

**RICHMOND, CALIFORNIA, February 18, 2025**

Community Services Building  
440 Civic Center Plaza  
Richmond, CA 94804

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**A. OPEN SESSION TO HEAR PUBLIC COMMENT BEFORE CLOSED SESSION**

The Richmond City Council Evening Open Session was called to order at 4:34 p.m. by Mayor Eduardo Martinez.

**B. ROLL CALL**

**Present:** Councilmembers Jamelia Brown, Claudia Jimenez, Doria Robinson, Sue Wilson, Vice Mayor Cesar Zepeda and Mayor Eduardo Martinez. **Absent:** Councilmember Soheila Bana arrived after the roll was called.

**C. CLOSED SESSION**

**C.1 PUBLIC EMPLOYEE PERFORMANCE EVALUATION (Government Code Section 54957)**

- Title: City Clerk
- Title: City Attorney

**C.2 CONFERENCE WITH LABOR NEGOTIATORS (Government Code Section 54957.6)**

- Agency Representatives: Sharrone Taylor, Jack Hughes, Lisa Charbonneau

Employee organizations:

1. SEIU Local 1021 Full Time Unit and Part Time Unit
2. IFPTE Local 21 Mid-Level Management Unit and Executive Management Units
3. Richmond Police Officers Association RPOA
4. Richmond Police Management Association RPMA
5. IAFF Local 188
6. Richmond Fire Management Association RFMA

**C.3 CONFERENCE WITH LEGAL COUNSEL - EXISTING LITIGATION (paragraph (1) of Subdivision [d] of Government Code Section 54956.9)**

- City of Richmond v. Riggers Loft Wine Company

**C.4 CONFERENCE WITH LEGAL COUNSEL - ANTICIPATED LITIGATION (Significant exposure to litigation pursuant to paragraph (2) or (3) of Subdivision (d) [as applicable] of Government Code Section 54956.9)**

- One Case

**D. PUBLIC COMMENT BEFORE CLOSED SESSION (limited to items on the Closed Session agenda only)**

Cordell Hindler gave comments in person.

**E. ADJOURN TO CLOSED SESSION**

Chief Assistant City Attorney Shannon Moore announced that item C.3 was improperly agendaized and as such the item would not be heard. The Open Session adjourned to Closed Session at 4:37 p.m. Closed Session adjourned at 6:32 p.m.

**F. REGULAR MEETING OF THE RICHMOND CITY COUNCIL**

The Regular Meeting of the Richmond City Council was called to order at 6:35 p.m. by Mayor Eduardo Martinez.

**G. PLEDGE OF ALLEGIANCE**

Mayor Martinez led the Pledge of Allegiance to the Flag.

**H. ROLL CALL**

**Present:** Councilmembers Soheila Bana, Jamelia Brown, Claudia Jimenez, Doria Robinson, Sue Wilson, Vice Mayor Cesar Zepeda and Mayor Eduardo Martinez. **Absent:** None.

**I. STATEMENT OF CONFLICT OF INTEREST**

None.

**J. AGENDA REVIEW**

Items O.1 (*Guiding Fiscal Policy Update*) and O.2 (*Financial Policies and Administrative Policy Manual Update*) were moved to the consent calendar.

**K. REPORT FROM THE CITY ATTORNEY OF FINAL DECISIONS MADE DURING CLOSED SESSION**

**C.1 PUBLIC EMPLOYEE PERFORMANCE EVALUATION (Government Code Section 54957)**

- Title: City Clerk
- Title: City Attorney

*Discussed. No reportable action taken.*

**C.2 CONFERENCE WITH LABOR NEGOTIATORS (Government Code Section 54957.6)**

- Agency Representatives: Sharrone Taylor, Jack Hughes, Lisa Charbonneau
- Employee organizations:
1. SEIU Local 1021 Full Time Unit and Part Time Unit
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  3. Richmond Police Officers Association RPOA
  4. Richmond Police Management Association RPMA
  5. IAFF Local 188
  6. Richmond Fire Management Association RFMA

*Not Discussed.*

**C.3 CONFERENCE WITH LEGAL COUNSEL - EXISTING LITIGATION  
(paragraph (1) of Subdivision [d] of Government Code Section 54956.9)**

- City of Richmond v. Riggers Loft Wine Company

*Not Discussed.*

**C.4 CONFERENCE WITH LEGAL COUNSEL - ANTICIPATED LITIGATION  
(Significant exposure to litigation pursuant to paragraph (2) or (3) of Subdivision  
(d) [as applicable] of Government Code Section 54956.9)**

- One Case

*Discussed. No reportable action taken.*

**L. REPORT FROM THE CITY MANAGER (public comment allowed under Open Forum)**

City Manager Shasa Curl provided a report. Link to view report: [City Manager's Report](#)

**M. OPEN FORUM FOR PUBLIC COMMENT**

**(public comment on items that remain on the Consent Calendar or items not on the agenda - limited to 2 minutes unless otherwise specified - Back and forth dialogue with the Council is prohibited)**

The following individuals gave comments in person:

Cordell Hindler suggested an item be brought to the council regarding traffic calming. Mr. Hindler also gave comments regarding the beautification of local business buildings.

Patricia Perez thanked Councilmember Bana and Mayor's Office Chief of Staff Tony Tamayo for attending Julie Perez's memorial services. Ms. Perez also thanked the council for their support throughout the years.

Rick Perez thanked the Council for renaming a section of Spring Street to Pedie Perez Avenue and expressed that the gesture was appreciated by Julie Perez. Mr. Perez also expressed appreciation that City representatives attended Julie Perez's memorial services.

Mary Stewart, Jose Luis Gonzalez, and Patricia Rodriguez gave comments regarding Patricia Rodriguez's difficulties with Building and Planning division processes to acquire a permit to complete an accessory dwelling unit project.

Irania DeLaMora gave comments promoting her efforts as a musician and author.

Jonas Juhlin and Clarita Griffin gave comments in support of Patricia Rodriguez.

Jamin Pursell thanked the Richmond Neighborhood Coordinating Council for their event recognizing Myrtle Braxton, Naomi Williams, and Joe Fisher. Mr. Pursell also gave comments regarding police reform and the Guardians of Justice.

Don Gosney expressed concerns regarding the upcoming change in council meeting start time on March 4, 2025.

The following individuals gave comments via teleconference:

Terri Hinte gave comments regarding the dangers of fireworks.

Michael Fitzhugh expressed concerns regarding the upcoming change to the council meeting start time. Mr. Fitzhugh thanked the council and City staff for support given to the Othering & Belonging Institute and suggested increased outreach to promote the upcoming Our Future Economy events.

**N. CITY COUNCIL CONSENT CALENDAR**

**(All items placed under the Consent Calendar are considered to be routine and noncontroversial. These items will be enacted upon together with a motion and second, without discussion, of any member of the City Council, and each item shall be deemed to have received the action recommended.)**

**Motion by** Councilmember Doria Robinson

**Seconded by** Councilmember Claudia Jimenez

To approve all items on the consent calendar including Items O.1 (*Guiding Fiscal Policy Update*) and O.2 (*Financial Policies and Administrative Policy Manual Update*).

Ayes (7): Councilmembers Soheila Bana, Jamelia Brown, Claudia Jimenez, Doria Robinson, Sue Wilson, Vice Mayor Cesar Zepeda, and Mayor Eduardo Martinez.

Passed

**N.1 City Clerk's Office**

N.1.a Meeting Minutes

APPROVE the minutes of the January 7, 2025, and February 4, 2025, regular City Council meetings and the January 14, 2025, Swearing-In Ceremony - City Clerk's Office (Pamela Christian 510-620-6513).

**N.2 Finance Department**

N.2.a Budget Book Compilation and Publishing Services

APPROVE a contract with Govdollars Consulting in an amount not to exceed \$66,000, over a three-year term from February 1, 2025, through January 31, 2028, with two one-year extension options for \$16,000, annually to provide budget book compilation services – Finance Department (Andrea Miller 510-620-6790/ Mubeen Qader 510-412-2077/Jerry Gurule 510-620-6591).

N.2.b Investment and Cash Balance Report, Monthly Overtime Reports, and Documentary Transfer Tax Report for the Month of December 2024

RECEIVE the City's Investment and Cash Balance Report, Monthly Overtime Reports, and Documentary Transfer Tax Report for the month of December 2024 – Finance Department (Andrea Miller 510-620-6740).

**N.3 Human Resources**

N.3.a Receive the 2024 Annual Report of the Personnel Board

RECEIVE the 2024 Annual Report of the Personnel Board to adhere to the requirement that the annual report is transmitted to the City Council on an annual basis - Human Resources Department (Nickie Mastay/Sharrone Taylor 510-620-6602).

**O. BUDGET SESSION**

**O.1 Guiding Fiscal Policy Update**

REVIEW and ADOPT updates to the Guiding Fiscal Policy – Finance Department (Shasa Curl/Nickie Mastay 510-620-6609/ Andrea Miller 510-620-6790/ Mubeen Qader 510-412-2077).

**O.2 Financial Policies and Administrative Policy Manual Update**

ADOPT a resolution approving the updates to the Finance Policies and Administrative Policy Manual and adopting the Unclaimed Funds Policy - Finance Department (Andrea Miller 510-620-6790/Mubeen Qader 510-412-2077/Jerry Gurule 510-620-6591).

**Adopted Resolution No. 15-25**

**P. PUBLIC HEARINGS**

**P.1 Keller Beach Sanitary Sewer Moratorium- Adoption of Urgency Ordinance**

ADOPT an urgency ordinance, pursuant to Government Code Section 65858, establishing a temporary moratorium (45 days) on the issuance of building permits requiring a new sewer connection to the Keller Beach Sanitary Sewer (KBSS) and declaring the urgency thereof pursuant to Government Code Section 65858. The ordinance is not a project under the California Environmental Quality Act (CEQA), as it maintains the existing physical environment and prevents changes in the environment, thereby having no potential for direct or reasonably foreseeable indirect physical change (CEQA Guidelines Section 15378(a)). It is also exempt under Guidelines Sections 15060(c)(2), as the activity will not result in a direct or reasonably foreseeable indirect physical change in the environment, and Section 15061(b)(3), as there is no possibility that adoption of this ordinance will have a significant effect on the environment because it maintains the existing condition of the environment - Public Works Department (Daniel Chavarria 510-620-5478/Robert Armijo 510-620-5477).

Deputy Public Works Director Robert Armijo introduced the item. Mr. Armijo and Water Resource Recovery Manager Mary Phelps presented a PowerPoint. Link to view presentation: [Keller Beach Sanitary Sewer Moratorium](#).

Mayor Martinez opened the public hearing. Norm Hantzsche gave comments in person. Rudi Garbelmann and Rodrick Satre gave comments via teleconference. Mayor Martinez closed the public hearing. Discussion ensued.

**Motion by** Vice Mayor Cesar Zepeda

**Seconded by** Councilmember Jamelia Brown

To approve the item using an updated version of the proposed ordinance which inserts an additional section after section 5 that reads as follows: During the term of this moratorium, the Department of Public Works is hereby directed to prepare a scope of work for a feasibility study to determine if the existing sewage flow into the Keller Beach Sanitary Sewer may be reduced, through measures including but not limited to rerouting sewage flow from homes located on Golden Gate Avenue, Bishop Aly, Bishop Avenue, and Washington Ct.; and to report to the City Council prior to the expiration of the moratorium on actions needed to complete the feasibility study.

Ayes (7): Councilmembers Soheila Bana, Jamelia Brown, Claudia Jimenez, Doria Robinson, Sue Wilson, Vice Mayor Cesar Zepeda, and Mayor Eduardo Martinez.

Passed

**Adopted Ordinance No. 06-25 N.S.**

**Q. REPORTS OF OFFICERS: REFERRALS TO STAFF, AND GENERAL REPORTS (INCLUDING AB 1234 REPORTS)(limited to two minutes per Councilmember)(public comments allowed under Open Forum)**

Councilmember Bana announced that on March 22, 2025, there would be a Nowruz celebration at Marina Bay Park from 11:00 a.m. to 5:00 p.m.

Vice Mayor Zepeda reported that he attended the following: Richmond Neighborhood Coordinating Council's Black History Celebration, a meeting regarding the Tobacco Ordinance, Our Future Economy event, and a Neighborhood Complete Streets Project event. Vice Mayor Zepeda announced that there would be an unveiling of a mural sign at the Point Richmond Tunnel on February 22, 2025, at 10:30 a.m.

**R. ADJOURNMENT**

There being no further business, the meeting adjourned at 8:01 p.m., to meet again on February 25, 2025, at 6:30 p.m.

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Clerk of the City of Richmond

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Mayor

**From:** [Julie Freestone](#)  
**To:** [City Clerk Dept User](#)  
**Subject:** Public Comments Open Forum  
**Date:** Tuesday, February 18, 2025 6:43:24 AM

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I was unable to access ecomments,. Here is what I want to say:

Several weeks ago, I wrote to each of you about the problem of illegal fireworks. Only Council member Bana had the courtesy to respond and agree to discuss the issue with residents. Several weeks ago, another resident asked you the following in open forum related to Illegal fireworks and to action the City Council directed in 2021:

- 1) Staff was to monitor the frequency of illegal fireworks for the next year to see if it was a temporary pandemic-related situation. Did that ever happen?
- 2) Staff was to review policies that L.A. had in effect such as “going after social media platforms that promoted illegal sales online.” Did that ever happen?
- 3) Staff was to consider a buy-back program for fireworks that L.A. was doing. Did that ever happen?
- 4) Staff was to “educate the community thru social media & other avenues that make it clear fireworks were illegal & there were substantial state fines associated with them.” Did that ever happen?
- 5) Staff was to “set up incentives & rewards for callers to report illegal sales of the illegal products.” Did that ever happen?
- 6) Friendly amendment by Councilmember Willis directed staff to “host residential community forums to identify issues & work with them on potential solutions.” Did that ever happen?

**The issue of illegal fireworks has not only not gone away, it has gotten worse. What is the City Council planning to address this danger?**

Julie Freestone  
32nd and Garvin  
35 years a Richmond resident

**From:** [Patricia Rodriguez](#)  
**To:** [City Clerk Dept User: Doria Robinson: shasa\\_curls@ci.richmond.ca.us](#); [Irene Lozano](#)  
**Subject:** public comments - Open Forum\_B21-00789  
**Date:** Tuesday, February 18, 2025 12:35:05 PM  
**Attachments:** [INSPECTION NOTE 1-19-24.pdf](#)  
[job card B21-00789.pdf](#)  
[Permitted DRAWINGS- B21-00789-6th S101.pdf](#)

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Dear Sir, or Madam,

Eduardo Martinez, Mayor at Large

Jamelia Brown, Councilmember District 1

Cesar Zepeda, Vice Mayor, District 2

Doria Robinson, Councilmember District 3

Soheila Bana, Councilmember District 4

Sue Wilson, Councilmember District 5

Claudia Jimenez, Councilmember District 6:

RE: ADU\_3431-A OHIO AVE RICHMOND CA 94804\_B21-00789

Hello, and thank you for taking the time to hear me today. My name is Patricia Rodriguez, I am a homeowner and a general contractor too. I am a resident of Richmond, currently living at 3431 Ohio Ave. I am here regarding my new ADU, building permit #B21-00789 to get my final inspection passed.

I am requesting official, written documentation stating whether a separate electrical meter is required for my ADU to pass final inspection. My plans were approved in 2021, and throughout the construction process, I successfully passed all inspections without issue. However, my final inspection in January 19<sup>th</sup> 2024 was denied due to three missing items, one of which was a new electrical meter. This requirement had never been mentioned before. Inspector Ms. Pat Carter stated that a new meter was required per the approved floor plans, but my plans only reference a new panel, not a meter.

My husband and I met with Mr. Leonard Williams at the Building Department to discuss this new requirement. Mr. Leonard explained the potential benefits of installing a new meter and stated that this was a requirement from PG&E. I asked when the City of Richmond implemented this requirement, as neither the plan checker nor any of the previous inspectors had mentioned it. However, Mr. Leonard did not provide an official document to support his answer. Instead, he referred me to his contact at PG&E, Mr. Gary England, for clarification.

When I contacted Gary at PG&E, he informed me that I should submit an application to PG&E so they could determine whether a new meter was required. After submitting my application, PG&E confirmed via email that a separate electrical meter was not necessary and should only be installed if I chose to do so. I forwarded this response to Mr. Leonard, yet he still refused to allow me to schedule my final inspection.

During March 2024, Mr. Leonard repeatedly called me giving me absurd reasons on why I need a separate meter, despite my repeated requests for official documentation. His phone calls became increasingly aggressive, leading me to request an in-person meeting.

In April 4th 2024, we held a meeting that included Mr. George, Mr. Leonard, and Ms. Patricia Carter, Melissa, Jose Luis, my husband and myself. At the conclusion of this meeting, Mr. George confirmed that if PG&E nor the plan checker required a separate meter, then the final inspection should proceed. Mr. Leonard was then put in charge of scheduling the final. I was able to schedule the final inspection for 4/10/24. The day of the inspection, Mr. Leonard emailed me stating that PG&E changed their mind. So, they canceled the inspection.

Given Mr. Leonard's prior behavior, I reached out to Mr. George directly to clarify the situation. Mr. George responded that if PG&E required a new meter, we would need to comply. He confirmed that once we put in our application for a new meter, and pay the fee which is \$3,500.00 then we can proceed with the final inspection. So, we did. We scheduled the final inspection on July 26th, 2024. However, on the day of the inspection, the assigned inspector informed us that we could not pass the inspection until the new meter was physically installed. The inspector then called Mr. George for clarification, and Mr. George agreed with the inspector, contradicting himself.

As a contractor, I fully understand the importance of following regulations. However, the lack of clear guidance throughout this process has made it increasingly difficult to do so. My plans were approved by the city in 2021, and if a separate electrical meter was truly required, it should have been addressed at that stage. To this day, I have not received any official documentation explaining why a separate meter is now required for my ADU.

To recap, The Planning Department has not provided an official regulation requiring a separate meter. The Building Inspections Department has not provided an official regulation requiring a separate meter. Then, my question is: Is there an official regulation that mandates a separate electrical meter for my ADU? If so, I respectfully request clear documentation stating this requirement via email.

Attachments:

1. Job card
2. Inspector note 1-19-2024
3. Approved set of plans

Kind Regards,

Patricia Rodriguez  
Jari Construction Inc. CFO & Office Manager  
Structural Contractor  
[patricia@jariconstruction.com](mailto:patricia@jariconstruction.com)  
510-978-0860  
<http://jariconstruction.com/>  
Ca Lic# 963722



# PERMIT # B21-00789

Permit Technician: SD2  
Print Date: 10-12-2021

Job Site Address: 3431 OHIO AVE UNIT A  
Parcel APN: 513-042-011-9

## Inspection Record Card

(see reverse side of the sheet for specific permit information)

**NOTICE and WARNING:** Do not cover any work until it has been inspected and approved. This card (or a copy) must be posted on the job site, and in a manner as to be visible from the street. This permit card and the approved site stamped plans must be available for each inspection, or the inspection will not be made.

