 SOUTH ELEVATION - EXISTING
1/4" = 1'-0"



2 SOUTH ELEVATION - NEW
1/4" = 1'-0"

RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR IMAGING ACCEPTED.

Philip Chan, DBI
AUG 12 2024

CITY AND COUNTY OF SAN FRANCISCO
DEPT. OF BUILDING INSPECTION
ISSUED
OCT 02 2024

Roger Ly, SFFD
AUG 14 2024

PROJECT ADDRESS
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REVISIONS		
No	date	by

drawn: A. Lorenzale
checked:
date: 8/2/2024
scale: 1/4" = 1'-0"
project No: 0445
drawing title
ELEVATIONS EXISTING AND NEW
sheet
A-1.02
3 of 14 sheets.

ELECTRICAL NOTES

E1. ALL ELECTRICAL CONDUCTOR MATERIAL SHALL BE COPPER.

E2. APPROVED SMOKE ALARMS (HARDWIRED W/BATTERY BACKUP) TO BE LOCATED IN EACH BEDROOM, AND IMMEDIATELY OUTSIDE THE SLEEPING AREAS THROUGHOUT, INCLUDING EACH FLOOR LEVEL. SMOKE ALARMS SHALL BE LISTED AS COMPLYING WITH UL 217 AND BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH NFPA 72 AND THE MANUFACTURER'S INSTRUCTIONS. COMBINATION SMOKE AND CARBON MONOXIDE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 217 AND UL 2034. (CRC R314.1) WHERE MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING OR SLEEPING UNIT, 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. PER CRC R317.4

E3. APPROVED CARBON MONOXIDE ALARMS (HARDWIRED W/BATTERY BACKUP) TO BE LOCATED IMMEDIATELY OUTSIDE THE SLEEPING AREAS THROUGHOUT, INCLUDING EACH FLOOR LEVEL. CARBON MONOXIDE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 2034 AND BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH NFPA 720 AND THE MANUFACTURER'S INSTRUCTIONS. (CRC R315) WHERE MORE THAN ONE CARBON MONOXIDE ALARM IS REQUIRED TO BE INSTALLED WITHIN A DWELLING UNIT OR WITHIN A SLEEPING UNIT IN GROUP R OCCUPANCIES, THE ALARMS SHALL BE INTERCONNECTED IN A MANNER THAT ACTIVATION OF ONE ALARM SHALL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT. SEE CRC R315.7 FOR EXCEPTIONS.

E4. APPLIANCES TO BE ACCESSIBLE FOR SERVICE/REPAIR WITHOUT REMOVAL OF ANY PERMANENT CONSTRUCTION.

E5. CONTRACTOR TO VERIFY (E) OUTLETS LOCATIONS MEET REQUIREMENTS.

E6. ELECTRICAL PANELS SHALL NOT BE LOCATED IN CLOSETS USED TO STORE CLOTHES. PER CEC 240.24(D)

E7. THE RATING OF THE SERVICE DISCONNECTING MEANS SHALL BE IN ACCORDANCE WITH CEC 220 ART. 220 WITH A MINIMUM RATING AS FOLLOW: FOR A SINGLE FAMILY DWELLING, THE MINIMUM SERVICE DISCONNECTING MEANS SHALL BE A MINIMUM RATING OF 100 AMP, 3-WIRE. PER CEC 230.79(C).

E8. BATHROOM RECEPTACLE OUTLETS TO BE SUPPLIED BY DEDICATED 20 AMP BRANCH CIRCUIT PER CEC 210.11(C)(3). THIS CIRCUIT CANNOT SUPPLY ANY OTHER RECEPTACLE, LIGHTS, FANS, ETC. (EXCEPTION - WHERE THE CIRCUIT SUPPLIES A SINGLE BATHROOM, OUTLETS FOR OTHER EQUIPMENT WITHIN THE SAME BATHROOM SHALL BE ALLOWED).

E9. ALL 120-VOLT, 15- AND 20- AMP RECEPTACLE OUTLETS SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES PER CEC 406.12.

E10. ALL 15 AND 20 AMPERE RECEPTACLES INSTALLED IN THE BATHROOMS, GARAGE AND ACCESSORY BUILDINGS, CRAWL SPACE, UNFINISHED BASEMENTS, SINKS-OUTLETS INSTALLED WITHIN 6 FEET, BATHTUBS OR SHOWER STALL, AND LAUNDRY AREAS, AND IN EXTERIOR LOCATIONS ON THE BUILDING, SHALL BE PROTECTED BY A GROUND FAULT CIRCUIT INTERRUPTER (GFCI) PER CEC 210.8.

E11. ALL 15 AND 20 AMPERES BRANCH CIRCUITS SUPPLYING ALL OUTLETS OR DEVICES IN NEW HABITABLE AND NON-HABITABLE ROOMS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER (AFCI) PER CEC 210.12 (A). KITCHEN COUNTERTOP RECEPTACLES NEED TO BE AFCI AND GFCI PROTECTED

E12. ALL LIGHTING (INDOOR AND OUTDOOR) SHALL BE HIGH EFFICACY PER CEnC 150.0 (k) 1A.

E13. OUTDOOR LIGHTING SHALL COMPLY WITH CEnC 150.0 (k) 3.

E14. DEDICATED 20-AMP GFCI PROTECTED BRANCH CIRCUIT SHALL BE PROVIDED FOR THE LAUNDRY AREA PER CEC 210.11 (C) (2).

E15. GROUND-FAULT CIRCUIT INTERRUPTION SHALL BE PROVIDED ON NEWLY INSTALLED RECEPTACLE OUTLETS IF REQUIRED BY THE CALIFORNIA ELECTRICAL CODE, TITLE 24 PART 5. (PMC 20.10.140)

E16. GFCI PROTECTION SHALL BE PROVIDED AT ALL RECEPTACLES OUTLETS INSTALLED IN THE KITCHEN PER CEC 210.8 (A)(6).

E17. SMOKE ALARMS INSTALLED WITHIN 20 FT. OF A KITCHEN, BATHROOM, OR ROOM CONTAINING A FIREPLACE OR WOOD BURNING STOVE SHALL BE OF THE PHOTOELECTRIC TYPE. FOR PLACEMENT OF SMOKE ALARMS AND CARBON MONOXIDE ALARMS IN ROOMS WITH VARIATIONS IN CEILING HEIGHT (SLOPED, PITCHED ETC.), REFER TO THE MANUFACTURERS GUIDELINES FOR PROPER PLACEMENT. IF THE SMOKE ALARMS CURRENTLY INSTALLED IN THE RESIDENCE ARE MORE THAN 10 YEARS OLD (10 YEARS FROM THE DATE OF INSTALLATION) THEY ARE REQUIRED TO BE REPLACED WITH NEW SMOKE ALARMS.

E18. SMOKE ALARMS INSTALLED WITHIN 20 FT. OF A KITCHEN, BATHROOM, OR ROOM CONTAINING A FIREPLACE OR WOOD BURNING STOVE SHALL BE OF THE PHOTOELECTRIC TYPE. FOR PLACEMENT OF SMOKE ALARMS AND CARBON MONOXIDE ALARMS IN ROOMS WITH VARIATIONS IN CEILING HEIGHT (SLOPED, PITCHED ETC.), REFER TO THE MANUFACTURERS GUIDELINES FOR PROPER PLACEMENT. IF THE SMOKE ALARMS CURRENTLY INSTALLED IN THE RESIDENCE ARE MORE THAN 10 YEARS OLD (10 YEARS FROM THE DATE OF INSTALLATION) THEY ARE REQUIRED TO BE REPLACED WITH NEW SMOKE ALARMS.

ENERGY NOTES

EN1. ALL NON-FLUORESCENT LIGHTING AT NEW BATHROOMS TO BE CONTROLLED BY MANUAL-ON OCCUPANT SENSOR THAT DOES NOT TURN ON AUTOMATICALLY OR HAVE AN ALWAYS ON OPTION.

EN2. ALL EXTERIOR LIGHTING FIXTURES SHALL BE HIGH EFFICACY, AND CONTROLLED BY AN AUTO ON/OFF MOTION SENSOR AND ONE OF THE FOLLOWING CONTROLS: A PHOTO-CONTROL, AN ASTRONOMICAL CLOCK OR AN ENERGY MANAGEMENT CONTROL SYSTEM. PER CNC 150 (K) 13.

EN3. ALL GARAGE LIGHTING MUST BE HIGH EFFICACY LIGHTING AND MANUAL-ON OCCUPANCY SENSOR.

EN4. ALL NEW LIGHTING INSTALLED IN BATHROOMS, LAUNDRY ROOMS, CLOSETS GREATER THAN 70 sq. ft., AND UTILITY ROOMS SHALL BE HIGH EFFICACY AND MANUAL-ON OCCUPANCY SENSOR PER CNC 150 (K) 10.

EN5. ALL NEW LIGHTING INSTALLED IN HALLWAYS LIVING ROOMS, BEDROOMS, OFFICES, STUDIES, PLAYROOMS AND DENS SHALL BE HIGH EFFICACY OR MANUAL-ON OCCUPANCY SENSOR OR DIMMERS PER CNC 150 (K) 11.

EN6. BATHROOM FANS SHALL BE SWITCHED SEPARATELY FROM ANY LIGHTING SYSTEM.

EN7. ALL HARDWIRED LIGHTING MUST BE HIGH EFFICACY, OR CONTROLLED BY MANUAL-ON OCCUPANT SENSOR.

EN8. ALL OUTDOOR LIGHTING ATTACHED TO BUILDING MUST BE HIGH EFFICACY, AND CONTROLLED BY A MOTION SENSOR AND A PHOTOCONTROL.

EN9. RECESSED LUMINARIES IN INSULATED CEILINGS MUST BE APPROVED FOR ZERO-CLEARANCE INSULATION COVER (IC) AND MUST BE CERTIFIED AIRTIGHT.

EN10. ANNULAR SPACES AROUND PIPES, ELECTRICAL CABLES, CONDUITS OR OTHER OPENINGS IN PLATES AT EXTERIOR WALL SHALL BE PROTECTED AGAINST OF RODENTS BY CLOSING OPENINGS W/ CEMENT MORTAR CONCRETE MASONRY OR SIMILAR METHODS ACCEPTABLE TO THE ENFORCING AGENCY.

EN11. PROVIDE AN OPERATIONAL MAINTENANCE MANUAL OF ALL NEW EQUIPMENT INSTALLED TO THE BUILDING OCCUPANT OR THE OWNER.

KEY NOTE

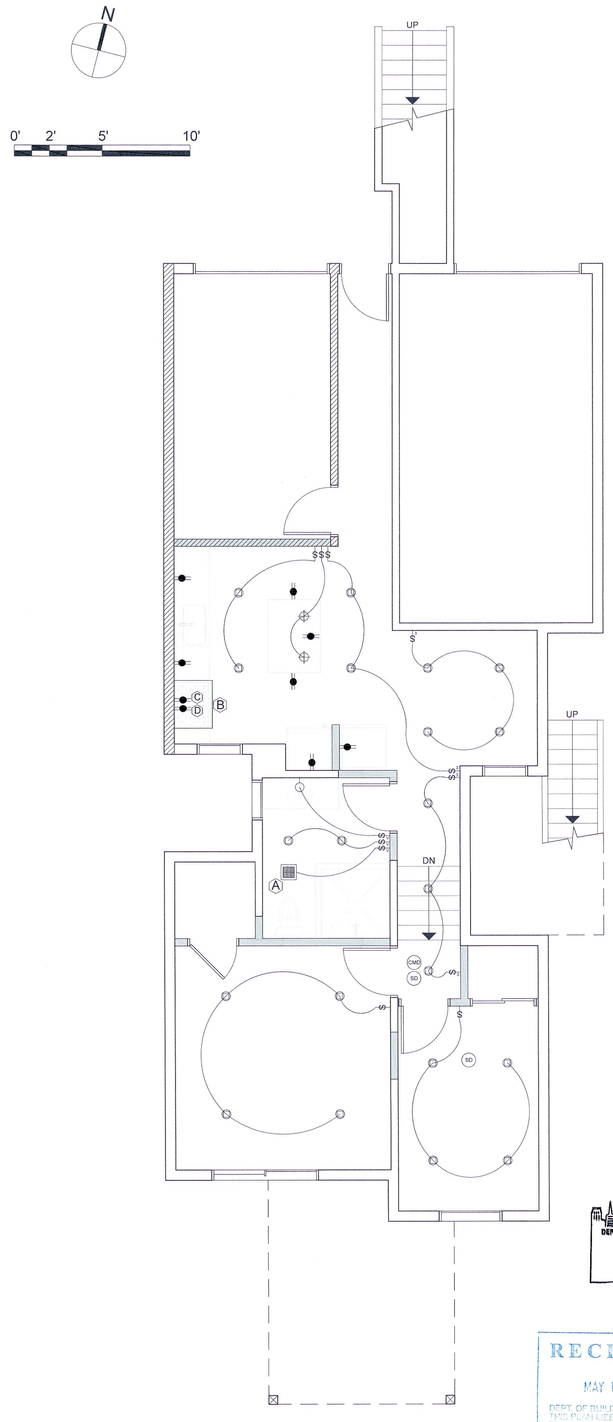
- Ceiling Mounted LED Light
- Pendant LED Light
- 4" Recessed LED Lights
- Wall Spot LED Light
- Outdoor Wall Spot LED Light
- Scone LED Lights
- LED Under Cabinet Tape Light
- $ Single Pole Switch
- $3 Three-Way Switch
- $V Vacancy Sensor Switch
- D Dimmer Switch
- I Intercom Station
- L Launch Port Wall Station
- T Thermostat
- 110 Volt Electrical Outlet
- 220 220 Volt Electrical Outlet
- 110 Volt G.F.C.I. Electrical Outlet
- WP 110 Volt G.F.C.I. w/ Waterproof Box Electrical Outlet
- SD Smoke Detector Alarm
- CMD Carbon Monoxide Detector Alarm
- Main Panel
- Sub Panel

(A) (N) ENERGY STAR COMPLIANT EXHAUST FAN MIN. 50 CFM W/ MAX. 1 SONE SOUND RATING PER ASHRAE 62.2. W/ HUMIDISTAT CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50% AND 80% - VENT TO ROOF. EXHAUST FAN SHALL BE SWITCHED SEPARATELY FROM ANY LIGHTING SYSTEM.

(B) (N) RANGE HOOD - MIN. 100 CFM W/ MAX. 1 SONE SOUND RATING PER ASHRAE 62.2. VENT TO ROOF

(C) (N) G.F.C.I. OUTLET FOR RANGE HOOD

(D) (N) G.F.C.I. OUTLET FOR RANGE



1 FIRST FLOOR PLAN - NEW
1/4" = 1'-0"

Philip Chan, DBI
AUG 12 2024

RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR IMAGING ACCEPTED

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED OCT 02 2024

RECEIVED
MAY 17 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR DIGITIZING ACCEPTED

Christian Gilmartin, DBI
AUG 12 2024

PROJECT ADDRESS
1077 FELL ST,
SAN FRANCISCO,
CA 94117

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REVISIONS

No	date	by

drawn: A. Lorenzale
checked:
date: 5/17/2024
scale: 1/4" = 1'-0"
project No: 0445
drawing title

ELECTRICAL PLANS

sheet

E-1.01

3 of 13 sheets.

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

CERTIFICATE OF COMPLIANCE

Project Name:	1077 Fell	**Enforcement Agency:**	City of San Francisco
Dwelling Address:	1077 Fell Street	**Permit Number:**	
City and Zip Code	San Francisco, 94117	**Permit Application Date:**	

A. General Information

01	Project Name	1077 Fell	02	Date Prepared	2024-05-17
03	Project Location	1077 Fell Street	04	Building Front Orientation (deg)	340
05	CA City	San Francisco	06	Number of Dwelling Units with Additions	1
07	Zip Code	94117	08	Fuel Type	Electricity
09	Climate Zone	3	10	Total Conditioned Floor Area (ft^2) (Addition)	45
11	Building Type	Single family	12	Slab Area (ft^2)	45
13	Project Scope	Addition 300 ft^2 Kitchen Remodel	14	Fenestration Exceptions	NA (do not allow other entries)

B. Building Insulation Details - Framed Walls/ Framed Floors (Section 150.2(a))

01	02	03	04	05	06		07	08	09	10	11
					Proposed					Required	
Tag/ID	Assembly Type	Frame Type	Frame Depth (inches)	Frame Spacing (inches)	Cavity R-value	Continuous Insulation R-value	U-Factor	Appendix JA4 Reference		U-Factor from Table 150.1-A	Comments
								Table	Cell		
Wall	Wall	Wood	2x4	@ 16 in. O. C.	15	10	0.049	4.3.1	4G	0.049	

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

B. Building Insulation Details - Framed Walls/ Framed Floors (Section 150.2(a))

01	02	03	04	05	06		07	08	09	10	11
					Proposed					Required	
Tag/ID	Assembly Type	Frame Type	Frame Depth (inches)	Frame Spacing (inches)	Cavity R-value	Continuous Insulation R-value	U-Factor	Appendix JA4 Reference		U-Factor from Table 150.1-A	Comments
								Table	Cell		

Note:
- Where insulation is installed above the roofing membrane, or above the layer used to seal the roof from water penetration, the insulation shall have a maximum water absorption of 0.3 percent by volume when tested according to American Society for Testing and Materials (ASTM) Standard C272.
- Extensions of existing wood-framed walls may retain the dimensions of the existing walls and shall install cavity insulation of R-15 in a 2x4 framing and R-21 in a 2x6 framing.

C. Building Insulation Details - Non-framed (Section 150.1(c)1)

This section does not apply to this project.

D. Building Insulation Details - Mass Walls (Section 150.1(c)1Bii)

This section does not apply to this project.

E. Slab On Grade/Concrete Raised Floor Insulation (Table 150.1-A)

This section does not apply to this project.

F. Radiant Barrier (Section 150.1(c).2)

01	02
Radiant Barrier installed below the roof deck and on all gable end walls	Comments
n/a	Existing roof

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

F. Radiant Barrier (Section 150.1(c).2)

01	02
Radiant Barrier installed below the roof deck and on all gable end walls	Comments

A radiant barrier is required (for Climate Zones 2-15)
- Radiant barriers shall meet specific eligibility and installation criteria to receive energy credit for compliance with the Building Energy Efficiency Standards for low-rise residential buildings. Refer to Reference Appendices, Residential Appendix RA4.2.1.
- The emittance of the radiant barrier shall be less than or equal to 0.05 as tested in accordance with American Society for Testing and Materials (ASTM) C1371 or ASTM E408.
- For Prescriptive Compliance the attic shall be ventilated to provide a minimum free ventilation area of not less than 1 square foot (ft^2 of vent area for each 300 square feet ft^2 of attic floor area with a minimum of 40 percent to no more than 50 percent upper vents. Ridge vents or gable end vents are recommended to achieve the best performance. The material should be cut to allow for full airflow to the venting.

G. Roofing Products (Cool Roof) (Section 150.1(c).11)

01	02	03	04	05	06	07	08	09	10	11	12	13
						Proposed				Required		
Tag/ID	Exception	Roof Pitch	Method of Compliance	Product Type	CRRC Product ID Number	Initial Solar Reflectance	Aged Solar Reflectance	Thermal Emittance	SRI (optional)	Aged Solar Reflectance	Thermal Emittance	SRI (optional)

Notes:
- Exception 1 Any roof area covered by building integrated photovoltaic (PV) panels and solar thermal panels are exempt from the above Cool Roof requirements
- Exception 2: Roof construction with a weight of 25 pounds per square foot (lb/ft^2) are also exempt.
- Liquid field applied coatings must comply with installation criteria from Section 110.8(i)4

H. Fenestration/Glazing Allowed Areas and Efficiencies (Section 150.2(a)1)

This section does not apply to this project.

I. Fenestration Proposed Areas and Efficiencies

This section does not apply to this project.

J. Opaque Swinging Doors to Exterior (Section 150.1(c)5)

This section does not apply to this project.

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

K. Space Conditioning (SC) Systems - Heating/ Cooling (Section 150.2(b) or (Section 150.1(c)7)

This section does not apply to this project.

L. Water Heating Systems (Section 150.2(a)1D)

This section does not apply to this project.

M. Indoor Air Quality (IAQ) Fan Information

This section does not apply to this project.

CalCERTS, Inc. HERS PROVIDER

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Ruben Lorenzale	Documentation Author Signature: Ruben Lorenzale
Company: ARL Design	Signature Date: 2024-05-17 08:19:54
Address: 607 Elmira rd, #249	CEA/ HERS Certification Identification (if applicable): N/A
City/State/Zip: Vacaville CA 95687-000	Phone: 415-505-5288

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I understand that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections, and I will take the necessary steps to accomplish this requirement.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

Responsible Designer Name: Ruben Lorenzale	Responsible Designer Signature: Ruben Lorenzale
Company : ARL Design	Date Signed: 2024-05-17 08:19:54
Address: 607 Elmira rd, #249	License: N/A
City/State/Zip: Vacaville CA 95687-000	Phone: 415-505-5288

Easy to Verify at CalCERTS.com

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

CalCERTS, Inc. HERS PROVIDER

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REVISIONS

No	date	by

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED OCT 02 2024

RECEIVED MAY 17 2024 DEPT OF BUILDING INSPECTION PLANS WILL BE TAKEN IN PARTY AT THE COUNTER

Christian Gilmartin, DBI MECH AUG 12 2024

drawn: A. Lorenzale
checked:
date: 5/17/2024
scale: N/A
project No: 0445
drawing title

TITLE 24

sheet

EN-1.01

4 of 13 sheets.

2022 Single-Family Residential Mandatory Requirements Summary

NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information.
(04/2022)

Building Envelope:

§ 110.6(a)1:	**Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 101/I.S.2/A440-2011. *
§ 110.6(a)5:	**Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.
§ 110.7:	**Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	**Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	**Roof Deck, Ceiling and Rafter Roof Insulation.** Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling; or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling. *
§ 150.0(b):	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	**Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. *
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. *
§ 150.0(f):	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to §150.0(d).
§ 150.0(g)2:	**Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45. *

Fireplaces, Decorative Gas Appliances, and Gas Log:

§ 110.5(e)	**Pilot Light**. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.
§ 150.0(e)3:	**Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *

Space Conditioning, Water Heating, and Plumbing System:

§ 110.0-§ 110.3:	**Certification.** Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission. *
§ 110.2(a):	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N. *
§ 110.2(b):	**Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.
§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
§ 110.3(c)3:	**Insulation.** Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)6:	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters. *
§ 150.0(n)1:	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.
§ 150.0(n)3A:	**Clearances.** Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(n)3B:	**Liquid Line Drier.** Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	**Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in § 609.11 of the California Plumbing Code. *
§ 150.0(j)2:	**Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	**Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2" higher than the base of the water heater
§ 150.0(n)3:	**Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.

Ducts and Fans:

§ 110.8(d)3:	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	**CMC Compliance.** All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than ¼", If mastic or tape is used. Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not be compressed. *
§ 150.0(m)2:	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	**Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	**Porous Inner Core Flex Duct.** Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.
§ 150.0(m)11:	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter. *

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. *

Ventilation and Indoor Air Quality:

§ 150.0(o)1:	**Requirements for Ventilation and Indoor Air Quality**. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	**Central Fan Integrated (CFI) Ventilation Systems.** Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed andcontrolled per §150.0(o)1Biii&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C.
§ 150.0(o)1C:	**Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses .** Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1Ci-iii.
§ 150.0(o)1G:	**Local Mechanical Exhaust.** Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of §150.0(o)1Giii,enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1Giii-iv. Airflow must be measured by the installer per §150.0(o)1Gv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H&I:	**Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems.** The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G

Pool and Spa Systems and Equipment:

§ 110.4(a):	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
§ 110.4(b)1:	**Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	**Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	**Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	**Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves. *

Lighting:

§ 110.9:	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9. *
§ 150.0(k)1A:	**Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.
§ 150.0(k)1B:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1C:	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
§ 150.0(k)1D:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1E:	**Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 150.0(k)1F:	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k). *

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(k)1G:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	**Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	**Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	**Accessible Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. *
§ 150.0(k)2B:	**Multiple Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	**Mandatory Requirements.** Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	**Energy Management Control Systems.** An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(k)2E:	**Automatic Shutoff Controls.** In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	**Dimmers.** Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2K:	**Independent controls.** Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3A:	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	**Internally illuminated address signs.** Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.

Solar Readiness:

§ 110.10(a)1:	**Single-family Residences.** Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
§110.10(b)1A:	**Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. *
§ 110.10(b)2:	**Azimuth.** All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)3A:	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment. *
§ 110.10(b)3B:	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane. *
§ 110.10(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
§ 110.10(e)1:	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

Electric and Energy Storage Ready:

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(s)	**Energy Storage System (ESS) Ready.** All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
§ 150.0(t)	**Heat Pump Space Heater Ready.** Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(u)	**Electric Cooktop Ready.** Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use." *
§ 150.0(v)	**Electric Clothes Dryer Ready.** Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready," and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

*Exceptions may apply.

5/6/22

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REVISIONS

No	date	by

SAN FRANCISCO
DEPT. OF BUILDING INSPECTION
ISSUED
OCT 02 2024

RECEIVED
MAY 1 2024
DEPT. OF BUILDING INSPECTION
SAN FRANCISCO, CALIFORNIA
BY: PLANNING FOR DISTRIBUTION

drawn: A. Lorenzale
checked:
date: 5/17/2024
scale: N/A
project No: 0445
drawing title

TITLE 24

sheet

EN-1.02

5 of 13 sheets.

Form version: December 13, 2023 (For permit applications October 3, 2023 - December 2025)

GS5: San Francisco Green Building Submittal Form for Residential Alteration, Addition, and Accessory Dwelling Unit Projects

INSTRUCTIONS:
Fill out the project information in the Verification box at the right.
Submittal must be a minimum of 11" x 17".

	TITLE	SOURCE OF REQUIREMENT	DESCRIPTION OF REQUIREMENT	OTHER RESIDENTIAL ALTERATIONS, ADDITIONS AND ACCESSORY DWELLING UNITS: adds any amount of conditioned area, volume, or size, OR a single freestanding unit accessory to an existing dwelling
				if applicable
RESIDENTIAL	GRADING & PAVING	CALGreen 4.106.3	Show how surface drainage (grading, swales, drains, retention areas) will keep surface water from entering the building.	•
RESIDENTIAL	RODENT PROOFING	CALGreen 4.406.1	Seal around pipe, cable, conduit, and other openings in exterior walls with cement mortar or DBI-approved similar method.	•
RESIDENTIAL	FIREPLACES & WOODSTOVES	CALGreen 4.503.1	Install only direct-vent or sealed-combustion, EPA Phase II-compliant appliances.	•
RESIDENTIAL	CAPILLARY BREAK, SLAB ON GRADE	CALGreen 4.505.2	Slab on grade foundation requiring vapor retarder also requires a capillary break such as: 4 inches of base 1/2-inch aggregate under retarder; slab design specified by licensed professional.	•
RESIDENTIAL	MOISTURE CONTENT	CALGreen 4.505.3	Wall + floor <19% moisture content before enclosure.	•
RESIDENTIAL	BATHROOM EXHAUST	CALGreen 4.506.1	Must be ENERGY STAR compliant, ducted to building exterior, and its humidistat shall be capable of adjusting between <50% to >80% (humidistat may be separate component).	•
MATERIAL EMISSIONS	LOW-EMITTING MATERIALS	CALGreen 4.504.2.1-5, SFGBC 4.103.3.2	Use products that comply with the emission limit requirements of 4.504.2.1-5, 5.504.4.1-6 for adhesives, sealants, paints, coatings, carpet systems including cushions and adhesives, resilient flooring (80% of area), and composite wood products.	•
WATER	INDOOR WATER USE REDUCTION	CALGreen 4.303.1, SF Housing Code sec.12A10	Meet flush/flow requirements for: toilets (1.28 gpf); urinals (0.125 gpf wall, 0.5 gpf floor); showerheads (1.8 gpm); lavatories (1.2 gpm private, 0.5 gpm public/common); kitchen faucets (1.8 gpm); wash fountains (1.8 gpm); metering faucets (0.2 gpc); food waste disposers (1 gpm/8 gpm). Residential major improvement projects must upgrade all non-compliant fixtures per SF Housing Code sec.12A10.	•
WATER	WATER-EFFICIENT IRRIGATION	Administrative Code ch.63	If modified landscape area is ≥1,000 sq.ft., use low water use plants or climate appropriate plants, restrict turf areas and comply with Model Water Efficient Landscape Ordinance restrictions by calculated ETAF of ≤.55 or by prescriptive compliance for projects with ≤2,500 sq.ft. of landscape area.	•
ENERGY	ENERGY EFFICIENCY	CA Energy Code	Comply with all provisions of the CA Energy Code. Freestanding ADU only: All-Electric is required by SF Building Code 106A.1.17.	•
PARKING	WIRING FOR EV CHARGERS	CalGreen 4.106.4.3	For alterations to multifamily, install raceway for future Level 2 EVSE (min 40A 208/240VAC) terminating at 10% of parking spaces in areas where parking is added, or electrical systems (including lighting) are altered in existing parking facilities.	Applies to alterations where: Off-street parking is added, OR Electrical systems are altered in existing parking facilities
PARKING	BICYCLE PARKING	Planning Code sec.155.1-2	Provide short- and long-term bike parking to meet requirements of SF Planning Code sec.155.1-2.	if applicable
RESOURCE RECOVERY	RECYCLING BY OCCUPANTS	SF Building Code 106A.3.3, CalGreen 5.410.1, AB-088	Provide adequate space and equal access for storage, collection, and loading of compostable, recyclable and landfill materials. For help estimating adequate space for collection by hauler, see supporting materials including a design guide and calculator at: www.sfenvironment.org/refusecalculator.	•
RESOURCE RECOVERY	CONSTRUCTION & DEMOLITION (C&D) DISCARDS MANAGEMENT	Environment Code ch. 14 SFGBC 4.103.2.3 CalGreen 4.408.2, 4.408.5	100% of mixed debris must be taken by a Permitted Transporter to a Registered Facility for recycling and recovery. Complete Material Reduction and Recovery Plan and demonstrate minimum 65% recovery rate. For more information, see DBI Information Sheet GB-02 or contact: debrisrecovery@sfgov.org or 415-355-3799.	•
HVAC	HVAC INSTALLER QUALS	CALGreen 4.702.1	Installers must be trained in best practices.	•
HVAC	HVAC DESIGN	CALGreen 4.507.2	HVAC shall be designed to ACCA Manual J, D, and S.	•
GOOD NEIGHBOR	BIRD-SAFE BUILDINGS	Planning Code sec.139	Glass facades and bird hazards facing and/or near Urban Bird Refuges may need to treat their glass for opacity.	•
GOOD NEIGHBOR	TOBACCO SMOKE CONTROL	Health Code art.19F	Prohibit smoking within 10 feet of building entries, air intakes, and operable windows and enclosed common areas.	•
POLLUTION PREVENTION	STORMWATER CONTROL PLAN	Public Works Code art.4.2 sec.147	Projects disturbing ≥5,000 sq.ft. in combined or separate sewer areas, or replacing ≥2,500 impervious sq.ft. in separate sewer area, must implement a Stormwater Control Plan meeting SFPUC Stormwater Management Requirements.	if project extends outside envelope
POLLUTION PREVENTION	CONSTRUCTION SITE RUNOFF	Public Works Code art.4.2 sec.146	Provide a construction site Stormwater Pollution Prevention Plan and implement SFPUC Best Management Practices.	if project extends outside envelope
INDOOR AIR QUALITY	AIR FILTRATION (CONSTRUCTION)	CALGreen 4.504.1	Seal permanent HVAC ducts/equipment stored onsite before installation.	•

FOR YOUR INFORMATION: INDOOR WATER EFFICIENCY

Each fixture must not exceed CALGreen 4.303 maximum flow rates:

FIXTURE TYPE	MAXIMUM FIXTURE FLOW RATE
Showerheads[2]	1.8 gpm @ 80 psi
Lavatory Faucets: residential	1.2 gpm @ 60 psi
Kitchen Faucets	1.8 gpm @ 60 psi default
Wash Fountains	1.8 gpm / 20 [rim space (inches) @ 60 psi]
Metering Faucets	.20 gallons per cycle
Tank-type water closets	1.28 gallons / flush[1] and EPA WaterSense Certified
Flushometer valve water closets	1.28 gallons / flush[1]
Urinals	Wall mount: 0.125 gallons / flush Floor mount: 0.5 gallons / flush

NOTES:
1. For dual flush toilets, effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. The referenced standard is ASME A112.19.14 and USEPA WaterSense Tank-Type High Efficiency Toilet Specification – 1.28 gal (4.8L)
2. The combined flow rate of all showerheads in one shower stall shall not exceed the maximum flow rate for one showerhead, or the shower shall be designed to allow only one showerhead to be in operation at a time (CALGreen 5.303.2.1)

Water Efficiency of Existing Non-Compliant Fixtures

All fixtures that are not compliant with the San Francisco Residential Water Conservation Ordinance that serve or are located within the project area must be replaced with fixtures or fittings meeting the maximum flow rates and standards referenced above. For more information, see "Comply with water conservation requirements" available at SF.GOV.

NON-COMPLIANT PLUMBING FIXTURES INCLUDE:
1. Any toilet manufactured to use more than 1.6 gallons/flush
2. Any urinal manufactured to use more than 1 gallon/flush
3. Any showerhead manufactured to have a flow capacity of more than 2.5 gpm
4. Any interior faucet that emits more than 2.2 gpm

Exceptions to this requirement are limited to situations where replacement of fixture(s) would detract from the historic integrity of the building, as determined by the Department of Building Inspection pursuant to San Francisco Building Code Chapter 13A.

VERIFICATION

Indicate below who is responsible for ensuring green building requirements are met. Projects that increase total conditioned floor area by ≥1,000 sq. ft. are required to have a Green Building Compliance Professional of Record as described in Administrative Bulletin 93. For projects that increase total conditioned floor area by <1,000 sq. ft., the applicant or design professional may sign below, and no license or special qualifications are required. FINAL COMPLIANCE VERIFICATION form will be required prior to Certificate of Completion

1077 FELL ST
PROJECT NAME

0777/059
BLOCK/LOT

1077 FELL ST, SAN FRANCISCO
ADDRESS

DUPLEX
PRIMARY OCCUPANCY

721 sf
GROSS BUILDING AREA

45 sf
INCREASE IN CONDITIONED FLOOR AREA

I have been retained by the project sponsor to verify that approved construction documents and construction fulfill the requirements of San Francisco Green Building Code. It is my professional opinion that the requirements of the San Francisco Green Building Code will be met. I will notify the Department of Building Inspection if the project will, for any reason, not substantially comply with these requirements, if I am no longer the Green Building Compliance Professional of Record for the project, or if I am otherwise no longer responsible for assuring the compliance of the project with the San Francisco Green Building Code.

5/17/24
LICENSED PROFESSIONAL *(sign & date)*
May be signed by applicant when <1,000 sq. ft. is added.

AFFIX STAMP BELOW:

Projects that increase total conditioned floor area by ≥1,000 sq.ft.: *Green Building Compliance Professional of Record will verify compliance.*

GREEN BUILDING COMPLIANCE PROFESSIONAL
(name & contact phone #)

FIRM

☐ I am a LEED Accredited Professional

☐ I am a GreenPoint Rater

☐ I am an ICC Certified CALGreen Inspector

GREEN BUILDING COMPLIANCE PROFESSIONAL
(sign & date)

Signature by a professional holding at least one of the above certifications is required. If the Licensed Professional does not hold a certification for green design and/or inspection, this section may be completed by another party who will verify applicable green building requirements are met.

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED OCT 02 2023

Christian Gilmartin, DBI MECH
OCT 02 2024

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RECEIVED
MAY 17 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR DIGITIZING ACCEPTED

REVISIONS

No	date	by

drawn: A. Lorenzale
checked:
date: 5/17/2024
scale: N/A
project No: 0445
drawing title
GS5 FORM
sheet
EN-1.03
6 of 13 sheets.