**Permit Fees** are set to provide for a limited number of inspections. A re-inspection fee will be charged if a return trip is necessary for the following: 1) work not ready for the inspection called for; 2) deficiencies found in the previous inspection still not corrected, or new deficiencies were created; 3) lack of access to the work to be inspected; 4) lack of approved plans with this card on the job site.

| Inspection Codes                  | Inspector's Initials | Date     | Inspection Codes                         | Inspector's Initials | Date    |
|-----------------------------------|----------------------|----------|--|----------------------|---------|
| <b>FOUNDATION</b>                 |                      |          | <b>T-BAR</b>                             |                      |         |
| 100 Set Backs                     |                      |          | 115 T-Bar Grid.                          |                      |         |
| 406 Ufer Ground →                 | pac                  | 2/4/22   | 308 T-Bar Plumbing                       |                      |         |
| 101 Piers                         | OK                   | 10-29-21 | 408 T-Bar Electric                       |                      |         |
| 102 Forms/Rebar/Holdowns          |                      |          | 503 T-Bar Mechanical                     |                      |         |
| 103 Slab (membrane/reinforcement) |                      |          | 905 T-Bar Fire/hydro                     |                      |         |
| 901 Underground Fire              |                      |          |  |                      |         |
| 125 CMU Reinforcement             |                      |          |  |                      |         |
| <b>BUILDING</b>                   |                      |          | <b>PLUMBING</b>                          |                      |         |
| 106 Underfloor/Girders/Joists     |                      |          | 301 Underground Plumbing                 | W                    | 4-27-22 |
| 107 Underfloor Insulation         |                      |          | 302 Water Service                        |                      |         |
| 104 Shear Nailing-Int.            |                      |          | 303 Underfloor Plumbing                  |                      |         |
| 126 Shear Nailing-Ext.            | pac                  | 2/4/22   | 304 Top-out Plumbing                     | W                    | 4-13-22 |
| 905 Fire sprinklers/hydro         |                      |          | 305 Shower pan/Tub Test                  | pac                  | 7/13/22 |
| 108 Framing (after MEP&Fire)      | pac                  | 5/9/22   | 306 Water Heater                         |                      |         |
| 109 Roof Deck Nail                | pac                  | 2/4/22   | 309 Gas Meter release                    |                      |         |
| 110 Framing Insulation            | pac                  | 5/9/22   | 310 Gas Test                             |                      |         |
| 111 Firewall/Fire Caulking        | pac                  | 5/9/22   |  |                      |         |
| 117 Ceiling Insulation            | pac                  | 5/9/22   | <b>MECHANICAL</b>                        |                      |         |
| 127 Drywall                       | pac                  | 5/13/22  | 501 Underfloor Mechanical                |                      |         |
| 114 Lath / Siding                 | pac                  | 5/13/22  | 502 Rough Mechanical                     |                      |         |
| 118 Wet Wall                      | pac                  | 7/21/22  | 504 Commercial Hood                      |                      |         |
| 123 Window Replacement            |                      |          | 505 Furnace/ Heating                     |                      |         |
| 124 Roof in-progress              |                      |          |  |                      |         |
| 128 Trusses (Roof / Floor)        |                      |          | <b>AGENCY APPROVALS ** when required</b> |                      |         |
| 129 Window Flashing               | A                    | 5/13/22  | Fire Department                          |                      |         |
| 132 Pool (Pre-Gunite/Pre-Plaster) |                      |          | Planning Department                      |                      |         |
|                                   |                      |          | Health Department                        |                      |         |
|                                   |                      |          | Engineering                              |                      |         |
|                                   |                      |          | Sanitary District                        |                      |         |
|                                   |                      |          | Water Resource Recovery                  |                      |         |
|                                   |                      |          | Arts & Culture Division                  |                      |         |
| <b>ELECTRICAL</b>                 |                      |          | <b>FINAL INSPECTION</b>                  |                      |         |
| 401 Ground                        |                      |          | 120 Building                             |                      |         |
| 402 Conduit / Underground         |                      |          | 320 Plumbing                             |                      |         |
| 403 Service Entrance/ Restore     |                      |          | 420 Electrical                           |                      |         |
| 404 Rough Electric                | W                    | 4-13-22  | 520 Mechanical                           |                      |         |
| 405 Bonding                       |                      |          | 620 Grading/Drainage                     |                      |         |
| 407 Meter Release (Temp/Perm)     |                      |          | 920 Fire Final                           |                      |         |

pac 21  
4-27-22  
frame inspection  
Show Ufer photo @ next inspection  
photo for town inspection ok at next  
corrections given 1/19/24 P. Carter

April 10.  
AM  
#413715

**Expiration:** this permit will expire if the work is not started within 180 days, or 180 days elapsed between approved inspections. If the permit expires before the work is completed and or inspected, no additional work shall be performed until the new permit is obtained. Under California law, uninspected work is a property defect and must be disclosed to the new owner prior to transfer of title.

**Extension:** prior to permit expiration and upon written request, a one-time extension, not to exceed 180 days, may be granted.

**Reimbursement:** SB 1815 states that a permittee is entitled to reimbursement of permit fees if the local enforcement agency fails to conduct an inspection of the permitted work within 60 days of receiving notice that the work is completed.

City of Richmond

DEPARTMENT OF PLANNING & BUILDING SERVICES  
Building Regulations

FIELD INSPECTION NOTICE

Date 1/19/24

Permit No. B21-00789

Job address 3431 Ohio Ave, Unit A

Violations were noted as follows:

① Address shall be on permanent  
location on front of main house +  
ADU (min 4 inches)

② 2-Meter main required <sup>See plan</sup> ~~NOT~~ SHR  
EOI Keynote 4

<sup>Correct/Recall</sup>  
③ Damper @ Kitchen Exhaust

When corrections have been made call for reinspection.

For additional information telephone CITY HALL 620-6868.

P. Carlet  
Inspector

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| &<br><<br>><br>@<br>/<br>#<br>AB<br>ABV<br>A/C<br>ADJ<br>AFF<br>AIA<br>ALT<br>ALUM<br>APPROX<br>ARCH<br>BD<br>BETW<br>BLDG<br>BLKG<br>BM<br>BOF<br>BOT<br>C<br>CAB<br>CB<br>CEC<br>CI<br>CJ<br>CLO<br>CLG<br>CMU<br>C.O.<br>COAX<br>COL<br>COMM<br>CONC<br>CONN<br>CONST<br>CONT<br>CONTR<br>CPTN<br>CU<br>DBL<br>DF<br>DET<br>DIA<br>DIM<br>DISP<br>DIST<br>DIV<br>DN<br>DR<br>DSP<br>DW<br>DWG<br>DWR<br>EA<br>EB<br>EF<br>EJ<br>ELECT<br>ELEV<br>EN<br>ENGR<br>EQ<br>ES<br>EW<br>(E) EXIST<br>EXP<br>EXT<br>F<br>FD<br>FDN<br>FIN<br>FJ<br>FL<br>F.LR<br>FOC<br>FOF<br>FOS<br>FT<br>FTG<br>FJRR<br>FUT<br>G<br>GA<br>GALV<br>GEN<br>GFI<br>GL<br>GR<br>GSM<br>GYP<br>HB<br>HC<br>HDG<br>HDR<br>HORIZ<br>HT<br>HTR | AND<br>ANGLE, LESS THAN<br>ANGLE, GREATER THAN<br>AT<br>PER<br>POUND OR NUMBER<br>ANCHOR BOLT<br>ABOVE<br>AIR CONDITIONING<br>ADJUSTABLE<br>ABOVE FINISHED FLOOR<br>AMERICAN INSTITUTE OF ARCHITECTS<br>ALTERNATE<br>ALUMINUM<br>APPROXIMATELY<br>ARCHITECTURAL<br>BOARD<br>BETWEEN<br>BUILDING<br>BLOCKING<br>BEAM<br>BOTTOM OF FOOTING<br>BOTTOM<br>CENTERLINE<br>CABINET<br>CATCH BASIN<br>CALIFORNIA ENERGY COMMISSION<br>CAST IRON<br>CEILING JOIST<br>CLOSED<br>CEILING<br>CONCRETE MASONRY UNIT<br>CLEANOUT<br>COAXIAL CABLE<br>COLUMN<br>COMMUNICATION<br>CONCRETE<br>CONNECTION<br>CONSTRUCTION<br>CONTINUOUS<br>CONTRACTOR<br>COMPUTER<br>CUBIC<br>DOUBLE<br>DOUGLAS FIR<br>DETAIL<br>DIAMETER<br>DIMENSION<br>DISPOSAL<br>DISTRIBUTION<br>DIVIDED OR DIVISION<br>DOWN<br>DOOR<br>DOWNSPOUT<br>DISHWASHER<br>DRAWING<br>DRAWER<br>EACH<br>EXPANSION BOLT<br>EACH FACE<br>EXPANSION JOINT<br>ELECTRIC<br>ELEVATION<br>EDGE NAIL<br>ENGINEER<br>EQUAL<br>EACH SIDE<br>EACH WAY<br>EXISTING<br>EXPANSION<br>EXTERIOR<br>FLAT BAR<br>FLOOR DRAIN<br>FOUNDATION<br>FINISH<br>FLOOR JOIST<br>FLOOR<br>FACE OF CONCRETE<br>FACE OF FINISH<br>FACE OF STUD<br>FOOT OR FEET<br>FOOTING<br>FURRING<br>FUTURE<br>GAS<br>GAUGE<br>GALVANIZED<br>GENERAL<br>GROUND FAULT INTERRUPTOR<br>GLAZING OR GLASS<br>GRADE<br>GALVANIZED SHEET METAL<br>GYPSUM<br>HOSE BIBB<br>HOLLOW CORE<br>HOT DIP GALVANIZED<br>HEADER<br>HORIZONTAL<br>HEIGHT<br>HEATER | INCH<br>INCLUDE<br>INSUL<br>INSULATION<br>INTERIOR<br>JOIST<br>JOINT<br>KILN-DRIED<br>LAV<br>LAVATORY<br>POUND<br>LB<br>LEFT HAND<br>LP<br>LOW POINT<br>LIGHT<br>LT<br>MAX<br>MAXIMUM<br>MACHINE BOLT<br>MED<br>MEDIUM<br>MEMB<br>MEMBRANE<br>MFR<br>MANUFACTURER<br>MIN<br>MINIMUM<br>MISC<br>MISCELLANEOUS<br>MSRY<br>MASONRY<br>MTD<br>MOUNTED<br>MTL<br>METAL<br>(N)<br>NEW<br>NIC<br>NOT IN CONTRACT<br>NOM<br>NOMINAL<br>NTS<br>NOT TO SCALE<br>O<br>OVER<br>O/<br>OVERALL<br>OC<br>ON CENTER<br>OCW<br>ON CENTER EACH WAY<br>OD<br>OUTSIDE DIAMETER<br>OF<br>OWNER FURNISH, CONTRACTOR INSTALL<br>OH<br>OVERHANG<br>OPNG<br>OPENING<br>OVHD<br>OVERHEAD<br>PL<br>PLATE<br>PLAM<br>PLASTIC LAMINATE<br>PLF<br>POUNDS PER LINEAL FOOT<br>PLY<br>PLYWOOD<br>PR<br>PAIR<br>PRCST<br>PRECAST<br>PSF<br>POUNDS PER SQUARE FOOT<br>PSI<br>POUNDS PER SQUARE INCH<br>PT<br>PRESERVATIVE<br>RD<br>ROOF DRAIN<br>REINFC<br>REINFORCEMENT<br>REQ<br>REQUIRED<br>RESIL<br>RESILIENT<br>REV<br>REVISED OR REVISED<br>RH<br>RIGHT HAND<br>RJ<br>ROOF JOIST<br>RM<br>ROOM<br>RO<br>ROUGH OPENING OR ROLL OUT<br>RS<br>RING SHANK<br>RWD<br>REDWOOD<br>SAD<br>SEE ARCHITECTURAL DRAWINGS<br>SCHD<br>SCHEDULE<br>SD<br>SMOKE DETECTOR<br>SECT<br>SECTION<br>SED<br>SEE ELECTRICAL DRAWINGS<br>SHT<br>SHEET<br>SHT<br>SIMILAR<br>SM<br>SHEET METAL<br>SMD<br>SEE MECHANICAL DRAWINGS<br>SPD<br>SEE PLUMBING DRAWINGS<br>SPEC<br>SPECIFICATION<br>SQ<br>SQUARE<br>SS<br>STAINLESS STEEL OR SANITARY<br>SEW<br>SEWER<br>SSD<br>SEE STRUCTURAL DRAWINGS<br>STAGG'D<br>STAGGERED<br>STD<br>STANDARD<br>STL<br>STEEL<br>STRL<br>STRUCTURAL<br>SUSP<br>SUSPEND (ED)<br>SYM<br>SYMMETRICAL<br>T & B<br>TOP & BOTTOM<br>TC<br>TOP OF CURB<br>T & G<br>TONGUE & GROOVE<br>TEMP<br>TEMPERED<br>THK<br>THICK<br>TOB<br>TOP OF BEAM<br>TOC<br>TOP OF CONCRETE<br>TOF<br>TOP OF FOOTING<br>TOP<br>TOP OF PLATE<br>TOS<br>TOP OF STEEL<br>TPH<br>TOILET PAPER HOLDER<br>TW, TOW<br>TOP OF WALL<br>TYP<br>TYPICAL<br>UON<br>UNLESS OTHERWISE NOTED<br>VERT<br>VERTICAL<br>VIF<br>VERIFY IN FIELD<br>W/<br>WITH<br>WC<br>WATER CLOSET<br>WD<br>WOOD<br>WDW<br>WINDOW<br>WP<br>WATERPROOF<br>WP'ING<br>WATERPROOFING |
|--|--|--|

|                       |   |
|-----------------------|---|
| <b>1</b><br>A0.0      | <b>ABBREVIATIONS</b>  |
| <b>OWNER:</b>         | PATRICIA RODRIGUEZ & LUIS GONZALEZ<br>3431 OHIO AVENUE<br>RICHMOND, CA 94804<br>patricia@jariconstruction.com<br>510-978-0860 |
| <b>CONTRACTOR/GC:</b> | LUIS GONZALEZ<br>JARI CONSTRUCTION<br>3431 OHIO AVENUE<br>RICHMOND, CA 94804<br>510.978.0860<br>LIC. 963722                   |
| <b>DESIGNER:</b>      | RICHARD A. DEPOLO<br>20 NORTHGATE AVENUE<br>BERKELEY, CA 94708<br>510.717.0728  |
| <b>ENGINEER:</b>      | VIT HANACEK, PE<br>2912 VESSANCK DRIVE<br>PLEASANT HILL, CA 94523<br>925.262.7401<br>PE 75786                                 |

|                  |                     |
|------------------|---------------------|
| <b>2</b><br>A0.0 | <b>PROJECT TEAM</b> |
|------------------|---------------------|

|                |  |
|----------------|--|
| <b>GENERAL</b> | <b>DIMENSIONING</b>  |
|                | CENTERLINE OF ELEMENT  |
|                | FACE OF STUD (F.O.S.) TYP.   |
|                | FACE OF FINISH (F.O.F.)  |
|                | DRAWING + SHEET NUMBER   |
|                | DRAWING + SHEET NUMBER   |
|                | DRAWING + SHEET NUMBER   |
|                | ARROW SHOWS ELEVATION  |
|                | DRAWING NUMBER   |
|                | SHEET NUMBER   |
|                | DATUM POINT  |
|                | CEILING HEIGHT   |
|                | SHEET NOTE   |
|                | ROOM IDENTIFICATION<br>(SEE INTERIOR FINISH SCHEDULE FOR ALL FINISHES.)  |
|                | DRAWING REVISION (MOST RECENT IS CLOUDED; PRIOR REVISIONS ARE PERMANENT) |
|                | DOOR IDENTIFICATION<br>(SEE DOOR/WINDOW SCHEDULE.)                       |
|                | WINDOW TYPE<br>(SEE DOOR/WINDOW SCHEDULE.)                               |
|                | WALL/PARTITION TYPE<br>(SEE WALL SCHEDULE.)                              |
|                | APPLIANCE (SEE APPLIANCE SCHEDULE.)                                      |

|                  |                        |
|------------------|------------------------|
| <b>3</b><br>A0.0 | <b>DRAWING SYMBOLS</b> |
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1. ALL WORK SHALL CONFORM TO APPLICABLE CODES, REGULATIONS, LAWS AND ORDINANCES AS REQUIRED BY CODES AND REGULATIONS LISTED HEREIN AND AS REQUIRED BY THE CITY OF RICHMOND AND THE STATE OF CALIFORNIA.

2. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CONDITIONS AND NOTIFY THE DESIGNER PROMPTLY OF ANY DISCREPANCIES AND OBTAIN CLARIFICATION BEFORE PROCEEDING WITH THE AFFECTED WORK. FOLLOW NUMERICAL DIMENSIONS: DO NOT SCALE.

3. FLOOR PLAN DIMENSIONS SHOWN ARE FACE OF FINISH AT NEW CONSTRUCTION.

4. BEFORE BEGINNING WORK AT THE SITE, WHERE POSSIBLE AND THROUGHOUT THE COURSE OF WORK, INSPECT AND VERIFY THE LOCATION AND CONDITION OF EVERY ITEM AFFECTED BY THE WORK UNDER THIS CONTRACT AND REPORT DISCREPANCIES TO THE DESIGNER BEFORE DOING THE WORK RELATED TO THAT BEING INSPECTED.

5. BEFORE BEGINNING WORK AT THE SITE, INSPECT THE EXISTING SITE CONDITIONS AND DETERMINE THE EXTENT OF THE EXISTING FINISHES, SPECIALTIES, AND OTHER ITEMS WHICH MUST BE REMOVED AND INSTALLED IN ORDER TO PERFORM THE WORK UNDER THIS CONTRACT. COORDINATE AND MAKE THIS INSPECTION WITH THE OWNER.

6. THE ARCHITECTURAL DRAWINGS SHOW PRINCIPAL AREAS WHERE WORK MUST BE ACCOMPLISHED UNDER THIS CONTRACT. INCIDENTAL WORK MAY ALSO BE NECESSARY IN AREAS NOT SHOWN ON THE ARCHITECTURAL DRAWINGS DUE TO CHANGES AFFECTING EXISTING MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER SYSTEMS. SUCH WORK IS ALSO PART OF THIS CONTRACT.

7. DO NOT DRILL OR CUT JOISTS, BEAMS, COLUMNS OR OTHER STRUCTURAL ELEMENTS UNLESS SPECIFICALLY INDICATED. MAKE OPENINGS OF PROPER SIZE FOR CONDUITS, DUCTS, PIPES, AND OTHER ITEMS PASSING THROUGH OPENINGS.

8. WHERE "MATCH EXISTING" IS INDICATED, NEW CONSTRUCTION OR FINISHES, AS APPROPRIATE TO THE NOTE, SHALL MATCH TO THE SATISFACTION OF THE DESIGNER.

9. AT THE TIME OF FINAL INSPECTION, A MANUAL WHICH INCLUDES ALL OF THE INFORMATION LISTED IN CALGREEN SECTION 4.410.1 ITEMS 1 THROUGH 10 SHALL BE PRESENTED TO THE BUILDING INSPECTOR AND PLACED IN THE BUILDING, FOR THE BUILDING OCCUPANT OR OWNER, PRIOR TO FINAL INSPECTION SIGN OFF.

|                  |                      |
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| <b>4</b><br>A0.0 | <b>GENERAL NOTES</b> |
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**APPROVED**  
**FIRE**  
**PREVENTION**  
**SERVICES DIVISION**

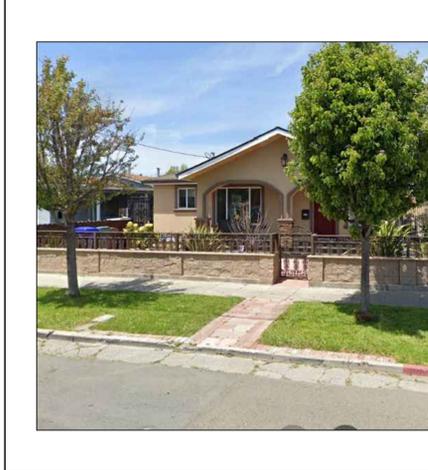
This plan review for substantial compliance does not relieve the owner, designer or contractor from the responsibility of conforming to all applicable codes and ordinances.