GENERAL STRUCTURAL NOTES

I GENERAL

A. ALL CONSTRUCTION SHALL CONFORM TO THE CALIFORNIA BUILDING CODE 2019 EDITION w/ AMENDMENTS BY LOCAL JURISDICTIONS.
B. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT JOB SITE BEFORE COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT OR ENGINEER.
C. OMISSIONS OR CONFLICT BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
D. DO NOT USE SCALED DIMENSIONS; USE WRITTEN DIMENSIONS OR WHERE NO DIMENSION IS PROVIDED, CONSULT THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
E. DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS WHETHER SPECIFICALLY CALLED OUT OR NOT.
F. FOR WATERPROOFING, FIREPROOFING, ETC. REFER TO DRAWINGS OTHER THAN STRUCTURAL.
G. SEE DRAWINGS OTHER THAN STRUCTURAL FOR: KINDS OF FLOOR FINISH AND THEIR LOCATION, FOR DEPRESSIONS IN FLOOR SLABS, FOR OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MECHANICAL FEATURES, FOR ROADWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC.
H. HOLES AND OPENINGS THROUGH WALLS AND FLOORS FOR DUCTS, PIPING AND VENTILATION SHALL BE CHECKED BY THE CONTRACTOR, WHO SHALL VERIFY SIZES AND LOCATION OF SUCH HOLES OR OPENINGS WITH THE PLUMBING HEATING, VENTILATING AND ELECTRICAL DRAWINGS AND THESE SUB-CONTRACTORS.
I. NO PIPES AND DUCTS SHALL BE PLACED IN SLABS OR WALLS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ARCHITECT.
J. DRAWINGS AND SPECIFICATIONS REPRESENT FINISHED STRUCTURE. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION INCLUDING BUT NOT LIMITED TO SHORING AND TEMPORARY BRACING. THE SUBCONTRACTOR SHALL UNDERTAKE ALL NECESSARY MEASURES TO INSURE SAFETY OF ALL PERSONS AND STRUCTURES AT THE SITE AND ADJACENT TO THE SITE. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT, ENGINEER SHALL NOT RELIEVE THE SUBCONTRACTOR OF SUCH RESPONSIBILITY.
K. NOTE THAT SHEET S1 IS A STANDARD COVER SHEET AND AS SUCH, NOT ALL TYP. DETAILS AND OR NOTES APPLY TO EVERY PROJECT.

II DESIGN CRITERIA

A. APPLICABLE CODE: CALIFORNIA BUILDING CODE 2019 & SFBC 2019.
B. VERTICAL LIVE LOADS: (REDUCIBLE). ROOF: 20 PSF. FLOOR: 40 PSF. HALLWAYS & CORRIDORS: 100 PSF.
C. LATERAL LOADS:
   1. WIND: 110 MPH. BASIC WIND SPEED, EXPOSURE: "B"
   2. SEISMIC: SITE CLASS 'D'
      MAPPED SPECTRAL ACCELERATIONS: S_S= S_1=
      Fa=1.0 Fv=1.5 S_{MS}= .xxx S_{M1}= .xxx
      BASE SHEAR 'V' = .xx W (ASD)
      SEISMIC DESIGN CATEGORY: D
      RESPONSE MODIFICATION FACTOR, R=6.5
      ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
      IMPORTANCE FACTOR=1 OCCUPANCY CATEGORY=II

III MATERIALS

A. CONCRETE:
   1. REINFORCING STEEL: ASTM A615, SUGRE 60, #4 AND SMALLER, GRADE 40.
   2. CONCRETE: NORMAL WEIGHT U.O.N. WITH COMPRESSIVE STRENGTH OF THE FOLLOWING AT 28 DAYS:
      FOOTINGS, ~~MAT SLAB~~ & DRILLED PIERS 2500 psi
      ~~WALLS, COLUMNS 5000 psi~~
      ~~STRUCTURAL SLAB (L.W. P.T. SEE S3.2) 5000 psi~~
   3. MINIMUM CONCRETE COVER FOR REINFORCING STEEL:
      a. SURFACE POURED AGAINST GROUND 3"
      b. FORMED SURFACES BELOW GRADE 2"
      c. SURFACES EXPOSED TO WEATHER 2"
      d. BEAM BARS (INCLUDING STIRRUPS) 1-1/2"
      e. ALL OTHER 1"
   4. ANCHOR BOLT EPOXY*: HILTI HIT-RE 500-SD. (ICC ESR-2322) OR SIMPSON SET-XP (ICC ESR-2508)
   5. SCREW ANCHORS*: SIMPSON TITEN HD (ICC ESR-2713)
      * USE COMPRESSED AIR TO BLOW THE DUST OUT OF ANCHOR BOLT HOLES.
   6. PNEUMATICALLY PLACED CONCRETE (SHOTCRETE) NOTES
      a. ALL CONCRETE WALLS MAY BE SHOTCRETED AT CONTRACTOR'S OPTION. VERIFY COMPATIBILITY OF SHOTCRETE WITH WATE PROOFINGCONTRACTOR.
      b. ALL SHOTCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 506.2 AND CBC SECTION 1924.
      c. ALL SHOTCRETE SHALL TEST NOT LESS THAN 4000 PSI AT 28 DAYS.
      d. MAXIMUM AGGREGATE SIZE SHALL BE 3/8 INCH.
      e. LAP ALL REINFORCING BARS 40 DIAMETERS AT SPLICES. SPLICE BARS BY THE NON-CONTACT LAP SPLICE METHOD WITH 2 INCHES CLEAR BETWEEN BARS.
      f. ANY REBOUND SHALL BE REMOVED PRIOR TO PLACING OF CONCRETE.
      g. IN-PLACE SHOTCRETE WHICH SHOW SAGS OR SLOUGHS, SEGREGATION, HONEY COMBING, SAND POCKETS OR OTHER OBVIOUS DEFECTS SHALL BE REMOVED AND REPLACED.
      h. CURE SHOTCRETE BY KEEPING CONTINUOUSLY MOIST FOR A MINIMUM OF 7 DAYS UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER.
      i. TEST PANELS: SHOOT ONE TEST PANEL, 18 INCHES SQUARE ,FOR EACH 50 CUBIC YARDS OF SHOTCRETE PLACED, BUT NOT LESS THAN ONE PANEL PER SHIFT. CURE PANELS UNDER SAME CONDITIONS AS THE WORK. TESTING AGENCY SHALL TAKE A MINIMUM OF THREE 2" DIAMETER CORES FROM EACH PANEL. WATER SOAK SPECIMENS 24 HOURS BEFORE TESTING. TEST IN ACCORDANCE WITH UNIFORM BUILDING CODE STANDARD NO. 26-10.
      j. A MINIMUM OF THREE 3" DIAMETER CORES SHALL BE TAKEN FROM THE WORK AT LOCATIONS SPECIFIED BY THE STRUCTURAL ENGINEER. THE SPECIAL INSPECTOR SHALL VISUALLY EXAMINE CORES FOR STRUCTURAL SOUNDNESS AND SUBMIT A REPORT TO THE STRUCTURAL ENGINEER AND THE BUILDING INSPECTION DEPARTMENT.
      k. INSPECTION: PROVIDE CONTINUOUS SPECIAL INSPECTION OF SHOTCRETING OPERATION.

B. CMU: UNITS 1500 PSI, MORTAR (TYPE 'S'), GROUT 2000 PSI

C. STEEL
   1. SHAPES AND PLATES: ASTM A36; TUBES: ASTM A500, GRADE B.
   2. MOMENT FRAMES (BEAMS, COLUMNS): ASTM A992 OR A913 (50 ksi)
      MOMENT FRAMES (PLATES): A572, GRADE 50.
   3. METAL STUDS, SEE S1.4, NOTES
   4. METAL JOISTS, 50 ksi
   5. BOLTS: ASTM A307, U.O.N.
   6. WELDING ELECTRODES: E-70 FOR FULL PEN WELDS USE CHARPY V-NOTCH WIRE, MIN. 20 ft # @ 0°F
   7. METAL DECKING, SEE S1.5

D. WOOD
   1. FRAMING LUMBER - DOUGLAS FIR LARCH
      a. HEADERS, PLATES, JOISTS: NO.1
      b. STUDS, BLOCKING: NO.2
      c. ALL LUMBER IN CONTACT WITH CONCRETE: PRESERVATIVE TREATED DOUGLAS FIR. (NOT CCA-C)
      d. POSTS AND BEAMS: NO.1
   2. PLYWOOD SHEATHING
      a. SHEARWALL PLYWOOD : 1/2 INCH STRUCTURAL I, C-D EXTERIOR, APA RATED 32/16.
      b. ROOF SHEATHING: 5/8 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 32/16
      c. FLOOR SHEATHING: 3/4 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 48/24
   3. FRAMING HARDWARE AND JOIST HANGERS: AS MANUFACTURED BY SIMPSON STRONGTIE CO. OR APPROVED EQUAL. SIMPSON DESIGNATIONS USED. USE NAILS PER I.C.C. APPROVAL FOR EACH DEVICE.
   4. COMMON NAILS, UNLESS OTHERWISE NOTED. SHORT NAILS MAY BE USED PROVIDED THEY HAVE COMMON CODE SPECIFIED MINIMUM EMBEDMENT. ALL NAILING TO BE PER IBC TABLE NO. 2304.9.1 UNLESS NOTED OTHERWISE.
   5. GLU-LAM BEAMS: 24F-V4 (Fb=2400 PSI)
   6. PARALLAM & MICROLLAM BEAMS AND TJI's TO BE FABRICATED BY TRUS JOIST:
      PARALLAM BEAMS: 2.2E (Fb=2900PSI)
      MICROLLAM BEAMS: 2.0E (Fb=2600PSI)
   7. FOR MICROLLAMS SEE CODE EVALUATION: ICC-ES ESR-1387
   8. FOR TJI JOISTS SEE CODE EVALUATION: ICC-ES ESR-1153

IV EXPOSURE TO WEATHER:

A. STEEL:
   1. ALL EXPOSED MEMBERS SHALL BE COATED WITH A ZINC RICH PRIMER.
   2. BOLTS, NUTS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED.

B. WOOD:
   1. ALL EXTERIOR TIMBER AND GLU-LAM BEAMS SHALL BE PRESSURE TREATED (BUT NOT CHROMATED COPPER ARSENATE) OR WOOD OF NATURAL RESISTANCE TO DECAY.
   2. ALL EXTERIOR HANGERS AND OTHER SIMPSON TYPE PRODUCTS SHALL BE GALVANIZED.
   3. ALL PLYWOOD SHALL BE OF AN EXTERIOR GRADE.
   4. METAL CONNECTORS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED w/ MIN. ZINC COATING OF G185.
   5. ALL NAILS & ANCHOR BOLTS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED.

V ABBREVIATIONS

B.N. — BOUNDARY NAILING
DIA. — DIAMETER
E.N. — EDGE NAILING
H.P. — HIGH POINT
L.P. — LOW POINT
LVL — LAMINATED VENEER LUMBER
L.W. — LIGHT WEIGHT
M.L. — MICROLLAM
PLWD — PLYWOOD SHEATHING
PSL — PARALLEL STRAND LUMBER
P.T. — PRESSURE TREATED OR POST-TENSIONED
S.A.D. — SEE ARCHITECTURAL DRAWINGS
S.O.G. — SLAB-ON-GRADE
S.S. — STAINLESS STEEL
T.O. — TOP OF
TYP. — TYPICAL
U.O.N. — UNLESS OTHERWISE NOTED
V.I.F. — VERIFY IN FIELD
W.W.F. — WELDED WIRE FABRIC

SYMBOLS

(E) WALL BELOW
(E) WALL ABOVE
(N) CONC. WALL ABOVE
BRICK OR CMU WALL ABOVE
WOOD SHEARWALL (BELOW)
WOOD JOIST HANGER (HUS TYPE, U.O.N.)
WOOD POST BELOW
WOOD POST ABOVE (OR ABOVE & BELOW)
HOLDOWN @ WOOD POST
STEEL COLUMN ABOVE
STEEL COLUMN BELOW
MOMENT CONNECTION
CONCRETE TOPPING OVER PLYWOOD
CONCRETE TOPPING OVER CORRUGATED METAL DECK
CONCRETE COLUMN ABOVE
CONCRETE COLUMN BELOW w/ DROPCAP
DRILLED CONCRETE PIER
PRECAST, PRESTRESSED CONCRETE PILE
DIAGONAL ABOVE
DIAGONAL BELOW

DRAWING NAME: G:\Users\ursarpete.bre-ef\13dfb1f3cf6f0f0f0\Desktop\Archive Stored Folders\Drawings\Projects 2023\1077 Fell Street\Drawings\Struct\1077 Fell Street - S1-02.28.24.dwg
PLOT DATE: 03-01-24 PLOTTED BY: darquisnm

PROJECT NAME: VOLUNTARY STRENGTHENING
ADDRESS: 1077 FELL STREET
BLOCK/LOT: ----
CITY: SAN FRANCISCO, CA

DRAWING INDEX:

S1.0 ——— TITLE SHEET
S1.1A ——— TYPICAL WOOD DETAILS
S2 ——— FOUNDATION PLAN/ 1ST, 2ND AND ROOF FLOOR FRAMING
S3-S4 ——— STRUCTURAL DETAILS
W1-W2 ——— STRONG SIMPSOM WALL

City and County of San Francisco
Department of Building Inspection

London Breed, Mayor
Patrick O'Riordan, Interim Director

Attachment A

SLOPE AND SEISMIC HAZARD ZONE PROTECTION CHECKLIST

A COPY OF THIS DOCUMENT SHALL BE SUBMITTED WITH THE PERMIT APPLICATION

JOB ADDRESS 1077 FELL STREET APPLICATION NO. _____ ADDENDUM NO. ____
OWNER NAME _____ OWNER PHONE NO. (____) _____

1: PROPERTY LOCATION		
EARTHQUAKE INDUCED LANDSLIDE AREA ON THE STATE OF CALIFORNIA DEPARTMENT OF CONSERVATION DIVISION OF MINES AND GEOLOGY (CDMG) SEISMIC HAZARD ZONES MAP FOR SAN FRANCISCO, RELEASED NOVEMBER 17, 2000.	YES ☐	NO ☑

2: AVERAGE SLOPE OF PROPERTY		
PROPERTY EXCEEDING AN AVERAGE SLOPE OF 4H:1V (25%) GRADE *(APPLICANT WILL NEED TO INCLUDE PLANS ILLUSTRATING SLOPE OF THE PROPERTY AND/OR INCLUDE A SURVEY VERIFYING THE SLOPE OF THE PROPERTY)*	YES ☐	NO ☑

3: PROPOSED CONSTRUCTION		
CONSTRUCTION OF NEW BUILDING OR STRUCTURE HAVING OVER 1000 SQFT OF NEW PROJECTED ROOF AREA	YES ☐	NO ☑
HORIZONTAL OR VERTICAL ADDITIONS HAVING OVER 500 SQFT OF NEW PROJECTED ROOF AREA	YES ☐	NO ☑
SHORING	YES ☐	NO ☑
UNDERPINNING	YES ☐	NO ☑
GRADING, INCLUDING EXCAVATION OR FILL, OF OVER 50 CUBIC YARDS OF EARTH MATERIAL	YES ☐	NO ☑
CONSTRUCTION ACTIVITY LISTED BELOW DETERMINED BY THE BUILDING OFFICIAL THAT MAY HAVE A SUBSTANTIAL IMPACT ON THE SLOPE STABILITY:		
RETAINING WALL:	YES ☐	NO ☑
OTHERS: _____	YES ☐	NO ☑

SECTION 4: LICENSED DESIGN PROFESSIONAL VERIFICATION AND SIGNATURES

Under penalty of perjury, I certify that the information provided on this form is based on my personal review of the building and its records, or review by others acting under my direct supervision, and is correct to the best of my knowledge.

Prepared by: JEFFERSON CHEN, P.E.
Engineer/Architect of Record

(415) 626 - 8300 Telephone
jefferson@enertiadesigns.net Email
Signature
Date

REGISTERED PROFESSIONAL ENGINEER JEFFERSON YU CHEN No. M 24 C057898 Exp. 06/30/24 CIVIL STATE OF CALIFORNIA

Permit Services Division
49 South Van Ness Avenue, Suite 500 - San Francisco CA 94103
Phone (628) 652-3600 – www.sfdbi.org

INFORMATION SHEET S-19 ATTACHMENT A — Slope Protection Checklist

FOR DBI USE ONLY

ASSIGNMENT OF REVIEW TIER

EXEMPTED: Reports per Section E and Third Party Peer Review Not Required

☑ If the box in Section 1 "Property Location" **AND** the box in Section 2 "Average Slope of Property" are marked "No" **OR** if all the boxes in Section 3 "Proposed Construction" are marked "No", reports per Section E and Third Party Peer Review are exempted by the SSPA.

TIER I: Reports per Section E Required but Third Party Peer Review Not Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property does not lie within any areas of potential landslide hazard, DBI shall require mandatory submittal of reports per Section E only.

TIER II: Reports per Section E and Third Party Peer Review Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property lies in the vicinity of mapped landslides, DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to a third party peer review. At the discretion of the SSPA Review Committee, the peer review may be followed by the establishment of a Structural Advisory Committee (SAC) with the project reassigned to Tier III.

If the DBI Plan Review Engineer (or the SSPA Review Committee, if established), in their discretion, determines from the submitted documents that the project has a substantial impact on the slope stability of the site or creates a potential for earthquake induced landslide hazards, DBI may require that the third party peer review be followed by the establishment of a Structural Advisory Committee (SAC) and re-assigned the project to Tier III.

TIER III: Structural Advisory Committee (SAC) Review

☐ If the box in Section 1 "Property Location" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes", DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to review by a Structural Advisory Committee (SAC), as defined by SFBC Section 105A.6. Philip Chan, DBI

Tier assigned by: AUG 12 2024 Phone: (628)
DBI Plan Review Engineer

Comment:

City and County of San Francisco
Department of Building Inspection

London N. Breed, Mayor
Patrick O'Riordan, Interim Director

NOTICE

SPECIAL INSPECTION REQUIREMENTS

Please note that the Special Inspections shown on the approved plans and checked on the Special Inspections form issued with the permit are required for this project. The employment of special inspectors is the direct responsibility of the owner or the engineer/architect of record acting as the owner's representative.

These special inspections are required *in addition to* the called inspections performed by the Department of Building Inspection. The name of the special inspector shall be furnished to the district building inspector prior to start of work for which special inspection is required.

For questions regarding the details or extent of required inspection or tests, please call the Plan Checker assigned to this project or **628-652-3407**. If there are any field problems regarding special inspection, please call your District Building Inspector or 628-652-3400 Ext 1.

Before final building inspection is scheduled, documentation of special inspection compliance must be submitted to and approved by the Special Inspection Services staff. To avoid delays in this process, the project owner should request final compliance reports from the architect or engineer of record and/or special inspection agency soon after the conclusion of work requiring special inspection. ***The permit will not be finalized without compliance with the special inspection requirements.***

STRUCTURAL OBSERVATION REQUIREMENTS

Structural observation shall be provided as required per Section 1704.6. **The building permit will not be finalized without compliance with the structural observation requirements.**

Special Inspection Services Contact Information

1. **Telephone: (628) 652-3407**
2. **Email: dbi.specialinspections@sfgov.org**
3. **In person: 49 South Van Ness Ave – Suite 400**

Note: We are moving towards a "paperless" mode of operation. All special inspection submittals, including final letters, may be emailed (preferred) or faxed. We will also be shifting to a paperless fax receipt mode.

Special Inspection Services
49 South Van Ness Ave – Suite 400 – San Francisco CA 94103
Office (628) 652-3407 – www.sfdbi.org

Updated 10/05/2020

Philip Chan, DBI
AUG 12 2024

SPECIAL INSPECTION AND STRUCTURAL OBSERVATION

A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED STRUCTURAL DRAWING SET

JOB ADDRESS 1077 FELL STREET APPLICATION NO. _____ ADDENDUM NO. ____
OWNER NAME _____ OWNER PHONE NO. (_____)

Employment of Special Inspection is the direct responsibility of the OWNER, or the engineer/architect of record acting as the owner's representative. Special inspector shall be one of those as prescribed in Sec. 1704. Name of special inspector shall be furnished to DBI District Inspector prior to start of the work for which the Special Inspection is required. Structural observation shall be performed as provided by Section 1704.6. A preconstruction conference is recommended for owner/builder or designer/builder projects, complex and high-rise projects, and for projects utilizing new processes or materials.

In accordance with Chapter 17 (SFBC), Special Inspection and/or testing is required for the following work:

1. [x] Concrete (Placement & sampling)
2. [ ] Bolts installed in concrete
3. [ ] Special moment - Resisting concrete frame
4. [x] Reinforcing steel ~~and prestressing tendons~~
5. **Structural welding:**
   A. Periodic visual inspection
   [ ] Single-pass fillet welds 5/16" or smaller
   [ ] Steel deck
   [ ] Welded studs
   [ ] Cold formed studs and joists
   [ ] Stair and railing systems
   [ ] Reinforcing steel
   B. Continuous visual inspection and NDT (Section 1704)
   [ ] All other welding (NDT exception: Fillet weld)
   [ ] Reinforcing steel; and [ ] NDT required
   [ ] Moment-resisting frames
   [ ] Others_____
6. [ ] High-strength bolting
7. [ ] Structural masonry
8. [ ] Reinforced gypsum concrete
9. [ ] Insulating concrete fill
10. [ ] Sprayed-on fireproofing
11. [ ] Piling, drilled piers and caissons
12. [ ] Shotcrete
13. [ ] Special grading, excavation and filling (Geo. Engineered)
14. [ ] Smoke-control system
15. [ ] Demolition
16. [ ] Exterior Facing
17. **Retrofit of unreinforced masonry buildings:**
    [ ] Testing of mortar quality and shear tests
    [ ] Inspection of repointing operations
    [ ] Installation inspection of new shear bolts
    [ ] Pre-installation inspection for embedded
    [ ] Pull/torque tests per SFBC Sec.1607C & 1615C
18. **Bolts Installed in existing concrete or masonry:**
    [ ] Concrete [ ] Masonry
    [ ] Pull/torque tests per SFEBC Sec. 507C & 515C
19. [ ] Shear walls and floor systems used as shear diaphragms
20. [ ] Holdowns
21. **Special cases:**
    [ ] Shoring
    [ ] Underpinning; [ ] Not affecting adjacent property
    [ ] Affecting adjacent property; PA_____
    [ ] Others
22. [ ] Crane safety (Apply to the operation of tower cranes on high-rise building) (Section 1705.22)
23. [ ] Others: "As recommended by professional of record"_____
24. **Structural observation per Sec. 1704.6 (SFBC) for the following:** [ ] Foundations [ ] Steel framing
    [ ] Concrete construction [ ] Masonry construction [x] Wood framing
    [ ] Other;_____
25. Certification is required for: [ ] Glu-lam components
26. [ ] Firestops in high-rise building

Prepared by: JEFFERSON CHEN, P.E. Phone: (415) 626 - 3800
Engineer/Architect of Record
Required information:
FAX: (415) 701 -0212 Email jefferson@enertiadesigns.net

Review by: Philip Chan, DBI Phone: (628) 652-
DBI Engineer or Plan Checker
AUG 12 2024

****

APPROVAL (Based on submitted reports.)

DATE DBI Engineer or Plan Checker / Special Inspection Services Staff

QUESTIONS ABOUT SPECIAL INSPECTION AND STRUCTURAL OBSERVATION SHOULD BE DIRECTED TO:
Special Inspection Services (628) 652-3407; or, dbi.specialinspections@sfgov.org

Updated 10/05/2020

CITY AND COUNTY OF SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED AUG 02 2024

RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARDS FOR IMAGING ACCEPTED

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.626.8300
FAX: 415.701.0212
1170 SANSOME STREET FL-1
SAN FRANCISCO, CA 94103

REGISTERED PROFESSIONAL ENGINEER JEFFERSON YU CHEN No. M 24 C057898 Exp. 06/30/24 CIVIL STATE OF CALIFORNIA

	DATE	REVISIONS
1		
2		
3		
4		

TITLE SHEET
GENERAL NOTES

VOLUNTARY STRENGTHENING
1077 FELL STREET
SAN FRANCISCO, CA

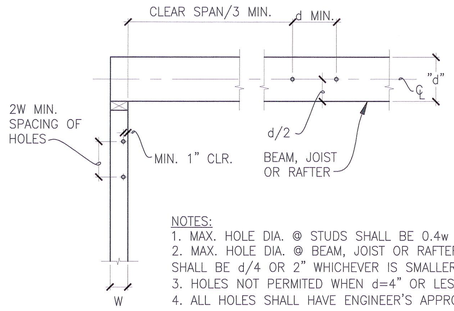
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Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet S1.0
Of 7 Sheets

NAILING SCHEDULE (PER CBC 2016, TABLE NO. 2304.10.1)

CONNECTION	NAILING [1]
1. JOIST TO SILL OR GIRDER, TOENAIL	3–8d
2. BRIDGING TO JOIST, TOENAIL EACH END	2–8d
3. 1"X6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2–8d
4. WIDER THAN 1" X 6" SUBFLOOR TO EACH JOIST, FACE NAIL	3–8d
5. 2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2–16d
6. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL	16d AT 16" O.C.
SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	3–16d PER 16"
7. TOP PLATE TO STUD, END NAIL	2–16d
8. STUD TO SOLE PLATE	4–8d, TOENAIL OR 2–16d, END NAIL
9. DOUBLE STUDS, FACE NAIL	16d AT 24" O.C.
10. DOUBLED TOP PLATES, TYPICAL FACE NAIL	16d AT 16" O.C.
DOUBLE TOP PLATES, LAP SPLICE	8–16d
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3–8d
12. RIM JOIST TO TOP PLATE, TOINAIL	8d AT 6" O.C.
13. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2–16d
14. CONTINUOUS HEADER, TWO PIECES	16d AT 16" O.C. ALONG EACH EDGE
15. CEILING JOISTS TO PLATE, TOENAIL	3–8d
16. CONTINUOUS HEADER TO STUD, TOINAIL	4–8d
17. CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3–16d
18. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3–16d
19. RAFTER TO PLATE, TOENAIL	3–8d
20. 1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2–8d
21. 1" X 8" SHEATHING OR LESS TO EACH BEARING, FACE NAIL	2–8d
22. WIDER THAN 1" X 8" SHEATHING TO EACH BEARING, FACE NAIL	3–8d
23. BUILT–UP CORNER STUDS	16d AT 24" O.C.
24. BUILT–UP GIRDER AND BEAMS	20d AT 32" O.C. AT TOP AND BOTTOM AND STAGGERED 2–20d AT ENDS AND AT EACH SPLICE
25. 2" PLANKS	2–16d AT EACH BEARING
26. COLLAR TIE TO RAFTER	3–10d AT FACE NAIL
27. JACK RAFTER TO HIP	2–10d AT TOENAIL AND 2–16d AT FACE NAIL
28. ROOF RAFTER TO 2–BY RIDGE BEAM	2–16d AT TOENAIL AND 2–16d AT FACE NAIL
29. JOIST TO BAND JOIST	3–16d AT FACE NAIL
30. LEDGER STRIP	3–16d AT FACE NAIL AT EACH JOIST
31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD [B] SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING)	
1/2" AND LESS	6d[C,L]
19/32"–3/4"	8d[D] or 6d[E]
7/8"–1"	10d[D] or 8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
COMBINATION SUBFLOOR–UNDERLAYMENT (TO FRAMING): 3/4" AND LESS	6d[E]
7/8"–1"	8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
32. PANEL SIDING (TO FRAMING): 1/2" OR LESS	6d[F]
5/8"	8d[F]
33. FIBERBOARD SHEATHING: [G] 1/2"	6d[D]
25/32"	8d[D]
34. INTERIOR PANELING 1/4"	4d[J]
3/8"	6d[K]

CBC TABLE 2304.10.1 FASTENING SCHEDULE NOTES

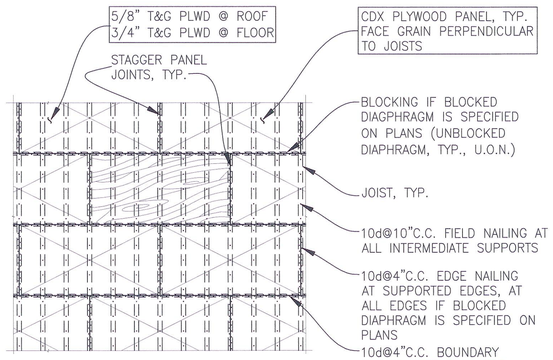
A. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED.
B. NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES AT SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLE BOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
C. COMMON OR DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
D. COMMON (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
E. DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
F. CORROSION–RESISTANT SIDING (6D – 1⅞" X 0.106"; 8D – 2⅜" X 0.128") OR CASING (6D – 2" X 0.099"; 8D – 2½" X 0.113") NAIL.
G. FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS.
H. CORROSION–RESISTANT ROOFING NAILS WITH 7/16–INCH–DIAMETER HEAD AND 1½–INCH LENGTH FOR ½–INCH SHEATHING AND 1¾–INCH LENGTH FOR 25/32–INCH SHEATHING.
I. CORROSION–RESISTANT STAPLES WITH NOMINAL 7/16–INCH CROWN AND 1⅛–INCH LENGTH FOR ½–INCH SHEATHING AND 1½–INCH LENGTH FOR 25/32–INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
J. CASING (1½" X 0.080") OR FINISH (1½" X 0.072") NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
K. PANEL SUPPORTS AT 24 INCHES. CASING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
L. FOR ROOF SHEATHING APPLICATIONS, 8D NAILS (2½" X 0.113") ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.
M. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16 INCH.
N. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.
O. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS SUB FLOOR AND WALL SHEATHING AND 3 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING.
P. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.



NOTES:
1. MAX. HOLE DIA. @ STUDS SHALL BE 0.4w
2. MAX. HOLE DIA. @ BEAM, JOIST OR RAFTER SHALL BE d/4 OR 2" WHICHEVER IS SMALLER.
3. HOLES NOT PERMITED WHEN d=4" OR LESS.
4. ALL HOLES SHALL HAVE ENGINEER'S APPROVAL.

1 TYPICAL HOLES IN BEAMS, JOISTS, RAFTERS AND STUDS

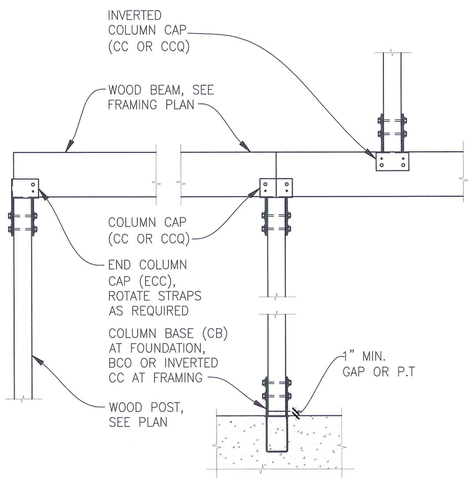
SCALE: 3/4" = 1'–0"



NOTES:
1. SEE PLANS FOR MORE INFORMATION
2. PLYWOOD = WOOD STRUCTURAL PANEL

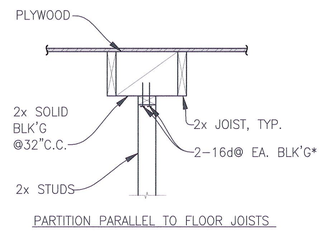
2 TYPICAL PLYWOOD DIAPHRAGM SHEATHING (PLAN VIEW)

SCALE: 3/4" = 1'–0"

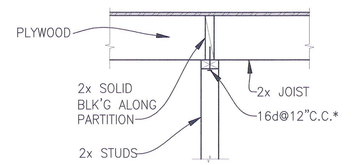


3 TYPICAL BEAM TO POST CONNECTION

SCALE: 3/4" = 1'–0"



PARTITION PARALLEL TO FLOOR JOISTS

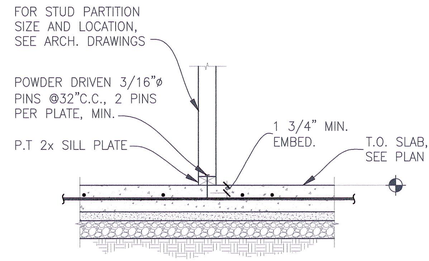


PARTITION PERPENDICULAR TO FLOOR JOISTS

*OPTION: PROVIDE STC CLIP TO ROOF TRUSS OR BEAM

4 TYPICAL NON–BEARING / NON–SHEARWALL SUPPORT @ ROOF

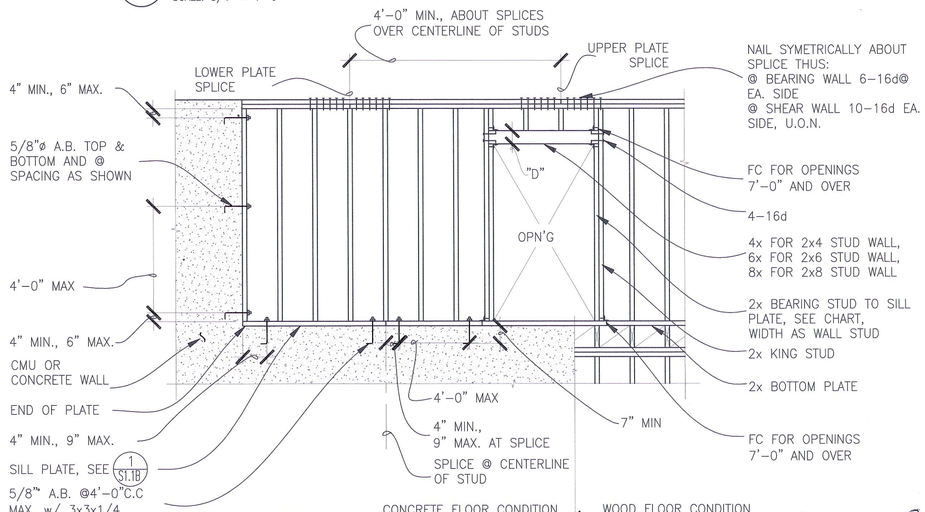
SCALE: 3/4" = 1'–0"



NOTES:
1. FOR SLAB THICKNESS, REINFORCEMENT AND BASE MATERIALS SEE PLAN.
2. AT P.T. SLAB PROVIDE MAX. 3/4" EMBEDMENT.