Reviewed by: Date: 08/07/2021

Deferred Submittals apply

Permit No.: 101-190220012  
Permitted 20190901 081-00789 6TH BLDG PDF  
PATRICK JACKSON REVISOR: 08/02/21

|                  |                     |
|------------------|---------------------|
| <b>5</b><br>A0.0 | <b>AREA OF WORK</b> |
|------------------|---------------------|

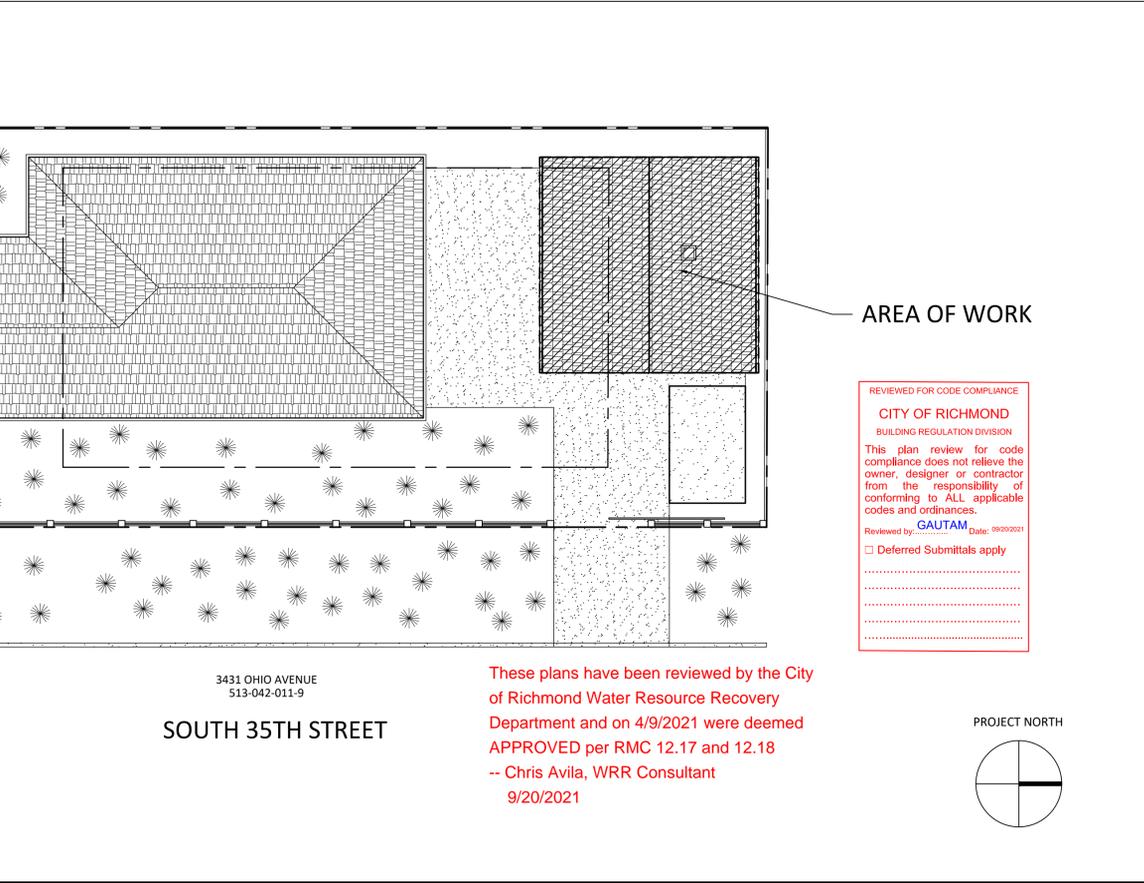


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| <b>6</b><br>A0.0 | <b>STREET VIEW</b> |
|------------------|--------------------|

ALL CONSTRUCTION, REGARDLESS OF DETAILS ON PLANS, SHALL COMPLY WITH THE 2019 CALIFORNIA BUILDING CODE, 2019 CALIFORNIA RESIDENTIAL CODE, 2019 PLUMBING CODE, 2019 CALIFORNIA MECHANICAL CODE, 2019 CALIFORNIA ELECTRICAL CODE, AND 2019 CALIFORNIA ENERGY STANDARDS

ALL CONSTRUCTION SHALL COMPLY WITH ALL LOCAL CODES AND ORDINANCES AND THE CODES LISTED BELOW:

- CITY OF RICHMOND AMENDMENTS TO THE CALIFORNIA BUILDING, ELECTRICAL, MECHANICAL & PLUMBING CODES.
- 2019 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, CBCS
- 2019 CALIFORNIA BUILDING CODE (CBC), PART 2 CBCS (2006 IBC & CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, CBCS (2005 NATIONAL ELECTRICAL CODE & CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, CBCS
- 2019 CALIFORNIA ENERGY CODE (CPC), PART 6, CBCS
- 2019 CALIFORNIA HISTORICAL BUILDING CODE, PART 8, CBCS
- 2019 CALIFORNIA MECHANICAL CODE
- 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CGBCS)



|                  |   |
|------------------|---|
| <b>8</b><br>A0.0 | <b>PROJECT DATA/DESCRIPTION OF WORK</b> |
|------------------|---|

|   |                                 |                        |                           |
|---|---------------------------------|------------------------|---------------------------|
| <b>PARCEL INFORMATION</b>   |                                 |                        |                           |
| PROPERTY ADDRESS  | 3431 OHIO AVENUE                | ALLOWABLE LOT COVERAGE | 2715 SF (50% X 5430 SF)   |
|   | RICHMOND, CA 94804              | EXISTING HABITABLE SF  | 1450 SF                   |
| ASSESSOR'S PARCEL #   | 513-042-011-9                   | ALLOWABLE FLOOR AREA   | 2125 SF (40% X 5430 SF)   |
| ZONING DISTRICT   | RL-2                            | LOT SF                 | 5430 SF                   |
| FLOOD ZONE  | NO                              | BUILDING HEIGHT        | 17'-0" (ADU)              |
| FIRE ZONE   | NO                              | EXISTING USE           | SINGLE-FAMILY RESIDENTIAL |
| OCCUPANCY TYPE  | GROUP R (NO CHANGES)            | PROPOSED USE           | NO CHANGES                |
| BUILDING TYPE   | TYPE VB                         | FIRE SUPPRESSION       | NOT REQUIRED              |
| EXISTING LOT COVERAGE   | 1450SF (HOME) & 587 SF (GARAGE) |                        |                           |
| PROPOSED LOT COVERAGE   | 2037 SF (NO CHANGE)             |                        |                           |
| DESCRIPTION OF WORK:<br>CONSTRUCT NEW 587 SF ACCESSORY DWELLING UNIT ABOVE (E) DETACHED TWO-CAR GARAGE. |                                 |                        |                           |

|                   |                         |
|-------------------|-------------------------|
| <b>7</b><br>A0.0  | <b>APPLICABLE CODES</b> |
| <b>9</b><br>A0.0  | <b>PARCEL MAP</b>       |
| <b>11</b><br>A0.0 | <b>SHEET INDEX</b>      |

**DESIGNER:**  
  
RICHARD A. DEPOLO  
20 NORTHGATE AVENUE  
BERKELEY, CA 94708  
PHONE: 510.717.0728  
EMAIL: radepolo@gmail.com

**OWNERS:**  
PATRICIA RODRIGUEZ & LUIS GONZALEZ  
3431 OHIO AVENUE  
RICHMOND, CA 94804  
510-978-0860

**PROJECT:**  
3431 OHIO AVENUE  
ACCESSORY DWELLING UNIT  
RICHMOND, CA 94804

**REVIEWED FOR CODE COMPLIANCE:**  
CITY OF RICHMOND  
BUILDING REGULATION DIVISION  
This plan review for code compliance does not relieve the owner, designer or contractor from the responsibility of conforming to ALL applicable codes and ordinances.  
Reviewed by: GAUTAM Date: 09/20/2021  
 Deferred Submittals apply

**REVIEWED FOR CODE COMPLIANCE:**  
CITY OF RICHMOND  
BUILDING REGULATIONS DIVISION  
PERMIT  
This plan review for code compliance does not relieve the owner, designer or contractor from the responsibility of conforming to All applicable codes and ordinances.  
Reviewed by: myersD Date: Sep 22, 2021  
Conditions: Full size printed drawings must be present at the construction site during inspection

**SUBMITTALS:**  
PERMIT SET  
4 MARCH 2021

| REVISIONS: | DATE      | DESCRIPTION   |
|------------|-----------|---------------|
|            | 27 MAY 21 | CORRECTIONS 1 |

These drawings, specifications, ideas, designs, and arrangements presented thereby are and shall remain the property of Richard A. Depolo. No part thereof shall be copied, disclosed to others or used in connection with any work or project other than the specific project for which they were prepared and developed without the written consent of Richard A. Depolo. Visual contact with these drawings or specifications shall constitute conclusive evidence of acceptance of these restrictions.

**SHEET TITLE:**  
PROJECT INFORMATION

**SHEET NUMBER:**  
A0.0

**CERTIFICATE OF COMPLIANCE**

Project Name: Ohio St. Richmond ADU  
 Calculation Date/Time: 2021-03-24T09:50:23-07:00  
 Input File Name: 21-03133 (revised-2.2x4 walls w-R19 Spray Foam) Depolo-Richmond - Ohio St. Richmond ADU Residence.rfd15x

**OPAQUE SURFACES**

| 01                   | 02   | 03                        | 04          | 05                            | 06                                      | 07         | 08 | 09 | 10 | 11 | 12 | 13 | 14 |
|----------------------|------|---------------------------|-------------|-------------------------------|---|------------|----|----|----|----|----|----|----|
| Name                 | Zone | Construction              | Orientation | Gross Area (ft <sup>2</sup> ) | Window and Door Area (ft <sup>2</sup> ) | Tilt (deg) |    |    |    |    |    |    |    |
| Right Wall           | ADU  | R-23 Close Cell spray foa | Right       | 195                           | 61                                      | 90         |    |    |    |    |    |    |    |
| Front Wall           | ADU  | R-23 Close Cell spray foa | Front       | 193                           | 17                                      | 17         |    |    |    |    |    |    |    |
| Left Wall            | ADU  | R-23 Close Cell spray foa | Right       | 255                           | 0                                       | 90         |    |    |    |    |    |    |    |
| Back Wall            | ADU  | R-23 Close Cell spray foa | Back        | 193                           | 29                                      | 90         |    |    |    |    |    |    |    |
| North Wall to garage | ADU  | R-23 Close Cell spray foa | Back        | 112                           | 0                                       | 90         |    |    |    |    |    |    |    |
| Raised Floor         | ADU  | R-19 Floor Crawlspace     | n/a         | 587                           | n/a                                     | n/a        |    |    |    |    |    |    |    |

**OPAQUE SURFACES - CATHEDRAL CEILINGS**

| 01            | 02   | 03                         | 04          | 05                      | 06                               | 07                   | 08               | 09             | 10 | 11 |
|---------------|------|----------------------------|-------------|-------------------------|----------------------------------|----------------------|------------------|----------------|----|----|
| Name          | Zone | Construction               | Orientation | Area (ft <sup>2</sup> ) | Skylight Area (ft <sup>2</sup> ) | Roof Slope (4 in 12) | Roof Reflectance | Roof Emissance |    |    |
| Roof - Rafter | ADU  | R-60 closed cell Foam to 2 | Back        | 587                     | 4                                | 3                    | 0.1              | 0.85           |    | No |

**FENESTRATION / GLAZING**

| 01        | 02     | 03         | 04          | 05                      | 06         | 07          | 08    | 09                      | 10       | 11   | 12          | 13          | 14               |
|-----------|--------|------------|-------------|-------------------------|------------|-------------|-------|-------------------------|----------|------|-------------|-------------|------------------|
| Name      | Type   | Surface    | Orientation | Area (ft <sup>2</sup> ) | Width (ft) | Height (ft) | Mult. | Area (ft <sup>2</sup> ) | U-factor | SHGC | SHGC Source | SHGC Source | Exterior Shading |
| #5 Window | Window | Right Wall | Right       | 90                      | 1          | 10          | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #6 Window | Window | Right Wall | Right       | 90                      | 1          | 20          | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #7 Window | Window | Right Wall | Right       | 90                      | 1          | 10          | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #1 Window | Window | Front Wall | Front       | 180                     | 1          | 7.5         | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #4 Window | Window | Front Wall | Front       | 180                     | 1          | 9.5         | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #2 Window | Window | Back Wall  | Back        | 0                       | 1          | 9           | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #3 Window | Window | Back Wall  | Back        | 0                       | 1          | 20          | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |

Registration Number: 2021-03-24T09:50:23-07:00  
 CA Building Energy Efficiency Standards - 2019 Residential Compliance  
 HERS Provider: CA CERTS Inc.  
 Report Version: 2019.1.300  
 Schema Version: rev 20200901

Registration Date/Time: 2021-03-24 09:50:26  
 Report Version: 2019.1.300  
 Schema Version: rev 20200901

Registration Number: 2021-03-24T09:50:23-07:00  
 CA Building Energy Efficiency Standards - 2019 Residential Compliance  
 HERS Provider: CA CERTS Inc.  
 Report Version: 2019.1.300  
 Schema Version: rev 20200901

Registration Number: 2021-03-24T09:50:23-07:00  
 CA Building Energy Efficiency Standards - 2019 Residential Compliance  
 HERS Provider: CA CERTS Inc.  
 Report Version: 2019.1.300  
 Schema Version: rev 20200901

Registration Number: 2021-03-24T09:50:23-07:00  
 CA Building Energy Efficiency Standards - 2019 Residential Compliance  
 HERS Provider: CA CERTS Inc.  
 Report Version: 2019.1.300  
 Schema Version: rev 20200901

**CERTIFICATE OF COMPLIANCE**

Project Name: Ohio St. Richmond ADU  
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**OPAQUE SURFACES**

| 01                   | 02   | 03                        | 04          | 05                            | 06                                      | 07         | 08 | 09 | 10 | 11 | 12 | 13 | 14 |
|----------------------|------|---------------------------|-------------|-------------------------------|---|------------|----|----|----|----|----|----|----|
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| North Wall to garage | ADU  | R-23 Close Cell spray foa | Back        | 112                           | 0                                       | 90         |    |    |    |    |    |    |    |
| Raised Floor         | ADU  | R-19 Floor Crawlspace     | n/a         | 587                           | n/a                                     | n/a        |    |    |    |    |    |    |    |

**OPAQUE SURFACES - CATHEDRAL CEILINGS**

| 01            | 02   | 03                         | 04          | 05                      | 06                               | 07                   | 08               | 09             | 10 | 11 |
|---------------|------|----------------------------|-------------|-------------------------|----------------------------------|----------------------|------------------|----------------|----|----|
| Name          | Zone | Construction               | Orientation | Area (ft <sup>2</sup> ) | Skylight Area (ft <sup>2</sup> ) | Roof Slope (4 in 12) | Roof Reflectance | Roof Emissance |    |    |
| Roof - Rafter | ADU  | R-60 closed cell Foam to 2 | Back        | 587                     | 4                                | 3                    | 0.1              | 0.85           |    | No |

**FENESTRATION / GLAZING**

| 01        | 02     | 03         | 04          | 05                      | 06         | 07          | 08    | 09                      | 10       | 11   | 12          | 13          | 14               |
|-----------|--------|------------|-------------|-------------------------|------------|-------------|-------|-------------------------|----------|------|-------------|-------------|------------------|
| Name      | Type   | Surface    | Orientation | Area (ft <sup>2</sup> ) | Width (ft) | Height (ft) | Mult. | Area (ft <sup>2</sup> ) | U-factor | SHGC | SHGC Source | SHGC Source | Exterior Shading |
| #5 Window | Window | Right Wall | Right       | 90                      | 1          | 10          | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #6 Window | Window | Right Wall | Right       | 90                      | 1          | 20          | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #7 Window | Window | Right Wall | Right       | 90                      | 1          | 10          | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #1 Window | Window | Front Wall | Front       | 180                     | 1          | 7.5         | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #4 Window | Window | Front Wall | Front       | 180                     | 1          | 9.5         | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #2 Window | Window | Back Wall  | Back        | 0                       | 1          | 9           | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #3 Window | Window | Back Wall  | Back        | 0                       | 1          | 20          | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |

Registration Number: 2021-03-24T09:50:23-07:00  
 CA Building Energy Efficiency Standards - 2019 Residential Compliance  
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 Report Version: 2019.1.300  
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Registration Date/Time: 2021-03-24 09:50:26  
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**CERTIFICATE OF COMPLIANCE**

Project Name: Ohio St. Richmond ADU  
 Calculation Date/Time: 2021-03-24T09:50:23-07:00  
 Input File Name: 21-03133 (revised-2.2x4 walls w-R19 Spray Foam) Depolo-Richmond - Ohio St. Richmond ADU Residence.rfd15x

**OPAQUE SURFACES**

| 01                   | 02   | 03                        | 04          | 05                            | 06                                      | 07         | 08 | 09 | 10 | 11 | 12 | 13 | 14 |
|----------------------|------|---------------------------|-------------|-------------------------------|---|------------|----|----|----|----|----|----|----|
| Name                 | Zone | Construction              | Orientation | Gross Area (ft <sup>2</sup> ) | Window and Door Area (ft <sup>2</sup> ) | Tilt (deg) |    |    |    |    |    |    |    |
| Right Wall           | ADU  | R-23 Close Cell spray foa | Right       | 195                           | 61                                      | 90         |    |    |    |    |    |    |    |
| Front Wall           | ADU  | R-23 Close Cell spray foa | Front       | 193                           | 17                                      | 17         |    |    |    |    |    |    |    |
| Left Wall            | ADU  | R-23 Close Cell spray foa | Right       | 255                           | 0                                       | 90         |    |    |    |    |    |    |    |
| Back Wall            | ADU  | R-23 Close Cell spray foa | Back        | 193                           | 29                                      | 90         |    |    |    |    |    |    |    |
| North Wall to garage | ADU  | R-23 Close Cell spray foa | Back        | 112                           | 0                                       | 90         |    |    |    |    |    |    |    |
| Raised Floor         | ADU  | R-19 Floor Crawlspace     | n/a         | 587                           | n/a                                     | n/a        |    |    |    |    |    |    |    |

**OPAQUE SURFACES - CATHEDRAL CEILINGS**

| 01            | 02   | 03                         | 04          | 05                      | 06                               | 07                   | 08               | 09             | 10 | 11 |
|---------------|------|----------------------------|-------------|-------------------------|----------------------------------|----------------------|------------------|----------------|----|----|
| Name          | Zone | Construction               | Orientation | Area (ft <sup>2</sup> ) | Skylight Area (ft <sup>2</sup> ) | Roof Slope (4 in 12) | Roof Reflectance | Roof Emissance |    |    |
| Roof - Rafter | ADU  | R-60 closed cell Foam to 2 | Back        | 587                     | 4                                | 3                    | 0.1              | 0.85           |    | No |

**FENESTRATION / GLAZING**

| 01        | 02     | 03         | 04          | 05                      | 06         | 07          | 08    | 09                      | 10       | 11   | 12          | 13          | 14               |
|-----------|--------|------------|-------------|-------------------------|------------|-------------|-------|-------------------------|----------|------|-------------|-------------|------------------|
| Name      | Type   | Surface    | Orientation | Area (ft <sup>2</sup> ) | Width (ft) | Height (ft) | Mult. | Area (ft <sup>2</sup> ) | U-factor | SHGC | SHGC Source | SHGC Source | Exterior Shading |
| #5 Window | Window | Right Wall | Right       | 90                      | 1          | 10          | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #6 Window | Window | Right Wall | Right       | 90                      | 1          | 20          | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #7 Window | Window | Right Wall | Right       | 90                      | 1          | 10          | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #1 Window | Window | Front Wall | Front       | 180                     | 1          | 7.5         | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #4 Window | Window | Front Wall | Front       | 180                     | 1          | 9.5         | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #2 Window | Window | Back Wall  | Back        | 0                       | 1          | 9           | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |
| #3 Window | Window | Back Wall  | Back        | 0                       | 1          | 20          | 0.2   | 0.5                     | 0.5      | NFRC | 0.5         | NFRC        | Bug Screen       |

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 CA Building Energy Efficiency Standards - 2019 Residential Compliance  
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**CERTIFICATE OF COMPLIANCE**

Project Name: Ohio St. Richmond ADU  
 Calculation Date/Time: 2021-03-24T09:50:23-07:00  
 Input File Name: 21-03133 (revised-2.2x4 walls w-R19 Spray Foam) Depolo-Richmond - Ohio St. Richmond ADU Residence.rfd15x

**GENERAL INFORMATION**

| 01                    | 02                | 03               | 04       | 05       | 06           | 07            | 08              | 09                 | 10                  | 11                | 12                           | 13                     | 14  |
|-----------------------|-------------------|------------------|----------|----------|--------------|---------------|-----------------|--------------------|---------------------|-------------------|------------------------------|------------------------|---|
| Project Name          | Run Title         | Project Location | City     | Zip code | Climate Zone | Building Type | Project Scope   | Number of Bedrooms | Number of Bathrooms | Number of Stories | Penetration Average U-factor | Glazing Percentage (%) | ADU Conditioned Floor Area (ft <sup>2</sup> ) |
| Ohio St. Richmond ADU | Title 24 Analysis | 3431 Ohio Ave    | Richmond |          | 05           | Single family | NewConstruction | 1                  | 1                   | 1                 | 0.21                         | 15.33%                 | n/a   |

**COMPLIANCE RESULTS**

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

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**GENERAL INFORMATION**

| 01                    | 02                | 03               | 04       | 05       | 06           | 07            | 08              | 09                 | 10                  | 11                | 12                           | 13                     | 14  |
|-----------------------|-------------------|------------------|----------|----------|--------------|---------------|-----------------|--------------------|---------------------|-------------------|------------------------------|------------------------|---|
| Project Name          | Run Title         | Project Location | City     | Zip code | Climate Zone | Building Type | Project Scope   | Number of Bedrooms | Number of Bathrooms | Number of Stories | Penetration Average U-factor | Glazing Percentage (%) | ADU Conditioned Floor Area (ft <sup>2</sup> ) |
| Ohio St. Richmond ADU | Title 24 Analysis | 3431 Ohio Ave    | Richmond |          | 05           | Single family | NewConstruction | 1                  | 1                   | 1                 | 0.21                         | 15.33%                 | n/a   |

**COMPLIANCE RESULTS**

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

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**FENESTRATION / GLAZING**

| 01   | 02   | 03      | 04          | 05                      | 06         | 07          | 08    | 09                      | 10       | 11   | 12          | 13          | 14               |
|------|------|---------|-------------|-------------------------|------------|-------------|-------|-------------------------|----------|------|-------------|-------------|------------------|
| Name | Type | Surface | Orientation | Area (ft <sup>2</sup> ) | Width (ft) | Height (ft) | Mult. | Area (ft <sup>2</sup> ) | U-factor | SHGC | SHGC Source | SHGC Source | Exterior Shading |
|      |      |         |             |                         |            |             |       |                         |          |      |             |             |                  |

CFIR-PRF-01E (Page 7 of 9)  
 Calculation Date/Time: 2021-03-24T09:50:33-07:00  
 Input File Name: 21-03133 (revised-2, 2x4 walls w-R19 Spray Foam) Depolo-Richmond - Ohio St. Richmond ADU Residence.rfd19x

| WATER HEATING - HERS VERIFICATION |                 | 04                        | 05                        | 06                    | 07                       | 08                                |
|-----------------------------------|-----------------|---------------------------|---------------------------|-----------------------|--------------------------|-----------------------------------|
| Name                              | Pipe Insulation | Compact Distribution Type | Compact Distribution Type | Recirculation Control | Central DHW Distribution | Showers Drain Water Heat Recovery |
| DHW Sys 1 - J/L                   | Not Required    | Not Required              | None                      | Not Required          | Not Required             | Not Required                      |

| SPACE CONDITIONING SYSTEMS |                           | 04                 | 05                 | 06       | 07                | 08                       | 09     | 10                          | 11    |
|----------------------------|---------------------------|--------------------|--------------------|----------|-------------------|--------------------------|--------|-----------------------------|-------|
| Name                       | System Type               | Heating Unit Name  | Cooling Unit Name  | Fan Name | Distribution Name | Required Thermostat Type | Status | Verified Existing Condition | Count |
| Mini Split Ductless        | Heat pump heating cooling | Heat Pump System 1 | Heat Pump System 1 | n/a      | n/a               | Setback                  | New    | NA                          | 1     |

| HVAC - HEAT PUMPS  |                       | 04              | 05       | 06     | 07     | 08   | 09        | 10                 | 11              |
|--------------------|-----------------------|-----------------|----------|--------|--------|------|-----------|--------------------|-----------------|
| Name               | System Type           | Number of Units | HSPF/COP | Cap 47 | Cap 17 | SEER | ENER/CEER | Zonally Controlled | Compressor Type |
| Heat Pump System 1 | Ductless MiniSplit HP | 1               | 10       | 22000  | 15000  | 20   | 12.7      | Not Zonal          | Single Speed    |

| HVAC HEAT PUMPS - HERS VERIFICATION |              | 04               | 05             | 06            | 07           | 08            | 09            | 10                      | 11                      |
|-------------------------------------|--------------|------------------|----------------|---------------|--------------|---------------|---------------|-------------------------|-------------------------|
| Name                                | System Type  | Verified Airflow | Airflow Target | Verified SEER | Verified COP | Verified HSPF | Verified HSPF | Verified Heating COP 47 | Verified Heating COP 17 |
| Heat Pump System 2 - hrs-htpump     | Not Required | 0                | 0              | Not Required  | Not Required | Not Required  | Not Required  | No                      | No                      |

Registration Number: 2021-03-24T09:50:33-07:00  
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 Report Generated: 2021-03-24 09:50:30

CFIR-PRF-01E (Page 8 of 9)  
 Calculation Date/Time: 2021-03-24T09:50:33-07:00  
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| IAQ (INDOOR AIR QUALITY) FANS |         | 04      | 05      | 06           | 07                             | 08                             | 09                             |
|-------------------------------|---------|---------|---------|--------------|--------------------------------|--------------------------------|--------------------------------|
| Dwelling Unit                 | IAQ CFM | IAQ CFM | IAQ CFM | IAQ Fan Type | IAQ Recovery Effectiveness (%) | IAQ Recovery Effectiveness (%) | IAQ Recovery Effectiveness (%) |
| Sfam IAQVentgrt               | 32      | 32      | 0.25    | Default      | 0                              | 0                              | n/a                            |

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 Report Generated: 2021-03-24 09:50:30

CFIR-PRF-01E (Page 9 of 9)  
 Calculation Date/Time: 2021-03-24T09:50:33-07:00  
 Input File Name: 21-03133 (revised-2, 2x4 walls w-R19 Spray Foam) Depolo-Richmond - Ohio St. Richmond ADU Residence.rfd19x

Documentation Author Signature: *Jam Hezar*  
 Signature Date: 2021-03-24 09:58:26  
 CEV/HERS Certification Identification (if applicable): CEA-R08-10-330  
 Phone: 415-422-9925

Responsible Designer Name: *Jam Hezar*  
 Design Date: 2021-03-24 09:58:26  
 Design User: CEA-R08-10-330  
 Design Phone: 415-422-9925

Registration Number: 2021-03-24T09:50:33-07:00  
 CA Building Energy Efficiency Standards - 2019 Residential Compliance  
 HERS Provider: CalCERTS Inc.  
 Report Generated: 2021-03-24 09:50:30

**RESIDENTIAL MEASURES SUMMARY** RMS-1  
 Project Name: Ohio St. Richmond ADU Building Type: Single Family Addition Alone Date: 3/24/2021  
 Project Address: 3431 Ohio Ave Richmond California Energy Climate Zone: CA Climate Zone 03 Total Cond. Floor Area: 587 Addition # of Units: 1

| Construction Type | Cavity                    | Area (ft <sup>2</sup> ) | Special Features  | Status   |
|-------------------|---------------------------|-------------------------|---|----------|
| Wall              | Wood Framed               | R23                     | 761 R6.5 per inch Close Cell Spray Foam 2x10 Stud w/Ins | New      |
| Door              | Opaque Door               | -                       | 41  | New      |
| Roof              | Wood Framed Rafter        | F 60                    | 583 R6.5 per inch close cell spary foam 2x10 rafter     | New      |
| Floor             | Wood Framed w/Crawl Space | R 19                    | 587   | New      |
| Slab              | Unheated Slab-on-Grade    | -                       | 60 Perim = 39'  | Existing |

| Orientation | Area (ft <sup>2</sup> ) | U-Fac | SHGC | Overhang | Sidelines | Exterior Shades | Status |
|-------------|-------------------------|-------|------|----------|-----------|-----------------|--------|
| Right (E)   | 40.0                    | 0.200 | 0.50 | none     | none      | N/A             | New    |
| Front (S)   | 17.0                    | 0.200 | 0.50 | none     | none      | N/A             | New    |
| Skylight    | 4.0                     | 0.350 | 0.25 | none     | none      | N/A             | New    |
| Rear (W)    | 28.0                    | 0.200 | 0.50 | none     | none      | N/A             | New    |

| HVAC SYSTEMS |                 | Min. Eff   | Cooling         | Min. Eff  | Thermostat | Status |
|--------------|-----------------|------------|-----------------|-----------|------------|--------|
| Qty.         | Heating         |            |                 |           |            |        |
| 1            | Split Heat Pump | 10.00 HSPF | Split Heat Pump | 20.0 SEER | Setback    | New    |

| HVAC DISTRIBUTION   |                   | Heating  | Cooling | Duct Location | Duct R-Value | Status |
|---------------------|-------------------|----------|---------|---------------|--------------|--------|
| Location            | Heating           |          |         |               |              |        |
| Mini Split Ductless | Ductless / No Fan | Ductless | n/a     | n/a           | n/a          | New    |

| WATER HEATING |           | Gallons | Min. Eff | Distribution | Status |
|---------------|-----------|---------|----------|--------------|--------|
| Qty.          | Type      |         |          |              |        |
| 1             | Heat Pump | 50      | 3.24     | Standard     | New    |

EnergyPro 8.2 by EnergySoft User Number: 6262 ID: 21-03107 Page 12 of 17

**2019 Low-Rise Residential Mandatory Measures Summary**

NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. \*Exceptions may apply. (01/2020)

**Building Envelope Measures:**

- § 110.6(a): 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 1011.8-2008/2011.
- § 110.6(a): 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 (BHSGS).
- § 110.8(b): Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g).
- § 110.8(c): 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(d) and be labeled per § 10-113 when the installation of a cool roof is specified on the CFI.
- § 110.8(d): Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
- § 110.8(e): Ceiling and Rafter Roof Insulation. Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043. Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to plastic insulation either above or below the roof deck or on top of a drywall ceiling.
- § 150.0(a): Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
- § 150.0(b): 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): 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): 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(i): Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58, or the weighted average U-factor of all fenestration must not exceed 0.58.

**Fireplaces, Decorative Gas Appliances, and Gas Log Measures:**

- § 110.5(e): Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
- § 150.0(e): 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): 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 light-fitting damper or combustion-air control device.
- § 150.0(e): Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.

**Space Conditioning, Water Heating, and Plumbing System Measures:**

- § 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-K.
- § 110.2(b): Controls for Heat Pumps with Supplemental 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): Water Heating Recirculation Loops Serving Multiple Dwelling Units. Water heating recirculation loops serving multiple dwelling units must meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c).
- § 110.3(c): 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.
- § 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): 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).

**2019 Low-Rise Residential Mandatory Measures Summary**

- § 150.0(h): 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(h): 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): Storage Tank Insulation. Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
- § 150.0(j): Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water piping must be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of one inch or a minimum insulation R-value of 7.7; the first five feet of cold water pipes from the storage tank; all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter less than 3/4 inch that is associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below grade, and from the heating source to kitchen fixtures.
- § 150.0(j): Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 120.3(b). Insulation exposed to weather must be water resistant 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(k): Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: A dedicated 125 volt, 20 amp electrical receptacle connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be labeled with the word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words "Future 240V Use," a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than two inches higher than the base of the water heater, and allows natural drainage without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour.
- § 150.0(l): Recirculating Loops. Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c).
- § 150.0(l): 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 Measures:**

- § 110.8(d): 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): CMC Compliance. All air-distribution system ducts and plenums must meet the requirements of the CMC §§ 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA-006-2008 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to a minimum installed level of R-6.0 or a minimum installed level of R-4.2 when ducts are entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Portions of the duct system completely exposed and surrounded by directly conditioned space are not required to be insulated. Connections of metal ducts and inner core of flexible ducts must be mechanically finished. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than 1/4 inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional areas.
- § 150.0(m): 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): 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): Backdraft Damper. Fans that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
- § 150.0(m): 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): Protection of Insulation. Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water resistant and provides shielding from solar radiation.
- § 150.0(m): Porous Inner Core Flex Duct. Porous inner core flex ducts must have a non-porous layer between the inner core and outer vapor barrier.
- § 150.0(m): 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 § 150.0(m)11 and Reference Residential Appendix RA3.
- § 150.0(m): 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. Pressure drops and labeling must meet the requirements in § 150.0(m)12. Filters must be accessible for regular service.
- § 150.0(m): 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.

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PROJECT:  
  
 3431 OHIO AVENUE  
 ACCESSORY DWELLING UNIT  
 RICHMOND, CA 94804

SUBMITTAL:  
 PERMIT SET  
 4 MARCH 2021

REVISIONS:  

| # | DATE        | DESCRIPTION                         |
|---|-------------|-------------------------------------|
| 1 | SEP 20 2021 | CITY OF RICHMOND PART OF PERMIT SET |

 By: GAUTAM

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SHEET TITLE:  
 TITLE 24 REPORT

SHEET NUMBER:  
 A0.2



### 2019 Low-Rise Residential Mandatory Measures Summary

| Requirements for Ventilation and Indoor Air Quality: |  |
|--|--|
| § 150.0(a):  | <b>Requirements for Ventilation and Indoor Air Quality.</b> 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(a).   |
| § 150.0(c):  | <b>Single Family Detached Dwelling Units.</b> 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 provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(c).   |
| § 150.0(e):  | <b>Multifamily Attached Dwelling Units.</b> Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-8 and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be ≤ 0.3 CFM at 50 Pa (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8. |
| § 150.0(f):  | <b>Multifamily Building Central Ventilation Systems.</b> Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-8. All unit airflows must be within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance.  |
| § 150.0(g):  | <b>Kitchen Range Hoods.</b> Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2.   |
| § 150.0(i):  | <b>Field Verification and Diagnostic Testing.</b> Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HV1 to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2.  |
| Pool and Spa Systems and Equipment Measures:         |  |
| § 110.4(a):  | <b>Certification by Manufacturers.</b> Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Appliance Efficiency Regulations; an on/off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating.  |
| § 110.4(b):  | <b>Piping.</b> Any pool or spa heating system or equipment must be installed with at least 3/8 inch 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(c):  | <b>Covers.</b> Outdoor pools or spas that have a heat pump or gas heater must have a cover.  |
| § 110.4(d):  | <b>Directional Inlets and Time Switches for Pools.</b> 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:   | <b>Pilot Light.</b> Natural gas pool and spa heaters must not have a continuously burning pilot light.   |
| § 150.0(p):  | <b>Pool Systems and Equipment Installation.</b> Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.  |
| Lighting Measures:                                   |  |
| § 110.9:   | <b>Lighting Controls and Components.</b> All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.  |
| § 150.0(k)(1A):                                      | <b>Luminaire Efficacy.</b> All installed luminaires must meet the requirements in Table 150.0-A.   |
| § 150.0(k)(1B):                                      | <b>Blank Electrical Boxes.</b> The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or fan speed control.  |
| § 150.0(k)(1C):                                      | <b>Recessed Downlight Luminaires in Ceilings.</b> Luminaires recessed into ceilings must meet all of the requirements for insulation contact (IC) labeling, air leakage, sealing, maintenance, and socket and light source as described in § 150.0(k)(1C).   |
| § 150.0(k)(1D):                                      | <b>Electronic Ballasts for Fluorescent Lamps.</b> Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz.   |
| § 150.0(k)(1E):                                      | <b>Night Lights, Step Lights, and Path Lights.</b> Night lights, step lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens.  |
| § 150.0(k)(1F):                                      | <b>Lighting Integral to Exhaust Fans.</b> Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).  |
| § 150.0(k)(1G):                                      | <b>Screw based luminaires.</b> Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.  |
| § 150.0(k)(1H):                                      | <b>Light Sources in Enclosed or Recessed Luminaires.</b> 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):                                      | <b>Light Sources in Drawers, Cabinets, and Linen Closets.</b> Light sources internal to drawers, cabinets 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):                                      | <b>Interior Switches and Controls.</b> All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.   |
| § 150.0(k)(2B):                                      | <b>Interior Switches and Controls.</b> Exhaust fans must be controlled separately from lighting systems.   |
| § 150.0(k)(2C):                                      | <b>Interior Switches and Controls.</b> Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.   |
| § 150.0(k)(2D):                                      | <b>Interior Switches and Controls.</b> Controls and equipment must be installed in accordance with manufacturer's instructions.  |
| § 150.0(k)(2E):                                      | <b>Interior Switches and Controls.</b> Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.0(k).   |
| § 150.0(k)(2F):                                      | <b>Interior Switches and Controls.</b> Lighting controls must comply with the applicable requirements of § 110.9.  |



### 2019 Low-Rise Residential Mandatory Measures Summary

| § 150.0(k)(2G):        | <b>Interior Switches and Controls.</b> An energy management control system (EMCS) may be used to comply with control requirements if it provides functionality of the specified control according to § 110.9, meets the Installation Certificate requirements of § 130.4, meets the EMCS requirements of § 130.0(g), and meets all other requirements in § 150.0(k).   |
|------------------------|--|
| § 150.0(k)(2H):        | <b>Interior Switches and Controls.</b> A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k).   |
| § 150.0(k)(2I):        | <b>Interior Switches and Controls.</b> In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by an occupant sensor or a vacancy sensor providing automatic-off functionality. If an occupant sensor is installed, it must be initially configured to manual-on operation using the manual control required under Section 150.0(k)(2C).  |
| § 150.0(k)(2J):        | <b>Interior Switches and Controls.</b> Luminaires that are or contain light sources that meet Reference Joint Appendix JA8 requirements for dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls.  |
| § 150.0(k)(2K):        | <b>Interior Switches and Controls.</b> Under cabinet lighting must be controlled separately from ceiling-installed lighting systems.   |
| § 150.0(k)(3A):        | <b>Residential Outdoor Lighting.</b> For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must meet the requirement in item § 150.0(k)(3A) (ON and OFF switch) and the requirements in either § 150.0(k)(3A) (photo) or § 150.0(k)(3A) (astronomical time clock), or an EMCS.   |
| § 150.0(k)(3B):        | <b>Residential Outdoor Lighting.</b> For low-rise residential buildings with four or more dwelling units, outdoor lighting for private patios, entrances, balconies, and porches, and residential parking lots and carports with less than eight vehicles per site must comply with either § 150.0(k)(3A) or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.   |
| § 150.0(k)(3C):        | <b>Residential Outdoor Lighting.</b> For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by § 150.0(k)(3B) or § 150.0(k)(3D) must comply with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.   |
| § 150.0(k)(4):         | <b>Internally Illuminated Address Signs.</b> Internally illuminated address signs must comply with § 140.8, or must consume no more than 5 watts of power as determined according to § 130.0(c).   |
| § 150.0(k)(5):         | <b>Residential Garages for Eight or More Vehicles.</b> Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for residential garages in Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.  |
| § 150.0(k)(6A):        | <b>Interior Common Areas of Low-Rise Multifamily Residential Buildings.</b> In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be controlled by an occupant sensor.  |
| § 150.0(k)(6B):        | <b>Interior Common Areas of Low-Rise Multifamily Residential Buildings.</b> In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common areas in that building must: <ul style="list-style-type: none"> <li>i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and</li> <li>ii. Lighting installed in corridors and stairwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress.</li> </ul>   |
| Solar Ready Buildings: |  |
| § 110.10(a):           | <b>Single Family Residences.</b> 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) through § 110.10(e).  |
| § 110.10(a)(2):        | <b>Low-rise Multifamily Buildings.</b> Low-rise multi-family buildings that do not have a photovoltaic system installed must comply with the requirements of § 110.10(b) through § 110.10(e).  |
| § 110.10(b):           | <b>Minimum Solar Zone Area.</b> 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 180 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. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy. |
| § 110.10(b)(2):        | <b>Azimuth.</b> All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north.  |
| § 110.10(b)(3A):       | <b>Shading.</b> 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):       | <b>Shading.</b> 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 distance, measured in the horizontal plane, 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):        | <b>Structural Design Loads on Construction Documents.</b> 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):           | <b>Interconnection Pathways.</b> 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):           | <b>Documentation.</b> A copy of the construction documents or a comparable document indicating the information from § 110.10(b) through § 110.10(c) must be provided to the occupant.  |
| § 110.10(e):           | <b>Main Electrical Service Panel.</b> The main electrical service panel must have a minimum busbar rating of 200 amps.   |
| § 110.10(e)(1):        | <b>Main Electrical Service Panel.</b> 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".  |
| § 110.10(e)(2):        | <b>Main Electrical Service Panel.</b> 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".  |

### HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

| ENGINEERING CHECKS   |        | SYSTEM LOAD                     |          |                |        |          |
|--|--------|---------------------------------|----------|----------------|--------|----------|
| Number of Systems  | 1      | COIL COOLING PEAK               |          | COIL HTG. PEAK |        |          |
| Heating System   |        | CFM                             | Sensible | Latent         | CFM    | Sensible |
| Output per System  | 22,000 | 375                             | 8,076    | 372            | 145    | 7,339    |
| Total Output (Btuh)  | 22,000 |                                 |          |                |        |          |
| Output (Btuh/sqft)   | 37.5   |                                 |          |                |        |          |
| Cooling System   |        |                                 |          |                |        |          |
| Output per System  | 18,000 |                                 |          |                |        |          |
| Total Output (Btuh)  | 18,000 |                                 |          |                |        |          |
| Total Output (Tons)  | 1.5    |                                 |          |                |        |          |
| Total Output (Btuh/sqft)   | 30.7   |                                 |          |                |        |          |
| Total Output (sqft/Ton)  | 391.3  |                                 |          |                |        |          |
| Air System   |        | HVAC EQUIPMENT SELECTION        |          |                |        |          |
| CFM per System   | 900    | MXZ-2C20NAZ Ductless Mini Split | 0        | 17,351         | 15,655 |          |
| Airflow (cfm)  | 900    |                                 |          |                |        |          |
| Airflow (cfm/sqft)   | 1.53   |                                 |          |                |        |          |
| Airflow (cfm/Ton)  | 600.0  |                                 |          |                |        |          |
| Outside Air (%)  | 0.0%   |                                 | 0        | 17,351         | 15,655 |          |
| Outside Air (cfm/sqft)   | 0.00   |                                 |          |                |        |          |
| Note: values above given at ARI conditions                                     |        | TIME OF SYSTEM PEAK             |          |                |        |          |
| HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak) |        |                                 |          |                |        |          |
|  |        |                                 |          |                |        |          |
| COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak) |        |                                 |          |                |        |          |
|  |        |                                 |          |                |        |          |

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3431 OHIO AVENUE  
ACCESSORY DWELLING UNIT  
RICHMOND, CA 94804

SUBMITTAL:

PERMIT SET  
4 MARCH 2021

REVISIONS:

| NO. | DATE | DESCRIPTION |
|-----|------|-------------|
|     |      |             |

CITY OF RICHMOND  
PART OF PERMIT SET  
Sep 20 2021  
By: GAUTAM

SHEET TITLE:

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SHEET TITLE:

TITLE 24 REPORT

SHEET NUMBER:

A0.3



STREET VIEW - RESIDENCE  
STUCCO AND TRIM OF ADU TO MATCH



EXISTING GARAGE, SOUTH ELEVATION



EXISTING GARAGE, EAST ELEVATION



VIEW TO NORTHWEST, REAR OF PROPERTY,  
(E) GARAGE AT LEFT OF PHOTOGRAPH



WEST SIDE OF PROPERTY WITH  
ADJACENT NEIGHBOR



VIEW TO SOUTH ACROSS OHIO AVENUE



VIEW TO SOUTH ACROSS OHIO AVENUE

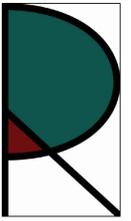


VIEW TO EAST ACROSS SOUTH 35TH STREET



VIEW TO SOUTHEAST ACROSS SOUTH 35TH  
STREET

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4 MARCH 2021

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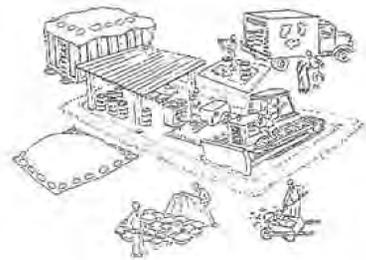
SHEET TITLE:

SITE PHOTOS

SHEET NUMBER:

A0.4

# Pollution Prevention - It's Part of the Plan



## Make sure your crews and subs do the job right!

Runoff from streets and other paved areas is a major source of pollution and damage to creeks and the San Francisco Bay. Construction activities can directly affect the health of creeks and the Bay unless contractors and crews plan ahead to keep dirt, debris, and other construction waste away from storm drains and local creeks. Following these guidelines and the project specifications will ensure your compliance with City of Berkeley requirements.