5 TYPICAL NON–BEARING / NON–SHEARWALL CONNECTION AT CONCRETE SLAB

SCALE: 3/4" = 1'–0"



HEADER SPANS "S"	"D" MIN.	ADDN'L BEARING STUDS
S ≤ 4'–0"	5 1/2"	0
4'–0" < S ≤ 8'–0"	7 1/4"	1
8'–0" < S ≤ 10'–0"	9 1/4"	2
S > 10'–0"	SEE PLAN	3

NOTE:
THIS DETAIL IS NOT FOR SHEARWALLS, SEE 1 S1.1B

6 TYPICAL FRAMING @ OPENINGS, TOP PLATE SPLICES, ETC.

SCALE: 3/4" = 1'–0"

Philip Chan, DBI
AUG 12 2024

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SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED
OCT 02 2024

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OFFICE: 415.828.8300
FAX: 415.701.0212
166 PASSION STREET FL-1
SAN FRANCISCO, CA 94103

REGISTERED PROFESSIONAL ENGINEER YEN-TIE CHEN C037886 CIVIL STATE OF CALIFORNIA

	DATE	REVISIONS
1		
2		
3		
4		

TYPICAL WOOD DETAILS

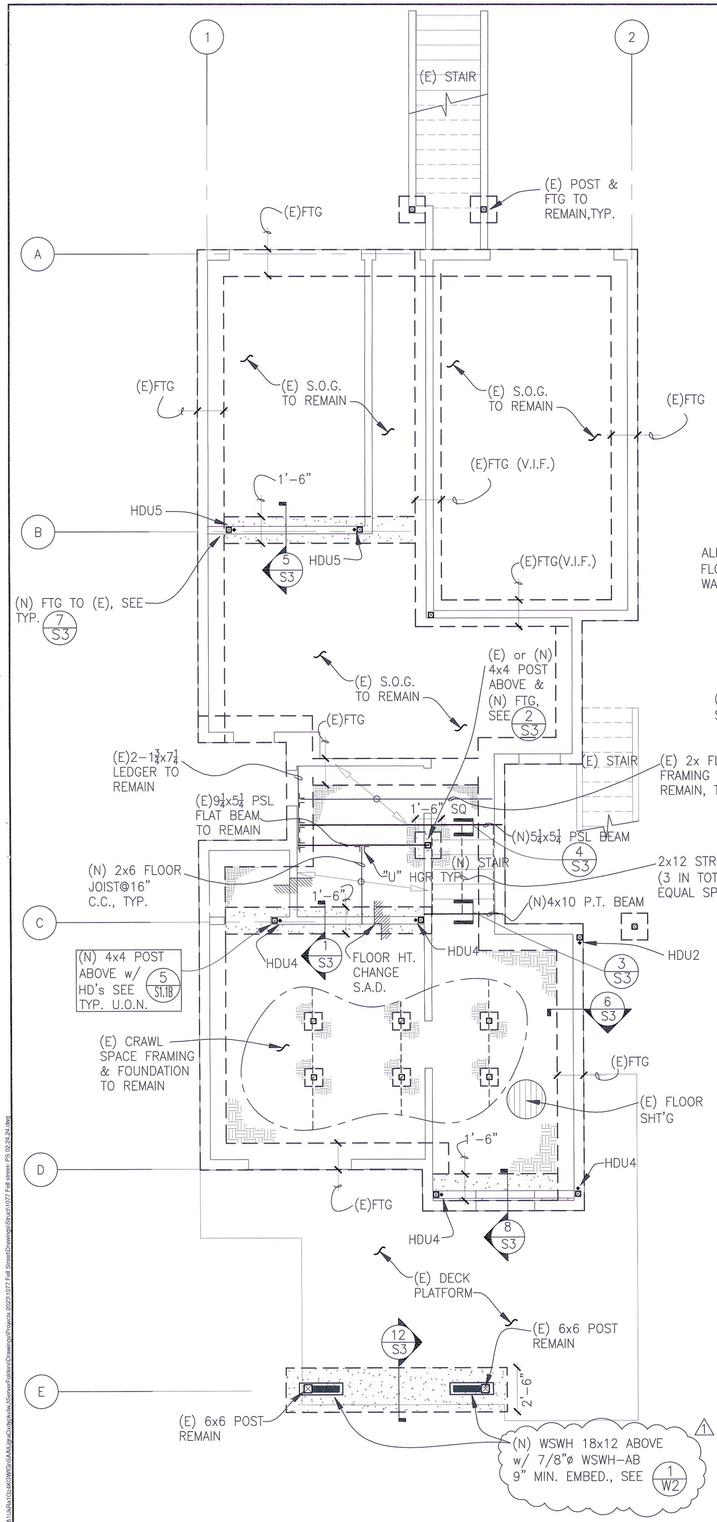
VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date:	03-01-2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059

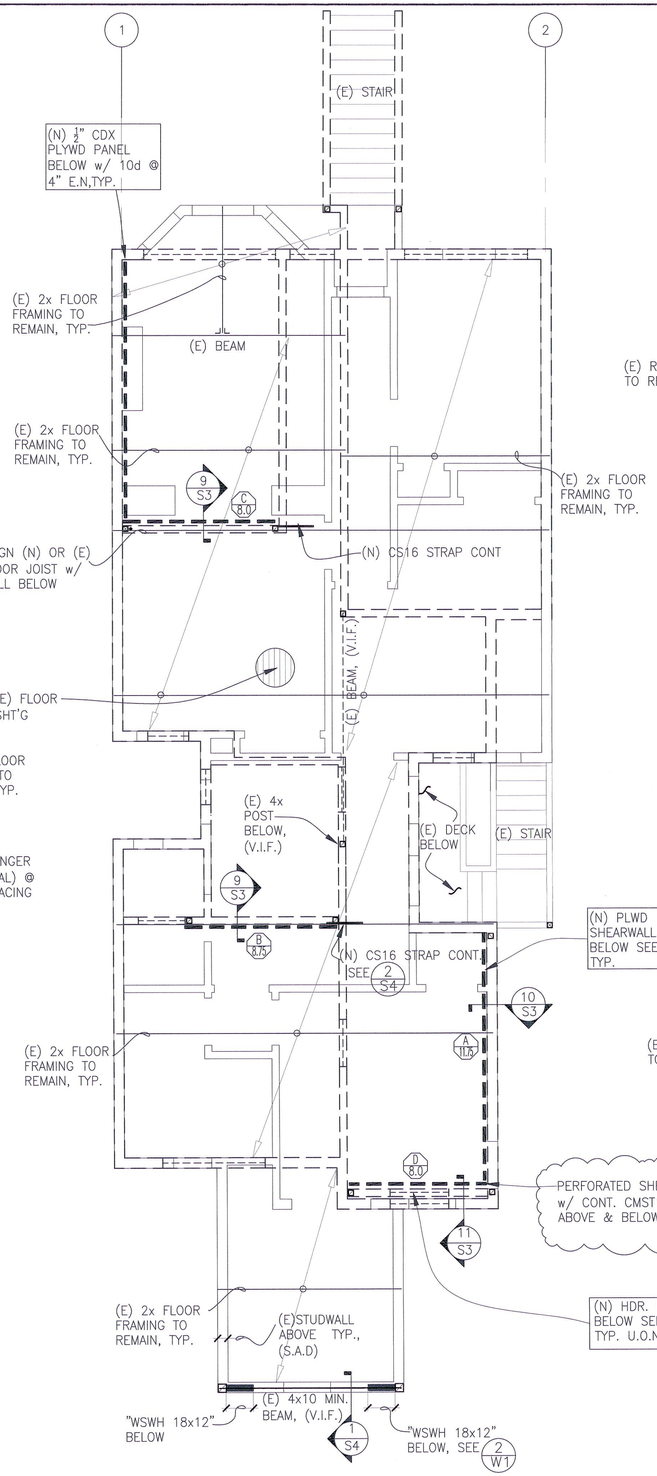
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Of 7 Sheets

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PLOT DATE: 03-01-24 PLOTTED BY: dmarquisnm



FIRST FLOOR / FOUNDATION PLAN

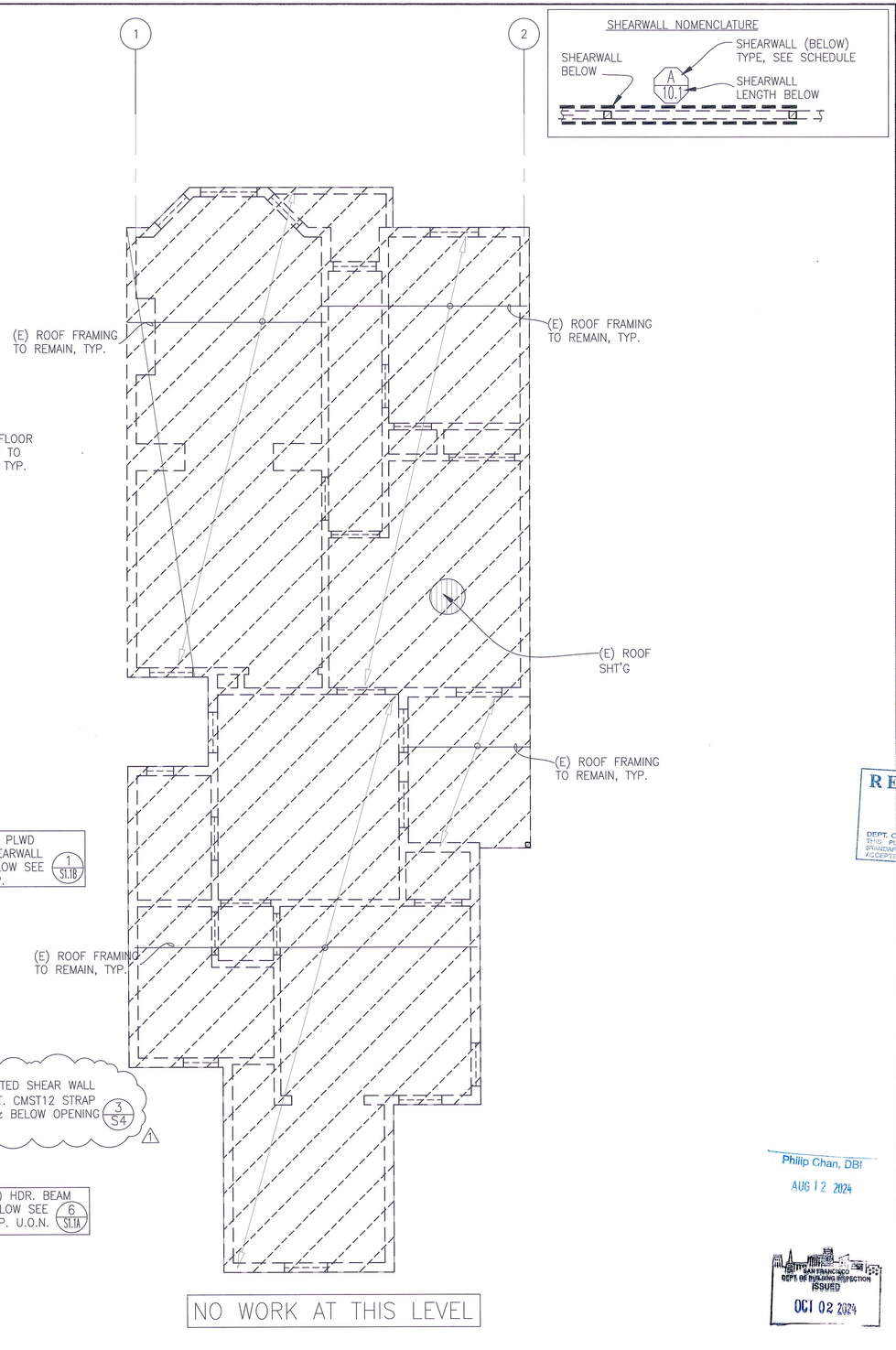
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NO WORK ABOVE THIS LEVEL

SECOND FLOOR FRAMING PLAN

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



NO WORK AT THIS LEVEL

ROOF FRAMING PLAN

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

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1167 MISSION STREET, FL. 4
SAN FRANCISCO, CA 94103

REGISTERED PROFESSIONAL ENGINEER PHILIP JIE CHEN No. 23057898 CIVIL STATE OF CALIFORNIA

	DATE	REVISIONS
1	05/17/24	PC REV1

FIRST FLOOR FOUNDATION PLAN
SECOND FLOOR FRAMING PLAN
ROOF FRAMING PLAN

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

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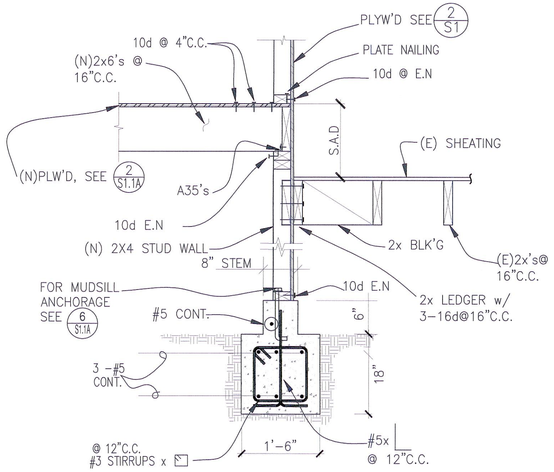
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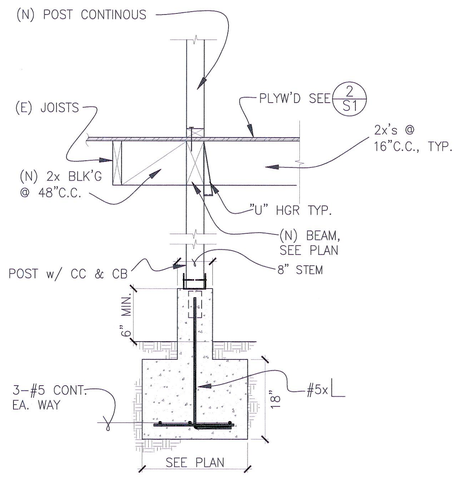
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Of	7 Sheets

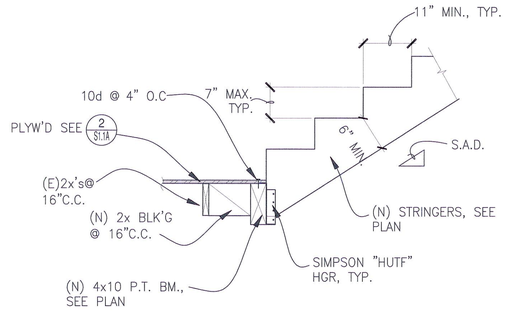
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PLOT DATE: 07-24-24 PLOTTED BY: dangaiaonm



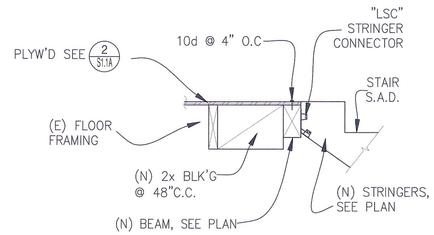
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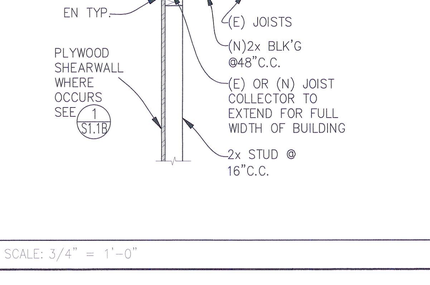
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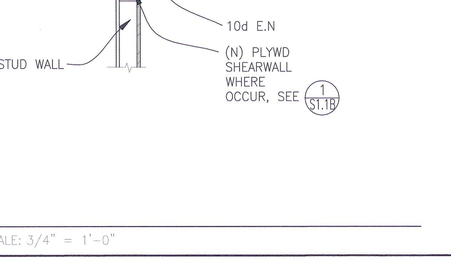
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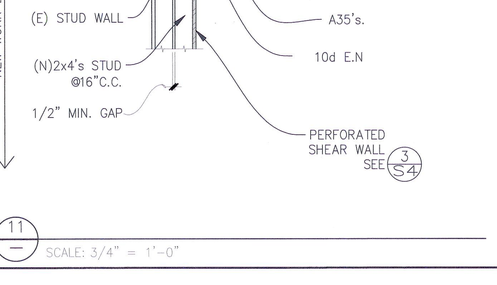
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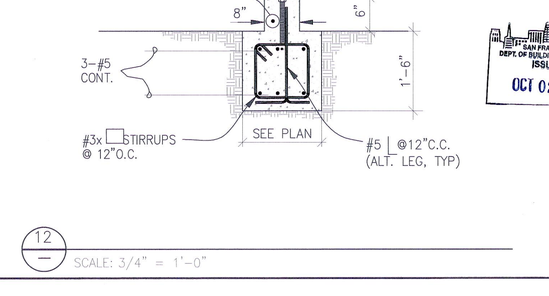
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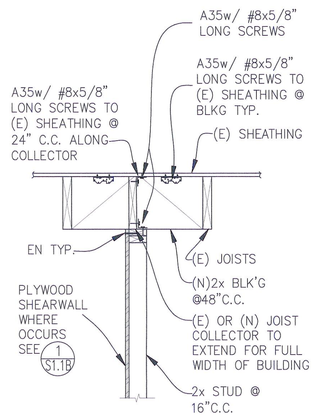
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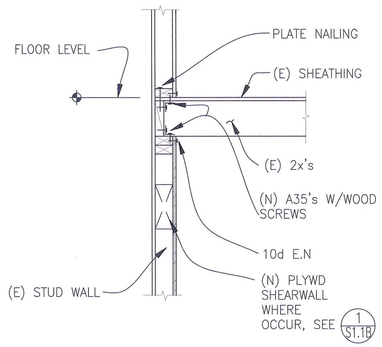
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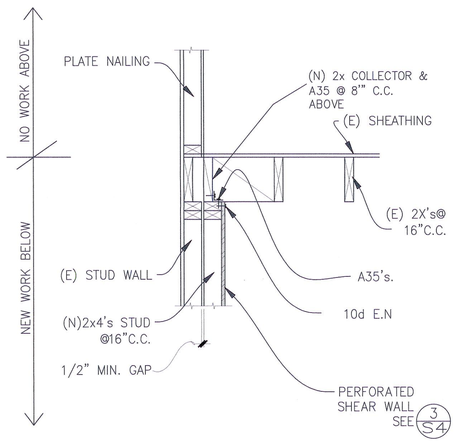
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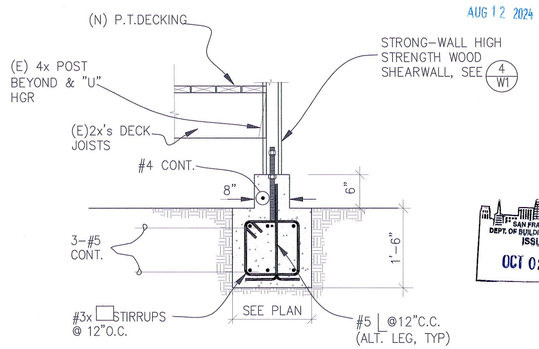
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10 SCALE: 3/4" = 1'-0"



11 SCALE: 3/4" = 1'-0"



Philip Chan, DBI
AUG 12 2024

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12 SCALE: 3/4" = 1'-0"

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SAN FRANCISCO, CA 94105

REGISTERED PROFESSIONAL ENGINEER — CIVIL — STATE OF CALIFORNIA — DEREK VECHEN — No. 85508 — EXP. 03/31/2026

	DATE	REVISIONS
1	05/17/24	PC REV1

STRUCTURAL DETAILS

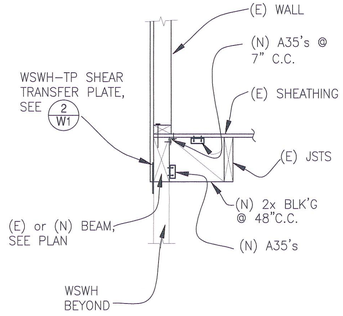
VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

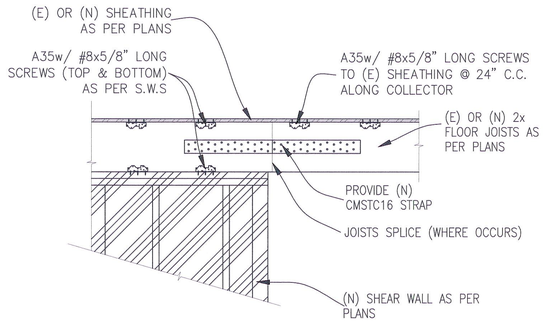
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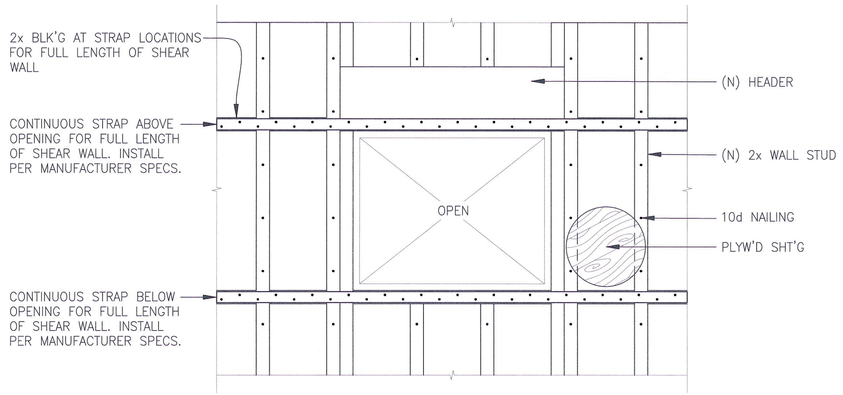
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PLOT DATE: 07-24-24 PLOTTED BY: darquisorm



1 — SCALE: 3/4" = 1'-0"



2 — SCALE: 3/4" = 1'-0"



3 — SCALE: 3/4" = 1'-0"

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1187 MISSION STREET FL 4
SAN FRANCISCO, CA 94103

LICENSED PROFESSIONAL ENGINEER — YUNJIE CHEN — C057898 — EXP. 06/2026 — CIVIL — STRUCTURAL

	DATE	REVISIONS
1	05/17/24	PC REV1

STRUCTURAL DETAILS

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AUG 12 2024

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VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date:	03/01/2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	S4
Of	7 Sheets

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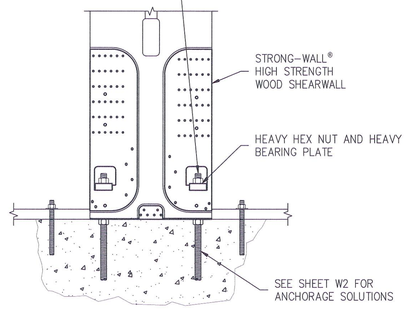
STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MODELS

MODEL NO.	W (in.)	H (in.)	ANCHOR BOLTS		TOTAL WALL WEIGHT (lb.)
			QUANTITY	DIA. (in.)	
WSWH12x7	12	84	2	1	105
WSWH18x7	18	84	2	1	155
WSWH12x8	12	96	2	1	120
WSWH18x8	18	96	2	1	175
WSWH24x8	24	96	2	1	225
WSWH12x9	12	108	2	1	130
WSWH18x9	18	108	2	1	195
WSWH24x9	24	108	2	1	250
WSWH12x10	12	120	2	1	145
WSWH18x10	18	120	2	1	210
WSWH24x10	24	120	2	1	275
WSWH12x12	12	144	2	1	165
WSWH18x12	18	144	2	1	245
WSWH24x12	24	144	2	1	325
WSWH18x14	18	168	2	1	285
WSWH24x14	24	168	2	1	370
WSWH24x16	24	192	2	1	420
WSWH18x20	18	240	2	1	390
WSWH24x20	24	240	2	1	520

NOTES :
1. FOR HEIGHTS NOT LISTED, ORDER THE NEXT TALLEST PANEL AND TRIM TO FIT. MINIMUM TRIMMED HEIGHT FOR ALL PANELS IS 74⅛".
2. ALL PANELS COME WITH PRE-ATTACHED HOLDOWNS, TWO HEAVY HEX NUTS, TWO HEAVY BEARING PLATES, ONE WSWH-TP TOP CONNECTION PLATE WITH REQUIRED FASTENERS AND INSTALLATION INSTRUCTIONS.
3. ALL PANELS ARE 3½" THICK.

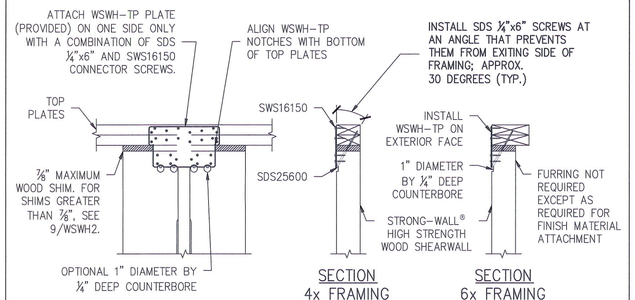
PLACE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL OVER THE ANCHOR BOLTS AND SECURE WITH HEAVY BEARING PLATES AND HEAVY HEX NUTS (PROVIDED). DO NOT USE AN IMPACT WRENCH. USE 1⅛" WRENCH FOR 1" NUT. TIGHTEN ANCHOR NUTS FINGER TIGHT + ½" TURN.

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

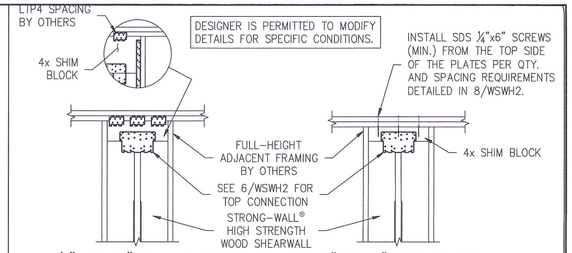


WSWH-TP CONNECTION		
MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	14	2
WSWH-TP18	26	4
WSWH-TP24	46	8

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



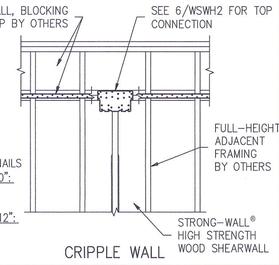
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



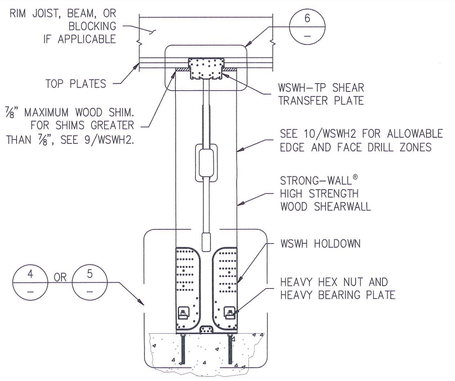
DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

FOR 8" TO 12" BLOCK DEPTHS:
ATTACH SIMPSON STRONG-TIE® CS16 STRAPS AT EDGE OF WSWH PANEL (EACH SIDE) USING 10dx1½" NAILS
SHIM BLOCK HEIGHTS GREATER THAN 8" AND UP TO 10":
- 8 NAILS INTO BLOCK
- 8 NAILS INTO WSWH PANEL

SHIM BLOCK HEIGHTS GREATER THAN 10" AND UP TO 12":
- 10 NAILS INTO BLOCK
- 10 NAILS INTO WSWH PANEL



STRONG-WALL® WSWH MODELS | 1

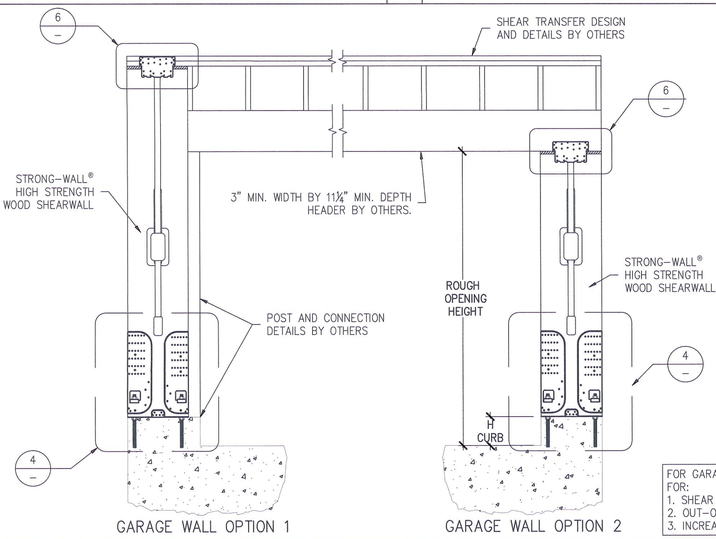


DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

ENSURE CONCRETE IS LEVEL AND SMOOTH BENEATH PANEL. GRIND OR FILL AS NECESSARY.

SINGLE STORY WSWH ON CONCRETE | 2

ALTERNATE WSWH GARAGE FRONT OPTIONS | 3



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

WHEN WSWH-PS STRAPS OMITTED, ALLOWABLE SHEAR VALUES FOR STANDARD PANEL APPLY.

GARAGE HEADER ROUGH OPENING HEIGHT

MODEL NO.	TRIMMED PANEL HEIGHT	H CURB	ROUGH OPENING HEIGHT
WSWH12x7 WSWH18x7 WSWH24x7	78"	5½"	6'-11½"
		6"	7'-0"
WSWH12x8 WSWH18x8 WSWH24x8	85½"	0"	7'-1½"
	93¼"	5½"	8'-2¾"
		6"	8'-3¾"

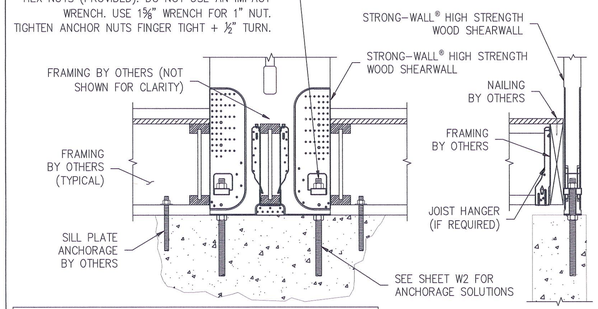
NOTES :
1. IF REQUIRED ROUGH OPENING HEIGHT EXCEEDS TABLE VALUE, SPECIFY NEXT TALLER PANEL AND TRIM AS NECESSARY. THE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MAY BE TRIMMED TO A MINIMUM HEIGHT OF 74⅛".
2. FURRING DOWN GARAGE HEADER MAY BE REQUIRED FOR CORRECT ROUGH OPENING HEIGHT.

FOR GARAGE WALL OPTION 2, DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

STANDARD INSTALLATION BASE CONNECTION | 4

PLACE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL OVER THE ANCHOR BOLTS AND SECURE WITH HEAVY BEARING PLATES AND HEAVY HEX NUTS (PROVIDED). DO NOT USE AN IMPACT WRENCH. USE 1⅛" WRENCH FOR 1" NUT. TIGHTEN ANCHOR NUTS FINGER TIGHT + ½" TURN.

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



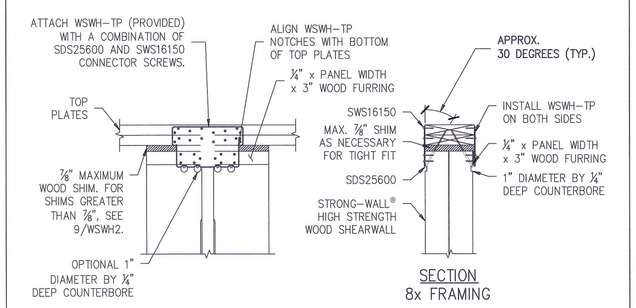
STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL HEIGHT TO INCLUDE THE DEPTH OF THE FLOOR SYSTEM AND SHALL BE INSTALLED DIRECTLY ON THE FOUNDATION. SPECIFY PANEL HEIGHT FROM TOP OF FOUNDATION TO UNDERSIDE OF TOP PLATES OR BEAM.

WOOD FLOOR SYSTEM BASE CONNECTION | 5

TOP CONNECTION | 6

WSWH-TP CONNECTION		
MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	28	4
WSWH-TP18	52	8
WSWH-TP24	92	16

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

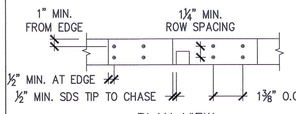


BACK-TO-BACK TOP CONNECTION | 7

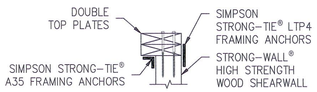
QTY. OF SDS¼"x6" SCREWS REQ'D.	
WSWH12	4
WSWH18	8
WSWH24	16

EDGE DISTANCE FOR SCREWS		
SLOPE	A (in.)	B (in.)
0:12-4:12	2	3
5:12-8:12	1½	4½
9:12-12:12	1½	5½

NOTES :
1. MAINTAIN END DISTANCES TO PREVENT SCREWS FROM PENETRATING THROUGH THE OUTER EDGES.
2. INSTALL SCREWS PERPENDICULAR TO THE TOP PLATE.
3. EDGE DISTANCES ASSUME DOUBLE TOP PLATE.

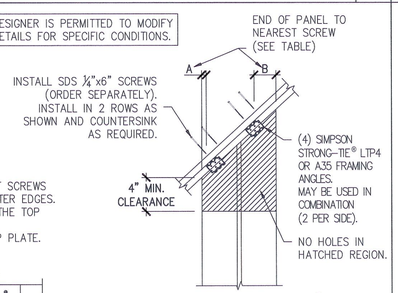


PLAN VIEW
SDS SCREW SPACING



SECTION VIEW
2X6 OR WIDER FRAMING

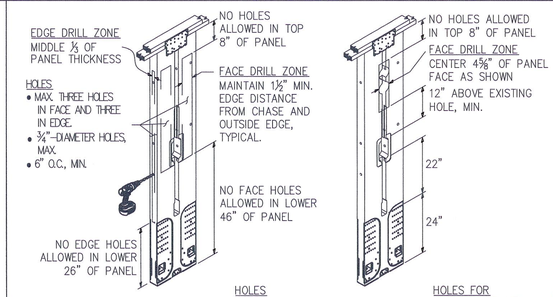
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



INSTALLATION NOTES :
1. ACTUAL CUT LENGTH (L) MUST BE GREATER THAN OR EQUAL TO PANEL WIDTH (W).
2. THIS DETAIL APPLICABLE FOR SLOPES UP TO 12:12.
3. PANELS TALLER THAN 12' MUST BE DESIGNED FOR THE APPLICATION.

RAKE WALL | 8

TOP OF WALL HEIGHT ADJUSTMENTS | 9



HOLES
- 4⅝"-DIA. HOLES, MAX.
- MAX. OF TWO 4⅝"-DIA. HOLES OR ONE 4⅝"x12" HOLE.
- NO MINIMUM ON-CENTER SPACING REQUIRED.

HOLES FOR WSWH24X7 PANEL ONLY
- MAX. OF ONE 4⅝"x6" HOLE
- 8" FROM TOP OF PANEL, MIN.

ALLOWABLE SMALL HOLES
FACE AND EDGE DRILL ZONES

ALLOWABLE LARGE HOLES
IN ADDITION TO ALLOWABLE SMALL HOLES

TRIM ZONE AND ALLOWABLE HOLES | 10

NOTES | 11

1. STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL IS MANUFACTURED AND TRADEMARKED BY "SIMPSON STRONG-TIE COMPANY INC." HOME OFFICE: 5956 W. LAS POSITAS BLVD., PLEASANTON, CA 94588 TEL: (800) 999-5099, FAX: (925) 847-1597. "SIMPSON STRONG-TIE COMPANY INC." IS AN ISO 9001-2008 REGISTERED COMPANY.
2. USE OF THIS PRODUCT IS SUBJECT TO THE APPROVAL OF THE LOCAL BUILDING DEPARTMENT.
3. THIS PRODUCT IS PART OF THE OVERALL LATERAL FORCE RESISTING SYSTEM OF THE STRUCTURE. DESIGN OF THE BUILDING'S LATERAL FORCE RESISTING SYSTEM, INCLUDING THE LOAD PATH TO TRANSFER LATERAL FORCES FROM THE STRUCTURE TO THE GROUND, IS THE RESPONSIBILITY OF THE DESIGNER.
4. ENGINEER OF RECORD IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, ELEVATIONS, ETC. PRIOR TO INSTALLATION OF ANY COMPONENTS FOR THE STRONG-WALL SB SYSTEM. IF ANY DISCREPANCIES ARE FOUND, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
6. INSTALLATION OF PRODUCT SHALL BE DONE IN CONFORMANCE TO THESE DRAWINGS. THE PERFORMANCE OF MODIFIED PRODUCTS OR ALTERED INSTALLATION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE DESIGNER.
7. SIMPSON STRONG-TIE COMPANY INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS, DESIGNS, AND MODELS WITHOUT NOTICE OR LIABILITY FOR SUCH CHANGES.
8. ALL HARDWARE CALLED OUT IS SIMPSON STRONG-TIE.
9. SEE ICC-ES ESR-2652 OR CITY OF LOS ANGELES RR25730 AS APPLICABLE FOR ADDITIONAL INFORMATION.