### Materials storage & spill cleanup

#### Non-hazardous materials management

- Sand, dirt, and similar materials must be stored at least 10 feet (3 meters) from catch basins. All construction material must be covered with a tarp and contained with a perimeter control during wet weather or when rain is forecasted or when not actively being used within 14 days.
- Use (but don't overuse) reclaimed water for dust control as needed.
- Sweep or vacuum streets and other paved areas daily. Do not wash down streets or work areas with water!
- Recycle all asphalt, concrete, and aggregate base material from demolition activities. Comply with City of Berkeley Ordinances for recycling construction materials, wood, gyp board, pipe, etc.
- Check dumpsters regularly for leaks and to make sure they are not overfilled. Repair or replace leaking dumpsters promptly.
- Cover all dumpsters with a tarp at the end of every work day or during wet weather.

#### Hazardous materials management

- Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state, and federal regulations.
- Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecasted.
- Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecasted within 24 hours.
- Be sure to arrange for appropriate disposal of all hazardous wastes.

#### Spill prevention and control

- Keep a stockpile of spill cleanup materials (rags, absorbents, etc.) available at the construction site at all times.
- When spills or leaks occur, contain them immediately and be particularly careful to prevent leaks and spills from reaching the gutter, street, or storm drain. Never wash spilled material into a gutter, street, storm drain, or creek!
- Dispose of all containment and cleanup materials properly.
- Report any hazardous materials spills immediately! Dial 911 or the City of Berkeley's Public Works Department by dialing 311

#### Construction Entrances and Perimeter

- Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking.

### Vehicle and equipment maintenance & cleaning

- Inspect vehicles and equipment for leaks frequently. Use drip pans to catch leaks until repairs are made; repair leaks promptly.
- Fuel and maintain vehicles on site only in a bermed area or over a drip pan that is big enough to prevent runoff.
- If you must clean vehicles or equipment on site, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or creeks.
- Do not clean vehicles or equipment on-site using soaps, solvents, degreasers, steam cleaning equipment, etc.



### Earthwork & contaminated soils

- Keep excavated soil on the site where it will not collect in the street.
- Transfer to dump trucks should take place on the site, not in the street.
- Use fiber rolls, silt fences, or other control measures to minimize the flow of silt off the site.



- Earth moving activities are only allowed during dry weather by permit and as approved by the City Inspector in the Field.
- Mature vegetation is the best form of erosion control. Minimize disturbance to existing vegetation whenever possible.
- If you disturb a slope during construction, prevent erosion by securing the soil with erosion control fabric, or seed with fast-growing grasses as soon as possible. Place fiber rolls down-slope until soil is secure.

- If you suspect contamination (from site history, discoloration, odor, texture, abandoned underground tanks or pipes, or buried debris), call the Engineer for help in determining what should be done, and manage disposal of contaminated soil according to their instructions.

### Dewatering operations

- Effectively manage all run-on, all runoff within the site, and all runoff that discharges from the site. Run-on from off-site shall be directed away from all disturbed areas or shall collectively be in compliance.
- Reuse water for dust control, irrigation, or another on-site purpose to the greatest extent possible.
- Be sure to notify and obtain approval from the Engineer before discharging water to a street, gutter, or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- In areas of known contamination, testing is required prior to reuse or discharge of groundwater. Consult with the Engineer to determine what testing is required and how to interpret results. Contaminated groundwater must be treated or hauled off-site for proper disposal.



### Saw cutting

- Always completely cover or barricade storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or sand/gravel bags to keep slurry out of the storm drain system.
- Shovel, absorb, or vacuum saw-cut slurry and pick up all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- If saw cut slurry enters a catch basin, clean it up immediately.

### Paving/asphalt work



- Always cover storm drain inlets and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal.
- Protect gutters, ditches, and drainage courses with sand/gravel bags, or earthen berms.
- Do not sweep or wash down excess sand from sand sealing into gutters, storm drains, or creeks. Collect sand and return it to the stockpile, or dispose of it as trash.
- Do not use water to wash down fresh asphalt concrete pavement.

### Concrete, grout, and mortar storage & waste disposal

- Store concrete, grout, and mortar under cover, on pallets, and away from drainage areas. These materials must never reach a storm drain.
- Wash out concrete equipment/trucks off-site or into contained washout areas that will not allow discharge of wash water onto the underlying soil or onto the surrounding areas.



- Collect the wash water from washing exposed aggregate concrete and remove it for appropriate disposal off-site.

### Painting

- Never rinse paint brushes or materials in a gutter or street!
- Paint out excess water-based paint before rinsing brushes, rollers, or containers in a sink.
- Paint out excess oil-based paint before cleaning brushes in thinner.
- Filter paint thinners and solvents for reuse whenever possible. Dispose of oil-based paint sludge and unusable thinner as hazardous waste.



### Landscape Materials

- Contain, cover, and store on pallets all stockpiled landscape materials (mulch, compost, fertilizers, etc.) during wet weather or when rain is forecasted or when not actively being used within 14 days.
- Discontinue the application of any erodible landscape material within 2 days of forecasted rain and during wet weather.

Storm drain polluters may be liable for fines of \$10,000 or more per day!

For references and more detailed information:  
[www.cleanwaterprogram.org](http://www.cleanwaterprogram.org)  
[www.cabmphandbooks.com](http://www.cabmphandbooks.com)

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 510-978-0860

PROJECT:  


3431 OHIO AVENUE  
 ACCESSORY DWELLING UNIT  
 RICHMOND, CA 94804

SUBMITTALS: \_\_\_\_\_

PERMIT SET  
 4 MARCH 2021

REVISIONS:

| NO.                                 | DATE      | DESCRIPTION           |
|-------------------------------------|-----------|-----------------------|
| 1                                   | 27-MAY-21 | PLAN CHECK RESPONSE 1 |
| CITY OF RICHMOND PART OF PERMIT SET |           |                       |
| Sep 20 2021                         |           |                       |
| By: GAUTAM                          |           |                       |

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SHEET TITLE:  
**CONSTRUCTION BMPs**

SHEET NUMBER:  
**A0.5**

# 2019 Cal Green Residential Mandatory Measures

New residential buildings shall be designed to include the green building mandatory measures specified in this checklist. This checklist shall also be applied to additions or alterations of existing residential buildings where the addition or alteration increases the buildings conditioned area, volume, or size. The requirements shall apply only to the specific area of the addition or alteration.

BUILDING PERMIT # B21-00789 ADDRESS: 3431 Ohio Avenue

| Feature or Measure (for full details of code requirements, see the 2019 Cal Green Code)  | Yes/No & Plan Reference |
|--|-------------------------|
| <b>PLANNING AND DESIGN</b>   |                         |
| <b>SITE DEVELOPMENT (CGS 4.106)</b>  |                         |
| <b>Storm water pollution control.</b> A plan has been developed and will be implemented to manage storm water drainage during construction per CGC 4.106.2 & 4.106.3   | A0.5                    |
| <b>Grading and Paving.</b> Construction plans to indicate how site grading and drainage system will manage all water flows to keep water from entering buildings. Examples found at CGC 4.106.3. Alterations and additions are excluded.   | A1.0                    |
| <b>Electric Vehicle Charging for New Construction.</b> For one- and two-family dwellings, install electric vehicle charging wiring and panels per the requirements found in CGC 4.106.4.   | N/A                     |
| <b>ENERGY EFFICIENCY</b>   |                         |
| <b>ENERGY CODE</b>   |                         |
| <b>Energy Efficiency.</b> Building meets or exceeds the requirements of the California Building Energy Efficiency Standards.   | A0.1-A0.3               |
| <b>WATER EFFICIENCY AND CONSERVATION</b>   |                         |
| <b>INDOOR WATER USE (CGC 4.303)</b>  |                         |
| <b>Water conserving plumbing fixtures.</b> Plumbing fixtures (water closets and urinals) shall comply with the following:<br>1. The effective flush volume of all water closets shall not exceed 1.28 gal/flush (CGC 403.1.1).<br>2. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gal/flush. The effective flush volume for all other urinals shall not exceed 0.5 gal/flush (CGC 403.1.2). | P1.0                    |
| <b>Water conserving plumbing fittings.</b> Fittings (faucets and showerheads) have all required standards listed on plans and are in accordance to CGC 4.303.1.3 and CGC 403.1.4.  | P1.0                    |
| <b>OUTDOOR WATER USE (CGC 4.304)</b>   |                         |
| <b>Scope.</b> The provisions of Section 4.304 reference the mandatory Model Water Efficiency Landscape Ordinance (MWELO) contained within Chapter 2.7, Division 2, Title 23 per CGC 4.304.1.   | N/A                     |
| <b>Outdoor water use in landscape areas equal to or greater than 500 square feet.</b> For new residential developments with aggregate landscape area equal to or greater than 500 square feet, shall comply with local water efficient landscape ordinance or the current MWELO per CGC 4.304.1.   | N/A                     |
| <b>Outdoor water use in landscape areas of 2,500 square feet or less.</b> New residential development with aggregate landscape area of 2,500 square feet or less may conform to the prescriptive compliance measures contained in MWELO's Appendix D.  | N/A                     |
| <b>MATERIAL CONSERVATION AND RESOURCE EFFICIENCY</b>   |                         |
| <b>ENHANCED DURABILITY AND REDUCED MAINTENANCE (CGC 4.406)</b>   |                         |
| <b>Rodent Proofing.</b> Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be rodent proofed by closing such openings with cement mortar, concrete masonry, or similar methods acceptable to the enforcing agency per CGC 4.406.1.   | 4/A1.2                  |
| <b>CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING (CGC 4.408)</b>  |                         |
| <b>Construction waste management.</b> Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste per CGC 4.408.1  | 4/A1.2                  |
| <b>BUILDING MAINTENANCE AND OPERATION (CGC 4.410)</b>  |                         |
| <b>Operation and maintenance manual.</b> An operation and maintenance manual will be provided to the building occupant or owner per CGC 4.410.1.   |                         |
| <b>Recycling by occupants.</b> Where five (5) or more multifamily dwelling units are constructed on a single site, provide readily accessible collection areas that serve all buildings on the site for depositing, storage and collection of non-hazardous recyclables (including paper, corrugated cardboard, glass, plastics, organic waste, and metals) per CGC 4.410.2.   | N/A                     |
| <b>ENVIRONMENTAL QUALITY</b>   |                         |

|   |           |
|---|-----------|
| <b>Fireplaces.</b> Any gas fireplaces shall be a direct-vent sealed-combustible type.   | N/A       |
| <b>Woodstoves.</b> Any wood stove or pellet stove shall comply with US EPA New Source Performance Standards emission limits per CGC 4.503.1.  | N/A       |
| <b>POLLUTANT CONTROL (CGC 4.504)</b>  |           |
| <b>Duct and mechanical systems protection.</b> At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution components openings shall be covered with tape, plastic, sheet metals, or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris, which may enter the system per CGC 4.504.1.        | P1.0      |
| <b>Finish material pollutant control.</b> Finish materials shall comply with Sections 4.504.2.1 through 4.504.5.1.  | A0.2-A0.3 |
| <b>Adhesives, sealants and caulks.</b> Adhesives, sealants and caulks used on the project shall meet the requirements of the standards listed in CGC 4.504.2.1.   | A0.2-A0.3 |
| <b>Paints and coatings.</b> Paints and coatings shall comply with VOC limits per CGC 4.504.2.2.   | A0.2-A0.3 |
| <b>Aerosol paints and coatings.</b> Aerosol paints and coatings shall meet the Product-weighted MIR limits for ROC and other requirements per CGC 4.504.2.3.  | A0.2-A0.3 |
| <b>Verification.</b> Documentation will be provided, at the request of the Building Division, to verify compliance with VOC finish materials per CGC 4.504.2.4.   | A0.2-A0.3 |
| <b>Carpet systems.</b> All carpet installed in the building interior shall meet the testing and product requirement per CGC 4.504.3. Carpet cushion and adhesive also must comply.  | A0.2-A0.3 |
| <b>Resilient flooring systems.</b> Where resilient flooring is installed, at least 80% of flooring must comply with one of the following: the VOC-emission limits defined in the 2012 CHPS criteria and listed on its High Performance Products Database; products certified under UL Greenguard Gold program; certified under the Resilient Floor Covering Institute FloorScore program; or meet California Department of Public Health 2010 Specifications per CGC 4.504.4. | A0.2-A0.3 |
| <b>Composite wood products.</b> Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior and exterior of the building shall comply with the low formaldehyde emission standards per CGC 4.504.5.  | A0.2-A0.3 |
| <b>Documentation.</b> Verification of compliance with this section shall be provided at the request of the enforcing agency.  | A0.2-A0.3 |
| <b>INTERIOR MOISTURE CONTROL (CGC 4.505)</b>  |           |
| <b>Concrete slab foundations.</b> A capillary break shall be installed if a slab on grade foundation system is used. The use of a 4" thick base of 1/2" or larger clean aggregate under a 6 mil vapor retarder with joint lapped not less than 6" will be provided per CGC 4.505.2 and CRC R505.2.3.  | N/A       |
| <b>Moisture content of building materials.</b> Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19% moisture content. Moisture content shall be checked prior to finish material being applied per CGC 4.505.3.   | 4/A1.2    |
| <b>INDOOR AIR QUALITY AND EXHAUST (CGC 4.506)</b>   |           |
| <b>Bathroom exhaust fans.</b> ENERGY STAR compliant exhaust fans shall be provided in every bathroom per CGC 4.506.1. Fans shall be ducted to the outside and must be controlled by a humidity control, unless functioning as part of a whole house ventilation system.   | E1.0      |
| <b>ENVIRONMENTAL COMFORT (CGC 4.507)</b>  |           |
| <b>Heating and air conditioning.</b> Heating and air-conditioning system shall be sized, designed and have their equipment selected using the following methods:<br>1. Heat Loss/Heat Gain values in accordance with ANSI/ACCA 2 Manual J-2016 or equivalent;<br>2. Duct systems are sized according to ANSI/ACCA 1, Manual D-2016 or equivalent;<br>3. Select heating and cooling equipment in accordance with ANSI/ACCA 3, Manual S-2014 or equivalent.                     | E1.0      |
| <b>INSTALLER AND SPECIAL INSPECTOR QUALIFICATIONS</b>   |           |
| <b>HVAC INSTALLER QUALIFICATION (CGC 702)</b>   |           |
| <b>HVAC installer training.</b> HVAC system installers shall be trained and certified in the proper installation of HVAC systems and equipment by a recognized training or certification program per CGC 702.1.   | A0.2      |
| <b>VERIFICATION (CGC 703)</b>   |           |
| <b>Compliance documentation.</b> Upon request, verification of compliance with this code may include construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the building department which will show substantial conformance.   | A0.2      |

| Responsible Designer's Declaration Statement  | Contractor's Declaration Statement  |
|---|---|
| I hereby certify that this project has been designed to meet the requirements of the 2019 California Green Building Standards Code. | I hereby certify, as the building or installer under permit listed herein, that this project will be constructed to meet the requirements of the 2019 California Green Building Standards Code. |
| <b>Name:</b> Richard Depolo   | <b>Name:</b>  |
| <b>Signature:</b> <i>RA Depolo</i>  | <b>Signature:</b>   |
| <b>Date:</b> 27 May 21  | <b>Date:</b>  |
| <b>Company:</b>   | <b>Company:</b>   |
| <b>Address:</b> 20 Northgate Avenue   | <b>Address:</b>   |
| <b>City/St/Zip:</b> Berkeley, CA 94708  | <b>City/St/Zip:</b>   |

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OWNERS:  
PATRICIA RODRIGUEZ & LUIS GONZALEZ  
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510-978-0860

PROJECT:

*RA Depolo*

3431 OHIO AVENUE  
ACCESSORY DWELLING UNIT  
RICHMOND, CA 94804

SUBMITTAL:

PERMIT SET  
4 MARCH 2021

REVISIONS:

| DATE      | DESCRIPTION           |
|-----------|-----------------------|
| 27-MAY 21 | PLAN CHECK RESPONSE 1 |

CITY OF RICHMOND  
PART OF PERMIT SET  
Sep 20 2021  
By: GAUTAM

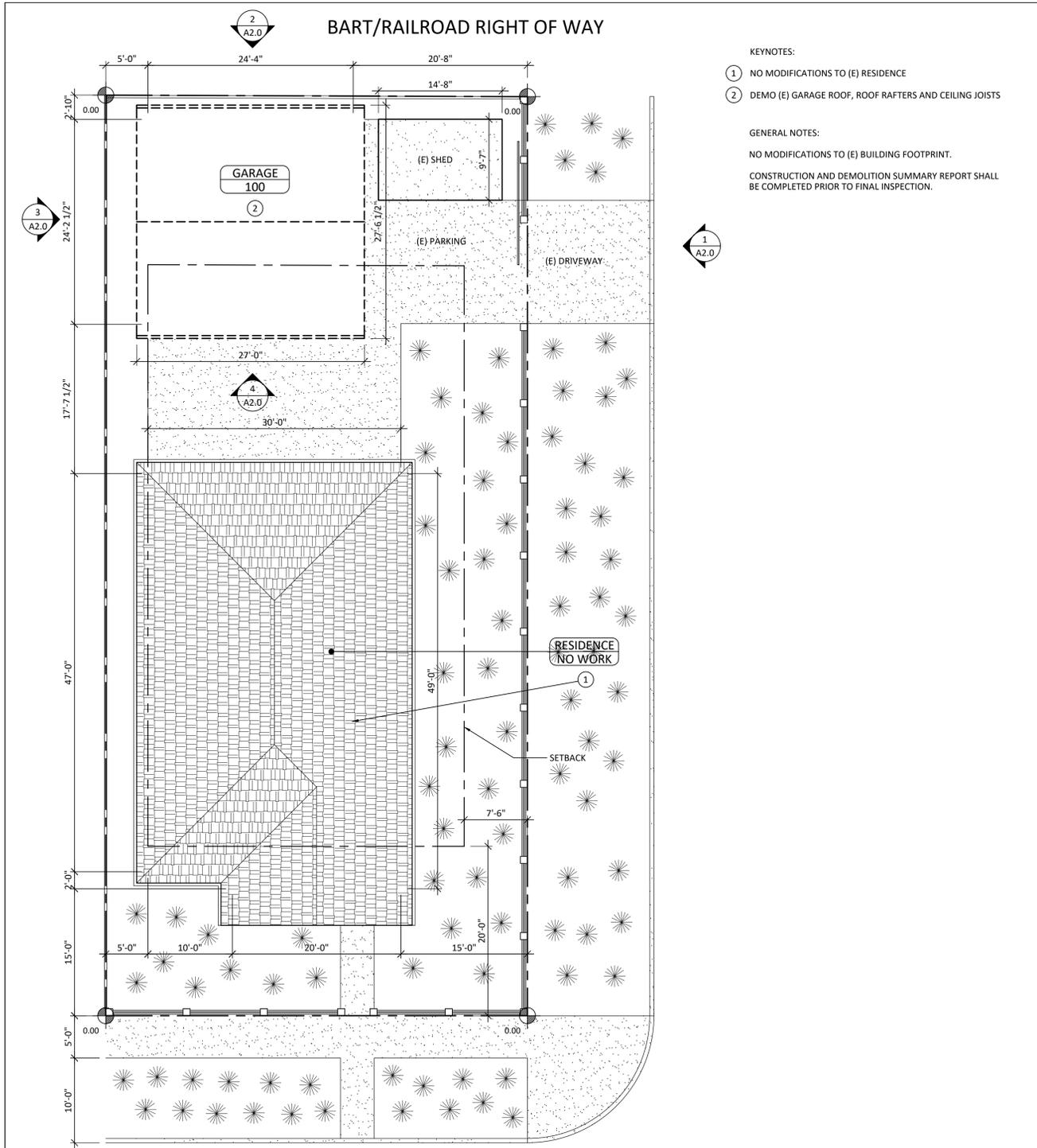
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SHEET TITLE:

CALGREEN CHECKLIST

SHEET NUMBER:

A0.6



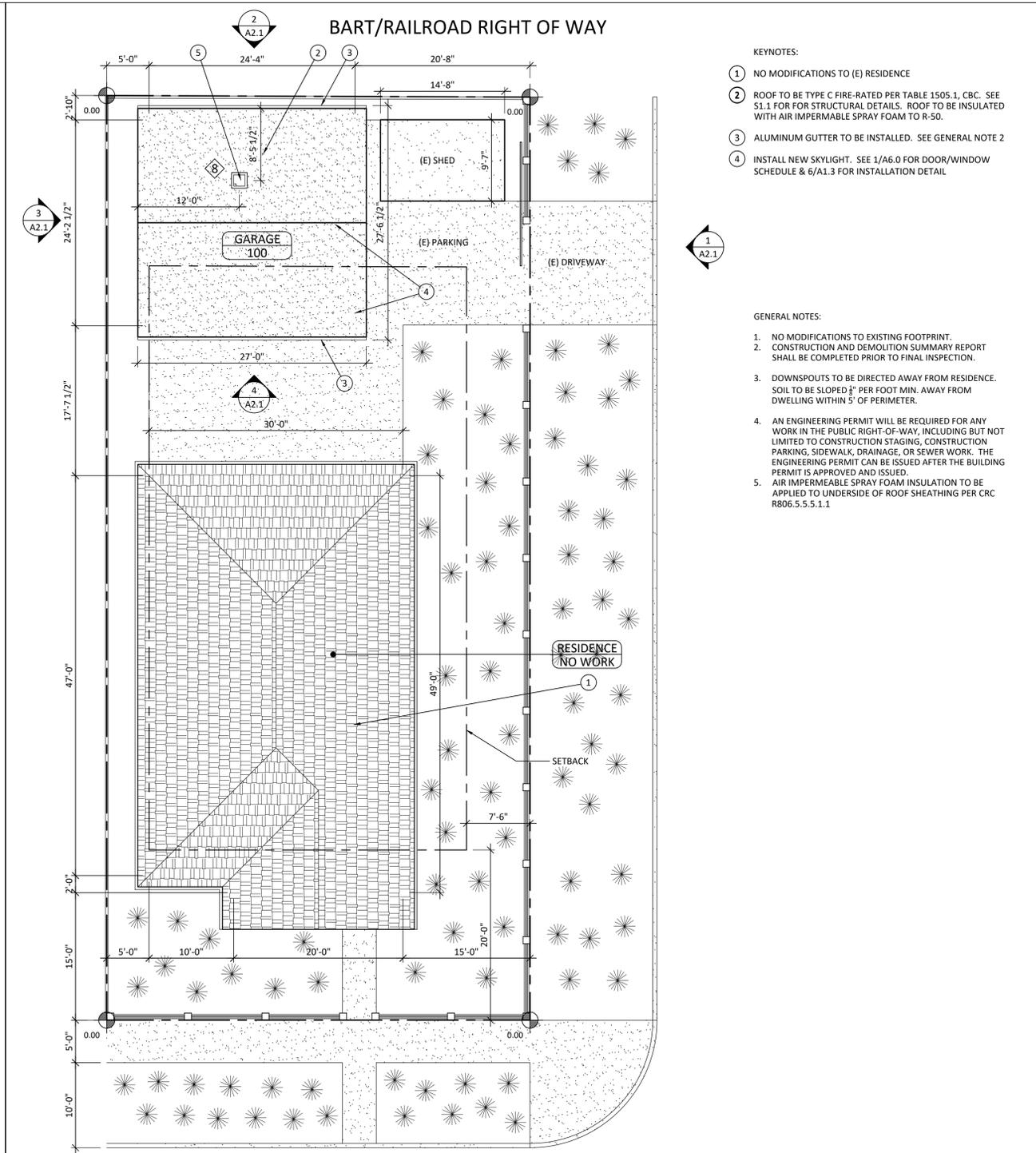
- KEYNOTES:
- ① NO MODIFICATIONS TO (E) RESIDENCE
  - ② DEMO (E) GARAGE ROOF, ROOF RAFTERS AND CEILING JOISTS
- GENERAL NOTES:
- NO MODIFICATIONS TO (E) BUILDING FOOTPRINT.
- CONSTRUCTION AND DEMOLITION SUMMARY REPORT SHALL BE COMPLETED PRIOR TO FINAL INSPECTION.

OHIO AVENUE

| FLOOR                               | EXISTING | PROPOSED |
|-------------------------------------|----------|----------|
| FLOOR AREA                          |          |          |
| RESIDENCE                           | 1450 SF  | 1450 SF  |
| ADU                                 | 0 SF     | 587 SF   |
| TOTAL                               | 1450 SF  | 2037 SF  |
| ALLOWABLE FAR (5430 SF X 40%)       | 2125 SF  | 2125 SF  |
| BUILDING FOOTPRINT                  |          |          |
| RESIDENCE                           | 1450 SF  | 1450 SF  |
| ADU/GARAGE                          | 587 SF   | 587 SF   |
| TOTAL                               | 2037 SF  | 2037 SF  |
| ALLOWABLE FOOTPRINT (5430 SF X 50%) | 2715 SF  | 2715 SF  |



① EXISTING/DEMO SITE/ROOF PLAN  
SCALE: 1/8"=1'-0"



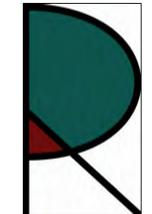
- KEYNOTES:
- ① NO MODIFICATIONS TO (E) RESIDENCE
  - ② ROOF TO BE TYPE C FIRE-RATED PER TABLE 1505.1, CBC. SEE S1.1 FOR STRUCTURAL DETAILS. ROOF TO BE INSULATED WITH AIR IMPERMEABLE SPRAY FOAM TO R-50.
  - ③ ALUMINUM GUTTER TO BE INSTALLED. SEE GENERAL NOTE 2
  - ④ INSTALL NEW SKYLIGHT. SEE 1/A6.0 FOR DOOR/WINDOW SCHEDULE & 6/A1.3 FOR INSTALLATION DETAIL
- GENERAL NOTES:
1. NO MODIFICATIONS TO EXISTING FOOTPRINT.
  2. CONSTRUCTION AND DEMOLITION SUMMARY REPORT SHALL BE COMPLETED PRIOR TO FINAL INSPECTION.
  3. DOWNSPOUTS TO BE DIRECTED AWAY FROM RESIDENCE. SOIL TO BE SLOPED 1" PER FOOT MIN. AWAY FROM DWELLING WITHIN 5' OF PERIMETER.
  4. AN ENGINEERING PERMIT WILL BE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY, INCLUDING BUT NOT LIMITED TO CONSTRUCTION STAGING, CONSTRUCTION PARKING, SIDEWALK, DRAINAGE, OR SEWER WORK. THE ENGINEERING PERMIT CAN BE ISSUED AFTER THE BUILDING PERMIT IS APPROVED AND ISSUED.
  5. AIR IMPERMEABLE SPRAY FOAM INSULATION TO BE APPLIED TO UNDERSIDE OF ROOF SHEATHING PER CRC R806.5.5.1.1

OHIO AVENUE

| FLOOR                               | EXISTING | PROPOSED |
|-------------------------------------|----------|----------|
| FLOOR AREA                          |          |          |
| RESIDENCE                           | 1450 SF  | 1450 SF  |
| ADU                                 | 0 SF     | 587 SF   |
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| RESIDENCE                           | 1450 SF  | 1450 SF  |
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| TOTAL                               | 2037 SF  | 2037 SF  |
| ALLOWABLE FOOTPRINT (5430 SF X 50%) | 2715 SF  | 2715 SF  |



② PROPOSED SITE/ROOF PLAN  
SCALE: 1/8"=1'-0"

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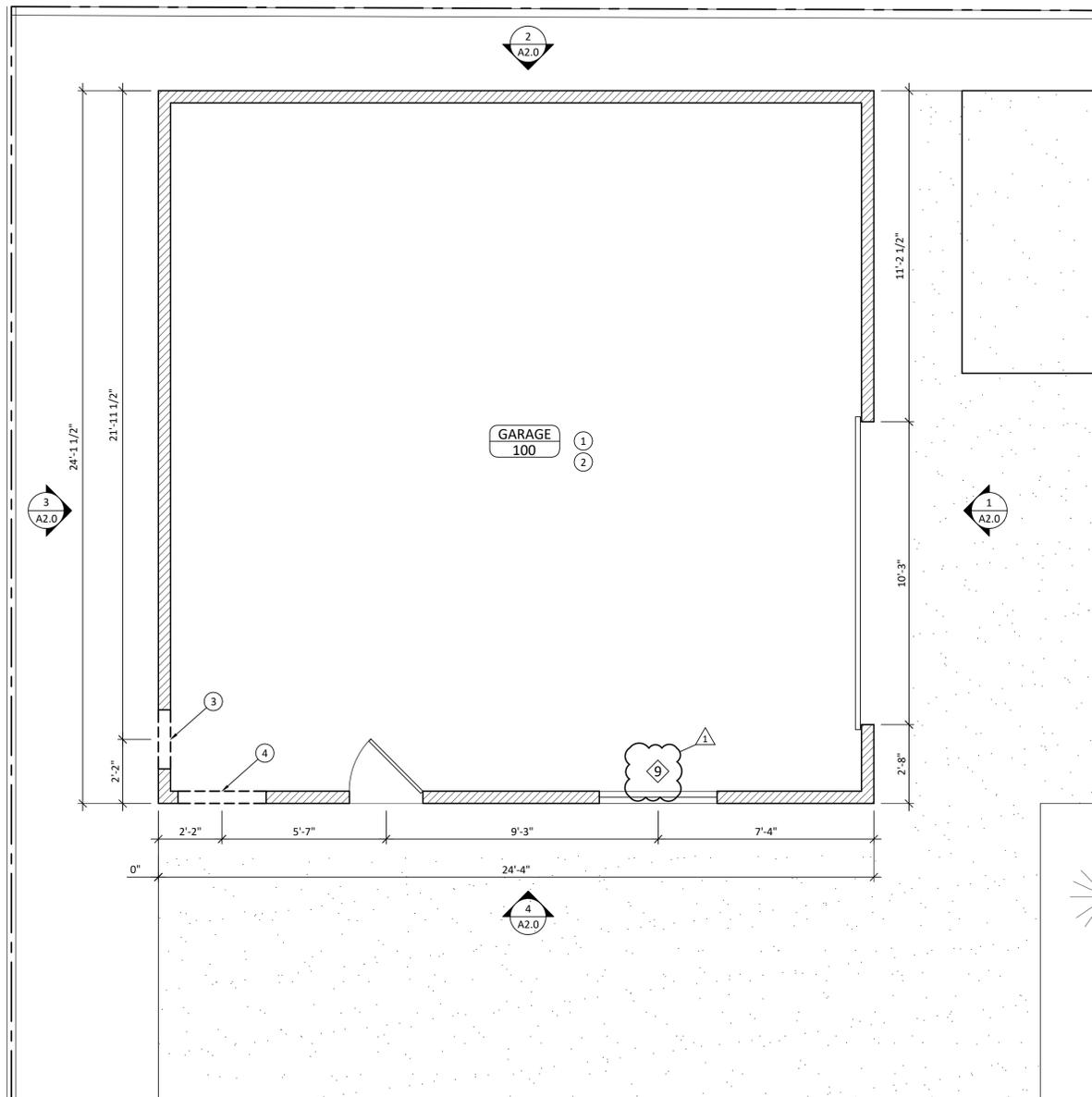
| # | DATE        | DESCRIPTION                         |
|---|-------------|-------------------------------------|
| 1 | Sep 20 2021 | CITY OF RICHMOND PART OF PERMIT SET |

By: GAUTAM

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SHEET TITLE:  
**EXISTING/  
 PROPOSED  
 SITE & ROOF PLAN**  
 SHEET NUMBER:

**A1.0**

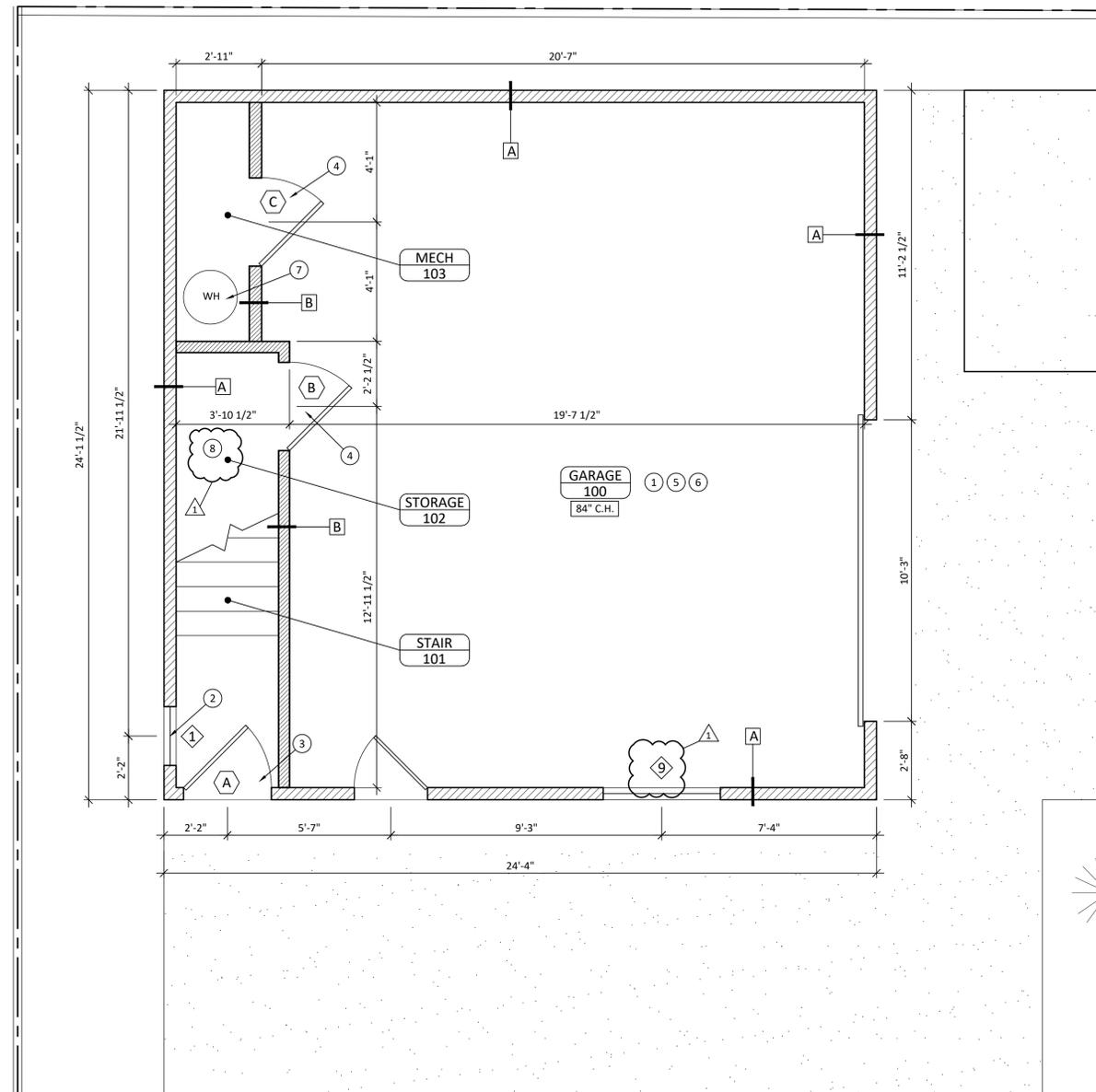


- KEYNOTES:
- 1 PREP FOR NEW PERIMETER FOOTING UNDER EXISTING SLAB. SEE 1/S-2 FOR FOUNDATION PLAN/DETAILS.
  - 2 DEMO EXISTING ROOF AND CEILING.
  - 3 PREP FOR NEW WINDOW OPENING. SEE A2.1 FOR DOOR WINDOW PLACEMENT. SEE 1/A6.0 FOR DOOR/WINDOW SCHEDULE. SEE 1/S-4 FOR STRUCTURAL DETAIL.
  - 4 PREP FOR NEW DOOR OPENING. SEE 2/A2.1 FOR DOOR WINDOW PLACEMENT. SEE 1/A6.0 FOR DOOR/WINDOW SCHEDULE. SEE 1/S-4 FOR STRUCTURAL DETAIL.

- GENERAL NOTES:
1. WASTE DIVERSION WORKSHEET FOR CONSTRUCTION WASTE MANAGEMENT PLAN TO BE SUBMITTED BY CONTRACTOR PRIOR TO PERMIT ISSUANCE.
  2. NO CHANGES TO (E) RESIDENCE.
  3. AN ENGINEERING PERMIT WILL BE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY, INCLUDING BUT NOT LIMITED TO CONSTRUCTION STAGING, RESERVED CONSTRUCTION PARKING, SIDEWALK, DRAINAGE, OR SEWER WORK. THE ENGINEERING PERMIT CAN BE ISSUED AFTER THE BUILDING PERMIT IS APPROVED AND ISSUED. UTILITY WORK (GAS, ELECTRICAL, WATER) REQUIRES A SEPARATE ENGINEERING UTILITY PERMIT FROM THE ENGINEERING DIVISION. APPROVAL OF THIS BUILDING PERMIT DOES NOT AUTHORIZE WORK IN THE PUBLIC RIGHT-OF-WAY.

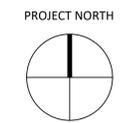


1  
A1.1 EXISTING/DEMO FIRST FLOOR PLAN  
SCALE: 3/8"=1'-0"

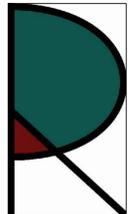


- KEYNOTES:
- 1 INSTALL NEW PERIMETER FOOTING UNDER EXISTING SLAB. SEE 1/S-2 FOR FOUNDATION PLAN/DETAILS.
  - 2 INSTALL NEW WINDOW. SEE A2.1 FOR DOOR WINDOW PLACEMENT. SEE 1/A6.0 FOR DOOR/WINDOW SCHEDULE. SEE 1/S-4 FOR STRUCTURAL DETAIL.
  - 3 INSTALL NEW DOOR. THRESHOLD TO BE 1-1/2" MAX. SEE A2.1 FOR DOOR WINDOW PLACEMENT. SEE 1/A6.0 FOR DOOR/WINDOW SCHEDULE. SEE 1/S-4 FOR STRUCTURAL DETAIL.
  - 4 INSTALL NEW FIRE-RATED DOOR. SEE 1/A6.0 FOR DOOR/WINDOW SCHEDULE. SEE 1/S-4 FOR STRUCTURAL DETAIL.
  - 5 CEILING TO BE FIRE-RATED. SEE A1.4 FOR FIRE-RATING DETAILS.
  - 6 (E) WALLS TO BE FIRE-RATED ON INTERIOR. 5/8" TYPE X FIRE-RATED SHEETROCK TO BE INSTALLED. SEE 5/A1.4 FOR DETAIL.
  - 7 INSTALL NEW WATER HEATER. SEE E1.0 AND P1.0 FOR DETAILS.
  - 8 WALLS AND CEILING OF AREA UNDER STAIRS TO BE FIRE-RATED. SEE B/1/A1.4 AND 5/A1.4 FOR DETAILS.

- GENERAL NOTES:
1. WASTE DIVERSION WORKSHEET FOR CONSTRUCTION WASTE MANAGEMENT PLAN TO BE SUBMITTED BY CONTRACTOR PRIOR TO PERMIT ISSUANCE.
  2. NO CHANGES TO (E) RESIDENCE.
  3. AN ENGINEERING PERMIT WILL BE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY, INCLUDING BUT NOT LIMITED TO CONSTRUCTION STAGING, RESERVED CONSTRUCTION PARKING, SIDEWALK, DRAINAGE, OR SEWER WORK. THE ENGINEERING PERMIT CAN BE ISSUED AFTER THE BUILDING PERMIT IS APPROVED AND ISSUED. UTILITY WORK (GAS, ELECTRICAL, WATER) REQUIRES A SEPARATE ENGINEERING UTILITY PERMIT FROM THE ENGINEERING DIVISION. APPROVAL OF THIS BUILDING PERMIT DOES NOT AUTHORIZE WORK IN THE PUBLIC RIGHT-OF-WAY.