Philip Chan, DBI
AUG 12 2024

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED OCT 02 2024

RECEIVED AUG 12 2024 DEPT. OF BUILDING INSPECTION SAN FRANCISCO PLAN REVIEWED AND ACCEPTED FOR COMPLIANCE WITH THE CITY'S BUILDING CODE ORDINANCE

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.626.8300
FAX: 415.701.0212
1167 MISSION STREET FL-1
SAN FRANCISCO, CA 94103

PROFESSIONAL ENGINEER — YENTING CHEN — C057696 — CIVIL — STATE OF CALIFORNIA

	DATE	REVISIONS

STRUCTURAL DETAILS

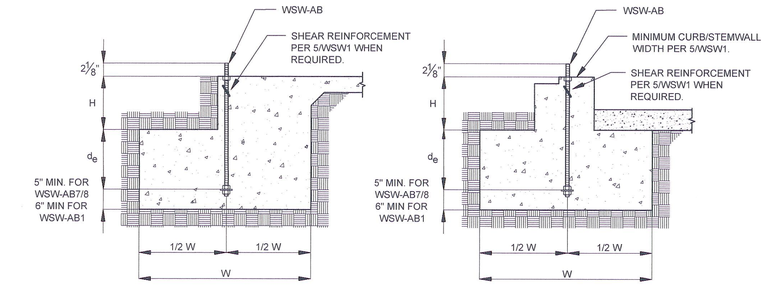
VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date:	03/01/2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	W1
Of	7 Sheets

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PLOT DATE: 07-24-24 PLOTTED BY: darquisonm

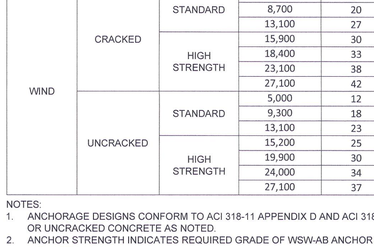


SLAB ON GRADE FOUNDATION

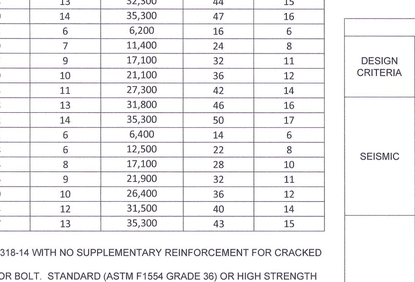
BRICK LEDGE FOUNDATION

NOTES:
1. SEE 2/WSW1 FOR DIMENSIONS AND ADDITIONAL NOTES.
2. SEE 5/WSW1 FOR SHEAR REINFORCEMENT WHEN REQUIRED.
3. MAXIMUM H = l_e - d_e. SEE 3/WSW1 AND 4/WSW1 FOR l_e.

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

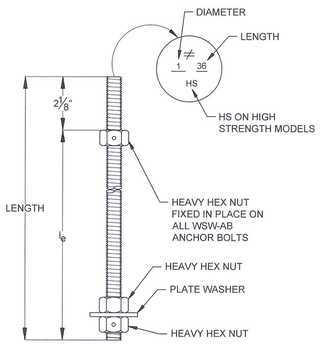


INTERIOR FOUNDATION



CURB OR STEMWALL FOUNDATION

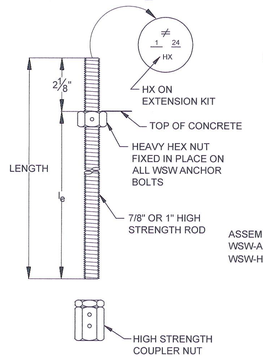
STRONG-WALL® WSW ANCHORAGE - TYPICAL SECTIONS | 1



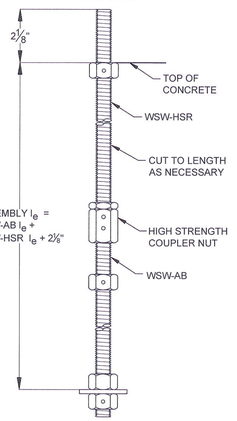
WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSW12 AND WSW18	WSW-AB7/8x24	7/8"	24"	20"
	WSW-AB7/8x24HS	7/8"	24"	20"
	WSW-AB7/8x30	7/8"	30"	26"
	WSW-AB7/8x30HS	7/8"	30"	26"
	WSW-AB7/8x36HS	7/8"	36"	32"
WSW24	WSW-AB1x24	1"	24"	20"
	WSW-AB1x24HS	1"	24"	20"
	WSW-AB1x30	1"	30"	26"
	WSW-AB1x30HS	1"	30"	26"
	WSW-AB1x36HS	1"	36"	32"

WSW ANCHOR BOLTS | 3

WSW-HSR_KT



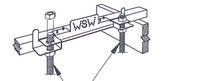
WSW-HSR AND WSW-AB ASSEMBLY



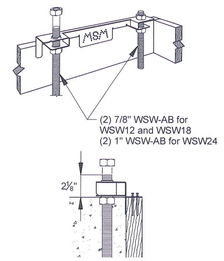
WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSW12 AND WSW18	WSW-HSR7/8x24KT	7/8"	24"	22"
	WSW-HSR7/8x36KT	7/8"	36"	34"
WSW24	WSW-HSR1x24KT	1"	24"	22"
	WSW-HSR1x36KT	1"	36"	34"

WSW ANCHOR BOLT EXTENSION | 4

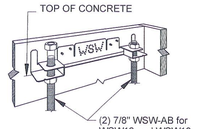
WSW-RT INTERIOR INSTALLATION



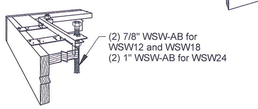
WSW-RT EXTERIOR INSTALLATION



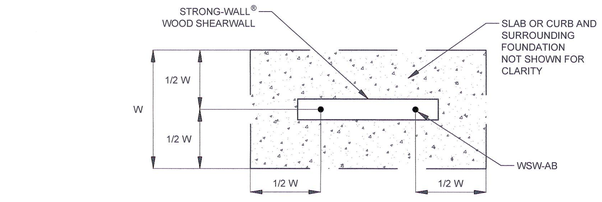
WSW-RTPF PANEL FORM INSTALLATION



WSW-RTBL BRICK LEDGE INSTALLATION



WSW ANCHOR BOLT TEMPLATES | 6



FOUNDATION PLAN VIEW

WSW ANCHORAGE SOLUTIONS FOR 2500 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
1 SEISMIC	CRACKED	STANDARD	11,900	27	9	16,100	33	11
			13,100	29	10	17,100	35	12
		HIGH STRENGTH	24,900	43	15	33,000	51	17
			27,100	46	16	35,300	54	18
	UNCRACKED	STANDARD	12,500	24	8	15,700	28	10
			13,100	25	9	17,100	30	10
		HIGH STRENGTH	25,300	38	13	32,300	44	15
			27,100	40	14	35,300	47	16
WIND	CRACKED	STANDARD	5,100	14	6	6,200	16	6
			8,700	20	7	11,400	24	8
		HIGH STRENGTH	13,100	27	9	17,100	32	11
			15,900	30	10	21,100	36	12
			18,400	33	11	27,300	42	14
			23,100	38	13	31,800	46	16
			27,100	42	14	35,300	50	17
	UNCRACKED	STANDARD	5,000	12	6	6,400	14	6
			9,300	18	6	12,500	22	8
		HIGH STRENGTH	13,100	23	8	17,100	28	10
			15,200	25	9	21,900	32	11
			19,900	30	10	26,400	36	12
			24,000	34	12	31,500	40	14
			27,100	37	13	35,300	43	15

NOTES:
1. ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D AND ACI 318-14 WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF WSW-AB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449).
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C - F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.3 AND ACI 318-14 SECTION 17.2.3.4.3.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
6. REFER TO 1/WSW1 FOR d_e.

STRONG-WALL® WOOD SHEARWALL TENSION ANCHORAGE SCHEDULE 2,500, 3,000 AND 4,500 PSI | 2

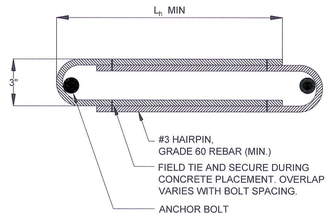
WSW ANCHORAGE SOLUTIONS FOR 3000 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
SEISMIC	CRACKED	STANDARD	12,300	26	9	16,000	31	11
			13,100	28	10	17,100	33	11
		HIGH STRENGTH	25,200	41	14	32,700	48	16
			27,100	43	15	35,300	51	17
	UNCRACKED	STANDARD	12,000	22	8	16,300	27	9
			13,100	24	8	17,100	28	10
		HIGH STRENGTH	25,300	36	12	32,700	42	14
			27,100	38	13	35,300	44	15
WIND	CRACKED	STANDARD	5,000	13	6	5,600	14	6
			8,800	19	7	10,200	21	7
		HIGH STRENGTH	13,100	25	9	17,100	30	10
			15,700	28	10	20,100	33	11
			19,200	32	11	25,300	38	13
			23,200	36	12	32,300	44	15
			27,100	40	14	35,300	47	16
	UNCRACKED	STANDARD	5,500	12	6	6,200	13	6
			8,500	16	6	12,800	21	7
		HIGH STRENGTH	13,100	22	8	17,100	26	9
			16,600	25	9	21,800	30	10
			19,700	28	10	25,200	33	11
			24,000	32	11	31,700	38	13
			27,100	35	12	35,300	41	14

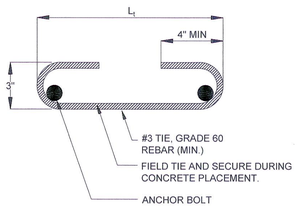
WSW ANCHORAGE SOLUTIONS FOR 4500 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
SEISMIC	CRACKED	STANDARD	12,600	23	8	16,000	27	9
			13,100	24	8	17,100	29	10
		HIGH STRENGTH	24,800	36	12	32,100	42	14
			27,100	38	13	35,300	45	15
	UNCRACKED	STANDARD	12,700	20	7	15,700	23	8
			13,100	21	7	17,100	25	9
		HIGH STRENGTH	24,600	31	11	32,500	37	13
			27,100	34	12	35,300	39	13
WIND	CRACKED	STANDARD	5,400	12	6	6,800	14	6
			8,300	16	6	11,600	20	7
		HIGH STRENGTH	13,100	22	8	17,100	26	9
			15,300	24	8	21,400	30	10
			19,300	28	10	25,800	34	12
			23,600	32	11	31,000	38	13
			27,100	36	12	35,300	42	14
	UNCRACKED	STANDARD	6,800	12	6	6,800	12	6
			9,400	15	6	12,400	18	6
		HIGH STRENGTH	13,100	19	7	17,100	23	8
			16,800	22	8	21,600	26	9
			20,300	25	9	26,700	30	10
			24,100	28	10	32,200	34	12
			27,100	31	11	35,300	36	12

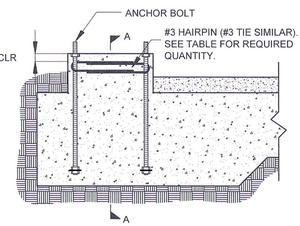
STRONG-WALL® WSW SHEAR ANCHORAGE SCHEDULE AND DETAILS | 5



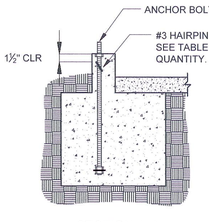
HAIRPIN SHEAR REINFORCEMENT



TIE SHEAR REINFORCEMENT



HAIRPIN INSTALLATION
(GARAGE CURB SHOWN. OTHER FOOTING TYPES SIMILAR.)



SECTION A-A

STRONG-WALL® WOOD SHEARWALL SHEAR ANCHORAGE

MODEL	L_t OR L_h (in.)	SEISMIC [3] SHEAR REINFORCEMENT	SEISMIC [3] MINIMUM CURB/ STEMWALL WIDTH (in.)	WIND [4] SHEAR REINFORCEMENT	WIND [4] MINIMUM CURB/ STEMWALL WIDTH (in.)	WIND [4] ASD ALLOWABLE SHEAR LOAD, V (lb.) [6] UNCRACKED	WIND [4] ASD ALLOWABLE SHEAR LOAD, V (lb.) [6] CRACKED
WSW12	10¼	(1) #3 HAIRPIN	8[5]	SEE NOTE 6	6	1,035	740
WSW18	15	(1) #3 HAIRPIN	8[5]	(1) #3 HAIRPIN	6	HAIRPIN REINFORCEMENT ACHIEVES MAXIMUM ALLOWABLE SHEAR LOAD OF THE WSW	
WSW24	19	(2) #3 HAIRPINS	8[5]	(1) #3 HAIRPIN	6		

NOTES:
1. SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-11 AND ACI 318-14 AND ASSUME MINIMUM 2,500 PSI CONCRETE.
2. SHEAR REINFORCEMENT IS NOT REQUIRED FOR INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. WHERE NOTED, MINIMUM CURB/STEMWALL WIDTH IS 6 INCHES WHEN STANDARD STRENGTH ANCHOR BOLT IS USED.
6. USE (1) #3 TIE FOR WSW12 WHEN PANEL DESIGN SHEAR FORCE EXCEEDS TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.
7. #4 GRADE 40 SHEAR REINFORCEMENT MAY BE SUBSTITUTED FOR WSW SHEAR ANCHORAGE SOLUTIONS.

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.626.8300
FAX: 415.701.0212
1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103

	DATE	REVISIONS
1	05/17/24	PC REV1

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARDS FOR ACCEPTED PLAN CHECKING

Philip Chan, DBI
AUG 12 2024

AUG 12 2024

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED
OCT 02 2024

STRUCTURAL DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date:	03/01/2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	W2
Of	7 Sheets

DRAWING NAME: C:\Users\rdgreis\AppData\Local\Temp\AcPublish_15044\WSW24 Fell Street\Drawings\Plotting 2023\1077 Fell Street\Drawings\Structural\1077 Fell Street - DS 02.24.24.dwg
PLOT DATE: 07-24-24 PLOTTED BY: darquisnorm

CONTRUCTION NOTES

1. CONTRACTOR IS TO VERIFY ALL (E) DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION.
2. CARE SHALL BE TAKEN TO ELIMINATE DAMAGE TO (E) MATERIALS AND SURFACES DURING CONSTRUCTION. ANY DAMAGES TO (E) CONSTRUCTION SHALL BE REPLACED OR REPAIRED AT NO ADDITIONAL COST.
3. CONTRACTOR SHALL REPAIR ANY DAMAGE TO (E) WALLS AND FLOORS CAUSED BY DEMOLITION OF (E) PARTITIONS & CEILING.
4. ALL DIMENSIONS ARE TO FACE OF FINISH OR CENTERLINE, U.N.O.
5. ALL BLOCKING AND FURRING SHALL BE FIRE TREATED AS REQUIRED BY BUILDING CODE.
6. ALL PARTITIONS ABUTTING EXISTING BUILDING CONSTRUCTION SHALL ALIGN FINISH FACE TO FINISH FACE U.N.O.
7. ALL PARTITIONS SHALL BE BRACED PER THE REQUIREMENTS OF CURRENT LOCAL SEISMIC CODE.
8. ALL DOORS TO BE UNDERCUT AS REQUIRED TO CLEAR FINISH FLOOR BY 1/4".
9. ALL WORK TO BE INSTALLED PLUMB, LEVEL, SQUARE, AND TRUE AND IN PROPER ALIGNMENT.
10. CONTRACTOR TO PROTECT FINISHES IN PATH OF TRAVEL TO AREA OF WORK.

PLUMBING NOTES

P1. Gas vent terminations shall meet the requirements of CMC 802.6 & SFMC 802.6.2.

P2. Combustion air shall meet the requirements of CMC Chapter 7.

P3. Environmental air ducts shall terminate 3 feet from the property line and 3 feet from openings into the building per CMC 504.5 and provide with back-draft dampers per CMC Table 504.1.

P4. Clothes dryer exhaust shall be a minimum 4", terminate to the outside of the building, shall be equipped with a back-draft damper and meet the requirements of CMC 504.3. Provide 100 sq. in. minimum make-up air opening for domestic dryers.

P5. 100% of the construction waste generated by this project shall be recycled or salvaged for use.

P6. Plastic Plumbing Pipe shall not be used for domestic water supply or sanitary waste system within the building.

P7. Shower and Tub-Shower combinations shall be pressure balanced or thermostatic mixing type control valves per CPC 418.

P8. Shower shall be 1024 sq. in. Min. Must encompass a 30" circle. Shower door Min. 22" clear opening.

P9. Control valves and Showerheads shall be located on sidewall of shower compartment or otherwise arranged so that the showerhead does not discharge directly at the entrance to the compartment so that the bather can adjust valves prior to stepping into the shower spray.

P10. Minimum 26 gage steel heating supply ducts shall be installed between the garage and new habitable spaces.

P11. Provide insulation on all new domestic hot water piping in new accessory units, rooms down additions and new buildings. The insulation shall be the same thickness of the water piping up to 2" water piping size.

P12. Water Heater shall be raised 18" above the Floor.

P13. Seismically strap the water heater with two straps (one 1/3 down from the top of the tank and one strap 4" above the controls)

P14. R-6.0 duct insulation shall be installed if 40 feet or less of new ducts are installed in unconditioned space.

P15. 1 inch insulation shall be installed on first 5 feet of cold water pipes at the water heater.

P16. All interior spaces intended for human occupancy shall be provided with space heating per CBC 1204.1.

EGRESS WINDOW REQUIREMENTS

A finished sill height above the finished floor of 44" or less.
A minimum opening of 5.7 square feet net clear area.
A minimum net clear opening dimension of 20" in width.
A minimum net clear opening dimension of 24" in height.

WINDOW TYPE ABBREVIATION

DH: DOUBLE HUNG
CS: CASEMENT
FX: FIXED
SL: SLIDDER

WATER CONSERVATION REQUIREMENTS

W1. Water closets shall not exceed 1.28 gallons per effective flush.

W2. Single showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi.

W3. Multiple showerheads serving one shower shall have a combined flow rate of not more than 1.8 gallons per minute at 80 psi.

W4. Bathroom faucets shall have a maximum flow rate of not more than 1.2 gallons per minute at 60 psi.

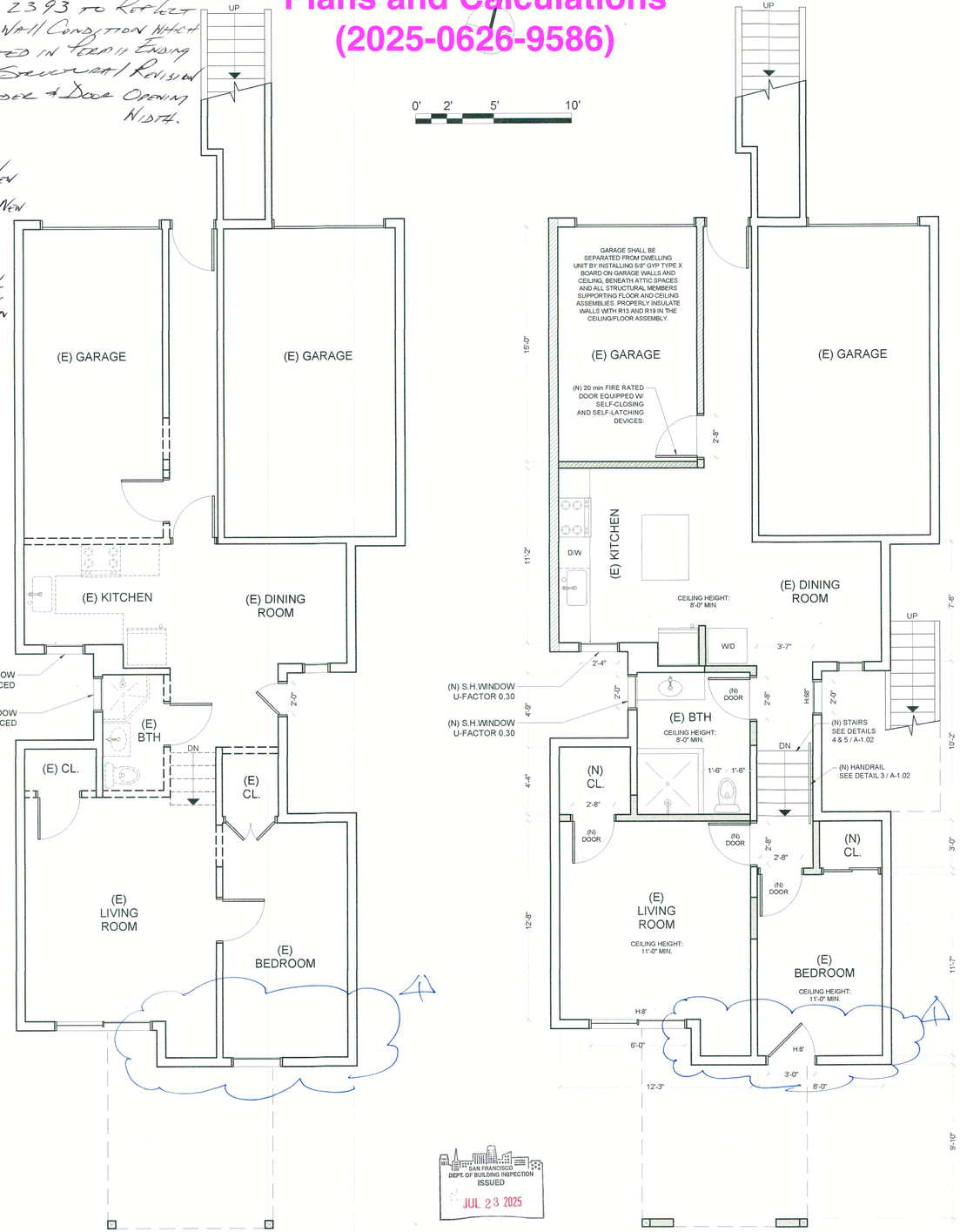
W5. Maximum water factor equal to or less than 6.0 for clothes washers.

Scope of Work:
Revision to Approved Permit 2024 0517 2393 to Reflect Existing Rear Wall Condition Which was Misrepresented in Permit Ending in 4513. Minor Structural Revision to Clarify Header & Door Opening Width.

Sheet Index

A-1.01 Floor Plans Existing & New
A-1.02 Elevations Existing & New
S1 General Notes
S1.1A Typical Wood Details
S1.1B Typical Wood Details
S2 First Floor Foundation Plan
S3 Structural Details
S4 Structural Details

Exhibit 10 - Approved Plans and Calculations (2025-0626-9586)



1 FIRST FLOOR PLAN - EXISTING
1/4" = 1'-0"

2 FIRST FLOOR PLAN - NEW
1/4" = 1'-0"

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED JUL 23 2025

WALLS AND INTERIOR PARTITIONS, WOOD FRAMED

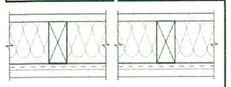
GA FILE NO. WP 3242	GENERIC	1 HOUR FIRE	50 to 54 STC SOUND

GYPSUM WALLBOARD, RESILIENT CHANNELS, MINERAL OR GLASS FIBER INSULATION, WOOD STUDS

Resilient channels 16" o.c. attached at right angles to ONE SIDE of 2 x 4 wood studs 24" o.c. with 1¼" Type S drywall screws. One layer ⅝" type X gypsum wallboard or gypsum veneer base applied at right angles to channels with 1" Type S drywall screws 8" o.c. with vertical joints located midway between studs. 3" mineral or glass fiber insulation in stud space.

OPPOSITE SIDE: One layer ⅝" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to studs with 6d cement coated nails, 1⅞" long, 0.0915" shank, 15/64" heads, 7" o.c.

Vertical joints staggered 24" on opposite sides. **(LOAD-BEARING)**



Thickness: 5⅜"
Approx. Weight: 7 psf
Fire Test: Based on UL R14196, 05NK05371, 2-15-05, UL Design U309
Sound Test: NRCC TL 93-098, IRC-IR-761, 3/98

3 FIRE RATED WALL

WALL TYPE

- EXISTING WALL
- DEMO WALL
- SOFFIT
- NEW WALL
- 1 HOUR FIRE RATED WALL

PROJECT ADDRESS
1077 FELL ST,
SAN FRANCISCO,
CA 94117

ARL DESIGN
ARIEL R LORENZALE
607 ELMIRA RD, #249,
VACAVILLE, CA 95687
415-505-5288
ariel@arldesigner.com

VELOX
442 HAIGHT ST.
SAN FRANCISCO, CA 94117
415-416-0177
doug@veloxsf.com

RECEIVED
JUL 23 2025
DEPT OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARDS FOR IMAGING ACCEPTED

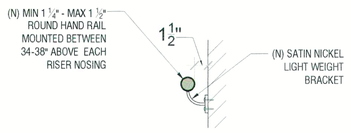
Stephen Liu, DBI
JUL 23 2025
REV 1 ONLY

2025-0626-9586

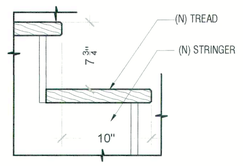
REVISIONS

No	date
1	5/27/25

drawn: A. Lorenzale
checked:
date: 7/16/2025
scale: 1/4" = 1'-0"
project No: 0445
drawing title
FLOOR PLANS EXISTING AND NEW
sheet
A-1.01
2 of 14 sheets.



3 TYPICAL HANDRAIL DETAIL



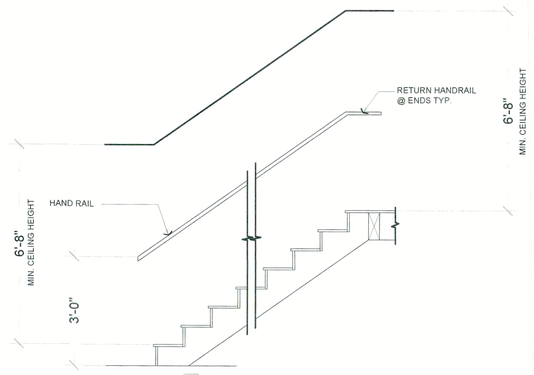
4 TYPICAL RISER/TREAD AT STAIR

NOSING PROJECTION TO BE NOT LESS THAN 3/4" AND NOT MORE THAN 1-1/4" FROM THE SOLID RISER. PER CRC R311.7.5.3.

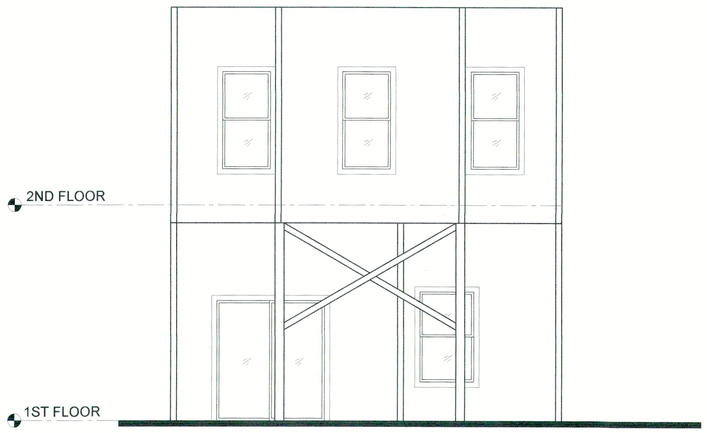
NOTES:

1. PROVIDE 2x NOMINAL LUMBER IN CONCEALED SPACE BETWEEN STAIR STRINGERS @ TOP & BOT. OF THE RUN & BETWEEN STUDS ALONG AND IN LINE WITH THE RUN OF STAIRS IF THE WALL UNDER STAIRS ARE UNFINISHED.

2. HANDRAIL MUST EXTEND NOT LESS THAN 6 INCHES BEYOND THE TOP AND BOTTOM RISERS. THE END OF HANDRAILS ARE TO BE RETURNED TO THE WALL OR SHALL TERMINATE IN NEWEL POST OR OTHER SIMILAR SAFETY TERMINALS.



5 STAIRS DETAILS



1 SOUTH ELEVATION - EXISTING
1/4" = 1'-0"



2 SOUTH ELEVATION - NEW
1/4" = 1'-0"

PROJECT ADDRESS
1077 FELL ST,
SAN FRANCISCO,
CA 94117

ARL DESIGN
ARIEL R LORENZALE
607 ELMIRA RD, #249,
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415-505-5288
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VELOX
442 HAIGHT ST.
SAN FRANCISCO, CA 94117
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doug@veloxsf.com

RECEIVED
JUL 23 2025
BY CITY AGENCY FOR BUILDING INSPECTION
DO NOT PLAN AUDIT OR THE QUALITY OF CONSTRUCTION MANUAL
Stephen Liu, DBI
JUL 23 2025

REVISIONS

No	date	by

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED JUL 23 2025

drawn: A. Lorenzale
checked:
date: 7/16/2025
scale: 1/4" = 1'-0"
project No: 0445
drawing title
ELEVATIONS EXISTING AND NEW
sheet
A-1.02
3 of 14 sheets.

GENERAL STRUCTURAL NOTES

I GENERAL

2 SCOPE OF WORK: REVISION FOR PA 2023-0426-6513/ REMODEL

A. ALL CONSTRUCTION SHALL CONFORM TO THE CALIFORNIA BUILDING CODE 2022 EDITION w/ AMENDMENTS BY LOCAL JURISDICTIONS.
B. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT JOB SITE BEFORE COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT OR ENGINEER.
C. OMISSIONS OR CONFLICT BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
D. DO NOT USE SCALED DIMENSIONS; USE WRITTEN DIMENSIONS OR WHERE NO DIMENSION IS PROVIDED, CONSULT THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
E. DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS WHETHER SPECIFICALLY CALLED OUT OR NOT.
F. FOR WATERPROOFING, FIREPROOFING, ETC. REFER TO DRAWINGS OTHER THAN STRUCTURAL.
G. SEE DRAWINGS OTHER THAN STRUCTURAL FOR: KINDS OF FLOOR FINISH AND THEIR LOCATION, FOR DEPRESSIONS IN FLOOR SLABS, FOR OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MECHANICAL FEATURES, FOR ROADWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC.
H. HOLES AND OPENINGS THROUGH WALLS AND FLOORS FOR DUCTS, PIPING AND VENTILATION SHALL BE CHECKED BY THE CONTRACTOR, WHO SHALL VERIFY SIZES AND LOCATION OF SUCH HOLES OR OPENINGS WITH THE PLUMBING HEATING, VENTILATING AND ELECTRICAL DRAWINGS AND THESE SUB-CONTRACTORS.
I. NO PIPES AND DUCTS SHALL BE PLACED IN SLABS OR WALLS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ARCHITECT.
J. DRAWINGS AND SPECIFICATIONS REPRESENT FINISHED STRUCTURE. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION INCLUDING BUT NOT LIMITED TO SHORING AND TEMPORARY BRACING. THE SUBCONTRACTOR SHALL UNDERTAKE ALL NECESSARY MEASURES TO INSURE SAFETY OF ALL PERSONS AND STRUCTURES AT THE SITE AND ADJACENT TO THE SITE. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT, ENGINEER SHALL NOT RELIEVE THE SUBCONTRACTOR OF SUCH RESPONSIBILITY.
K. NOTE THAT SHEET S1 IS A STANDARD COVER SHEET AND AS SUCH, NOT ALL TYP. DETAILS AND OR NOTES APPLY TO EVERY PROJECT.

II DESIGN CRITERIA

A. APPLICABLE CODE: CALIFORNIA BUILDING CODE 2022 & SFBC 2022.
B. VERTICAL LIVE LOADS: (REDUCIBLE). ROOF: 20 PSF. FLOOR: 40 PSF. HALLWAYS & CORRIDORS: 100 PSF.
C. LATERAL LOADS:
   1. WIND: 95 MPH. BASIC WIND SPEED, EXPOSURE: "B"
   2. SEISMIC: SITE CLASS 'D'
      MAPPED SPECTRAL ACCELERATIONS: S_S=1.66 S_1=0.62
      Fa=1.2 Fv=1.5 S_{ms}= 1.26 S_{m1}= 1.24
      BASE SHEAR 'V' = .136 W (ASD)
      SEISMIC DESIGN CATEGORY: D
      RESPONSE MODIFICATION FACTOR, R=6.5
      ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
      IMPORTANCE FACTOR=1 OCCUPANCY CATEGORY=II

III MATERIALS

A. CONCRETE:
   1. REINFORCING STEEL: ASTM A615, GRADE 60, #4 AND SMALLER, GRADE 40.
   2. CONCRETE: NORMAL WEIGHT U.O.N. WITH COMPRESSIVE STRENGTH OF THE FOLLOWING AT 28 DAYS:
      FOOTINGS, ~~MAT SLAB~~ & DRILLED PIERS 2500 psi
      ~~WALLS, COLUMNS 5000 psi~~
      ~~STRUCTURAL SLAB (L.W. P.T. SEE S3.2) 5000 psi~~
   3. MINIMUM CONCRETE COVER FOR REINFORCING STEEL:
      a. SURFACE POURED AGAINST GROUND 3"
      b. FORMED SURFACES BELOW GRADE 2"
      c. SURFACES EXPOSED TO WEATHER 2"
      d. BEAM BARS (INCLUDING STIRRUPS) 1-1/2"
      e. ALL OTHER 1"
   4. ANCHOR BOLT EPOXY*: HILTI HIT-RE 500-SD. (ICC ESR-2322) OR SIMPSON SET-XP (ICC ESR-2508)
   5. SCREW ANCHORS*: SIMPSON TITEN HD (ICC ESR-2713)
      * USE COMPRESSED AIR TO BLOW THE DUST OUT OF ANCHOR BOLT HOLES.
   6. PNEUMATICALLY PLACED CONCRETE (SHOTCRETE) NOTES
      a. ALL CONCRETE WALLS MAY BE SHOTCRETED AT CONTRACTOR'S OPTION. VERIFY COMPATIBILITY OF SHOTCRETE WITH WATE PROOFINGCONTRACTOR.
      b. ALL SHOTCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 506.2 AND CBC SECTION 1924.
      c. ALL SHOTCRETE SHALL TEST NOT LESS THAN 4000 PSI AT 28 DAYS.
      d. MAXIMUM AGGREGATE SIZE SHALL BE 3/8 INCH.
      e. LAP ALL REINFORCING BARS 40 DIAMETERS AT SPLICES. SPLICE BARS BY THE NON-CONTACT LAP SPLICE METHOD WITH 2 INCHES CLEAR BETWEEN BARS.
      f. ANY REBOUND SHALL BE REMOVED PRIOR TO PLACING OF CONCRETE.
      g. IN-PLACE SHOTCRETE WHICH SHOW SAGS OR SLOUGHS, SEGREGATION, HONEY COMBING, SAND POCKETS OR OTHER OBVIOUS DEFECTS SHALL BE REMOVED AND REPLACED.
      h. CURE SHOTCRETE BY KEEPING CONTINUOUSLY MOIST FOR A MINIMUM OF 7 DAYS UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER.
      i. TEST PANELS: SHOOT ONE TEST PANEL, 18 INCHES SQUARE ,FOR EACH 50 CUBIC YARDS OF SHOTCRETE PLACED, BUT NOT LESS THAN ONE PANEL PER SHIFT. CURE PANELS UNDER SAME CONDITIONS AS THE WORK. TESTING AGENCY SHALL TAKE A MINIMUM OF THREE 2" DIAMETER CORES FROM EACH PANEL. WATER SOAK SPECIMENS 24 HOURS BEFORE TESTING. TEST IN ACCORDANCE WITH UNIFORM BUILDING CODE STANDARD NO. 26-10.
      j. A MINIMUM OF THREE 3" DIAMETER CORES SHALL BE TAKEN FROM THE WORK AT LOCATIONS SPECIFIED BY THE STRUCTURAL ENGINEER. THE SPECIAL INSPECTOR SHALL VISUALLY EXAMINE CORES FOR STRUCTURAL SOUNDNESS AND SUBMIT A REPORT TO THE STRUCTURAL ENGINEER AND THE BUILDING INSPECTION DEPARTMENT.
      k. INSPECTION: PROVIDE CONTINUOUS SPECIAL INSPECTION OF SHOTCRETING OPERATION.

B. ~~CMU: UNITS 1500 PSI, MORTAR (TYPE 'S'), GROUT 2000 PSI~~

C. STEEL
   1. SHAPES AND PLATES: ASTM A36; TUBES: ASTM A500, GRADE B.
   2. MOMENT FRAMES (BEAMS, COLUMNS): ASTM A992 OR A913 (50 ksi) MOMENT FRAMES (PLATES): A572 GRADE 50.
   3. METAL STUDS, SEE S1.4, NOTES
   4. METAL JOISTS, 50 ksi
   5. BOLTS: ASTM A307, U.O.N.
   6. WELDING ELECTRODES: E-70 FOR FULL PEN WELDS USE CHARPY V-NOTCH WIRE, MIN. 20 ft # @ 0°F
   7. METAL DECKING, SEE S1.5

D. WOOD
   1. FRAMING LUMBER - DOUGLAS FIR LARCH
      a. HEADERS, PLATES, JOISTS: NO.1
      b. STUDS, BLOCKING: NO.2
      c. ALL LUMBER IN CONTACT WITH CONCRETE: PRESERVATIVE TREATED DOUGLAS FIR, (NOT CCA-C)
      d. POSTS AND BEAMS: NO.1
   2. PLYWOOD SHEATHING
      a. SHEARWALL PLYWOOD : 1/2 INCH STRUCTURAL I, C-D EXTERIOR, APA RATED 32/16.
      b. ROOF SHEATHING: 5/8 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 32/16
      c. FLOOR SHEATHING: 3/4 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 48/24
   3. FRAMING HARDWARE AND JOIST HANGERS: AS MANUFACTURED BY SIMPSON STRONGTIE CO. OR APPROVED EQUAL. SIMPSON DESIGNATIONS USED. USE NAILS PER I.C.C. APPROVAL FOR EACH DEVICE.
   4. COMMON NAILS, UNLESS OTHERWISE NOTED. SHORT NAILS MAY BE USED PROVIDED THEY HAVE COMMON CODE SPECIFIED MINIMUM EMBEDMENT. ALL NAILING TO BE PER IBC TABLE NO. 2304.9.1 UNLESS NOTED OTHERWISE.
   5. GLU-LAM BEAMS: 24F-V4 (Fb=2400 PSI)
   6. PARALLAM & MICROLLAM BEAMS AND TJI's TO BE FABRICATED BY TRUS JOIST:
      PARALLAM BEAMS: 2.2E (Fb=2900PSI)
      MICROLLAM BEAMS: 2.0E (Fb=2600PSI)
   7. FOR MICROLLAMS SEE CODE EVALUATION: ICC-ES ESR-1387
   8. FOR TJI JOISTS SEE CODE EVALUATION: ICC-ES ESR-1153

IV EXPOSURE TO WEATHER:

A. STEEL:
   1. ALL EXPOSED MEMBERS SHALL BE COATED WITH A ZINC RICH PRIMER.
   2. BOLTS, NUTS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED.

B. WOOD:
   1. ALL EXTERIOR TIMBER AND GLU-LAM BEAMS SHALL BE PRESSURE TREATED (BUT NOT CHROMATED COPPER ARSENATE) OR WOOD OF NATURAL RESISTANCE TO DECAY.
   2. ALL EXTERIOR HANGERS AND OTHER SIMPSON TYPE PRODUCTS SHALL BE GALVANIZED.
   3. ALL PLYWOOD SHALL BE OF AN EXTERIOR GRADE.
   4. METAL CONNECTORS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED w/ MIN. ZINC COATING OF G185.
   5. ALL NAILS & ANCHOR BOLTS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED.

V ABBREVIATIONS

B.N. — BOUNDARY NAILING
DIA. — DIAMETER
E.N. — EDGE NAILING
H.P. — HIGH POINT
L.P. — LOW POINT
LVL — LAMINATED VENEER LUMBER
L.W. — LIGHT WEIGHT
M.L. — MICROLLAM
PLWD — PLYWOOD SHEATHING
PSL — PARALLEL STRAND LUMBER
P.T. — PRESSURE TREATED OR POST-TENSIONED
S.A.D. — SEE ARCHITECTURAL DRAWINGS
S.O.G. — SLAB-ON-GRADE
S.S. — STAINLESS STEEL
T.O. — TOP OF
TYP. — TYPICAL
U.O.N. — UNLESS OTHERWISE NOTED
V.I.F. — VERIFY IN FIELD
W.W.F. — WELDED WIRE FABRIC

SYMBOLS

(E) WALL BELOW
(E) WALL ABOVE
(N) CONC. WALL ABOVE
BRICK OR CMU WALL ABOVE
WOOD SHEARWALL (BELOW)
WOOD JOIST HANGER (HUS TYPE, U.O.N.)
WOOD POST BELOW
WOOD POST ABOVE (OR ABOVE & BELOW)
HOLDOWN @ WOOD POST
STEEL COLUMN ABOVE
STEEL COLUMN BELOW
MOMENT CONNECTION
CONCRETE TOPPING OVER PLYWOOD
CONCRETE TOPPING OVER CORRUGATED METAL DECK
CONCRETE COLUMN ABOVE
CONCRETE COLUMN BELOW w/ DROPCAP
DRILLED CONCRETE PIER
PRECAST, PRESTRESSED CONCRETE PILE
DIAGONAL ABOVE
DIAGONAL BELOW

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PLOT DATE: 07-01-25 PLOTTED BY: danpaisonn

PROJECT NAME: VOLUNTARY STRENGTHENING
ADDRESS: 1077 FELL STREET
2 BLOCK/LOT: 0777/059
CITY: SAN FRANCISCO, CA

2 DRAWING INDEX:

S1.0 — TITLE SHEET
S1.1A-S1.1B — TYPICAL WOOD DETAILS
S2 — FOUNDATION PLAN/ 1ST, 2ND AND ROOF FLOOR FRAMING
S3-S4 — STRUCTURAL DETAILS

City and County of San Francisco
Department of Building Inspection

Daniel Lurie, Mayor
Patrick O'Riordan, C.B.O., Director

Attachment A

SLOPE AND SEISMIC HAZARD ZONE PROTECTION CHECKLIST

A COPY OF THIS DOCUMENT SHALL BE SUBMITTED WITH THE PERMIT APPLICATION

JOB ADDRESS 1077 Fell Street APPLICATION NO. 2025-0626-9586 ADDENDUM NO. ____
OWNER NAME Steven Huang OWNER PHONE NO. (425) 876-1946

1: PROPERTY LOCATION	YES	NO
EARTHQUAKE INDUCED LANDSLIDE AREA ON THE STATE OF CALIFORNIA DEPARTMENT OF CONSERVATION DIVISION OF MINES AND GEOLOGY (CDMG) SEISMIC HAZARD ZONES MAP FOR SAN FRANCISCO, RELEASED NOVEMBER 17, 2000.	☐	☑

2: AVERAGE SLOPE OF PROPERTY	YES	NO
PROPERTY EXCEEDING AN AVERAGE SLOPE OF 4H:1V (25%) GRADE *(APPLICANT WILL NEED TO INCLUDE PLANS ILLUSTRATING SLOPE OF THE PROPERTY AND/OR INCLUDE A SURVEY VERIFYING THE SLOPE OF THE PROPERTY)*	☐	☑

3: PROPOSED CONSTRUCTION	YES	NO
CONSTRUCTION OF NEW BUILDING OR STRUCTURE HAVING OVER 1000 SQFT OF NEW PROJECTED ROOF AREA	☐	☑
HORIZONTAL OR VERTICAL ADDITIONS HAVING OVER 500 SQFT OF NEW PROJECTED ROOF AREA	☐	☑
SHORING	☐	☑
UNDERPINNING	☐	☑
GRADING, INCLUDING EXCAVATION OR FILL, OF OVER 50 CUBIC YARDS OF EARTH MATERIAL	☐	☑
CONSTRUCTION ACTIVITY LISTED BELOW DETERMINED BY THE BUILDING OFFICIAL THAT MAY HAVE A SUBSTANTIAL IMPACT ON THE SLOPE STABILITY:		
RETAINING WALL:	☐	☑
OTHERS: _____	☐	☑

SECTION 4: LICENSED DESIGN PROFESSIONAL VERIFICATION AND SIGNATURES

Under penalty of perjury, I certify that the information provided on this form is based on my personal review of the building and its records, or review by others acting under my direct supervision, and is correct to the best of my knowledge.

Prepared by: JEFFERSON CHEN, P.E.
Engineer/Architect of Record

(415) 626 - 8300 Telephone
jefferson@enertiadesigns.net Email
Signature
Date

REGISTERED PROFESSIONAL ENGINEER JEFFERSON W. CHEN C057898 Exp. 06/30/24 CIVIL STATE OF CALIFORNIA

Permit Services Division
49 South Van Ness Avenue, Suite 500 - San Francisco CA 94103
Phone (628) 652-3600 – www.sfdbi.org

INFORMATION SHEET S-19 ATTACHMENT A — Slope Protection Checklist

FOR DBI USE ONLY

ASSIGNMENT OF REVIEW TIER

EXEMPTED: Reports per Section E and Third Party Peer Review Not Required

☐ If the box in Section 1 "Property Location" **AND** the box in Section 2 "Average Slope of Property" are marked "No" **OR** if all the boxes in Section 3 "Proposed Construction" are marked "No", reports per Section E and Third Party Peer Review are exempted by the SSPA.

TIER I: Reports per Section E required but Third Party Peer Review Not Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property does not lie within any areas of potential landslide hazard, DBI shall require mandatory submittal of reports per Section E only.

TIER II: Reports per Section E and Third Party Peer Review Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property lies in the vicinity of mapped landslides, DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to a third party peer review. At the discretion of the SSPA Review Committee, the peer review may be followed by the establishment of a Structural Advisory Committee (SAC) with the project reassigned to Tier III.

If the DBI Plan Review Engineer (or the SSPA Review Committee, if established), in their discretion, determines from the submitted documents that the project has a substantial impact on the slope stability of the site or creates a potential for earthquake induced landslide hazards, DBI may require that the third party peer review be followed by the establishment of a Structural Advisory Committee (SAC) and re-assigned the project to Tier III.

TIER III: Structural Advisory Committee (SAC) Review

☐ If the box in Section 1 "Property Location" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes", DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to review by a Structural Advisory Committee (SAC), as defined by SFBC Section 105A.6.

Tier assigned by: _____ Phone: (628) _____
DBI Plan Review Engineer

Comment:

RECEIVED JUL 23 2025 DEPT OF BUILDING INSPECTION SAN FRANCISCO, CA

Stephen Liu, DBI JUL 23 2025

City and County of San Francisco
Department of Building Inspection

Daniel Lurie, Mayor
Patrick O'Riordan, C.B.O., Director

NOTICE

SPECIAL INSPECTION REQUIREMENTS

Please note that the Special Inspections shown on the approved plans and checked on the Special Inspections form issued with the permit are required for this project. The employment of special inspectors is the direct responsibility of the owner or the engineer/architect of record acting as the owner's representative.

These special inspections are required *in addition to* the called inspections performed by the Department of Building Inspection. The name of the special inspector shall be furnished to the district building inspector prior to start of work for which special inspection is required.

For questions regarding the details or extent of required inspection or tests, please call the Plan Checker assigned to this project or 415-558-6133. If there are any field problems regarding special inspection, please call your District Building Inspector or 415-558-6096.

Before final building inspection is scheduled, documentation of special inspection compliance must be submitted to and approved by the Plan Check Services Division. To avoid delays in this process, the project owner should request final compliance reports from the architect or engineer of record and/or special inspection agency soon after the conclusion of work requiring special inspection. ***The permit will not be finalized without compliance with the special inspection requirements.***

STRUCTURAL OBSERVATION REQUIREMENTS

Structural observation shall be provided as required per Section 1704.6. **The building permit will not be finalized without compliance with the structural observation requirements.**

Special Inspection Services Contact Information

1. **Telephone: (628) 652-3407**
2. **Email: dbi.specialinspections@sfgov.org**
3. **In person: 49 South Van Ness Ave – Suite 400**

Note: We are moving towards a "paperless" mode of operation. All special inspection submittals, including final letters, may be emailed.

Special Inspection Services
49 South Van Ness Ave – Suite 400 – San Francisco CA 94103
Office (628) 652-3407 – www.sfdbi.org

Updated 7/29/24

SPECIAL INSPECTION AND STRUCTURAL OBSERVATION

A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED STRUCTURAL DRAWING SET

JOB ADDRESS 1077 Fell Street APPLICATION NO. 2025-0626-9586 ADDENDUM NO. ____
OWNER NAME Steven Huang OWNER PHONE NO. (425) 876-1946

Employment of Special Inspection is the direct responsibility of the OWNER, or the engineer/architect of record acting as the owner's representative. Special inspector shall be one of those as prescribed in Sec. 1704. Name of special inspector shall be furnished to DBI District Inspector prior to start of the work for which the Special Inspection is required. Structural observation shall be performed as provided by Section 1704.6. A preconstruction conference is recommended for owner/builder or designer/builder projects, complex and high-rise projects, and for projects utilizing new processes or materials.

In accordance with Chapter 17 (SFBC), Special Inspection and Testing is required for the following work:

1. [-] Concrete (Placement & sampling)
2. [-] Bolts installed in concrete
3. [ ] Special moment - Resisting concrete frame
4. [-] Reinforcing steel ~~and prestressing tendons~~
5. **Structural welding:**
   A. Periodic visual inspection
   [ ] Single pass fillet welds 5/16" or smaller
   [ ] Steel deck
   [ ] Welded studs
   [ ] Cold formed studs and joists
   [ ] Stair and railing systems
   [ ] Reinforcing steel
   B. Continuous visual inspection and NDT (Section 1704)
   [ ] All other welding (NDT exception: Fillet weld)
   [ ] Reinforcing steel; and [ ] NDT required
   [ ] Moment-resisting frames
   [ ] Others _____
6. [ ] High-strength bolting
7. [ ] Structural masonry
8. [ ] Reinforced gypsum concrete
9. [ ] Insulating concrete fill
10. [ ] Sprayed-on fireproofing
11. [ ] Piling, drilled piers and caissons
12. [ ] Shotcrete
13. [ ] Special grading, excavation and filling (Geo. Engineered)
14. [ ] Smoke-control system
15. [ ] Demolition
16. [ ] Exterior Facing
17. **Retrofit of unreinforced masonry buildings:**
    [ ] Testing of mortar quality and shear tests
    [ ] Inspection of repointing operations
    [ ] Installation inspection of new shear bolts
    [ ] Pre-installation inspection for embedded
    [ ] Pull/torque tests per SFBC Sec.1607C & 1615C
18. **Bolts Installed in existing concrete or masonry:**
    [ ] Concrete [ ] Masonry
    [-] Pull/torque tests per SFEBC Sec. 507C & 515C
19. [-] Shear walls and floor systems used as shear diaphragms
20. [-] Holdowns
21. **Special cases:**
    [ ] Shoring
    [ ] Underpinning [ ] Not affecting adjacent property
    [ ] Affecting adjacent property: PA_____
    [ ] Others
22. [ ] Crane safety (Apply to the operation of tower cranes on high-rise building) (Section 1705.22)
23. [ ] Others: "As recommended by professional of record" _____
24. **Structural observation per Sec. 1704.6 (SFBC) for the following:** [ ] Foundations [ ] Steel framing
    [-] Concrete construction [ ] Masonry construction [-] Wood framing
    [ ] Other: _____
25. Certification is required for: [ ] Glu-lam components
26. [ ] Firestops in high-rise building

Prepared by: JEFFERSON CHEN, P.E. Phone: (415) 626 - 3800
Engineer/Architect of Record
Required information:
FAX: (415) 701 -0212 Email jefferson@enertiadesigns.net

Review by: _____ Phone: (628) 652-
DBI Engineer or Plan Checker

****

APPROVAL (Based on submitted reports.)

_____
DATE DBI Engineer or Plan Checker / Special Inspection Services Staff

QUESTIONS ABOUT SPECIAL INSPECTION AND STRUCTURAL OBSERVATION SHOULD BE DIRECTED TO: Special Inspection Services (628) 652-3407; or, dbi.specialinspections@sfgov.org

Updated 7/29/24

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1167 MISSION STREET, FL. 1
SAN FRANCISCO, CA 94103

REGISTERED PROFESSIONAL ENGINEER JEFFERSON W. CHEN C057898 Exp. 06/30/24 CIVIL STATE OF CALIFORNIA

	DATE	REVISIONS
2	06/26/25	PCC REV

TITLE SHEET
GENERAL NOTES

VOLUNTARY STRENGTHENING
1077 FELL STREET
SAN FRANCISCO, CA

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED JUL 23 2025

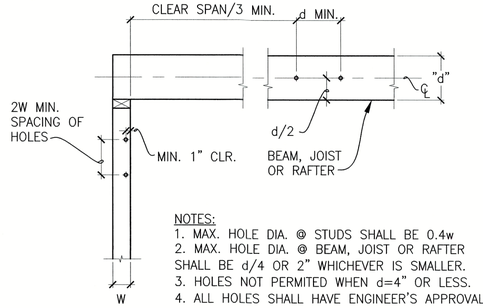
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Of	6 Sheets

NAILING SCHEDULE (PER CBC 2022, TABLE NO. 2304.10.1)

CONNECTION	NAILING [1]
1. JOIST TO SILL OR GIRDER, TOENAIL	3–8d
2. BRIDGING TO JOIST, TOENAIL EACH END	2–8d
3. 1"X6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2–8d
4. WIDER THAN 1" X 6" SUBFLOOR TO EACH JOIST, FACE NAIL	3–8d
5. 2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2–16d
6. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL	16d AT 16" O.C.
SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	3–16d PER 16"
7. TOP PLATE TO STUD, END NAIL	2–16d
8. STUD TO SOLE PLATE	4–8d, TOENAIL OR 2–16d, END NAIL
9. DOUBLE STUDS, FACE NAIL	16d AT 24" O.C.
10. DOUBLED TOP PLATES, TYPICAL FACE NAIL	16d AT 16" O.C.
DOUBLE TOP PLATES, LAP SPLICE	8–16d
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3–8d
12. RIM JOIST TO TOP PLATE, TOINAIL	8d AT 6" O.C.
13. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2–16d
14. CONTINUOUS HEADER, TWO PIECES	16d AT 16" O.C. ALONG EACH EDGE
15. CEILING JOISTS TO PLATE, TOENAIL	3–8d
16. CONTINUOUS HEADER TO STUD, TOINAIL	4–8d
17. CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3–16d
18. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3–16d
19. RAFTER TO PLATE, TOENAIL	3–8d
20. 1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2–8d
21. 1" X 8" SHEATHING OR LESS TO EACH BEARING, FACE NAIL	2–8d
22. WIDER THAN 1" X 8" SHEATHING TO EACH BEARING, FACE NAIL	3–8d
23. BUILT–UP CORNER STUDS	16d AT 24" O.C.
24. BUILT–UP GIRDER AND BEAMS	20d AT 32" O.C. AT TOP AND BOTTOM AND STAGGERED 2–20d AT ENDS AND AT EACH SPLICE
25. 2" PLANKS	2–16d AT EACH BEARING
26. COLLAR TIE TO RAFTER	3–10d AT FACE NAIL
27. JACK RAFTER TO HIP	2–10d AT TOENAIL AND 2–16d AT FACE NAIL
28. ROOF RAFTER TO 2–BY RIDGE BEAM	2–16d AT TOENAIL AND 2–16d AT FACE NAIL
29. JOIST TO BAND JOIST	3–16d AT FACE NAIL
30. LEDGER STRIP	3–16d AT FACE NAIL AT EACH JOIST
31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD [B] SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING)	
1/2" AND LESS	6d[C,I]
19/32"–3/4"	8d[D] or 6d[E]
7/8"–1"	10d[D] or 8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
COMBINATION SUBFLOOR–UNDERLAYMENT (TO FRAMING): 3/4" AND LESS	6d[E]
7/8"–1"	8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
32. PANEL SIDING (TO FRAMING): 1/2" OR LESS	6d[F]
5/8"	8d[F]
33. FIBERBOARD SHEATHING: [G] 1/2"	6d[D]
25/32"	8d[D]
34. INTERIOR PANELING 1/4"	4d[J]
3/8"	6d[K]

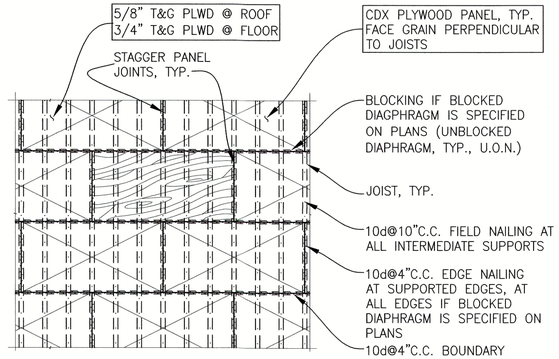
CBC TABLE 2304.10.1 FASTENING SCHEDULE NOTES

A. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED.
B. NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES AT SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLE BOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
C. COMMON OR DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
D. COMMON (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
E. DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
F. CORROSION–RESISTANT SIDING (6D – 1⅞" X 0.106"; 8D – 2⅜" X 0.128") OR CASING (6D – 2" X 0.099"; 8D – 2½" X 0.113") NAIL.
G. FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS.
H. CORROSION–RESISTANT ROOFING NAILS WITH 7/16–INCH–DIAMETER HEAD AND 1½–INCH LENGTH FOR ½–INCH SHEATHING AND 1¾–INCH LENGTH FOR 25/32–INCH SHEATHING.
I. CORROSION–RESISTANT STAPLES WITH NOMINAL 7/16–INCH CROWN AND 1⅛–INCH LENGTH FOR ½–INCH SHEATHING AND 1½–INCH LENGTH FOR 25/32–INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
J. CASING (1½" X 0.080") OR FINISH (1½" X 0.072") NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
K. PANEL SUPPORTS AT 24 INCHES. CASING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
L. FOR ROOF SHEATHING APPLICATIONS, 8D NAILS (2½" X 0.113") ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.
M. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16 INCH.
N. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.
O. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS SUB FLOOR AND WALL SHEATHING AND 3 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING.
P. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.



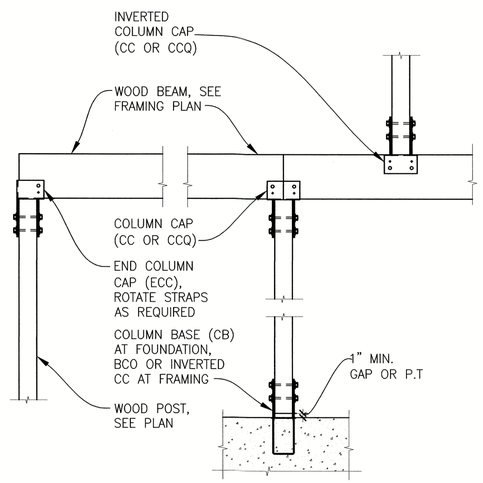
NOTES:
1. MAX. HOLE DIA. @ STUDS SHALL BE 0.4w
2. MAX. HOLE DIA. @ BEAM, JOIST OR RAFTER SHALL BE d/4 OR 2" WHICHEVER IS SMALLER.
3. HOLES NOT PERMITED WHEN d=4" OR LESS.
4. ALL HOLES SHALL HAVE ENGINEER'S APPROVAL.

1 — TYPICAL HOLES IN BEAMS, JOISTS, RAFTERS AND STUDS
SCALE: 3/4" = 1'–0"

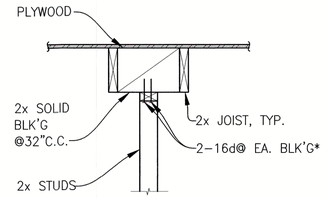


NOTES:
1. SEE PLANS FOR MORE INFORMATION
2. PLYWOOD = WOOD STRUCTURAL PANEL

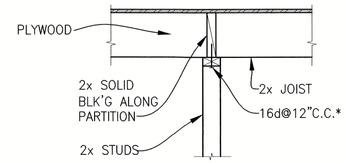
2 — TYPICAL PLYWOOD DIAPHRAGM SHEATHING (PLAN VIEW)
SCALE: 3/4" = 1'–0"



3 — TYPICAL BEAM TO POST CONNECTION
SCALE: 3/4" = 1'–0"



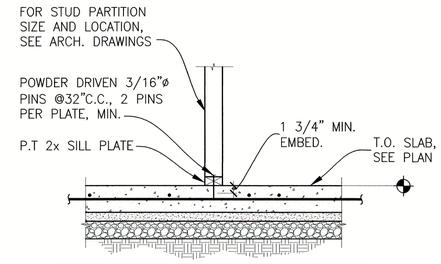
PARTITION PARALLEL TO FLOOR JOISTS



PARTITION PERPENDICULAR TO FLOOR JOISTS

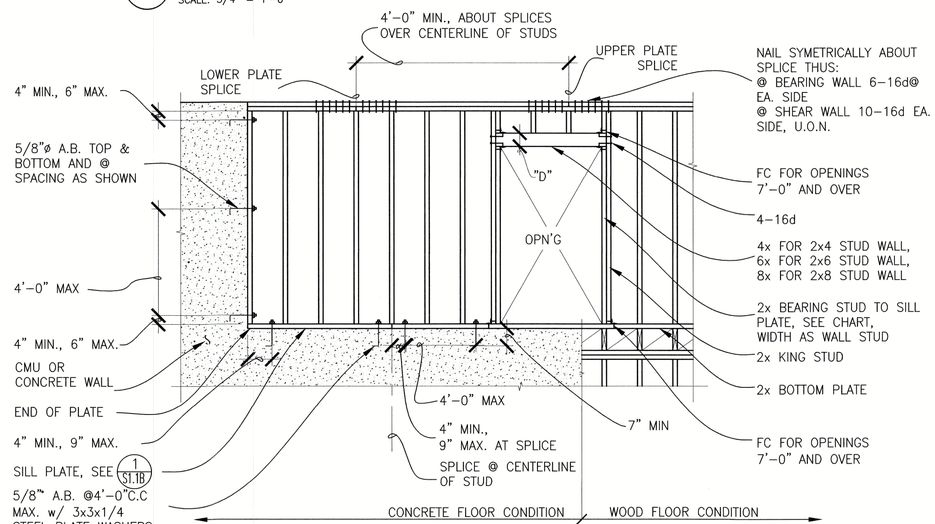
*OPTION: PROVIDE STC CLIP TO ROOF TRUSS OR BEAM

4 — TYPICAL NON–BEARING / NON–SHEARWALL SUPPORT @ ROOF
SCALE: 3/4" = 1'–0"



NOTES:
1. FOR SLAB THICKNESS, REINFORCEMENT AND BASE MATERIALS SEE PLAN.
2. AT P.T. SLAB PROVIDE MAX. 3/4" EMBEDMENT.

5 — TYPICAL NON–BEARING / NON–SHEARWALL CONNECTION AT CONCRETE SLAB
SCALE: 3/4" = 1'–0"



HEADER SPANS "S"	"D" MIN.	ADDN'L BEARING STUDS
S ≤ 4'–0"	5 1/2"	0
4'–0" < S ≤ 8'–0"	7 1/4"	1
8'–0" < S ≤ 10'–0"	9 1/4"	2
S > 10'–0"	SEE PLAN	3

NOTE:
THIS DETAIL IS NOT FOR SHEARWALLS, SEE 1 S1.1B

6 — TYPICAL FRAMING @ OPENINGS, TOP PLATE SPLICES, ETC.
SCALE: 3/4" = 1'–0"

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SAN FRANCISCO, CA 94103

PROFESSIONAL ENGINEER – YINSHUN CHEN – No. 093029 – CIVIL – STATE OF CALIFORNIA – REGISTERED

	DATE	REVISIONS
2	06/26/25	PCC REV

TYPICAL WOOD DETAILS

RECEIVED
JUL 23 2025
DBI'S ACCEPTANCE OF THIS PLAN DOES NOT CONSTITUTE APPROVAL OF ANY VIOLATIONS OF LAWS, ORDINANCES OR REGULATIONS
Stephen Liu, DBI
JUL 23 2025

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

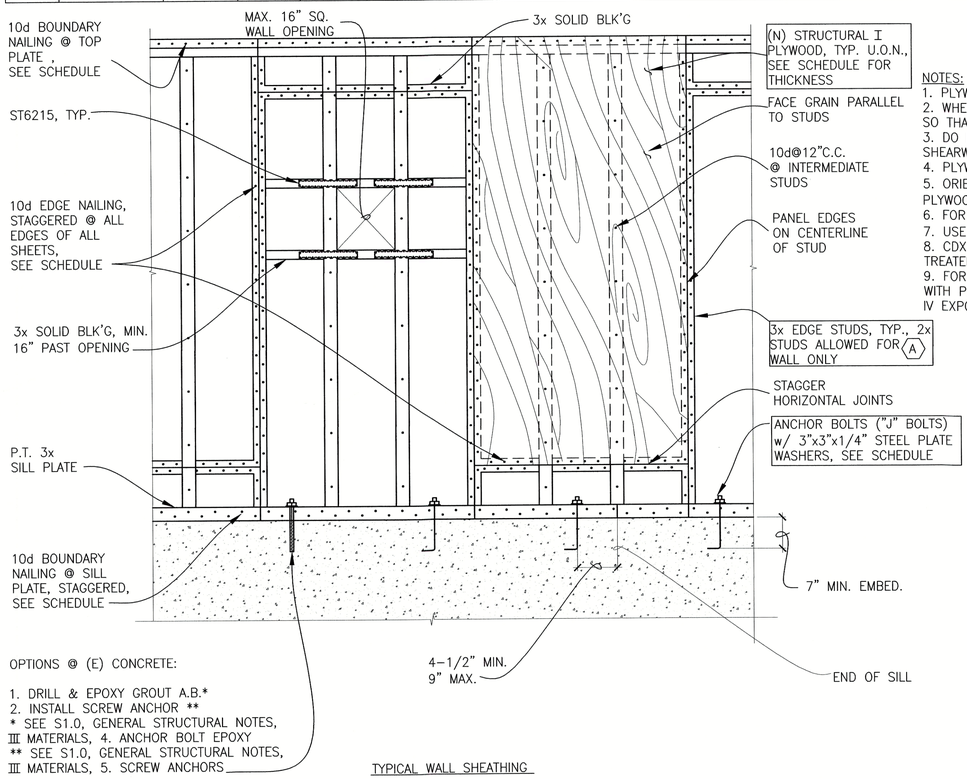
SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED
JUL 23 2025

Date:	03-01-2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	S1.1A
Of	6 Sheets

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PLOT DATE: 07-01-25 PLOTTED BY: danguisonm

SHEARWALL SCHEDULE

SYMBOL	PLWD GRADE	PLWD THICKNESS	PLWD ONE SIDE	PLWD TWO SIDES	PLWD EDGE & BOUNDARY NAILING	CONT. JOIST OR SOLID BLK'G	CLIP SPACING	PLATE NAIL SPACING	SDS 1/4x4 1/2" WOOD SCREW SPACING	A.B. SPACING	CAPACITY (PLF)
(A)	STRUC I	15/32"	X		10d @ 6"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 16"C.C.	16d @ 4"C.C.	–	5/8"ø @ 32"C.C.	340
(B)	STRUC I	15/32"	X		10d @ 4"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 12"C.C.	16d @ 3"C.C.	–	5/8"ø @ 24"C.C.	510
(C)	STRUC I	15/32"	X		10d @ 3"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 9"C.C.	–	6"C.C.	5/8"ø @ 16"C.C.	665
(D)	STRUC I	15/32"	X		10d @ 2"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 7"C.C.	–	4"C.C.	5/8"ø @ 16"C.C.	870
(E)	STRUC I	15/32"		X	10d @ 3"C.C.	2–2x's OR 4x OR 3 1/2" PSL	A35 OR LTP4 @ 8"C.C. + (LTP4 @ 8"C.C. OR CONTINUE WALL PLWD UP)	–	3"C.C. STAGGERED	7/8"ø @ 16"C.C.	1330
(F)	STRUC I	15/32"		X	10d @ 2"C.C.	2–2x's OR 4x OR 3 1/2" PSL	A35 OR LTP4 @ 8"C.C. + (LTP4 @ 8"C.C. OR CONTINUE WALL PLWD UP)	–	2"C.C. STAGGERED	7/8"ø @ 16"C.C.	1740



OPTIONS @ (E) CONCRETE:

1. DRILL & EPOXY GROUT A.B.*
2. INSTALL SCREW ANCHOR **

* SEE S1.0, GENERAL STRUCTURAL NOTES, III MATERIALS, 4. ANCHOR BOLT EPOXY
** SEE S1.0, GENERAL STRUCTURAL NOTES, III MATERIALS, 5. SCREW ANCHORS

TYPICAL WALL SHEATHING

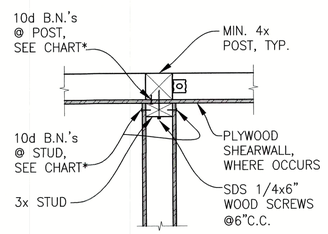
1 TYPICAL PLYWOOD SHEARWALL
SCALE: 3/4" = 1'–0"

NOTES:
1. PLYWOOD SHALL BE NAILED DIRECTLY TO FRAMING.
2. WHEN PLYWOOD APPLIED TO BOTH FACES, STAGGER SHEETS SO THAT EDGES OCCUR AT DIFFERENT STUDS.
3. DO NOT OVER SHOOT NAILS THROUGH OUTER LAYER OF SHEARWALL PLYWOOD.
4. PLYWOOD = WOOD STRUCTURAL PANEL.
5. ORIENTED STRAND BOARD (OSB) MAY BE USED IN LIEU OF PLYWOOD AT CONTRACTOR'S OPTION.
6. FOR TYPICAL PLYWOOD SHEARWALL INTERSECTION, SEE (3)
7. USE 3" LONG 10d NAILS.
8. CDX PLYWOOD EXPOSED TO EXTERIOR SHALL BE PRESSURE TREATED.
9. FOR STEEL PLATES, BOLTS, NAILS, SCREWS, ETC. IN CONTACT WITH P.T WOOD, SEE SHEET S1.0, GENERAL STRUCTURAL NOTES, IV EXPOSURE TO WEATHER, B. WOOD

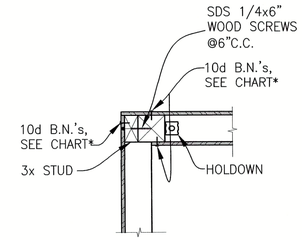
PULL OUT TEST ON HDU HOLDOWNS	
HOLDOWN	PULL OUT VALUE
HDU2	7688 LBS
HDU4	11413 LBS
HDU5	14113 LBS
HDU8	19675 LBS
HDU11	23338 LBS
HDU14	36113 LBS
HD12	28440 LBS
HD19	38140 LBS

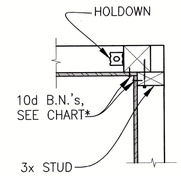
STRAP OPTION	
HOLDOWN	EQUIVALENT STRAP
HDU2	MST60
HDU4	MST60 OR 2–MST37's
HDU5, PHD5 OR HD5A	MST60 OR 2–MST48's
~~PHD6~~ OR ~~HD6A~~	2–MST48's
HDU8, HDQ8	2–MST60's

POST SIZE	LARGEST HOLDDOWN FOR A SINGLE HOLDOWN APPLICATION
4X4 OR (2)2X4	HDU2 TO HDU4
4x6	HDU5 TO HDU8 – HDQ8
6x6	HDU11 TO HDU14 HHDQ11 TO HHDQ14



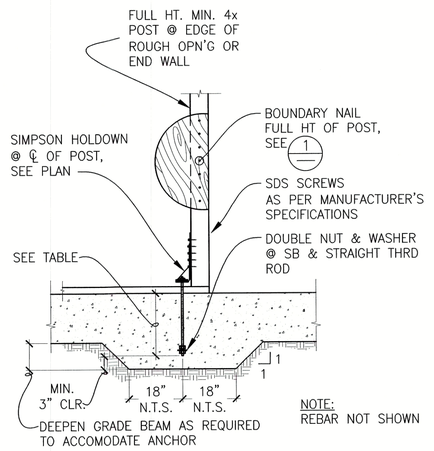
EXTERIOR PLYWOOD (PLAN)





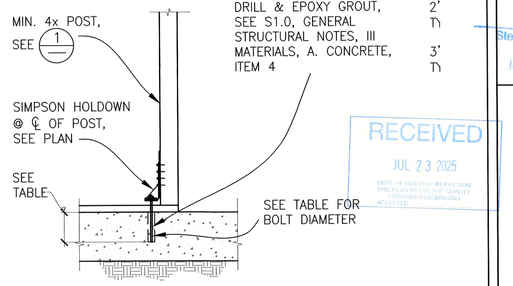
INTERIOR PLYWOOD (PLAN)