2  
A1.1 PROPOSED ADU FIRST FLOOR PLAN  
SCALE: 3/8"=1'-0"

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SUBMITTAL:  
 PERMIT SET  
 4 MARCH 2021

REVISIONS:

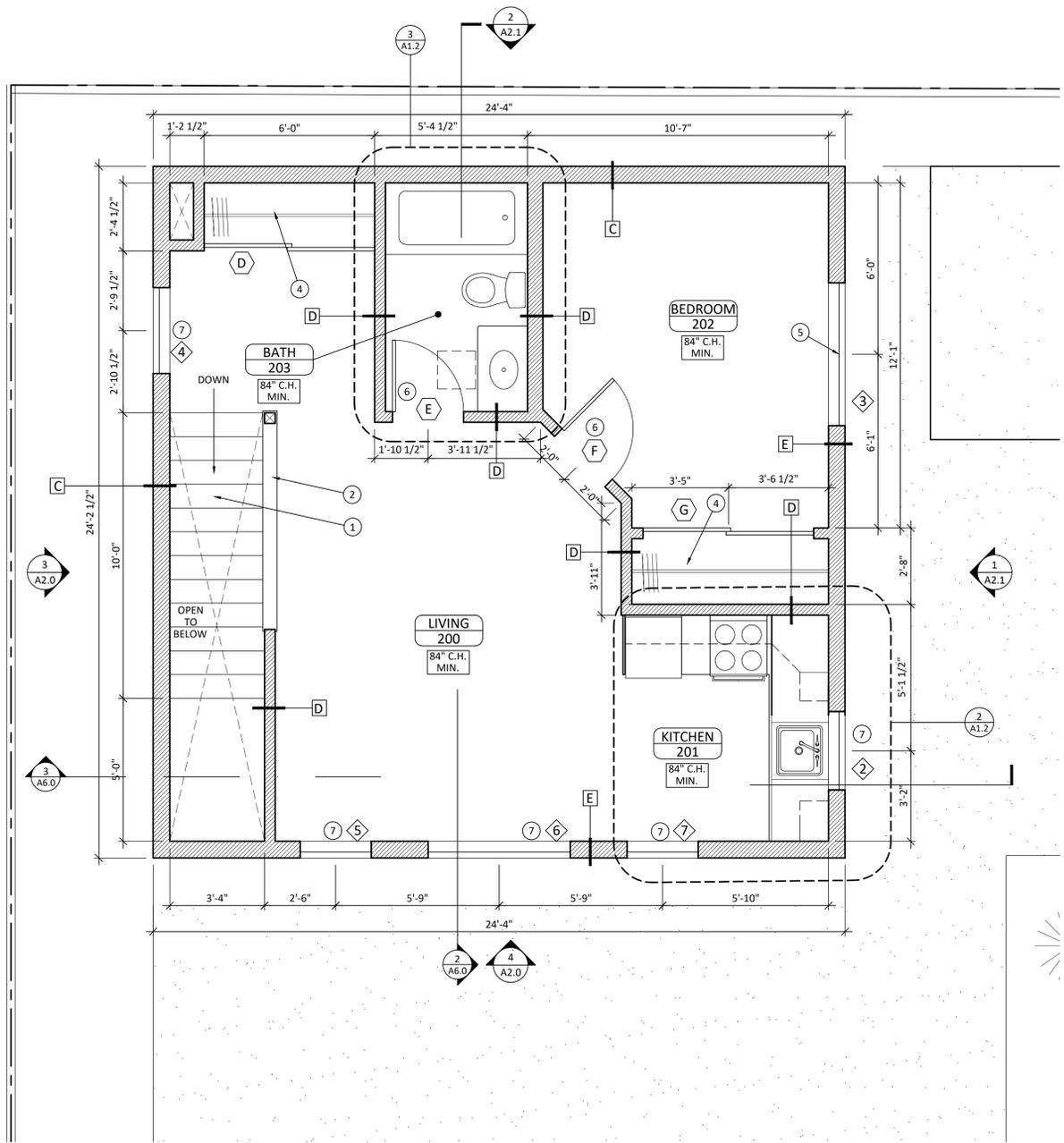
| DATE      | DESCRIPTION   |
|-----------|---------------|
| 27-MAY 21 | CORRECTIONS 1 |

CITY OF RICHMOND  
 PART OF PERMIT SET  
 Sep 20 2021  
 By: GAUTAM

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SHEET TITLE:  
 EXISTING &  
 PROPOSED FIRST  
 FLOOR PLAN  
 SHEET NUMBER:

A1.1



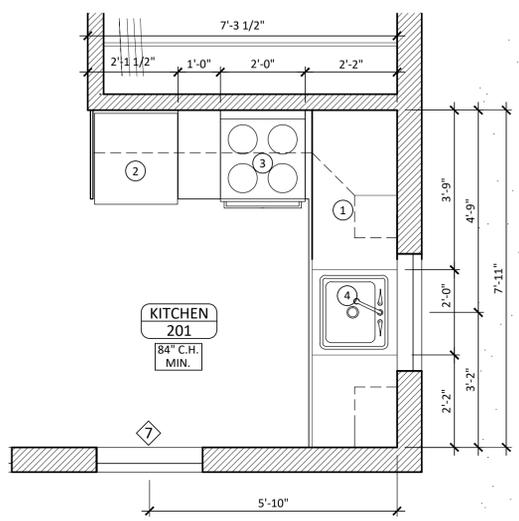
- KEYNOTES:
1. INSTALL NEW STAIR. SEE 2/A1.3 FOR ARCHITECTURAL DETAIL AND 9 & 10/S-3 FOR STRUCTURAL DETAIL.
  2. INSTALL NEW GUARDRAIL AND HANDRAIL. SEE 2/A1.3 FOR ARCHITECTURAL DETAIL. SEE 4/S-2 FOR STRUCTURAL DETAIL. GUARDRAIL MUST RESIST A LATERAL OUT-OF-PLANE LOAD OF 50 PLF OR A CONCENTRATED LOAD OF 200 LBS APPLIED FROM ANY DIRECTION.
  3. NOT USED.
  4. INSTALL CLOSET WITH SLIDING DOORS. SEE 1/A6.0 FOR DOOR/WINDOW SCHEDULE. SEE 1/S-4 FOR STRUCTURAL DETAIL.
  5. EGRESS WINDOW OPENING. SEE A2.1 FOR DOOR WINDOW PLACEMENT. SEE 1/A6.0 FOR DOOR/WINDOW SCHEDULE. SEE 1/S-4 FOR STRUCTURAL DETAIL. EGRESS NET OPENING AREA 5.7 SF MIN. CLEAR OPENING EXCEEDS 20"W X 24" H REQUIREMENT.
  6. INSTALL NEW DOOR. SEE A2.1 FOR DOOR WINDOW PLACEMENT. SEE 1/A6.0 FOR DOOR/WINDOW SCHEDULE. SEE 1/S-4 FOR STRUCTURAL DETAIL.
  7. INSTALL NEW WINDOW. SEE 2/A2.0 FOR DOOR WINDOW PLACEMENT. SEE 1/A6.0 FOR DOOR/WINDOW SCHEDULE. SEE 1/S-4 FOR STRUCTURAL DETAIL.

- GENERAL NOTES:
1. WASTE DIVERSION WORKSHEET FOR CONSTRUCTION WASTE MANAGEMENT PLAN TO BE SUBMITTED BY CONTRACTOR PRIOR TO PERMIT ISSUANCE.
  2. NO CHANGES TO (E) RESIDENCE.
  3. AN ENGINEERING PERMIT WILL BE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY, INCLUDING BUT NOT LIMITED TO CONSTRUCTION STAGING, RESERVED CONSTRUCTION PARKING, SIDEWALK, DRAINAGE, OR SEWER WORK. THE ENGINEERING PERMIT CAN BE ISSUED AFTER THE BUILDING PERMIT IS APPROVED AND ISSUED. UTILITY WORK (GAS, ELECTRICAL, WATER) REQUIRES A SEPARATE ENGINEERING UTILITY PERMIT FROM THE ENGINEERING DIVISION. APPROVAL OF THIS BUILDING PERMIT DOES NOT AUTHORIZE WORK IN THE PUBLIC RIGHT-OF-WAY.

CITY OF RICHMOND  
 PART OF PERMIT SET  
 Sep 22, 2021  
 By: myersD



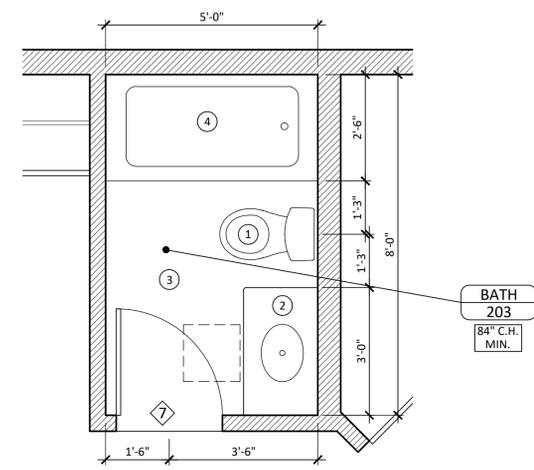
1 A1.2 PROPOSED SECOND FLOOR PLAN  
 SCALE: 3/8"=1'-0"



- KEYNOTES - KITCHEN:
1. INSTALL NEW SOLID SURFACE COUNTERTOPS & CABINETRY
  2. INSTALL NEW REFRIGERATOR W/ ICEMAKER SUPPLY
  3. INSTALL ELECTRIC RANGE W/ VENT HOOD. VENT HOOD TO TERMINATE TO EXTERIOR. SEE 1/P1.0 FOR DETAILS
  4. INSTALL NEW SINK W/ DISPOSAL. SEE 2/P1.0 FOR DETAILS

- GENERAL NOTES - KITCHEN:
1. EXTERIOR WALLS TO BE INSULATED TO R-23. SEE C & E/1/A1.3 FOR WALL DETAIL.
  2. NEW DRYWALL TO BE SMOOTH FINISH, LEVEL 4 MIN.
  3. SEE 1/E1.0 AND 1/P1.0 FOR ELECTRICAL & PLUMBING DETAILS.
  4. CABINETRY AND COUNTERTOPS TO BE SUPPLIED BY OWNER.
  5. SEE 2/P1.0 FIXTURE SCHEDULE FOR FIXTURE DETAILS.
  6. SEE 4/A1.2 FOR ADD'L CONSTRUCTION NOTES

2 A1.2 PROPOSED KITCHEN FLOOR PLAN  
 SCALE: 1/2"=1'-0"



- KEYNOTES - BATH:
1. INSTALL NEW LOW-FLOW TOILET. SEE 2/P1.0 FOR DETAILS
  2. INSTALL NEW 36" VANITY, SINK, COUNTERTOP, FAUCET, MIRROR
  3. INSTALL TILE FLOORING
  4. INSTALL NEW TUB W/ TILE SURROUND. SEE 2/P1.0 FOR DETAILS

- GENERAL NOTES - BATH:
1. EXTERIOR WALLS TO BE INSULATED TO R-23. SEE C & E/1/A1.3 FOR WALL DETAIL.
  2. NEW DRYWALL TO BE SMOOTH FINISH, LEVEL 4 MIN.
  3. SEE 1/E1.0 AND 1/P1.0 FOR ELECTRICAL & PLUMBING DETAILS.
  4. CABINETRY AND COUNTERTOPS TO BE SUPPLIED BY OWNER.
  5. SEE 2/P1.0 FIXTURE SCHEDULE FOR FIXTURE DETAILS.
  6. SEE 4/A1.2 FOR ADD'L CONSTRUCTION NOTES

3 A1.2 PROPOSED BATHROOM FLOOR PLAN  
 SCALE: 1/2"=1'-0"

MOISTURE CONTENT OF BUILDING MATERIALS:

BUILDING MATERIALS WITH VISIBLE SIGNS OF WATER DAMAGE SHALL NOT BE INSTALLED. WALL AND FLOOR FRAMING SHALL NOT BE ENCLOSED WHEN THE FRAMING MEMBERS EXCEED 19% MOISTURE CONTENT. MOISTURE CONTENT SHALL BE VERIFIED IN COMPLIANCE WITH THE FOLLOWING:

1. MOISTURE CONTENT SHALL BE DETERMINED WITH EITHER A PROBE-TYPE OR CONTACT-TYPE MOISTURE METER. EQUIVALENT MOISTURE VERIFICATION METHODS MAY BE APPROVED BY THE CITY OF BERKELEY AND SHALL SATISFY REQUIREMENTS FOUND IN CALGREEN SECTION 101.8.
2. MOISTURE READINGS SHALL BE TAKEN AT A POINT 2 FEET TO 4 FEET FROM THE GRADE STAMPED END OF EACH PIECE TO BE VERIFIED.
3. AT LEAST 3 RANDOM MOISTURE READINGS SHALL BE PERFORMED ON WALL AND FLOOR FRAMING WITH DOCUMENTATION ACCEPTABLE TO THE CITY OF BERKELEY PROVIDED AT THE TIME OF APPROVAL TO ENCLOSE THE WALL AND FLOOR FRAMING.

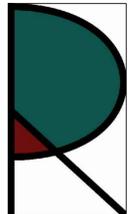
INSULATION PRODUCTS:

INSULATION PRODUCTS WHICH ARE VISIBLY WET OR HAVE A HIGH MOISTURE CONTENT SHALL BE REPLACED OR ALLOWED TO DRY PRIOR TO ENCLOSURE IN WALL OR FLOOR CAVITIES. WET-APPLIED INSULATION PRODUCTS SHALL FOLLOW THE MANUFACTURER'S DRYING RECOMMENDATIONS PRIOR TO ENCLOSURE.

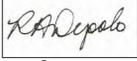
CALGREEN NOTES:

1. WASTE DIVERSION WORKSHEET FOR CONSTRUCTION WASTE MANAGEMENT PLAN TO BE SUBMITTED BY CONTRACTOR PRIOR TO PERMIT ISSUANCE.
2. ALL EXTERIOR WALLS TO BE INSULATED TO R-13, WHERE (E) PLASTER IS REMOVED.
3. ROOF CAVITIES TO BE INSULATED TO R-60.
4. ALL INTERIOR WALLS, WHERE NOT FIRE-RATED, TO BE 1/2" SHEETROCK, FINISHED TO LEVEL 4.
5. ANNULAR SPACES AROUND PIPES, ELECTRICAL CABLES, CONDUITS, OR OTHER OPENINGS IN SOLE/BOTTOM PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR SIMILAR METHOD ACCEPTABLE BY THE CITY OF RICHMOND. (CALGREEN 4.406.1)
6. AT THE TIME OF ROUGH INSTALLATION, DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE BY THE CITY OF BERKELEY TO REDUCE THE AMOUNT OF WATER, DUST AND DEBRIS, WHICH MAY ENTER THE SYSTEM. (CALGREEN 4.504.1)
7. ADHESIVES, SEALANTS AND CAULKS USED ON THE PROJECT SHALL COMPLY WITH CALGREEN TABLE 4.504.1 OR 4.504.2 FOR VOC LIMITS. (CALGREEN 4.504.2.1)
8. ARCHITECTURAL PAINTS AND COATINGS SHALL COMPLY WITH VOC LIMITS IN CALGREEN TABLE 4.504.3 (CALGREEN 4.504.2.2)
9. HARDWOOD PLYWOOD, PARTICLEBOARD AND MEDIUM DENSITY FIBERBOARD COMPOSITE WOOD PRODUCTS USED ON THE INTERIOR OR EXTERIOR OF THE BUILDING SHALL MEET THE REQUIREMENTS FOR FORMALDEHYDE AS SHOWN IN CALGREEN TABLE 4.504.5. (CALGREEN 4.504.5)
10. BUILDING MATERIALS WITH VISIBLE SIGNS OF WATER DAMAGE SHALL NOT BE INSTALLED. WALL AND FLOOR FRAMING SHALL NOT BE ENCLOSED WHEN THE FRAMING MEMBERS EXCEED 19% MOISTURE CONTENT. (CALGREEN 4.505.3)

4 A1.2 GENERAL CONSTRUCTION NOTES

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PROJECT:  
  
**3431 OHIO AVENUE  
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SUBMITTALS:

PERMIT SET  
 4 MARCH 2021

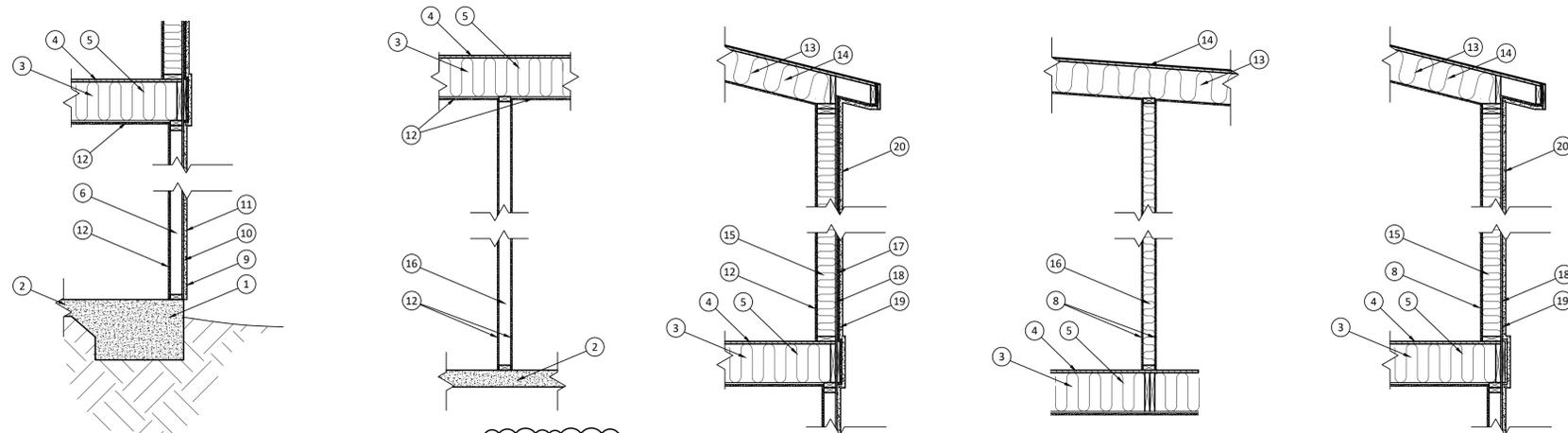
| REVISIONS: | DATE      | DESCRIPTION   |
|------------|-----------|---------------|
| 1          | 27-MAY-21 | CORRECTIONS 1 |

CITY OF RICHMOND  
 PART OF PERMIT SET  
 Sep 20 2021  
 By: GAUTAM

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SHEET TITLE:  
**PROPOSED  
 SECOND FLOOR  
 PLAN**

SHEET NUMBER:  
**A1.2**

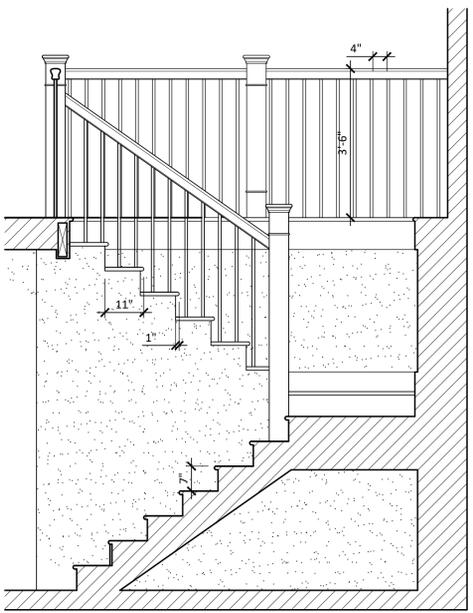


WALL TYPE A - FIRE-RATED      WALL TYPE B - FIRE-RATED      WALL TYPE C - FIRE-RATED      WALL TYPE D      WALL TYPE E

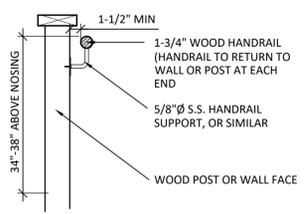
- 1 NEW CONCRETE PERIMETER FOOTING. SEE 1/5-2
- 2 (E) GARAGE CONCRETE SLAB
- 3 1-3/4 X 11-7/8 PSL FLOOR JOISTS, SEE 2/5-2 FOR DETAILS
- 4 3/4" T&G FLOOR SHEATHING, SEE 8/5-3 FOR DETAILS
- 5 R-19 FIBERGLASS INSULATION BETWEEN JOISTS PER TITLE 24
- 6 EXISTING 2X4 WALL STUDS @ 16" O.C.
- 7 R-23 SPRAY FOAM INSULATION PER TITLE 24
- 8 1/2" SHEETROCK
- 9 EXISTING 1/2" CDX PLYWOOD
- 10 EXISTING 15# FELT PAPER
- 11 EXISTING STUCCO
- 12 5/8" TYPE X FIRE-RATED SHEETROCK, 1-HOUR RATED
- 13 SEE 3/5-2 FOR ROOF STRUCTURAL
- 14 ROOF INSULATED TO R-60 WITH FOAM INSULATION
- 15 2X4 WALL STUDS @ 16" O.C., SEE 8/2-4 FOR DETAIL
- 16 2X4 WALL STUDS @ 16" O.C., SEE 5/2-4 FOR DETAIL
- 17 3/8" DENSGLASS FIRE-RATED GYPSUM SHEATHING
- 18 1/2" CDX PLYWOOD. SEE 6/5-3 FOR STRUCTURAL
- 19 HOUSEWRAP OR 15# FELT PAPER
- 20 STUCCO TO MATCH EXISTING