3 TYPICAL PLYWOOD SHEARWALL INTERSECTION DETAILS
SCALE: 3/4" = 1'–0"



NOTE: REBAR NOT SHOWN

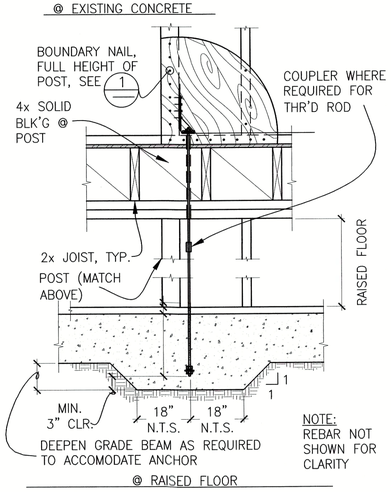
@ NEW CONCRETE GRADE BEAM



@ EXISTING CONCRETE

HOLDOWN	ANCHOR DIAMETER	ANCHOR INTO (N) CONC.	MIN. EMBED. INTO (E) CONC.	PLATE @ P.T. SLAB
HDU2 OR HD3B	5/8"	SSTB16	10"	2"x2"x3/8"
HDU4	5/8"	SSTB20	12"	2"x2"x1/2"
HDU5 OR HD5B	5/8"	SSTB24	14"	2"x2"x1/2"
HD7	7/8"	SB 7/8x24	16"	3"x3"x5/8"
HDU8, HDQ8	7/8"	SB 7/8x24	18"	3"x3"x5/8"
HD9B	7/8"	SB 7/8x24	20"	4"x4"x3/4"
HDU11, HHDQ11 OR HD12	1"	SB 1x30	22"	4"x4"x3/4"
HDU14, HHDQ14	1"*	SB 1x30	24"	4"x4"x3/4"
HD19	1 1/4"*	1 1/4"dx30"**	26"	4"x4"x3/4"

* PROVIDE HEAVY HEX ANCHOR NUT
** STRAIGHT THREADED ROD w/ DOUBLE NUT AND WASHER



NOTE: REBAR NOT SHOWN FOR CLARITY

@ RAISED FLOOR

5 TYPICAL HOLDOWN DETAIL @ CONCRETE FOUNDATION
SCALE: 3/4" = 1'–0"

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FAX: 415.701.0212
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SAN FRANCISCO, CA 94103

PROFESSIONAL ENGINEER * REGISTERED * CIVIL * STATE OF CALIFORNIA * JERON JIE CHEN * No. 087899 * 06/30/26

	DATE	REVISIONS
2	06/26/25	PCC REV

TYPICAL WOOD DETAILS

Stephen Liu, DBI
JUL 23 2025

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JUL 23 2025
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THIS PLAN MEETS THE QUALITY CONTROL REQUIREMENTS AS ACCEPTED

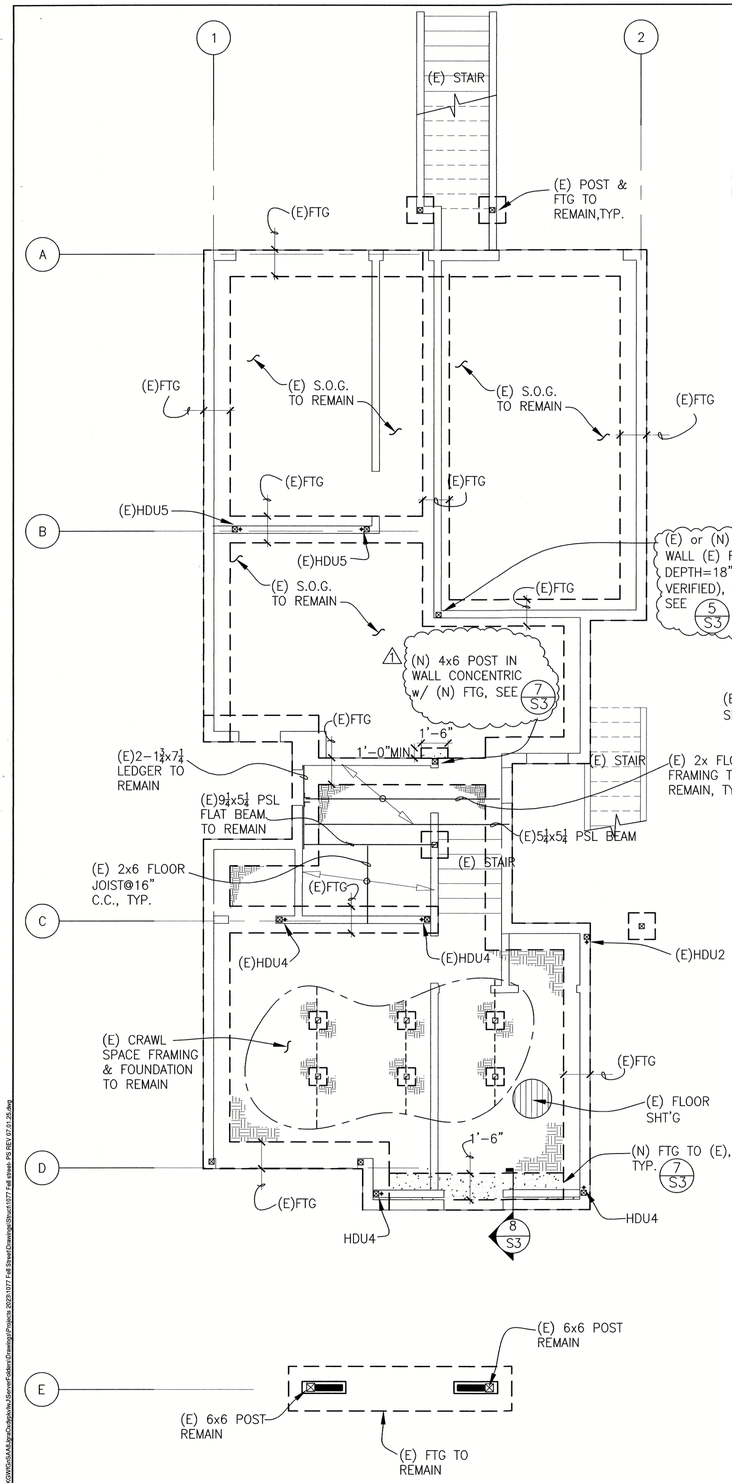
VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

SAN FRANCISCO
DEPT. OF BUILDING INSPECTION
ISSUED
JUL 23 2025

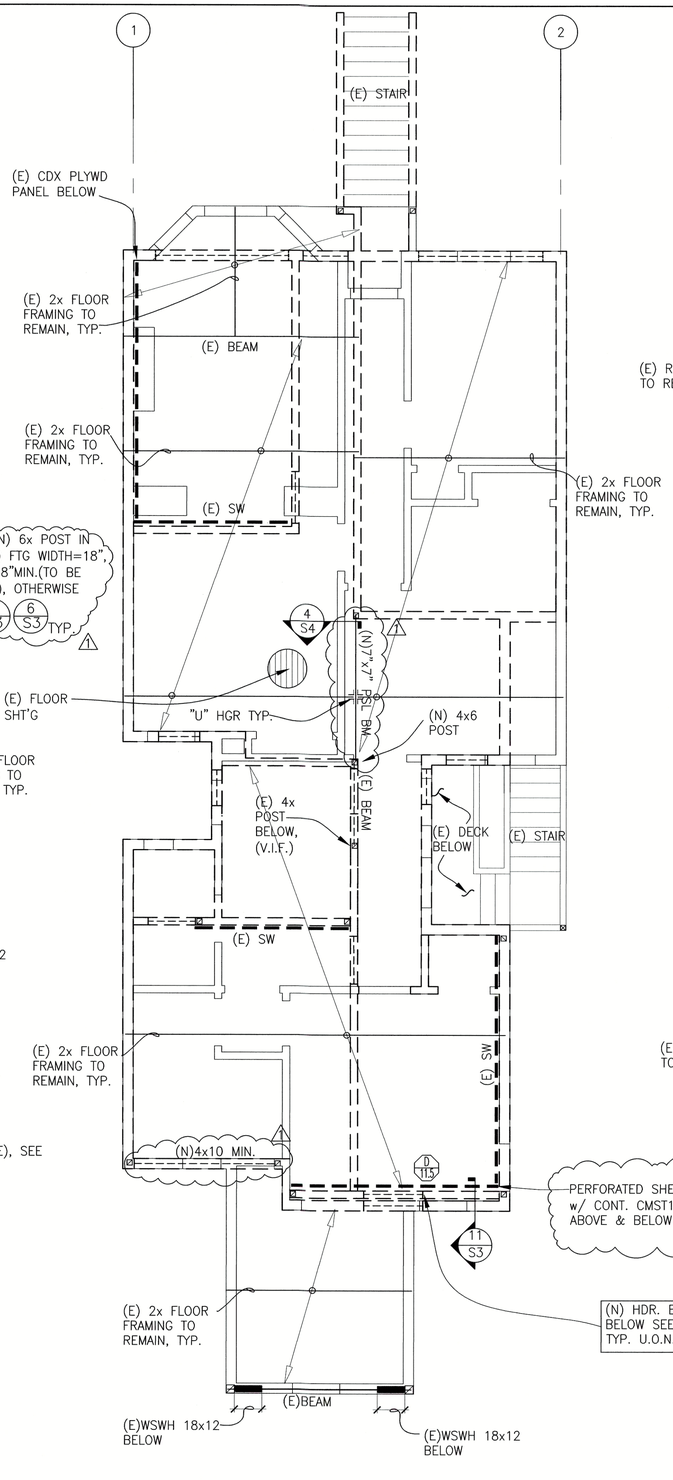
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Job No:	23059
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Of	6 Sheets

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FIRST FLOOR / FOUNDATION PLAN

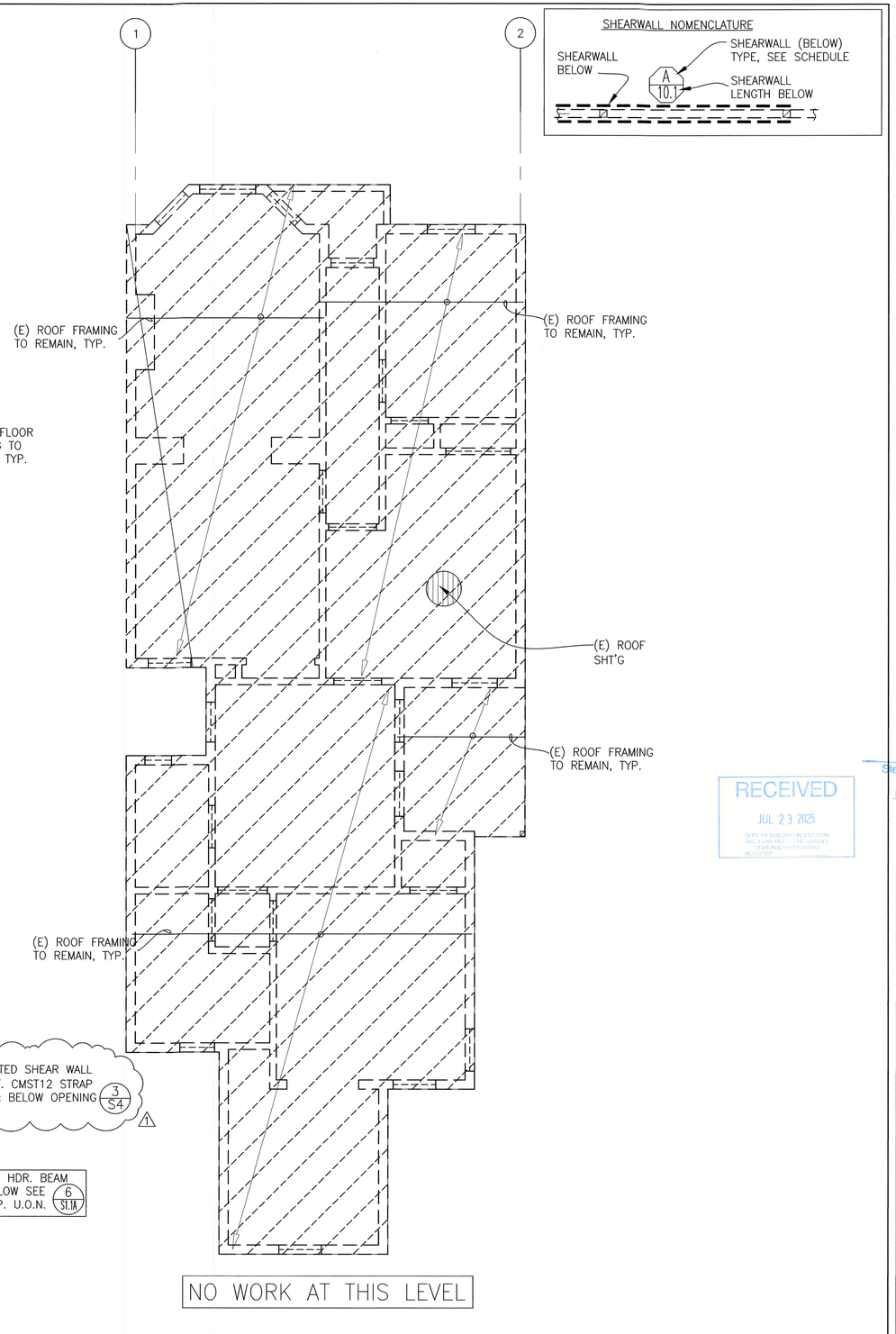
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NO WORK ABOVE THIS LEVEL

SECOND FLOOR FRAMING PLAN

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



NO WORK AT THIS LEVEL

ROOF FRAMING PLAN

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

NORTH

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.626.8300
FAX: 415.701.0212
1167 MISSION STREET, FL-1
SAN FRANCISCO, CA 94103

REGISTERED PROFESSIONAL ENGINEER * VINCENT CHI-YUEN CHEN * No. C-47470 * STATE OF CALIFORNIA
Expires 08/31/2026

	DATE	REVISIONS
1	05/27/25	FIELD REV

FIRST FLOOR FOUNDATION PLAN
SECOND FLOOR FRAMING PLAN
ROOF FRAMING PLAN

Stephen Liu, DBI
JUL 23 2025

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JUL 23 2025
DEPT. OF BUILDING INSPECTION
THIS PLAN MUST BE KEPT ON THE JOB SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED AND ACCEPTED

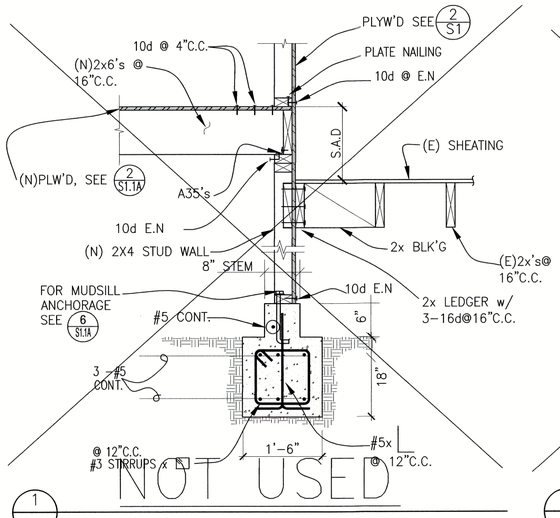
VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

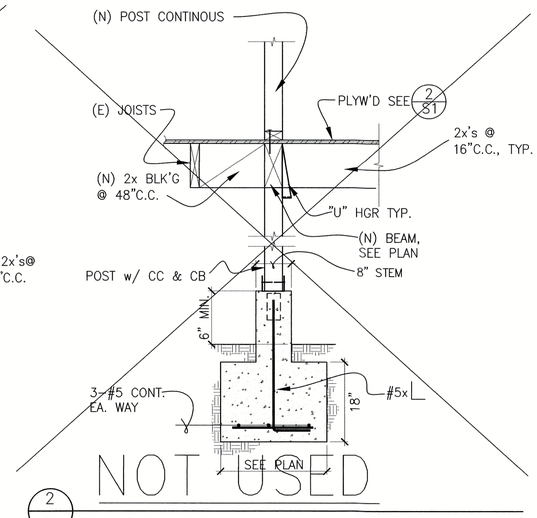
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Drawn By:	DM
Job No:	23059
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Of	6 Sheets

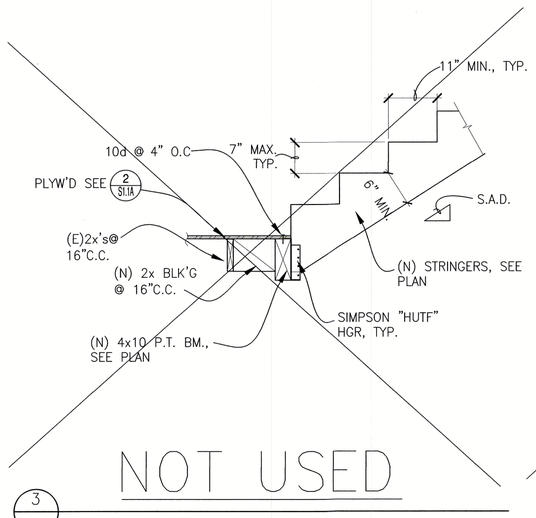
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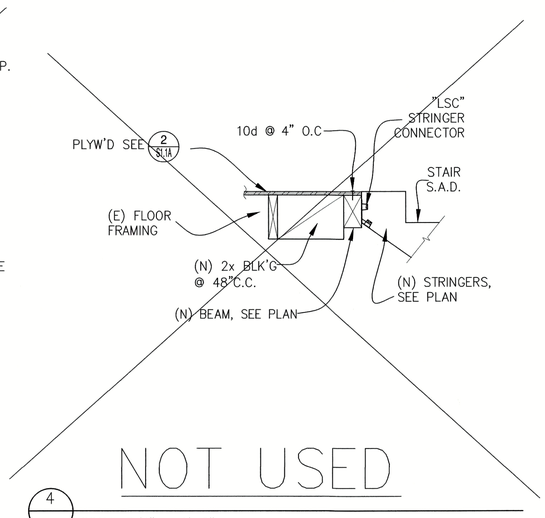
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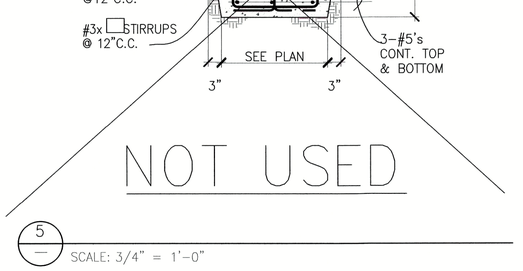
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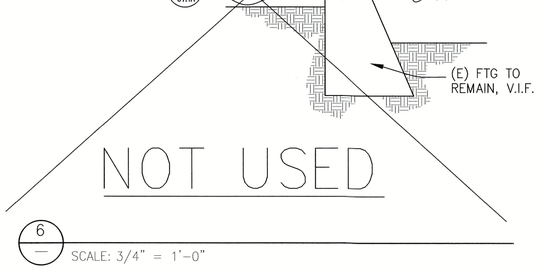
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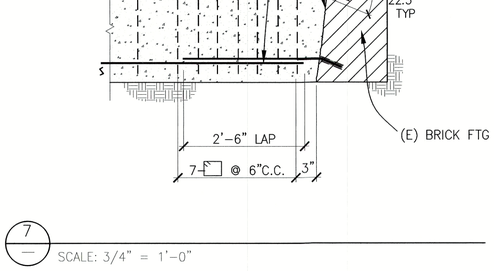
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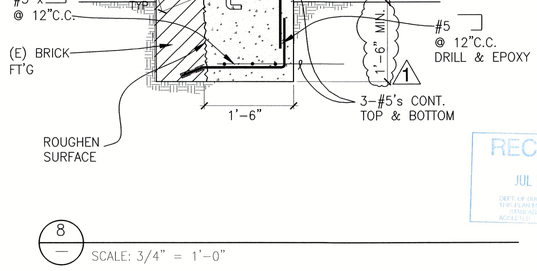
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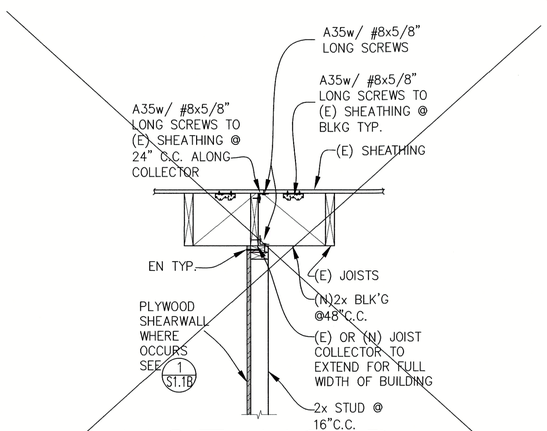
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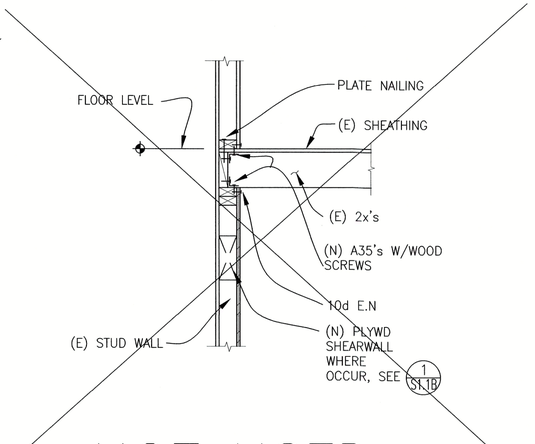
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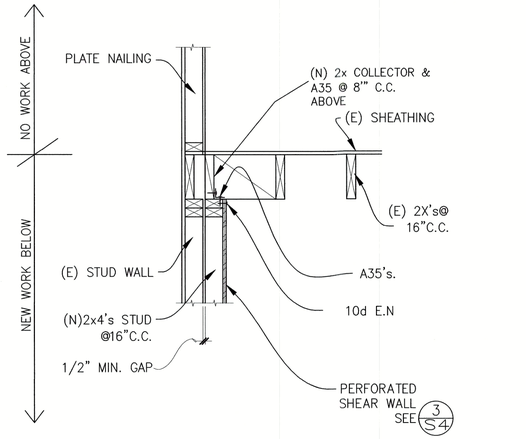
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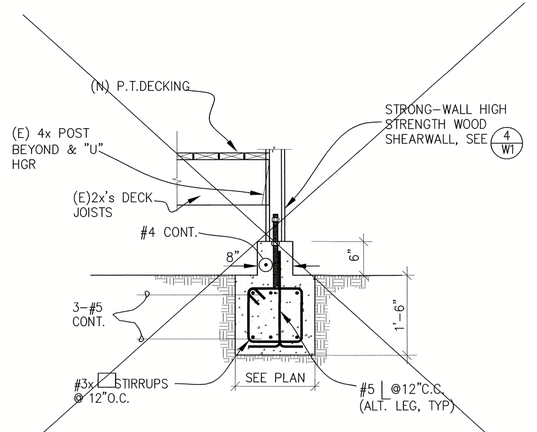
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10
SCALE: 3/4" = 1'-0"



11
SCALE: 3/4" = 1'-0"



12
SCALE: 3/4" = 1'-0"

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FAX: 415.520.6767
1167 MISSION STREET, FL. 1
SAN FRANCISCO, CA 94103

	DATE	REVISIONS
1	05/27/25	PC REV1

STRUCTURAL DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

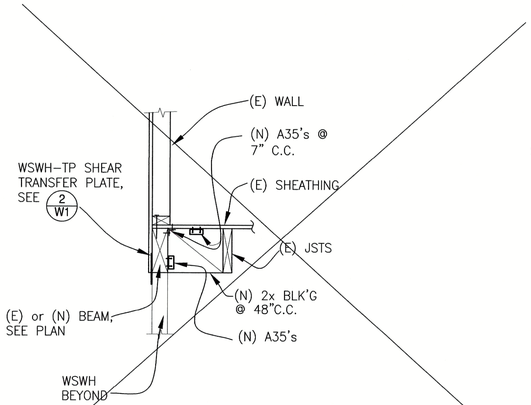
Stephen Liu, DBI
07/23/2025

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DEPT. OF BUILDING INSPECTION
THIS PLAN SET IS THE ONLY ONE SUBMITTED FOR REVIEW AND APPROVAL. ANY OTHER PLAN SETS ARE NOT APPROVED.

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED
JUL 23 2025

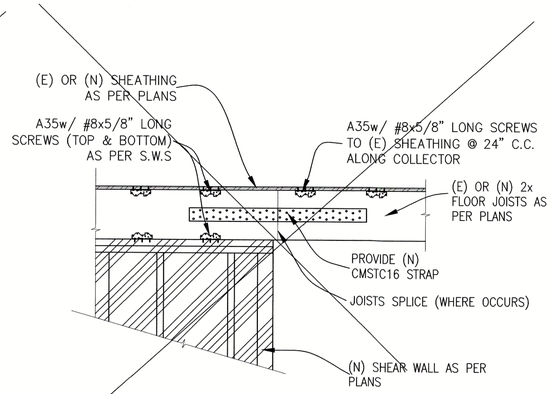
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Drawn By:	DM
Job No:	23059
Sheet	S3
Of	6 Sheets

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PLOT DATE: 07-23-25 PLOTTED BY: durquisonm



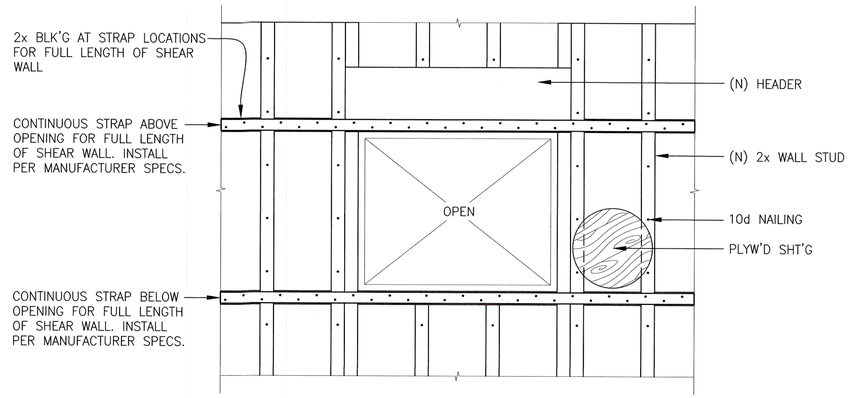
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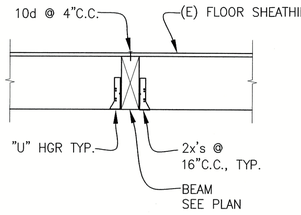


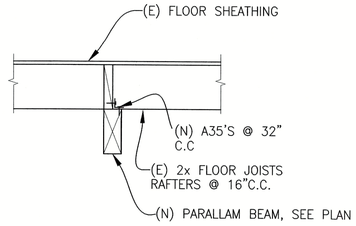
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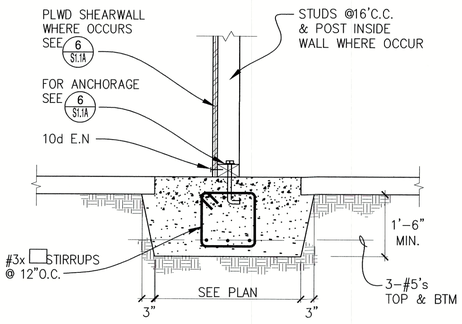
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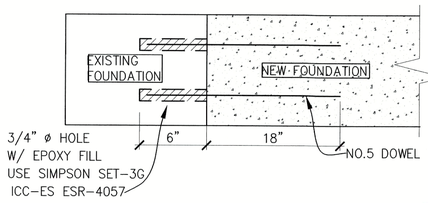


(N) PARALLAM BEAM, SEE PLAN

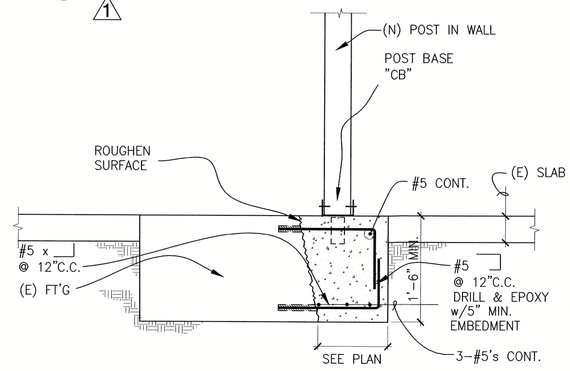
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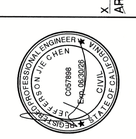
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7 — SCALE: 3/4" = 1'–0"

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THIS PLAN MUST BE KEPT ON JOB SITE AT ALL TIMES DURING CONSTRUCTION
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1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103



	DATE	REVISIONS
1	05/27/25	FIELD REV

STRUCTURAL DETAILS

Stephen Liu, DBI
JUL 23 2025

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA



Date:	03/01/2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	S4
Of	6 Sheets

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PLOT DATE: 07-23-25 PLOTTED BY: darquisonm

STRUCTURAL CALCULATIONS FOR:

REMODEL
(FIELD REVISION)

1077 FELL STREET
SAN FRANCISCO, CA

REPORT PREPARED BY:

ENERTIA DESIGNS
1167 MISSION STREET, FL.1
SAN FRANCISCO, CA 94103
P: (415) 626-8300
F: (415) 701-0212



ED PROJECT #23059

DATE: May 27, 2025

ENERTIA DESIGNS

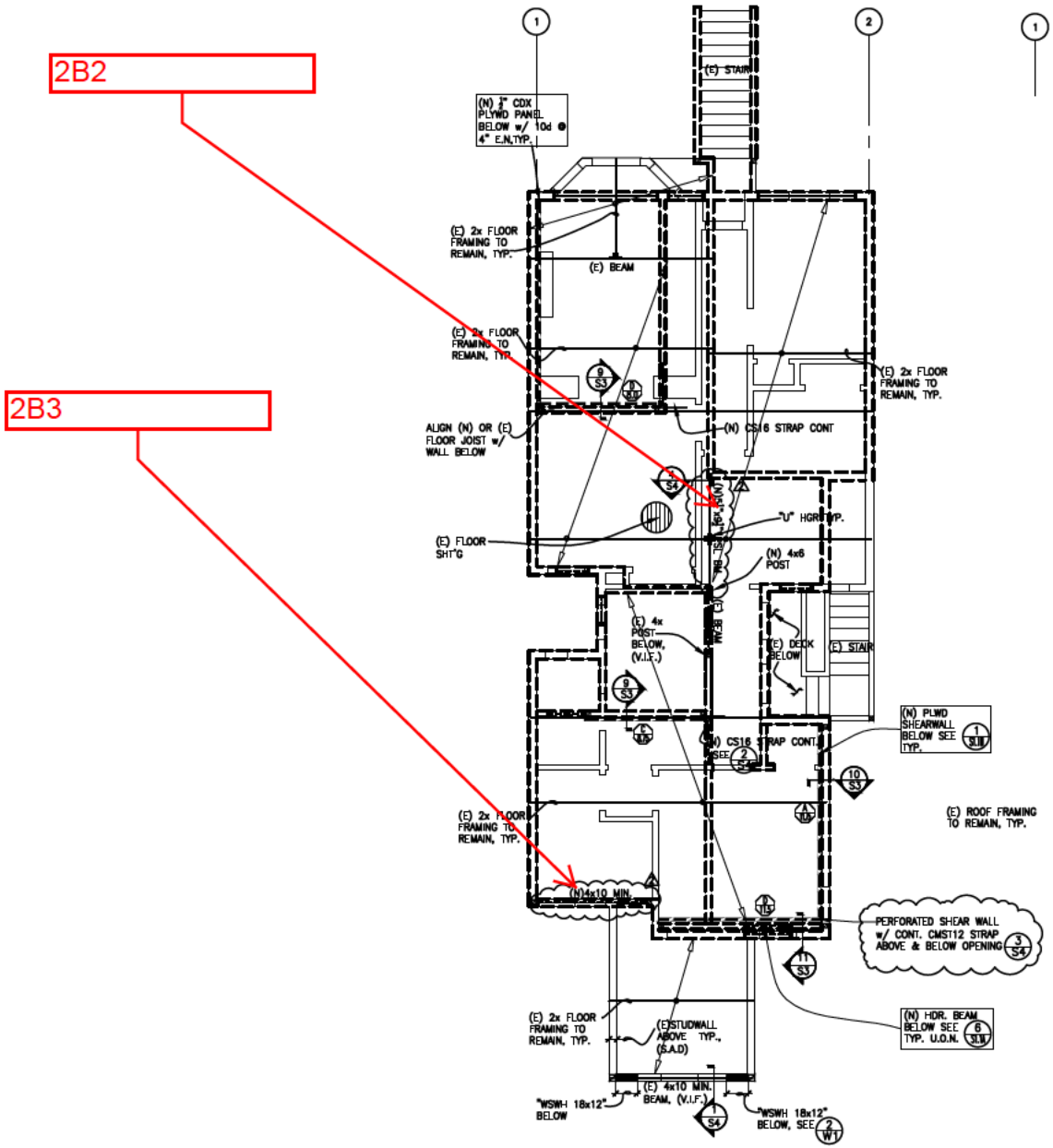
1077 FELL STREET
ED PROJECT #23059

TABLE OF CONTENTS

DESCRIPTION	PAGE NUMBER
FRAMING KEY PLANS	1
ASCE HAZARDS SITE SEISMIC MAP	2 – 5
LATERAL ANALYSIS:	
Design Criteria and Lateral base shear	6 –11
Shear Wall and Holdowns	12 –13
Legend	14
Perforated Shear Wall	15
GRAVITY:	
Beams	16 – 19

2B2

2B3



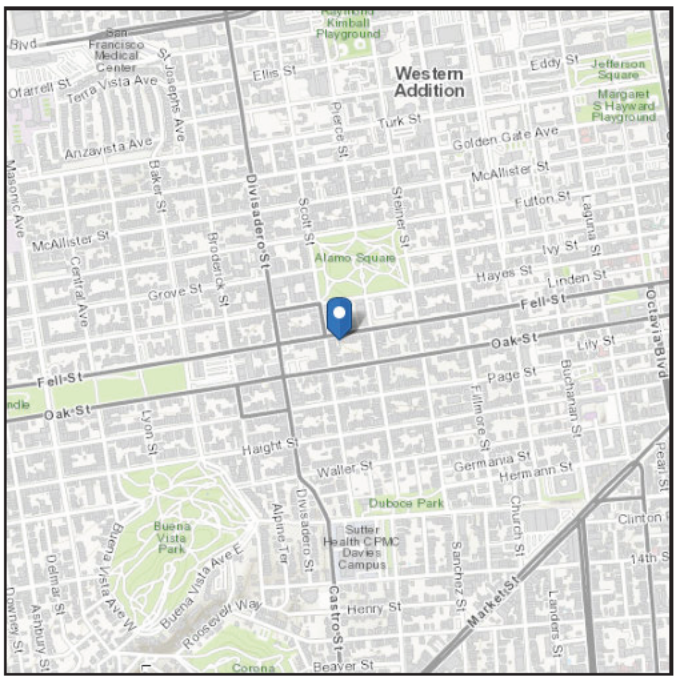
SECOND FLOOR FRAMING PLAN

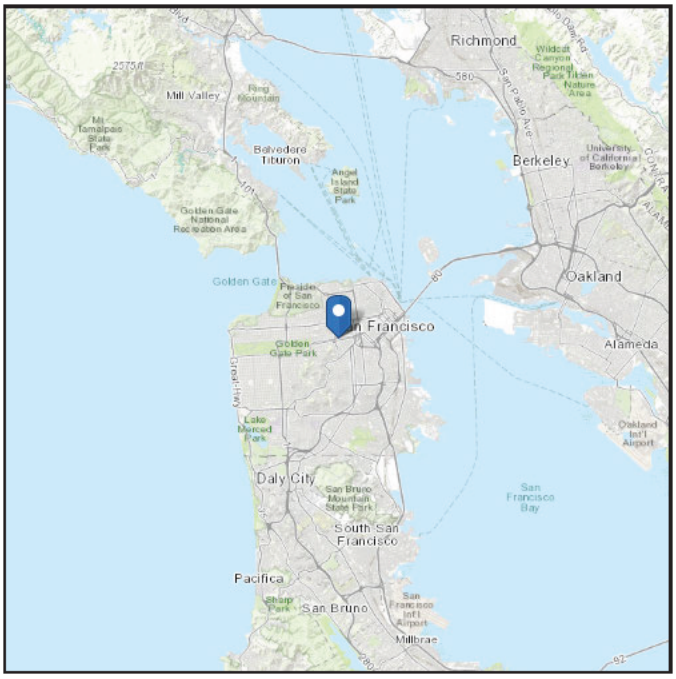
ASCE Hazards Report

Address:
1077 Fell St
San Francisco, California
94117

Standard: ASCE/SEI 7-22
Risk Category: II
Soil Class: Default

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Longitude: -122.435446
Elevation: 195.3952831817827 ft (NAVD 88)





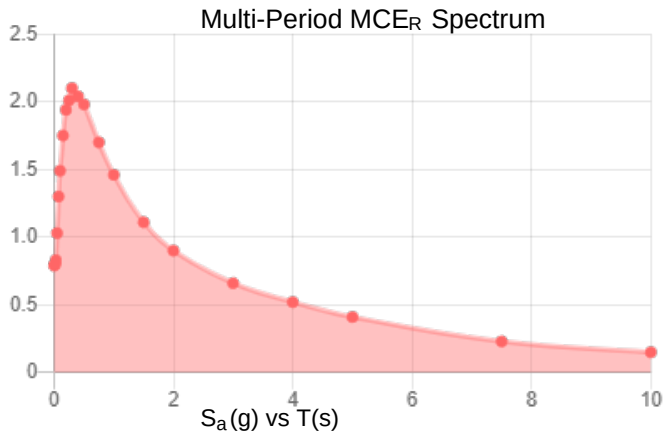
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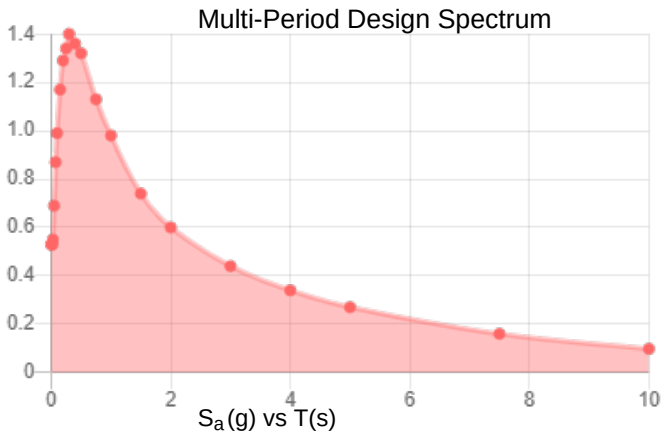
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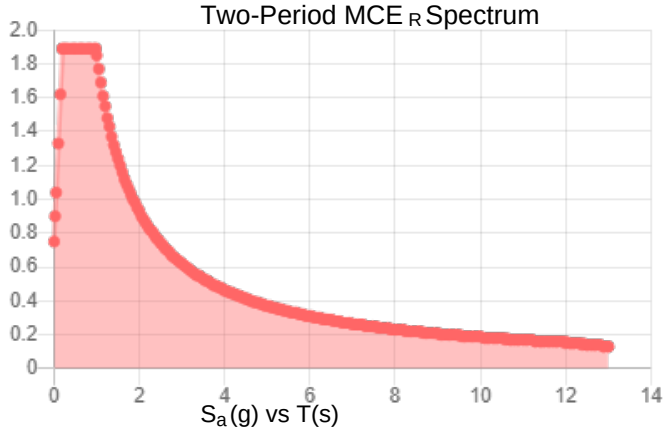
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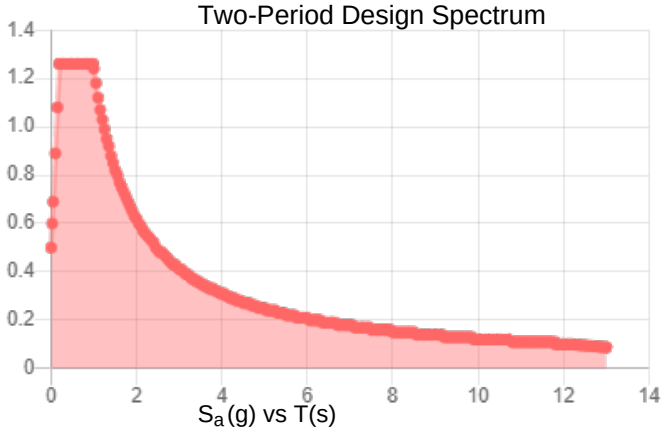
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S_{MS} :	1.89	S_S :	1.66
S_{M1} :	1.85	S_1 :	0.62
S_{DS} :	1.26	V_{S30} :	260
S_{D1} :	1.24		

Seismic Design Category: D









MCER Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.

Design Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.

Data Accessed: **Tue Feb 27 2024**

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-22 and ASCE/SEI 7-22 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-22 Ch. 21 are available from USGS.

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ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE standard.

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PROJECT:	SHEET NO	
VOLUNTARY STRENGTHENING	JOB No.	0
1077 FELL STREET	REV. NO.	DATE
94117	02	05/27/25

Design Criteria **2022 California Building Code based on 2021 IBC**

1. MATERIAL SPECIFICATIONS

1.1 Concrete f'c = 2500 psi (28 day compressive strength)

1.2 Concrete Block f'm = 1500 psi (Type N or S)

1.3 Reinforcing Steel
Grade 40 : #4 and smaller
Grade 60 : #5 and larger

1.4 Lumber

2" to 4" thick		DF No.2	Fb= 900 psi	
2" to 4" wide		DF No.1	Fb= 1000 psi	
Roof/ Ceiling Joist		DF No.2	Fb= 900 psi	
Beam/ Post	4x	DF No.2	Fb= 875 psi	Fc= 600 psi
	6x	DF No.1	Fb= 1350 psi	Fc= 925 psi
Mudsill		DF Pressure Treated		
Glu-Lam Beam		DF/ DF Simple Span		24F-V4
		DF/ DF Cantilever		24F-V8
Parallam (PSL)		2.2 E Truss Joist MacMillan		
Micro-Lam (ML)		2.0 E Truss Joist MacMillan		
Floor I-Joist (TJI)		Manufactured by Trus Joist Corporation		

1.5 Plywood Diaphragm Roof 1/2" CDX APA(32/16)
Floor 3/4" T&G CDX APA(48/24)

1.6 Structural Steel ASTM A-992 or per latest AISC provision

1.7 Manufactured Shear Panels Simpson Strongwall: Manufactured by Simpson Strong-Tie
Hardy Frame Panels: Manufactured by Mitek Company

2. FOUNDATION PARAMETERS

2.1 Minimum Building Code Requirements **USED**

2.2

Geotechnical Engineer:	N.A.
Project Reference No.:	N.A.
Date:	N.A.
Telephone No.	N.A.

Allowable Soil Bearing Capacity	1500	psf
Allowable Pier Skin Friction	N.A.	psf

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3. GRAVITY LOADS

3.1 Live Load / Snow Load

LLr =	20	psf	(Roof Live Load)	Roof Slope	0.0	: 12
LL =	40	psf	(Floor Live Load)	Slope Factor	1.00	
S =	0	psf	(Snow Load)			

3.2 Dead Load

3.21 Roof

Five-ply felt and gravel	10.0	psf	
5/8" Plywood Sheathing	2.0	psf	
2x8 @ 16" Framing	2.2	psf	
Insulation	1.0	psf	
Ceiling/ 1 Layers of G.B.	2.7	psf	
Miscellaneous	1.0	psf	
Total =	19.0	x 1	
	19.0	psf	

3.22 Lower Roof/ Roof Deck

5.0	psf	
2.0	psf	
2.2	psf	
1.0	psf	
2.7	psf	
1.0	psf	
14.0	psf	

3.23 Floors

Hard Wood Flooring	4.0	psf	
3/4" Plywood Sheathing	2.5	psf	
2x10 @ 16" Framing	2.9	psf	
Insulation	1.0	psf	
Ceiling 1 Layes of G.B.	2.7	psf	
Miscellaneous	1.5	psf	
Total =	**14.6**	psf	

3.24 Deck/Balcony

4.0	psf	
2.5	psf	
2.9	psf	
1.0	psf	
2.7	psf	
1.5	psf	
14.6	psf	

3.25 Exterior Walls

Stucco	9.0	psf	
1/2" thk Plywd sht'g	2.0	psf	
2x Studs	2.5	psf	
Gypboard	2.0	psf	
Miscellaneous	1.5	psf	
Total =	**17.0**	psf	

3.26 Interior Walls

	-	-	
→	2	psf	
→	2.0	psf	
→	4.0	psf	
→	2.0	psf	
	10.0	psf	

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4. LATERAL LOADS ASD

4.1 Seismic Parameters

Site Class (Use deafult 'D1' if no Soil Report)		D1
Occupancy Category		II
Seismic Design Category **(SDC)**		D
Response Modification Coefficient **(R)**	R=	6.50
Importance Factor **(I)**	I=	1.00
Site Coordinates	37.774 ° N	-122.435 ° W
Short Period Response **(S_S)**	S_S=	1.66
One Second Period Response **(S_1)**	S_1=	0.62

4.2 Wind Parameters

Exposure Type		B
Basic Wind Speed		95 mph

15. Light frame (wood) walls sheathed with wo

Location

5.1 Wind Forces

Exposure Type =	B		**Kd =**	0.85	**Cp =** 0.80
Basic Wind Speed =	95	mph	**K_{ZT} =**	1.00	**GCpi =** 0.18
Occupancy Category =	II		**G =**	0.85	

Z	**15'-0"**	**20'-0"**	**25'-0"**	**30'-0"**	**40'-0"**	**60'-0"**
Z_{min}	30	30	30	30	40	60
Zg	1200	1200	1200	1200	1200	1200
α	7.00	7.00	7.00	7.00	7.00	7.00
Kz	0.70	0.70	0.70	0.70	0.76	0.85
qz	8.26	8.26	8.26	8.26	8.96	10.06
P (psf)	**7.10**	**7.10**	**7.10**	**7.10**	**7.71**	**8.65**

$Kz = 2.01\ (Z/Zg)^{(2/\alpha)}$

$qz = 0.00256\ K_Z K_{ZT} K_d V^2$

$P = qz\ (GCp + GCpi)$

5.2 Seismic Forces

5.21 Site Coefficients

Site Coefficient (Fa)

SITE CLASS	Ss < 0.25	0.50	0.75	1.00	1.25	>1.5
A	0.8	0.8	0.8	0.8	0.8	0.8
B	0.9	0.9	0.9	0.9	0.9	0.9
C	1.3	1.3	1.2	1.2	1.2	1.2
D	1.6	1.4	1.2	1.1	1.0	1.0
E	2.4	1.7	1.3	SEE SEC 11.4.8		

Table 1613.5.3 (1)

Site Coefficient (Fv)

SITE CLASS	S1 < 0.1	0.2	0.3	0.4	0.5	0.6
A	0.8	0.8	0.8	0.8	0.8	0.8
B	0.8	0.8	0.8	0.8	0.8	0.8
C	1.5	1.5	1.5	1.5	1.5	1.4
D	2.4	2.2	2.0	1.9	1.8	1.7
E	4.2	SEE SECTION 11.4.8				

Table 1613.5.3 (2)

Tabulated Result

Site Class =	**D1**
S_S=	**1.66**
S_1=	**0.62**
By Interpolation:	
Fa =	**1.20**
Fv =	**3.00**

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5.22 Spectral Response Acceleration

S_{MS}=	Fa S_S =	1.20 x 1.66=	1.89	S_{DS}=	2/3 (S_{MS}) =	1.26
S_{M1}=	Fv S_1 =	3.00 x 0.62=	1.85	S_{D1}=	2/3 (S_{M1}) =	1.24

5.23 Horizontal Sismic Load Effect w/ Overstrength Load Combinations (ASCE 12.4.3.1)

LC 5: (1.0 + 0.14 S_{DS})D + 0.7 Ωo Qe = **1.18D+2.5Qe** Ωo = 2.50

LC 6: (1.0 + 0.15 S_{DS})D + 0.525 Ωo Qe +0.75L +0.75 LLr = **1.19D+1.88Qe+0.75(LL+LLr)**

LC 8: (0.6 - 0.14 S_{DS})D - 0.7 Ωo Qe = **0.43D+2.5Qe**

5.24 Design Base Shear

R =	6.50		**C_r =**	0.020	All other structural system
I =	1.00		**x =**	0.75	
TL =	8.00	sec	**h_n =**	23.0	ft
Redundancy Factor **ρ =**	1.30		**T =**	$C_r (h_n)^x$ = 0.210	

ASCE (12.8-2)	*ASCE (12.8-3)*	*ASCE (12.8-4)*	*ASCE (12.8-6)*	*ASCE (12.8-5)*
	($T \le$ TL)	($T >$ TL)	$S_1 \ge 0.60$	
$Cs = \frac{S_{DS}}{(R/I)}$	$Cs_{max} = \frac{S_{D1}}{T\,(R/I)}$	$Cs_{max} = \frac{S_{D1}\,T_L}{T^2\,(R/I)}$	$Cs_{min} = \frac{0.5\,S_1}{(R/I)}$	Cs_{min}= 0.01
Cs = 0.194	**Cs =** 0.908	**Cs =** 0.000 *NOT USED*	**Cs =** 0.048	**Cs =** 0.01

Use **Cs =** **0.194**

V = Cs W ***Apply 0.7 Reduction for ASD*

GOVERNING DESIGN BASE SHEAR **V =** **0.136W** **ASD**

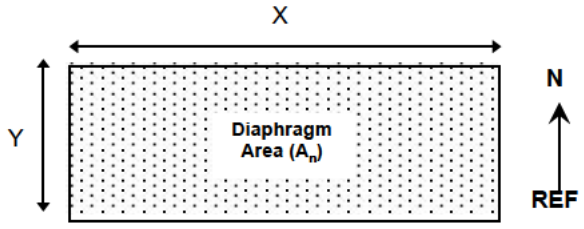
6. BUILDING PARAMETERS

6.1 Building Dimensions

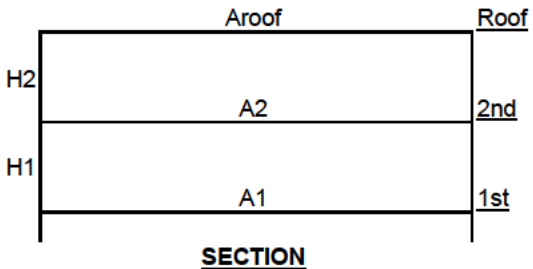
No. of Floor/s Levels 2

Total building height 25.0 ft

Basement/Crawl Space 3.00 ft



PLAN



SECTION

Nomenclature:

n	Subscript for floor levels
Xn	Building width
Yn	Building length
An	Diaphragm area
Hn	Floor height between levels

6.2 Roof /Floor Areas

Floor Level	Area A_n (ft^2)	Low Roof Area A_n (ft^2)	Deck Area A_n (ft^2)	Bldg Length X_n (ft)	Bldg Width Y_n (ft)
Roof	1406	~~0~~	~~0~~	56	25
2nd floor	1212		193	48	25

6.3 Wall Heights

Floor Level	Floor Height H_n (ft)	Exterior Wall Length (ft)	Interior Wall Length (ft)	Tributary Ext. Wall (ft^2)	Tributary Int. Wall (ft^2)	Height of Diaphragm
Roof	~~0~~	~~0~~	~~0~~	996	942	23.0
2nd floor	11.0	181	171	1664	1420	11.0
1st floor	8.0	167	120	668	478	3.0
				0	0	0.0
				0	0	~~0~~

6.3 Building Weights

6.3a Roof weight

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Roof	1406	19.0	26714
Ext Walls	996	17.0	16924
Int Walls	942	10.0	9416
Misc			0

Level Weight = **53,054** lbs

NOT USED

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Floor	0	14.6	0
Low Roof	0	14.0	0
Deck	0	14.6	0
Ext Walls	0	17.0	0
Int Walls	0	10.0	0
Misc			0

Level Weight = **0** lbs

6.3b 2nd floor

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Floor	1212	14.6	17695
Low Roof	0	14.0	0
Deck	193	14.6	2821
Ext Walls	1664	17.0	28280
Int Walls	1420	10.0	14196
Misc			0

Level Weight = **62,992** lbs

NOT USED

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Floor			
Low Roof			
Deck			
Ext Walls			
Int Walls			
Misc			

Level Weight = **0** lbs

6. 4 Building Weight Summary

Floor Level	Level Weights (lbs)	S Weights (lbs)
Roof	53,054	53,054
2nd floor	62,992	116,046
	-	-
	-	-
S	**116,046**	

6. 5 Base Shear

Vu = 0.136 x 116,046

V = 15,747 lbs
V x ρ = 20.470 kips
ASD

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7. LATERAL FORCES

T= 0.210

k= 1.00

7.1 Seismic Forces

7.1a Lateral Force Distribution

C_{vx} $F_x = C_{vx} V$

Floor Level (x)	h_x (ft)	h^k_x (ft)	Wx (kips)	$h^k x$ Wx (kip-ft)	$\frac{h^k x \text{ Wx}}{S\, h^k x \text{ Wx}}$	Fx (kips)	Diaphragm Area (ft^2)	Fx / Area (lbs/ ft^2)
Roof	23.0	23.0	53.05	1220.23	0.64	13.06	1406	**9.29**
2nd floor	11.0	11.0	62.99	692.91	0.36	7.41	1405	**5.28**
0	0.0	0.0	0.0	0.0	0.00	0.00	0	**0.00**
0	0.0	0.0	0.0	0.0	0.00	0.00	0	**0.00**
		SUM	116.0	1913.1	1.00	**20.47**		

7.1b Lateral Diaphragm Force Distribution

$Fpx\ max = 0.4 S_{DS}\ I\ wpx$ = 0.50 wpx (%)

$Fpx\ min = 0.2 S_{DS}\ I\ wpx$ = 0.25 wpx (%)

S_{DS}= 1.26

I= 1.00

Floor Level	Fx (kips)	S Forces (kips)	S Weights (kips)	$\frac{\text{S Forces}}{\text{S Weights}}$ (% Level)	% Level Fpx min Fpx max	Level Weight (kips)	Level Diaphragm Force (kips)	Fx / Area (lbs/ ft^2)
Roof	13.06	13.06	53.05	0.25	0.25	53.05	13.37	**9.51**
2nd floor	7.41	20.47	116.05	0.18	0.25	62.99	15.87	**11.30**
0	0.00	0.0	0.0	0.0	0.00	0.00	0.00	**0.00**
0	0.00	0.0	0.0	0.0	0.00	0.00	0.00	**0.00**

7.2 Wind Load

	North -South Direction			East West Direction	
Floor Level	Wind Height Projection (ft)	Building Length X_n (ft)	Projected Wind Area (ft^2)	Building Length Y_n (ft)	Projected Wind Area (ft^2)
Roof	8.5	56.2	478.0	25.0	212.5
2nd floor	9.5	48.5	460.6	25.0	237.5
0	0.0	0.0	0.0	0.0	0.0
0	0.0	0.0	0.0	0.0	0.0

*** (See 5.1 for wind pressures)*

	North -South Direction				East West Direction		
Floor Level	Floor Level Height (ft)	Projected Wind Area (ft^2)	Wind Pressure** (psf)	**Wind Force (kip)**	Projected Wind Area (ft^2)	Wind Pressure** (psf)	**Wind Force (kip)**
Roof	23.0	478.0	7.10	**3.39**	212.5	7.10	**1.51**
2nd floor	11.0	460.6	7.10	**3.27**	237.5	7.10	**1.69**
0	0.0	0.0	0.00	**0.00**	0.0	0.00	**0.00**
0	0.0	0.0	0.00	**0.00**	0.0	0.00	**0.00**
			S	**6.66**		**S**	**3.19**

SEISMIC LOAD GOVERNS

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SEISMIC LOAD DISTRIBUTION TO SHEARWALL & FRAMES

Distribution of Seismic Forces per Tributary Area (for Story Levels from Roof to 1st Floor) ** With Wood Diaphragm

Total Seismic Base Shear, V = **20.47** kips

Lateral Force F_{roof} = 13.06 kips

$V3r_d$ = 13.06 kips

A_{roof} = 1,406 ft^2

Allowable Aspect Ratio = 3.5 : 1

(See AF & PA ADPWS Table 4.3.4 Note '1' on blocked Shearwall panel aspect ratio greater than 2)

Reduction on Allowable Shear Value = $\frac{2w}{h}(V_{allow})$

DL reduction per 1605.3 of CBC 2010 and ASCE 7 12.4 (0.6 -0.14Sds)DL= **0.42**

Seismic Load Distribution to Shear Walls & Frames in N-S direction

Line	System	Tributary Area (ft²)	Wall properties					Portion of Area (%)	Wall loading and capacity				Wall Type	For Hold Down use Simpson PHD/MST						H.D.
			Length (ft)	Height	Aspect Ratio	$V_{allowable}$ (plf)	$V_{all} > V_{demand}$			Σv_x (lbs)	v_{total} (lbs)	v_{demand} (plf)		Wall wt. (psf)	Tri. Width for DL (ft)	DL (lbs)		OTM(V_i) (kip-ft)	OTM(DL) (kip-ft)	T (kip)	
A	PW	399	3	11	3.7	363	870	14%		1853	1853	618	D	17	1.30	627		20.38	0.85	6.51	HDU8
A	PW		3	11	3.7	363	870	14%		1853	1853	618	D	17	1.30	627		20.38	0.85	6.51	HDU8
B	PW	302	6.5	11	1.7	510	OK	21%		2804	2804	431	B	17	1.30	1359		30.85	3.98	4.13	HDU4
C	PW	226	4.5	11	2.4	510	OK	16%		2055	2055	456	D	17	1.30	541		23.09	1.91	4.71	HDU5
D	PW	216	3	11	3.7	278	665	8%		1075	1075	358	C	17	1.30	627		11.82	0.85	3.66	HDU4
	PW		2.6	11	4.2	241	665	7%		931	931	358	C	17	1.30	544		10.24	0.64	3.70	HDU4
E	PW	263	3.5	11	3.1	340	OK	9%		1140	1140	326	A	17	1.30	732		12.54	1.15	3.25	HDU4
	PW		4	11	2.8	340	OK	10%		1303	1303	326	A	17	1.30	836		14.33	1.51	3.21	HDU4
		1406						100%		13056	13056										

FOR REFERENCE ONLY

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SEISMIC LOAD DISTRIBUTION TO SHEARWALL & FRAMES

Lateral Force F3rd = 7.41 kips
V2nd = 20.47 kips
A3rd = 1,405 ft^2

Seismic Load Distribution to Shear Walls & Frames in N-S direction

Line	System	Tributary Area (ft^2)	Wall properties: Length (ft)	Height	Aspect Ratio	$V_{allowable}$ (plf)	$V_{all} > V_{demand}$	Portion of partial area (%)	Wall loading and capacity: Σv_{Above} roof		Σv_x (lbs)	v_{total} (lbs)	v_{demand} (plf)	Wall Type	For Hold Down use Simpson PHD/MST: Wall wt. (psf)	Tri. Width for DL (ft)	DL (lbs)	$DL_{(above)}$	$OTM(V_i)$ (kip-ft)	OTM(DL) (kip-ft)	T (kip)	H.D.
A	PW	399	4	8	2.0	1740	OK	28%	3705		2105	5810	1453	F	17	8.00	1024	1255	50.19	2.47	11.93	HDU14
													FOR REFERENCE ONLY									
B	PW	302	8	8	1.0	665	OK	21%	2804		1593	4398	550	C	17	8.00	2048	1359	52.01	8.05	5.49	HDU5
C	PW	226	8.75	8	0.9	510	OK	16%	2099		1192	3291	376	B	17	8.00	2240	941	45.22	9.29	4.11	HDU4
D	PW	216	11.5	8	0.7	340	OK	15%	2006		1140	3145	274	A	17	8.00	2944	1171	43.22	15.82	2.38	HDU2
E	WSWH	263	1.5	8	N.A.	N.A.	N.A.	9%	1140		694	1834	1222		17	8.00	384	732	24.93	0.63	16.20	
	WSWH		1.5	8	N.A.	N.A.	N.A.	9%	1303		694	1996	1331		17	8.00	384	836	27.69	0.68	18.01	
		1406						100%	13056		7418.1	20474.4										

See perforated Shear Wall (page 15)

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LEGEND

HF	HARDY FRAME
TS	TUBE STEEL (CANTILEVER COLUMN)
PW	PLYWOOD SHEARWALL
MF	STEEL MOMENT FRAME
SW	STRONGWALL
SSW	STL. STRONGWALL
CMU	CONRETE MASONRY
CON.	CONCRETE WALL
L	LENGTH OF WALL
BETA (β)	FACTOR TO ACCOUNT TO ANGLE VARIATION OF LATERAL
OTM (V_i)	OVERTURNING MOMENT DUE TO TOTAL SHEAR FORCE ON SHEARWALL
OTM (DL)	RESISTING MOMENT DUE TO TOTAL DEADWEIGHT OF WALL

NOTE :

1. PLYWOOD SHEARWALLS WITH CAPACITY OF 300LBS/FT SHALL BE INSPECTED BY A DEPUTY INSPECTOR
2. PLYWOOD SHALL BE AT LEAST 4-PLY 3-PLY SHALL ONLY HAVE A MAX CAP OF 200LBS/FT
3. USE ONLY COMMON NAILS FOR PLYWOOD SHEARWALLS AND DIAPRAGHM

SHEARWALL SCHEDULE

MARK	TYPE	MATERIALS	NAILING	ALLOW. SHEAR PLF
1	A	1/2" STRUC 1	10d @6 oc	340
2	B	1/2" STRUC 1	10d @4 oc	510
3	C	1/2" STRUC 1	10d @3 oc	665
4	D	1/2" STRUC 1	10d @2 oc	870
5	E	1/2", PLY STRUC 1 BOTH SIDES	10d @4 oc ea side	1330
6	F	1/2", PLY STRUC 1 BOTH SIDES	10d @3 oc ea side	1740

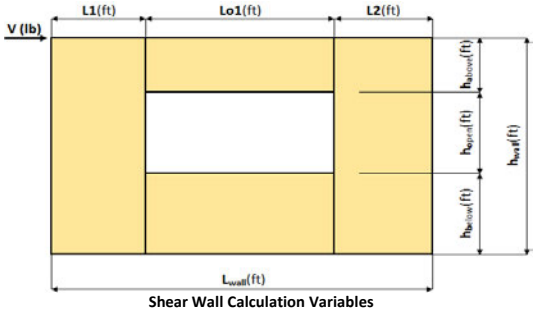
HOLDOWN CAPACITIES

FOUNDATION		UPPER FLOOR	
(SIMPSON) (ICC ESR 2330	4x4 POST kips	(SIMPSON)	4x4 POST kips
HDU2	3.080	MST37	5.080
HDU4	4.560	MST48	5.310
HDU5	5.645	MST60	6.730
HDU8	6.97	2-MST48	10.620
HDU11	9.54	2-MST60	13.46
HDU14	14.37		
HD12	15.51		
HD19	19.07		

Note : For HDU14, HD12, HD19 : Capacity is based on 6x6 wood post

Project Information

Code:	**Date:** 5/27/2025
Designer:	DM
Client:	
Project:	1077 Fell Street, San Francisco
Wall Line:	Grid line D- 1st floor



Shear Wall Calculation Variables

V	3145 lbf	Opening 1	
L1	4.42 ft	h_a	2.00 ft
L2	4.42 ft	h_o	8.00 ft
h_{wall}	11.58 ft	h_b	1.58 ft
L_{wall}	11.84 ft	Lo1	3.00 ft

Adj. Factor Method =	1.25-0.125h/bs	
Wall Pier Aspect Ratio		Adj. Factor
P1=h_o/L1=	1.81	N/A
P2=h_o/L2=	1.81	N/A

1. Hold-down forces: H = Vh_{wall}/L_{wall} 3076 lbf

2. Unit shear above + below opening

First opening: va1 = vb1 = H/(h_a+h_b) = 859 plf

3. Total boundary force above + below openings

First opening: O1 = va1 x (Lo1) = 2578 lbf

4. Corner forces

F1 = O1(L1)/(L1+L2) = 1289 lbf

F2 = O1(L2)/(L1+L2) = 1289 lbf

5. Tributary length of openings

T1 = (L1*Lo1)/(L1+L2) = 1.50 ft

T2 = (L2*Lo1)/(L1+L2) = 1.50 ft

6. Unit shear beside opening

v1 = (V/L)(L1+T1)/L1 = 356 plf

v2 = (V/L)(T2+L2)/L2 = 356 plf

Check v1*L1+v2*L2=V? 3145 lbf **OK**

7. Resistance to corner forces

R1 = v1*L1 = 1573 lbf

R2 = v2*L2 = 1573 lbf

8. Difference corner force + resistance

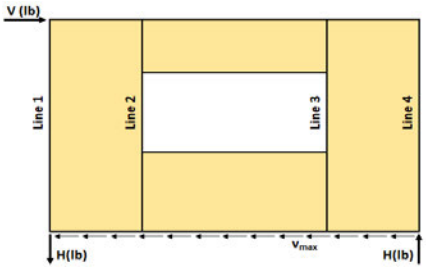
R1-F1 = 284 lbf

R2-F2 = 284 lbf

9. Unit shear in corner zones

vc1 = (R1-F1)/L1 = 64 plf

vc2 = (R2-F2)/L2 = 64 plf



Check Summary of Shear Values for One Opening

Line 1: vc1(h_a+h_b)+v1(h_o)=H?		230	2846	3076 lbf
Line 2: va1(h_a+h_b)-vc1(h_a+h_b)-v1(h_o)=0?	3076	230	2846	0
Line 3: va1(h_a+h_b)-vc2(h_a+h_b)-v1(h_o)=0?	3076	230	2846	0
Line 4: vc2(h_a+h_b)+v2(h_o)=H?		230	2846	3076 lbf

Design Summary*

Req. Sheathing Capacity	859 plf	**4-Term Deflection**		**3-Term Deflection**	
Req. Strap Force	1289 lbf	**4-Term Story Drift %**		**3-Term Story Drift %**	
Req. HD Force (H)	3076 lbf				
Req. Shear Wall Anchorage Force (v_{max})	266 plf				

***The Design Summary assumes that the shear wall is designed as blocked.**

Project Title:
Engineer:
Project ID:
Project Descr:

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.10.30 Enertia Designs Inc. (c) ENERCALC, LLC 1982-2025

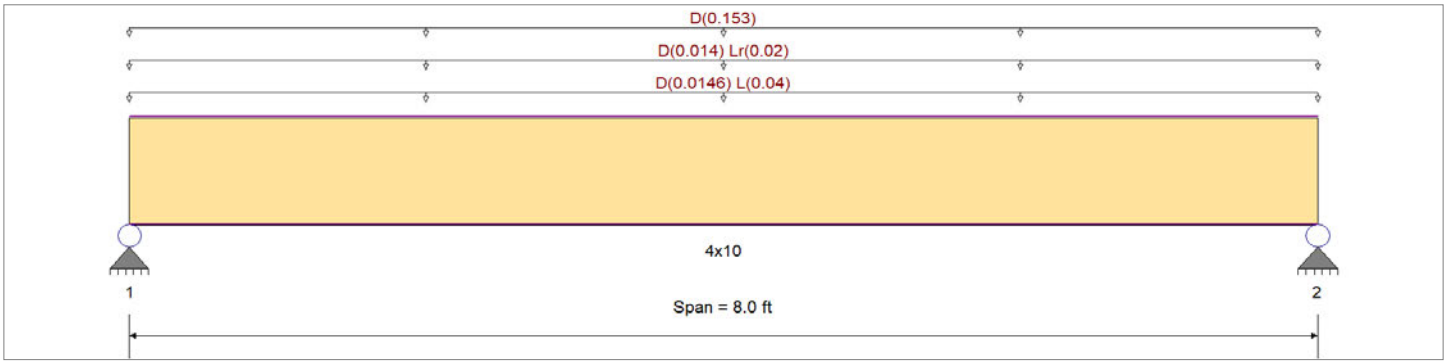
DESCRIPTION: 2B3

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, SDPWS 2015
Load Combination Set : ASCE 7-16

Material Properties

Analysis Method :	Allowable Stress Design	Fb +	900.0 psi	*E : Modulus of Elasticity*	
Load Combination :	ASCE 7-16	Fb -	900.0 psi	Ebend- xx	1,600.0 ksi
		Fc - Prll	1,350.0 psi	Eminbend - xx	580.0 ksi
Wood Species :	Douglas Fir-Larch	Fc - Perp	625.0 psi		
Wood Grade :	No.2	Fv	180.0 psi		
		Ft	575.0 psi	Density	31.210 pcf
Beam Bracing :	Beam is Fully Braced against lateral-torsional buckling				



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Uniform Load : D = 0.01460, L = 0.040 ksf, Tributary Width = 1.0 ft, (FLOOR LOAD)
Uniform Load : D = 0.0140, Lr = 0.020 ksf, Tributary Width = 1.0 ft, (ROOF LOAD)
Uniform Load : D = 0.0170 ksf, Tributary Width = 9.0 ft, (WALL)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.509 : 1	Maximum Shear Stress Ratio	=	0.238 : 1
Section used for this span		4x10	Section used for this span		4x10
fb: Actual	=	439.72 psi	fv: Actual	=	34.33 psi
F'b	=	864.00 psi	F'v	=	144.00 psi
Load Combination		+D+L	Load Combination		+D+L
Location of maximum on span	=	4.000 ft	Location of maximum on span	=	7.241 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.011 in	Ratio =	9084 >=300	Span: 1 : L Only
Max Upward Transient Deflection	0 in	Ratio =	0 <300	n/a
Max Downward Total Deflection	0.062 in	Ratio =	1555 >=400	Span: 1 : +D+0.750Lr+0.750L
Max Upward Total Deflection	0 in	Ratio =	0 <400	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 8.0 ft	1	0.467	0.219	0.90	1.00	1.00	1.00	1.200	1.00	0.80	1.00	1.51	362.8	777.6	0.61	28.3	129.6
+D+L					1.00	1.00	1.00	1.200	1.00	0.80	1.00			0.0	0.00	0.0	0.0
Length = 8.0 ft	1	0.509	0.238	1.00	1.00	1.00	1.00	1.200	1.00	0.80	1.00	1.83	439.7	864.0	0.74	34.3	144.0
+D+Lr					1.00	1.00	1.00	1.200	1.00	0.80	1.00			0.0	0.00	0.0	0.0
Length = 8.0 ft	1	0.372	0.174	1.25	1.00	1.00	1.00	1.200	1.00	0.80	1.00	1.67	401.3	1,080.0	0.68	31.3	180.0
+D+0.750Lr+0.750L					1.00	1.00	1.00	1.200	1.00	0.80	1.00			0.0	0.00	0.0	0.0

Wood Beam

LIC# : KW-06019663, Build:20.24.10.30 Enertia Designs Inc. (c) ENERCALC, LLC 1982-2025

DESCRIPTION: 2B3

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
Length = 8.0 ft	**1**	0.416	0.195	1.25	1.00	1.00	1.00	1.200	1.00	0.80	1.00	1.87	449.3	1,080.0	0.76	35.1	180.0
+D+0.750L					1.00	1.00	1.00	1.200	1.00	0.80	1.00			0.0	0.00	0.0	0.0
Length = 8.0 ft	**1**	0.423	0.198	1.15	1.00	1.00	1.00	1.200	1.00	0.80	1.00	1.75	420.5	993.6	0.71	32.8	165.6
+0.60D					1.00	1.00	1.00	1.200	1.00	0.80	1.00			0.0	0.00	0.0	0.0
Length = 8.0 ft	**1**	0.157	0.074	1.60	1.00	1.00	1.00	1.200	1.00	0.80	1.00	0.91	217.7	1,382.4	0.37	17.0	230.4

Overall Maximum Deflections

Span	Load Combination	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
1	+D+0.750Lr+0.750L	0.0617	4.029		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	0.934	0.934
Max Upward from Load Combinations	0.934	0.934
Max Upward from Load Cases	0.754	0.754
D Only	0.754	0.754
+D+L	0.914	0.914
+D+Lr	0.834	0.834
+D+0.750Lr+0.750L	0.934	0.934
+D+0.750L	0.874	0.874
+0.60D	0.453	0.453
Lr Only	0.080	0.080
L Only	0.160	0.160

Project Title:
Engineer:
Project ID:
Project Descr:

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.10.30 Enertia Designs Inc. (c) ENERCALC, LLC 1982-2025

DESCRIPTION: 2B2

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, SDPWS 2015
Load Combination Set : ASCE 7-16

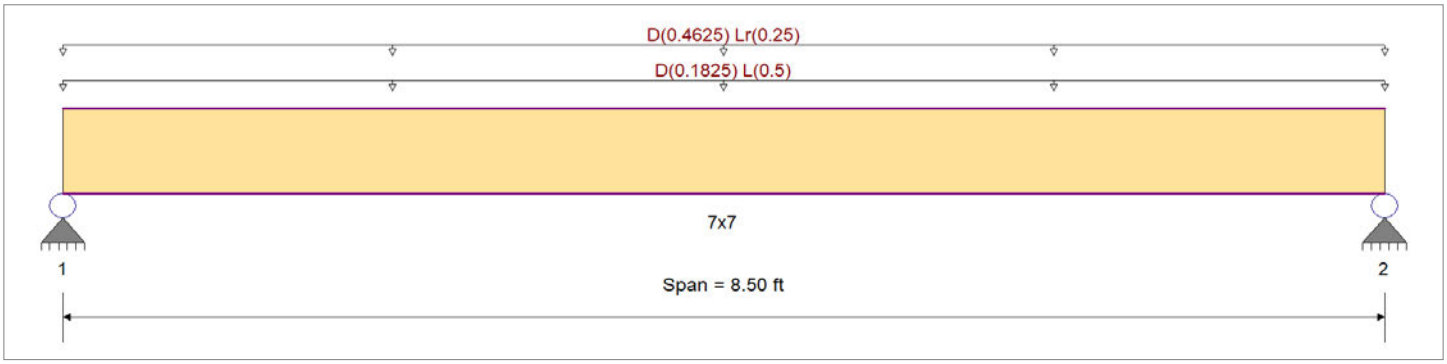
Material Properties

Analysis Method :	Allowable Stress Design
Load Combination :	ASCE 7-16
Wood Species :	iLevel Truss Joist
Wood Grade :	Parallam PSL 2.0E
Beam Bracing :	Beam is Fully Braced against lateral-torsional buckling

Fb +	2,900.0 psi
Fb -	2,900.0 psi
Fc - Prll	2,900.0 psi
Fc - Perp	750.0 psi
Fv	290.0 psi
Ft	2,025.0 psi

E : Modulus of Elasticity

Ebend- xx	2,000.0 ksi
Eminbend - xx	1,016.54 ksi
Density	45.070 pcf



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Uniform Load : D = 0.01460, L = 0.040 ksf, Tributary Width = 12.50 ft, (FLOOR LOAD)
Uniform Load : D = 0.0370, Lr = 0.020 ksf, Tributary Width = 12.50 ft, (ROOF LOAD)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.714 : 1	Maximum Shear Stress Ratio	=	0.452 : 1
Section used for this span		7x7	Section used for this span		7x7
fb: Actual	=	2,199.73 psi	fv: Actual	=	131.13 psi
F'b	=	3,078.80 psi	F'v	=	290.00 psi
Load Combination		+D+L	Load Combination		+D+L
Location of maximum on span	=	4.250 ft	Location of maximum on span	=	0.000 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.155 in	Ratio =	656	>=360	Span: 1 : L Only
Max Upward Transient Deflection	0 in	Ratio =	0	<360	n/a
Max Downward Total Deflection	0.380 in	Ratio =	268	>=240	Span: 1 : +D+0.750Lr+0.750L
Max Upward Total Deflection	0 in	Ratio =	0	<240	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 8.50 ft	1	0.452	0.286	0.90	1.00	1.00	1.00	1.062	1.00	1.00	1.00	5.96	1,251.8	2,770.9	2.44	74.6	261.0
+D+L					1.00	1.00	1.00	1.062	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 8.50 ft	1	0.714	0.452	1.00	1.00	1.00	1.00	1.062	1.00	1.00	1.00	10.48	2,199.7	3,078.8	4.28	131.1	290.0
+D+Lr					1.00	1.00	1.00	1.062	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 8.50 ft	1	0.448	0.284	1.25	1.00	1.00	1.00	1.062	1.00	1.00	1.00	8.22	1,725.8	3,848.5	3.36	102.9	362.5
+D+0.750Lr+0.750L					1.00	1.00	1.00	1.062	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 8.50 ft	1	0.602	0.381	1.25	1.00	1.00	1.00	1.062	1.00	1.00	1.00	11.04	2,318.2	3,848.5	4.51	138.2	362.5

Project Title:
Engineer:
Project ID:
Project Descr:

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.10.30 Enertia Designs Inc. (c) ENERCALC, LLC 1982-2025

DESCRIPTION: 2B2

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
+D+0.750L					1.00	1.00	1.00	1.062	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 8.50 ft	**1**	0.554	0.351	1.15	1.00	1.00	1.00	1.062	1.00	1.00	1.00	9.35	1,962.8	3,540.6	3.82	117.0	333.5
+0.60D					1.00	1.00	1.00	1.062	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 8.50 ft	**1**	0.152	0.096	1.60	1.00	1.00	1.00	1.062	1.00	1.00	1.00	3.58	751.1	4,926.1	1.46	44.8	464.0

Overall Maximum Deflections

Span	Load Combination	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
1	+D+0.750Lr+0.750L	0.3800	4.281		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	5.197	5.197
Max Upward from Load Combinations	5.197	5.197
Max Upward from Load Cases	2.806	2.806
D Only	2.806	2.806
+D+L	4.931	4.931
+D+Lr	3.869	3.869
+D+0.750Lr+0.750L	5.197	5.197
+D+0.750L	4.400	4.400
+0.60D	1.684	1.684
Lr Only	1.063	1.063
L Only	2.125	2.125

Exhibit 12 - Aggregation of Plan Checkers to date

Aggregation of Plan Checkers to date			
Date	Permit	Station	Checked By
4/26/2023	202304266513	BLDG	SZETO DAVID
4/26/2023	202304266513	CPB	BROWN JANAE
6/9/2023	202306099711	BLDG	SOENKSEN RICHARD
6/9/2023	202306099711	MECH-E	MASCK ED
6/9/2023	202306099711	MECH	TAN (PETER) JIA JIAN
7/12/2023	202306099711	CPB	CHAN CHENG
9/26/2023	202309267475	BLDG	LO JAMES
6/1/2024	202405172393	CP-ZOC	MAU ELIZABETH
7/15/2024	202405172393	CP-ZOC	OROPEZA EDGAR
7/15/2024	202405172393	BLDG	CHAN PHILIP
8/12/2024	202405172393	BLDG	CHAN PHILIP
8/12/2024	202405172393	MECH	GILMARTIN CHRISTIAN
8/12/2024	202405172393	SFPUC	IMSON GRACE
8/12/2024	202405172393	SFFD	LY ROGER
8/14/2024	202405172393	BLDG	CHAN PHILIP
8/14/2024	202405172393	SFFD	LY ROGER
7/23/2025	202506269586	CP-ZOC	LAUSH MAGGIE
7/23/2025	202506269586	BLDG	JONES DAVID
7/23/2025	202506269586	BLDG	LIU STEPHEN
7/23/2025	202506269586	PAD-STR	LIU STEPHEN

Exhibit 13 - Project Qualifies for 503.11 Exception 1

3708 LINWOOD AVENUE
OAKLAND, CA. 94602
PHONE: 510-757-6131
biggs-group.com

Biggs Group Architecture

8/23/25

Subject: Requiring A Full Seismic Upgrade for a Renovation in a Two-Dwelling Property
Project Address: 1077 Fell Street
Project Application # : 2023-0426-6513

The work for this project involves remodeling the first level of a two level building, with each level serving as a separate condominium. The neighbor in the upper unit has hired a consultant who is a Licensed Engineer, that has stated that the project is beyond a 30% threshold, and that the plans created by a separate Licensed Structural Engineer, and that have been reviewed by City engineers, must increase the scope to include additional seismic improvements.

The San Francisco building code "30% rule" for seismic upgrades refers to the thresholds in the California Existing Building Code (CEBC), which is adopted by the city. It requires a seismic retrofit when structural alterations exceed 30% of the building's floor or roof areas.

Code reference:

The specific code reference can be found in the **California Existing Building Code (CEBC)**. San Francisco uses and amends this state code. In general, the key triggering provisions are related to substantial structural alterations.

The CEBC states:

- **CEBC Section 503.11:** This section is where the triggers for mandatory seismic upgrades are typically found.
- **CEBC Section 202:** This defines what constitutes "Substantial Structural Alterations" that would mandate a retrofit, which includes the following two type of substantial alterations listed below.

How the 30% rule works

Under the CEBC, a full seismic upgrade to the current San Francisco Building Code (SFBC) is typically required if a project includes any of the following triggers:

- **Alterations to more than 30% of the building's floor and roof areas** or their structural support. This is cumulative, meaning it factors in all such work done since May 21, 1973.
- **A horizontal addition** that increases the building's square footage by more than 30%.

This 30% rule does not apply to all alteration projects!
Under 503.11, Exception 1, "Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes that are altered based on the conventional light-frame construction methods of the San Francisco Building Code.
Since this building is a wood frame building, type VB construction, two stories, two parcels , and two Dwellings, it is exempt under Exception 1.

From my site visit on Friday, 8/23/25, I viewed the current state of the project with rough framing at or near completion. I viewed plywood sheathed shear walls at reasonable intervals, within the work scope area. Further, I have worked on enough of these types of renovations, to know a well-conceived project, and this is one of them. The engineering documents are comprehensive, and include all measures of accommodation for lateral forces, which would exceed code minimums, and that are appropriate for the work. As a result of the work, the building is left in a much stronger structural state.

If you have any questions about this letter do not hesitate to contact me to discuss further.

Best ,
Thomas Biggs
Architect, C-30039

Exhibit 14 - Resolved Concern of Seismic Retrofitters

Gmail

Steven Huang <thestevenhuang@gmail.com>

Question about level of Simpson strong wall

Mark B <barbcon1@gmail.com> Sun, Jan 12, 2025 at 1:11 PM
Reply-To: mark@quakeprep.com
To: soumya sastry <soumya.sastry@gmail.com>
Cc: Darquison Martins <darquison@enertiadesigns.net>, Mark Barbagelata <mark@quakeprep.com>, Steven Huang <thestevenhuang@gmail.com>

Sonya,

Rebar often followes the slope of the grade hence it is a non issue.

I don't think you're friend is qualified to inspect our work.

Mark

On Sun, Jan 12, 2025, 12:10 PM soumya sastry <soumya.sastry@gmail.com> wrote:

> Hi all,
>
> Question before the concrete gets poured. My friend has highlighted a concern that the iron/ footing is not level. See the attached picture. What do you think?



Exhibit 15 - AI Generated Inspection Reports

Gmail

Steven Huang <thestevenhuang@gmail.com>

Serious concerns about installation of Simpson strong wall

2 messages

soumya sastry <soumya.sastry@gmail.com> Sat, Apr 26, 2025 at 4:13 PM
To: Darquison Martins <darquison@enertiadesigns.net>, "Eng. Jefferson Chen" <jefferson@enertiadesigns.net>, Steven Huang <thestevenhuang@gmail.com>, haraprasad sastry <haraprasadsastry@yahoo.com>

Hi Darquison and Jefferson,

I believe that we are meeting this week, but I want to raise some other concerns even outside of the rough opening.

(I have used AI to help me summarize this.)

Simpson Strong-Wall WSWH18x12 Installation – Final Engineering Summary

---

1. Project and Product Information

Strong Wall Model: WSWH18x12 (Wood Strong Wall, High Capacity)
- Location: Perimeter wall, anchored to foundation concrete at grade
Exposure Condition: Exterior condition, subject to soil vapor and moisture
Contractor's scope does not include exterior waterproofing or siding installation.

2. Corrosion Protection Requirements

- Project Structural Notes (Section V.A.2): "All bolts, nuts and miscellaneous hardware shall be galvanized."
Simpson Strong Tie WSWH Installation Manual: "Hardware installed in environments subject to elevated moisture levels must be corrosion resistant."
- Moisture exposure includes foundation concrete at grade — corrosion protection is required even if siding or finishes are installed later.

3. Identified Installation Defects

Rusted, Non Galvanized Anchor Bolts:
Bolts installed are plain steel and already rusting, indicating violation of corrosion protection requirements.

- Missing or Poor Grout Under Baseplate:
Strong Wall base is not fully supported with non shrink grout. Visible gaps and sloppy fill indicate inadequate load transfer into the foundation.

Insufficient Thread Engagement:
Nuts installed without at least one full thread protruding beyond the nut, violating basic structural bolting standards.

- Missing Washers Under Nuts:
Heavy hex nuts clamping directly against hardware block openings without washers, severely weakening clamping force.

- Nuts Bearing on Hole Edges:
Nuts are bearing directly on the edges of the hardware block openings instead of on a solid plate surface. Critical structural flaw.

Bolt Skew / Misalignment:

Anchor bolts are not perfectly vertical, which can reduce proper load transfer and introduce bending stresses.

- Bolt Hole Clearance:
Bolts are positioned close to the edges of access holes, preventing proper washer seating and weakening the connection.

4. Additional Observations Indicating Poor Workmanship

- Incomplete Concrete Perimeter:
A perimeter curb was formed on one side only; the footing lacks a complete and proper perimeter curb where required.

- Rough Concrete Finish:
Concrete surfaces are rough, dirty, chipped, and unfinished, indicating poor placement and finishing.

- Inadequate Fascia/Trim Installation:
Scrap plywood was installed instead of a proper exterior fascia or trim board, exposing wood elements directly to weather.

- General Site Sloppiness:
Construction debris, mortar spills, and poor cleanup practices reflect careless work standards.

5. Related Structural Concern – Rough Opening and Missing Straps

A large 42" x 100" rough opening was cut into the same structural shear wall without proper seismic strapping or reinforcement, significantly reducing the intended lateral and shear strength of the assembly. This structural change further undermines the effectiveness of the Strong-Wall installation in resisting earthquake and wind loads. The rough opening was NOT in the plans and the contractor cut it despite being asked to wait for clarification.

6. Pattern of Poor Workmanship and Judgment

The cumulative deficiencies observed — including the improper Strong-Wall installation, missing grout, non-galvanized anchors, improper bolt connections, incomplete concrete perimeter work, and the inappropriate use of scrap plywood instead of weatherproof trim — suggest a widespread lack of construction quality and structural understanding. The additional cutting of a large unreinforced rough opening in the shear wall further raises concerns about the contractor's overall competence, attention to plans and codes, and commitment to structural safety.

7. Conclusion

The installation currently deviates from both the project's structural requirements and Simpson Strong-Tie's published installation standards. Anchor bolts are exposed to moisture and must be corrosion-protected. The base connection must provide full bearing support. Structural fasteners and anchorages must meet specified configurations to achieve rated strength. The pattern of defects identified suggests that a broader review of the contractor's work is warranted. Immediate correction and repair are strongly recommended to ensure the Strong-Wall performs as designed in seismic or high-wind events.

Darquison Martins <darquison@enertiadesigns.net> Tue, Apr 29, 2025 at 9:48 AM
To: soumya sastry <soumya.sastry@gmail.com>
Cc: "Eng. Jefferson Chen" <jefferson@enertiadesigns.net>, Steven Huang <thestevenhuang@gmail.com>, haraprasad sastry <haraprasadsastry@yahoo.com>

Hi Soumya,
Thank you for sharing the detailed summary regarding the Strong-Wall installations. I appreciate your close attention to these structural elements.
Please find my comments below:

1. **Exposure of Simpson Strong-Walls:**
   The Simpson Strong-Walls are structural elements that must be protected from weather exposure. Exterior finishes such as siding or waterproof enclosures are typically coordinated by the architectural team.
   I recommend that enclosure or protective detailing be addressed in the architectural scope to ensure long-term durability.

2. **Corrosion Protection (Anchor Bolts and Hardware):**
   As specified in the structural general notes and Simpson Strong-Tie installation guidelines, all hardware exposed to moisture must be galvanized.
   The use of non-galvanized anchor bolts and missing washers should be corrected in the field to meet those requirements.

3. **Rough Opening at Shear Wall:**
   This item has already been addressed in a separate email.

4. **Site Conditions and Workmanship:**
   I understand there are concerns regarding the installation details. At this point, I recommend we focus on addressing any specific items that may affect the structural performance, such as hardware, grout, and connection corrections.
   Let's continue coordinating closely with the contractor and design team to ensure the system is installed in compliance with structural standards and manufacturer requirements.

Best,
Darquison

On Sat, Apr 26, 2025 at 4:13 PM soumya sastry <soumya.sastry@gmail.com> wrote:

> Hi Darquison and Jefferson,
>
> I believe that we are meeting this week, but I want to raise some other concerns even outside of the rough opening.
>
> (I have used AI to help me summarize this.)
>
> # Simpson Strong-Wall WSWH18x12 Installation – Final Engineering Summary
>
> ---
>
> ## 1. Project and Product Information
> - Strong-Wall Model: WSWH18x12 (Wood Strong-Wall, High Capacity)
> - Location: Perimeter wall, anchored to foundation concrete at grade
> - Exposure Condition: Exterior condition, subject to soil vapor and moisture
> - Contractor's scope does not include exterior waterproofing or siding installation.
>
> ## 2. Corrosion Protection Requirements
> - Project Structural Notes (Section V.A.2): "All bolts, nuts and miscellaneous hardware shall be galvanized."
> - Simpson Strong-Tie WSWH Installation Manual: "Hardware installed in environments subject to elevated moisture levels must be corrosion-resistant."
> - Moisture exposure includes foundation concrete at grade — corrosion protection is required even if siding or finishes are installed later.
>
> ## 3. Identified Installation Defects
> - Rusted, Non-Galvanized Anchor Bolts:
> Bolts installed are plain steel and already rusting, indicating violation of corrosion protection requirements.
>
> - Missing or Poor Grout Under Baseplate:
> Strong-Wall base is not fully supported with non-shrink grout. Visible gaps and sloppy fill indicate inadequate load transfer into the foundation.
>
> - Insufficient Thread Engagement:

ENERTIA DESIGNS

COMPLIANCE REPORT

June 25, 2025

Project Address: 1077 Fell Street
Enertia Designs Project number: 23059
Application No: 2023-0926-7475/ 2024-0517-2393

To whom it may concern,
This letter confirms that the proposed alteration at 1077 Fell Street will not impair the structural integrity or mechanical systems of the property.

If you have any questions or concerns, feel free to contact our office at your earliest convenience.

Sincerely,

Jefferson Chen, M.S, P.E
Principal, Enertia Designs Inc.
1167 MISSION STREET, FL. 1
SAN FRANCISCO, CA 94103
T:415.626.8300 x 300
M:415.515.0403
F:415.701.0212



Exhibit 19 - Declaration from Kathleen Gevertz

CITY AND COUNTY OF SAN FRANCISCO
BOARD OF APPEALS

SOUMYA SASTRY Appellant, vs. DEPARTMENT OF BUILDING INSPECTION Respondent	**Appeal No: 25-029** DECLARATION OF KATHLEEN GEVERTZ IN SUPPORT OF RESPONDENT STEVEN HUANG Date: September 3, 2025 Time: 5:00PM

DECLARATION OF SUPPORT FOR 1077 FELL STREET

I, Kathleen Gevertz, declare as follows:

1. I am an individual and over the age of 18. I am aware of Steven Huang and Soumya Sastry, who is also a previous client of mine. I am competent to testify, and if called upon to testify herein, I could and would testify as follows from my personal, first-hand knowledge.
2. I have been involved in construction, design, project management, and owner's representation for over 25 years in the city of San Francisco, working on hundreds of projects. I am also a licensed General B contractor in the State of California.
3. As Mr. Huang's owner's representative, we have been thoroughly engaged and truthful with DBI and the planning department. [redacted]; we have not knowingly acted in a way that violated any building code or permit.
4. The appellant alleges that we "failed to address any of [her] concerns adequately and have left the Property in a compromised condition." [redacted] Additionally, I can attest that we have tried earnestly to address her concerns through licensed professionals, but she doesn't listen to or believe them. She chooses not to contact me with her concerns, though I am available. When acting on behalf of my client, Mr. Huang, if the subject at hand doesn't sit well with Ms. Sastry, she refuses to speak with me. She has repeatedly refused to provide clarity on the information she is requesting [redacted]

[redacted]

5. [redacted]

6. [redacted]

[redacted].

7. Attached hereto as exhibits in the Response Brief are the true and correct copies of the Structural and Architectural plans related to this project.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed August 28, 2025, at San Francisco, California.

DECLARANT: KATHLEEN A GEVERTZ

CEO of KAG Designs and Construction LLC

License: 1103702

Exhibit 20 - Resolved Concern of Seismic Retrofitters - Again

Gmail

Steven Huang <thestevenhuang@gmail.com>

1077 Fell - south wall/ door.

Mark B <barbcon1@gmail.com> Fri, May 9, 2025 at 5:30 PM
Reply-To: mark@quakeprep.com
To: soumya sastry <soumya.sastry@gmail.com>
Cc: Mark Barbagelata <mark@quakeprep.com>, Darquison Martins <darquison@enertiadesigns.net>, Steven Huang <thestevenhuang@gmail.com>, Doug Burrows <Doug@veloxsf.com>, "Eng. Jefferson Chen" <jefferson@enertiadesigns.net>, haraprasad sastry <haraprasadsastry@yahoo.com>, Ariel Lorenzale <ariel@veloxsf.com>, lorenzaleariel@gmail.com

Soumya,

Your claims are incorrect, derogatory and completely without merit.

The 2x6 in question is cladding over the structural beam and offers zero structural integrity.

We can replace the entire lengths of 2x6 if it will make you feel better.



Please refrain from further contact with Seismic Retrofitters.
The EOR or the building inspector can request structure corrections directly with me if needed.

Mark

Seismic Retrofitters Inc.
415-822-4200

Exhibit 21 - Arbitration

I am the claimant, Soumya Sastry. I reside at 1075 Fell Street and signed the contract with Seismic Retrofitters on behalf of the 1075–1077 Fell Street HOA. Although the work affected both units, the HOA has paid approximately $87,000 to date, of which I contributed 60%. The final $5,000 under the contract remains unpaid and has not been released. Seismic Retrofitters failed to perform the contracted seismic retrofit work in accordance with the stamped structural plans and the agreed scope of work.

The main issues include:

- Unauthorized structural cut: Seismic Retrofitters cut a 100-inch by 40-inch opening into a shear wall. This opening does not appear on the stamped plans and compromises the intended lateral resistance, requiring engineering reassessment and corrective work.
- Cutting through framing: They cut through 2x6 members beneath the cantilevered floor, assuming these were non-structural facade elements. The stamped plans do not authorize this. These members may have been intended to strengthen the cantilevered floor connection.
- Failure to restore the building envelope: Seismic Retrofitters removed cladding under the cantilevered floor but did not replace it. While the contract excluded siding and waterproofing for a new Simpson Strong-Wall, it did not exclude restoring areas they cut open. Their failure to do so affects waterproofing and long-term durability.
- Improper payment practices: Seismic Retrofitters demanded payment in advance of contractual milestones and threatened to file a lien. We made a pressured payment from HOA funds to avoid escalation.
- Refusal to communicate: I made multiple attempts to resolve these issues directly and professionally. Seismic Retrofitters has since blocked my email and has refused further communication.

I provided all outstanding punch list items to Seismic Retrofitters, including insulation they removed and did not replace, an untightened structural nut, and areas where they damaged exterior structures and failed to restore them.

I request that the arbitrator award damages sufficient to cover the cost of remediation by a qualified third party, based on the full scope of unauthorized and incomplete work, and that Seismic Retrofitters cover the costs of arbitration, as permitted under the contract. I seek reimbursement for 60% of that amount, reflecting my share of payments made through the HOA. If the arbitrator determines that specific performance is enforceable and appropriate, I am open to that outcome under clear, documented conditions approved by the arbitrator and the HOA's engineer. Non monetary outcomes depend on the cooperation of my neighbor and his contractor.

Gmail Steven Huang <thestevenhuang@gmail.com>

Re: Soumya Sastry v. Mark Barbagelata - Case 01-25-0003-4192

Mark B <barbcon1@gmail.com> Tue, Jul 22, 2025 at 1:36 PM
Reply-To: mark@quakeprep.com
To: Steven Huang <thestevenhuang@gmail.com>
Cc: soumya.sastry@gmail.com

Soumya,

Please include Steven on all future correspondence so that we can properly prepare for what now appears to be an impending legal dispute.

I do not agree to using a New Jersey-based arbitration firm to resolve a construction matter located in San Francisco. This is a California-based dispute and, if arbitration is to occur, it should be handled through a neutral, California-based forum consistent with applicable state law.

I remain seriously concerned about the safety of the occupants in your building. Your demand to remove essential structural elements—such as shear walls—runs counter to the recommendations of licensed professionals and puts both residents and the integrity of the building at risk, including your own child. Disregarding these life-safety measures is both dangerous and negligent.

Several individuals have observed behavior from you that raises concerns about your ability to engage in these matters constructively and responsibly. If you're experiencing difficulties, I sincerely encourage you to seek appropriate support.

I strongly urge you to take a more measured and safety-focused approach. This includes allowing licensed professionals to carry out their work in accordance with approved plans, codes, and engineering best practices.

Sincerely,

Mark Barbagelata

On Tue, Jul 22, 2025 at 1:10 PM <AAAfiling@adr.org> wrote:

> Hello,
>
> Please review the attached correspondence regarding the above-referenced case.
>
> Feel free to contact me with any questions, comments or concerns you have related to this matter.
>
> Thank you.

RECORDING REQUESTED BY: 1075-1077 Homeowners Association WHEN RECORDED MAIL TO: Soumya Sastry 1075 Fell Street San Francisco, CA 94117 APN: Formerly: Block 0825, Lot 021; Now: Block 0825, Lots 049-050.	

Space above this line for Recorders Use

FIRST AMENDMENT TO

DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR 1075–1077 FELL STREET

Recorded March 8, 2016 as Document No. 2016-K212508-00

San Francisco County Records

RECORDING AND RETURN REQUESTED BY:

1075-1077 Homeowners Association
1075 Fell Street
San Francisco, CA 94117

This Amendment amends the Declaration of Covenants, Conditions and Restrictions for 1075–1077 Fell Street, recorded March 8, 2016 as Document No. 2016-K212508-00 (originally affecting Block 0825, Lot 021), and now affecting Block 0825, Lots 049 and 050.

This Amendment is made pursuant to Article 7.1 of the Declaration of Covenants, Conditions and Restrictions for 1075–1077 Fell Street (Declaration). The Owners amend the Declaration as follows:

1. Article 1 (“Definitions”) of the Declaration is amended to replace the definition of Condominium Plan as follows:

   “Condominium Plan” means the plan showing the physical boundaries of the Property and the individual ownership interests, which is attached to this Declaration as Exhibit B. The approximate location and physical boundaries of Units, Exclusive Use Common Areas, and Common Area are shown on the Condominium Plan. The actual, as-built dimensions of the structures, either as originally constructed or as reconstructed in accordance with the Governing Documents, shall be presumed the true boundaries and shall take priority over any legal description in a document, regardless of minor encroachments resulting from construction, settlement, lateral movement, or other causes.

   For clarity, the Interstitial Space, as defined in this Declaration, is part of the Common Area regardless of how any floor, ceiling, or structural elements are depicted in the Condominium Plan or constructed in as-built conditions. No portion of the Interstitial Space shall be construed to fall within the boundaries of either Unit, even if physically enclosed or integrated into adjacent finishes or soffits. In any case of conflict or ambiguity between the Condominium Plan and the definition of Interstitial Space, the definition of Interstitial Space shall control.

2. Article 1 (“Definitions”) of the Declaration is amended to add the definition of Interstitial Space as follows:

"Interstitial Space" means the space located between the upper surface of the finished ceiling of 1077 Fell and the lower surface of the subfloor of 1075 Fell, including the floor joists supporting 1075. The Interstitial Space is part of the Common Area as defined in this Declaration. For purposes of use and clearance, the Interstitial Space includes a vertical zone extending below the bottom of the floor joists of 1075 Fell to a depth equal to the greater of (a) sixteen (16) inches, or (b) the depth of the floor joist plus six (6) inches [2 x 10 joists]. This space also includes the area needed to accommodate plumbing, ductwork, and other systems, including within any soffit located beneath those joists. The Interstitial Space shall be deemed to retain this definition and minimum depth regardless of any physical encroachments or alterations made by either Unit. In case of conflict or ambiguity between the Condominium Plan and this definition, this definition shall control.

3. Section 2.1 (C) of the Declaration "Association's Easements" is amended as follows:

(1) The Association shall have an easement for access throughout the Property to perform its duties under the Governing Documents.

(2) The only access to the crawlspace beneath the Property is through an opening located within the closet of 1077 Fell. The Owner of 1077 Fell shall not permanently obstruct or alter this access. The Association may enter 1077 Fell for the purpose of accessing the crawlspace. The Association shall repair or restore disturbance to the closet or its contents during such entry, unless the work was necessitated by the act or neglect of the Owner of 1077 Fell.

4. Section 2.8 of the Declaration "Animals" is amended to add 2.8 (D) Pet Waste:

(1) Owners and residents must not allow any animal to urinate or defecate in any part of the Common Area, including garden spaces and other shared exterior spaces. Within any Exclusive Use Common Area, the Owner or resident must immediately remove and properly dispose of all animal waste.

(2) Owners that do not comply are subject to the following fines, which may be imposed by the Association after notice and an opportunity to be heard:

1. First Violation: $25.00

2. Second Violation: $50.00

3. Third and Subsequent Violations: $100.00 per violation

Each separate incident is a separate violation. The Association may impose fines in addition to any costs incurred to clean or repair affected areas.

5. Section 2.13 (B) of the Declaration “Alterations of Common Area” is amended as follows:

(1) Except as specifically provided in this Subsection, no one may alter Common Area, or Exclusive Use Common Area, without prior, explicit approval of the other Owner. The following alterations of Exclusive Use Common Area are permitted without approval:

An Owner may alter his/her assigned landing or deck provided the alteration will not impair the structural integrity, mechanical systems, value or desirability of the Property, or involve the installation or attachment of anything to the Property (such as a screen, cover, awning, hot tub, spa, fence, etc.).

(2) No one may alter the Interstitial Space without prior, explicit approval of the other Owner.

6. Section 2.16 “Emergency Access Door” is added:

The design intent for the door at the southeast of level one is for emergency use. The door will open inwards. The door may be opened for air flow. Ingress or egress by animals is only permitted by explicit authorization by the other homeowner (1075 Fell). Such animal ingress/egress permission may be revoked at any time, at the sole discretion of the granting party.

7. Section 7.4 B. “Decision to Rebuild” is amended:

Provided that repairing the damaged areas of the Property would not necessitate a Special Assessment of more than ten percent (10%) of the combined fair market value of both Units, the Association shall repair, and any difference between the total funds available and the actual repair cost shall be imposed as a Special Assessment. If repair would necessitate a Special Assessment exceeding ten percent (10%) of the combined fair market value of both Units, the Association shall not repair unless all such

Owners vote to do so. If the Association does not repair, it shall sell the entire Property in its then existing condition on the best available terms. The sale proceeds together with any insurance proceeds shall then be distributed as provided in §7.5. If the Association fails to sell the Property within a reasonable period of time, any Owner may bring an action for judicial partition.

IN WITNESS WHEREOF, the undersigned, being all of the Owners of the Condominiums at 1075–1077 Fell Street, have executed this Amendment as of the date(s) written below.

_____ _____

Soumya Sastry Date Steven Huang Date

[Attach notary acknowledgments for each signature]

Exhibit 23 - Unlicensed Worker's Warning

Gmail

Steven Huang <thestevenhuang@gmail.com>

Access to 1077

soumya sastry <soumya.sastry@gmail.com> Tue, May 27, 2025 at 3:23 PM
To: Steven Huang <thestevenhuang@gmail.com>, haraprasad sastry <haraprasadsastry@yahoo.com>

Hi Steven, for the record Kathleen is incorrect in her email below on many items. I also have acknowledged nothing to her regarding anybody that I have hired. She is making lots of assumptions. I am also not taking on any liability by not responding to her.

---------- Forwarded message ---------
From: **soumya sastry** <soumya.sastry@gmail.com>
Date: Tue, May 27, 2025 at 3:22 PM
Subject: Fwd: Access to 1077
To: haraprasad sastry <haraprasadsastry@yahoo.com>

---------- Forwarded message ---------
From: **soumya sastry** <soumya.sastry@gmail.com>
Date: Tue, May 27, 2025 at 12:57 PM
Subject: Re: Access to 1077
To: Kathleen Gevertz <kathleen@kagdesigns.com>
CC: Steven Huang <thestevenhuang@gmail.com>, Doug Burrows <doug@veloxsf.com>, Alex Gevertz <alex@kagdesigns.com>

I would like to hear what Darquison has to say about that. Has he responded? Is there something that you have not disclosed? As to my access rights- They are listed in the CC and ours, which are familiar with. Appreciate your cooperation as I cooperated so much earlier remember the slugs.

On Tue, May 27, 2025 at 12:54 PM Kathleen Gevertz <kathleen@kagdesigns.com> wrote:

> I need assurances that the people you have working are licensed. I've mentioned several times that you do not have the proper permit(s) for your powder room. Permits and inspections are not protocols that can be circumvented.
>
> You have acknowledged that unlicensed workers have worked in your unit. Pedro worked in what is technically Steven's unit when he did the header for the sliding door. That work was not properly executed and needed to be removed. I'm not certain who authorized Pedro to complete that scope, but that was unacceptable and could have potentially posed a significant safety issue.
>
> I can't have plumbing or electrical that is coming from your unit into Steven's unit done without the appropriate permits/inspections or by unlicensed trades.
>
> If something were to happen as a result of their work, there is no recourse except for you to be 100% financially liable. I don't think you want to expose yourself or the building to this potential risk.
>
> Please let me know if you have additional questions. Thank you.
> Cheers,
>
> Kathleen A Gevertz
> KAG Designs and Construction LLC
> Lic# 1103702
> 415 271 5243
> Please reply to all when responding to emails. My phone is on M-F 7:30-6:00 PST
>
> KAG logo 01.pdf

On May 27, 2025, at 12:05 PM, soumya sastry <soumya.sastry@gmail.com> wrote:

Hi Kathleen, I will ensure that and all contractors follow Doug's safety protocols. Let me know if you have something specific in mind on safety.

On Tue, May 27, 2025 at 11:44 AM Kathleen Gevertz <kathleen@kagdesigns.com> wrote:

> Hi Soumya,
>
> I'm writing regarding the access you requested tomorrow at Steven's property. Steven will be on hand tomorrow between one and three, to let the plumber in.
>
> Regarding your text to the group, we do not authorize the use of videotape in Steven's unit. You mentioned wanting to tag and videotape the electrical lines. When Steven is on-site with you tomorrow, you can take photos and measurements. As a side note, it is standard in the industry to photograph and mark-up the photos for future reference, not videotape.
>
> Furthermore, since we've not received a list of your subcontractors and their insurance, we do not authorize unlicensed people to work in the building, particularly when it affects Steven's unit.
>
> Your powder room work requires a separate electrical permit. The knob and tube addressed on your old electrical permit is irrelevant since it doesn't pertain to your powder room work. You need a licensed electrician to do the electrical work within the powder room, including the work required per code to comply with the mechanical code.
>
> We are firm when it comes to life safety issues, such as structural, plumbing, and electrical work.
>
> Please let me know if you have any questions. Thank you.
>
> Cheers,
>
> Kathleen A Gevertz
> KAG Designs and Construction LLC
> Lic# 1103702
> 415 271 5243
> Please reply to all when responding to emails. My phone is on M-F 7:30-6:00 PST
>
> KAG logo 01.pdf