SEE STRUCTURAL DRAWINGS FOR WALL/FRAMING/FOUNDATION STRUCTURAL DETAILS  
SEE 5/A1.4 FOR LISTED FIRE-RATED DETAILS AND SPECIFICATIONS

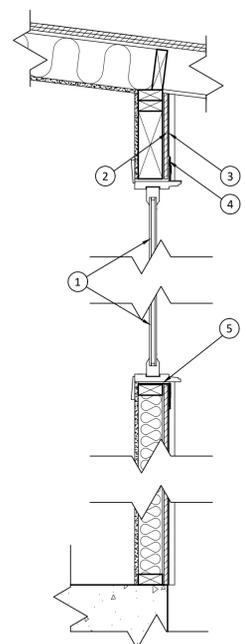
1 A1.3 WALL DETAILS  
SCALE: 1"=1'-0"



- GENERAL NOTES:
- MINIMUM STAIRWAY WIDTH ABOVE HANDRAIL TO BE 36". HANDRAIL MAY PROJECT IN REQ'D WIDTH 4-1/2" (PER CBCS 1003.3.3)
  - MAXIMUM RISER HEIGHT NOT TO EXCEED 7-3/4" (PER CBCS 1003.3.3)
  - MINIMUM TREAD DEPTH 10" (PER CBCS 1003.3.3)
  - MAXIMUM DIFFERENCE BETWEEN TALLEST & SHORTEST RISER OR LARGEST & SHORTEST TREAD RUN NOT TO EXCEED 3/8" (PER CBCS 1003.3.3)
  - NOSING MINIMUM 3/4", MAXIMUM 1-1/4" ON STAIRS WITH SOLID RISERS (PER CBCS 1003.3.3)
  - GRIPPABLE HANDRAIL REQ'D IF 4 OR MORE RISERS. HANDRAIL HEIGHT 34"-38" ABOVE STAIR NOSING (PER CBCS 1003.3.3)
  - GRIPS SHALL BE 1-1/2" MIN, 2" MAX CIRCULAR CROSS SECTION, SPACED 1-1/4" MIN. FROM WALL, AND SHALL RETURN TO NEWEL POST OR WALL. (PER CBCS 1003.3.3)
  - GUARDRAIL TO BE 42" MIN. HEIGHT, 4" DIAMETER SPHERE MAY NOT PASS THROUGH BALUSTERS. (PER CBCS 509.3)
  - SEE 1/53.1 FOR STAIR STRUCTURAL DETAIL
  - SEE 3/51.4 FOR HANDRAIL STRUCTURAL DETAIL
  - MIN. HEAD HEIGHT CLEARANCE 80" ABOVE STAIR NOSING MIN.

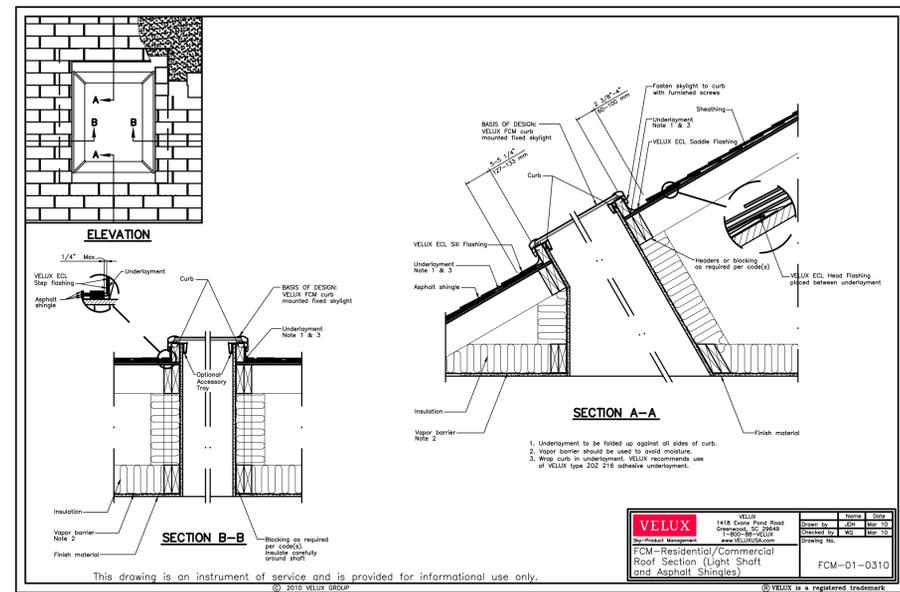


2 A1.3 STAIR/RAILING DETAIL, TYP.  
SCALE: 1/2"=1'-0"

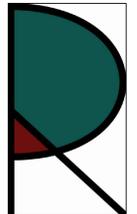


- FLANGED WOOD WINDOW/DOOR, DUAL PANE INSULATED GLASS, SEE WINDOW SCHEDULE FOR DETAILS, SILICONE CAULKING AT FLANGE PERIMETER, SECURED PER MANUFACTURER GUIDELINES
- 1/2" CDX SHEATHING
- 15# FELT PAPER
- SELF-ADHESIVE FLASHING AT WINDOW SIDES, UNDER 15# FELT AT TOP OF WINDOW.
- 15# FELT WRAPPED INTO WINDOW DOOR OPENING AT SIDES AND BOTTOM.

5 A1.3 WINDOW/DOOR FLASHING DETAIL, TYP.  
SCALE: 1"=1'-0"



6 A1.3 SKYLIGHT FLASHING DETAIL

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 PROJECT:

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SUBMITTAL: PERMIT SET 4 MARCH 2021

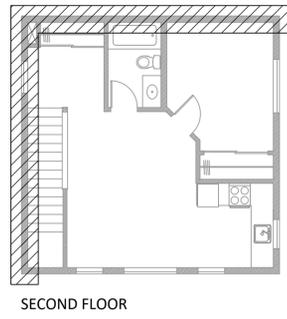
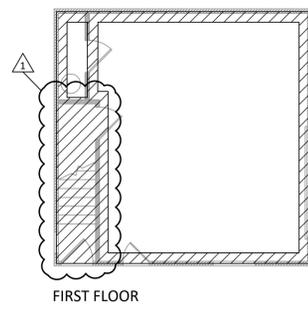
| REVISIONS: | DATE      | DESCRIPTION   |
|------------|-----------|---------------|
| 1          | 27-MAY-21 | CORRECTIONS 1 |

CITY OF RICHMOND  
 PART OF PERMIT SET  
 Sep 20 2021  
 By: GAUTAM

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SHEET TITLE: DETAILS

SHEET NUMBER: A1.3



INTERIOR FACES OF GARAGE AREA UNDER STAIRWELL AND CEILING TO BE 8" TYPE X FIRE-RATED SHEETROCK. SEE 3 & 4/A1.4 FOR NOTES AND PENETRATION DETAILS.

WALLS TO BE FIRE-RATED DUE TO PROXIMITY TO PROPERTY BOUNDARY.

| WALL  | WALL AREA | PROPOSED OPENING AREA | ALLOWABLE OPENING (25%) |
|-------|-----------|-----------------------|-------------------------|
| NORTH | 417 SF    | 0 SF                  | 104.25 SF               |
| WEST  | 448 SF    | 18.5 SF               | 112 SF                  |

THE TOTAL OPENING AREA IN EXTERIOR WALLS LOCATED 5 FEET OR LESS FROM PROPERTY LINES ARE LIMITED TO 25% OF THE WALL AREA PER CRC R302.1

- WALLS LOCATED 3' - 5' FROM A PROPERTY LINE SHALL HAVE NOT LESS THAN A 1-HOUR FIRE-RESISTANCE RATING WHEN TESTED IN ACCORDANCE WITH ASTM E 119 OR UL 263.
  - FIRE-RESISTANCE FLOOR-CEILING AND WALL ASSEMBLIES SHALL EXTEND TO AND BE TIGHT AGAINST THE EXTERIOR WALL, AND WALL ASSEMBLIES SHALL EXTEND FROM THE FOUNDATION TO THE UNDERSIDE OF THE ROOF SHEATHING.
  - PENETRATION OF THE RATED WALL ASSEMBLY SHALL COMPLY WITH CRC R302.4.
- MEMBRANE PENETRATIONS SHALL COMPLY WITH SECTION R302.4.1. WHERE WALLS ARE REQUIRED TO HAVE A FIRE-RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SO THAT THE REQUIRED FIRE-RESISTANCE RATING WILL NOT BE REDUCED. THE FOLLOWING EXCEPTIONS APPLY.
  - MEMBRANE PENETRATIONS OF NOT MORE THAN 2-HOUR FIRE-RESISTANCE-RATED WALLS AND PARTITIONS BY STEEL ELECTRICAL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES (0.0103 M<sup>2</sup>) IN AREA PROVIDED THAT THE AGGREGATE AREA OF THE OPENINGS THROUGH THE MEMBRANE DOES NOT EXCEED 100 SQUARE INCHES (0.0645 M<sup>2</sup>) IN ANY 100 SQUARE FEET (9.29 M<sup>2</sup>) OF WALL AREA. THE ANNULAR SPACE BETWEEN THE WALL MEMBRANE AND THE BOX SHALL NOT EXCEED 1/8 INCH (3.1 MM). SUCH BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY ONE OF THE FOLLOWING:
    - BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES (610 MM) WHERE THE WALL OR PARTITION IS CONSTRUCTED WITH INDIVIDUAL NONCOMMUNICATING STUD CAVITIES
    - BY A HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY WHERE THE WALL CAVITY IS FILLED WITH CELLULOSE LOOSE-FILL, ROCKWOOL OR SLAG MINERAL WOOL INSULATION.
    - BY SOLID FIREBLOCKING IN ACCORDANCE WITH SECTION R302.11.
    - BY PROTECTING BOTH BOXES WITH LISTED PUTTY PADS.
  - MEMBRANE PENETRATIONS BY LISTED ELECTRICAL BOXES OF ANY MATERIALS PROVIDED THAT THE BOXES HAVE BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED IN ACCORDANCE WITH THE INSTRUCTIONS INCLUDED IN THE LISTING. THE ANNULAR SPACE BETWEEN THE WALL MEMBRANE AND THE BOX SHALL NOT EXCEED 1/8 INCH (3.1 MM) UNLESS LISTED OTHERWISE. SUCH BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED BY ONE OF THE FOLLOWING:
    - BY THE HORIZONTAL DISTANCE SPECIFIED IN THE LISTING OF THE ELECTRICAL BOXES.
    - BY SOLID FIREBLOCKING IN ACCORDANCE WITH SECTION R302.11.
    - BY PROTECTING BOTH BOXES WITH LISTED PUTTY PADS.
- SEE DETAIL 4/A1.4 FOR PIPES PENETRATING FIRE-RATED ASSEMBLIES IN ACCORDANCE WITH CPC 1501.1.

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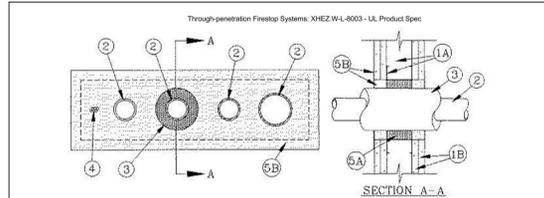
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PROJECT:

1 FIRE-RATED WALLS  
 SCALE: 3/8"=1'-0"

2 OPENING AREA CALCULATIONS  
 A1.4

3 FIRE SEPARATION - GENERAL NOTES  
 A1.4



1. **Wall Assembly** — The 1 or 2 h fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. In 2 h fire-rated assemblies, steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. In 1 h fire-rated assemblies, steel studs to be min 3-5/8 in. wide and spaced 24 in. OC. Additional studs shall be installed horizontally in such a manner to form a nom 22-3/4 in. wide by 6 in. high opening.

B. **Gypsum Board** — 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. If the through penetrants are installed in a wood stud/gypsum board assembly, the max area of opening is 87 sq. in. with max dimension of 14-1/2 in.

The hourly F rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through Penetrants** — Four pipes, conduits or tubing to be installed within the opening. The space between pipes, conduits or tubing shall be a nom 1-7/8 in. The space between pipes, conduits or tubing and periphery of opening shall be min 5/8 in. to max 1-15/16 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of pipes, conduits or tubing may be used:

A. **Steel Pipe** — Nom 3 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.

- Through-penetration Firestop Systems: XHEZ-W4-8003 - UL Product Spec
- B. **Iron Pipe** — Nom 2 in. diam (or smaller) cast or ductile iron pipe.
  - C. **Conduit** — Nom 3 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
  - D. **Copper Tubing** — Nom 2 in. diam (or smaller) Type L (or heavier) copper tubing.
  - E. **Copper Pipe** — Nom 2 in. diam (or smaller) Regular (or heavier) copper pipe.
  - F. **Polyvinyl Chloride (PVC) Pipe** — Nom 2 in. diam (or smaller) Schedule 40 PVC pipe for use in closed (process or supply) piping system.

**Pipe Covering** — One of the following types of pipe coverings shall be used:

A. **Pipe and Equipment Covering — Materials** — Nom 1 in. thick hollow cylindrical heavy density (min 3.5 pcf) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or with butt tape supplied with the product. The pipe covering may be installed on one of the metallic pipes or tubing having a nom diam of 2 in. or less. The insulated pipe or tubing shall be spaced a nom 1-7/8 in. from the other through-penetrants. The annular space between the insulated through penetrant and periphery of the opening shall be a nom 1 in. See **Pipe and Equipment Covering — Materials** (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

B. **Pipe Covering Materials** — Nom 1 in. thick faced mineral fiber pipe insulation sized to the outside diam of pipe or tube. Pipe insulation secured with min 8 AWG steel wire spaced max 12 in. OC. The insulated pipe or tubing shall be spaced a nom 1-7/8 in. from the other through-penetrants. The annular space between the insulated through penetrant and periphery of opening shall be a nom 1 in.

**INDUSTRIAL INSULATION GROUP L L C** — High Temperature Pipe Insulation 1200, High Temperature Pipe Insulation BWT or High Temperature Pipe Insulation Thermaloc

C. **Sheathing Material** — (Not shown) — Used in conjunction with Item 3B. Foli-scrim-kraft or all service jacket material shall be wrapped around the outer circumference of the pipe insulation (Item 3B) with the kraft side exposed. Longitudinal joints and transverse joints sealed with metal fasteners or butt tape.

Through-penetration Firestop Systems: XHEZ-W4-8003 - UL Product Spec

See **Sheathing Materials** (BVDV) category in the Building Materials Directory for names of manufacturers. Any sheathing material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

4. **Cables** — Max six cables to be installed within the firestop system. Cables to be spaced 1-1/2 in. from the through-penetrants. The space between the cables and periphery of opening shall range from a min 1 in. to a max 2-7/8 in. Cables to be tightly bundled together and rigidly supported on both surfaces of wall. Any combination of the following types and sizes of copper conductor cables may be used:

- A. Max 25 pair No. 24 AWG (or smaller) telephone cables with polyvinyl chloride (PVC) insulation and jacket.
- B. Max 3/C (with ground) — No. 10 AWG (or smaller) nonmetallic sheathed ("Romex") cable with PVC insulation and jacket.
- C. Max 4 pair No. 18 AWG (or smaller) thermostat cables with PVC insulation and jacket.

5. **Firestop System** — The firestop system shall consist of the following:

A. **Packing Material** — In 2 h fire-rated assemblies, min 2-1/2 in. thickness of min 6 pcf mineral wool batt insulation firmly packed into opening as a permanent form. In 1 h fire-rated assemblies, min 2-1/4 in. thickness of mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.

B. **Fill, Void or Cavity Material** — **Caulk** — Min 1-1/4 in. thickness of fill material applied within the annulus, on both surfaces of wall. Caulk to be forced into interstices of cable group to max extent possible. Additional caulk to be installed such that a min 1 in. is lapping beyond periphery of the opening.

**SPECIFIED TECHNOLOGIES INC** — SpecSeal Series SSS Sealant or SpecSeal LCI Sealant

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

| GA FILE NO. WP 8170   | PROPRIETARY* | 1 HOUR FIRE   |
|---|--------------|---|
| GYPSUM WALLBOARD, WOOD STUDS, GYPSUM SHEATHING, STUCCO NETTING, CEMENT STUCCO   |              |   |
| <b>Fire Design:</b><br>EXTERIOR SIDE: 5/8" proprietary type X gypsum sheathing applied parallel or at right angles to 2 x 4 wood studs 16" o.c. with 1-1/4" Type W screws 8" o.c. Pre-furred wire stucco netting applied over gypsum sheathing with 1-1/4" x 1" steel staples 7" o.c. Portland cement stucco, 3/4", applied over stucco netting.<br>INTERIOR SIDE: One layer 5/8" proprietary type X gypsum wallboard applied parallel or at right angles to studs with 1-1/4" Type W screws 8" o.c. (LOAD-BEARING) |              |   |
| <b>PROPRIETARY GYPSUM BOARD</b><br>American Gypsum Company LLC.....5/8" FireBloc® Type X Gypsum Board<br>5/8" M-Glass® Type X Exterior Gypsum Sheathing   |              |   |
|   |              | Thickness: 6-1/8" (Fire)<br>Approx. Weight: 11 psf (Fire)<br>Fire Test: UL R14196, 4787829354, 02-01-17, UL Design V333 |

4 FIRE SEPARATION - PENETRATIONS  
 A1.4

5 FIRE-RATED WALL DETAIL  
 A1.4

CITY OF RICHMOND  
 PART OF PERMIT SET  
 Sep 22, 2021  
 By: myersD

SUBMITTAL: PERMIT SET 4 MARCH 2021

REVISIONS:

| DATE      | DESCRIPTION   |
|-----------|---------------|
| 27-MAY 21 | CORRECTIONS 1 |

CITY OF RICHMOND  
 PART OF PERMIT SET  
 Sep 20 2021  
 By: GAUTAM

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SHEET TITLE:

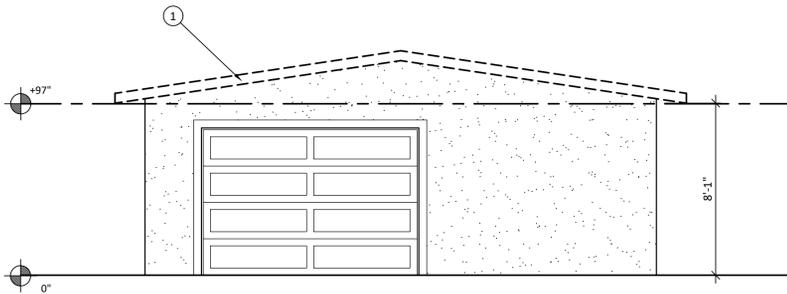
FIRE RESISTANCE

SHEET NUMBER:

A1.4

KEYNOTES:

- ① DEMO (E) GARAGE ROOF AND CEILING STRUCTURES. PREP FOR ADDITION OF 2ND STORY. SEE S-2 FOR STRUCTURAL PLANS.



GENERAL NOTES:

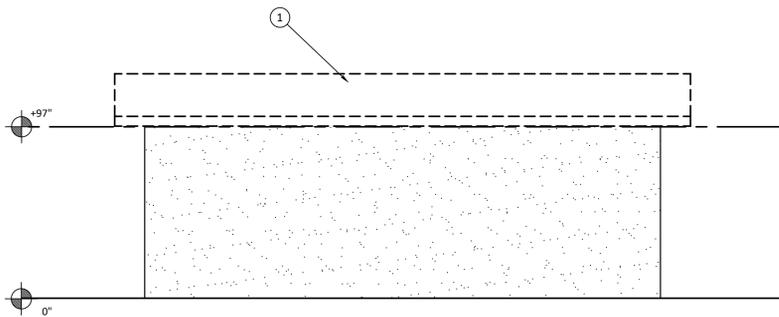
- 1. WASTE DIVERSION WORKSHEET FOR CONSTRUCTION WASTE MANAGEMENT PLAN TO BE SUBMITTED BY CONTRACTOR PRIOR TO PERMIT ISSUANCE.

1 EXISTING/DEMO EXTERIOR ELEVATION - EAST

A2.0 SCALE: 1/4"=1'-0"

KEYNOTES:

- ① DEMO (E) GARAGE ROOF AND CEILING STRUCTURES. PREP FOR ADDITION OF 2ND STORY. SEE S-2 FOR STRUCTURAL PLANS.



GENERAL NOTES:

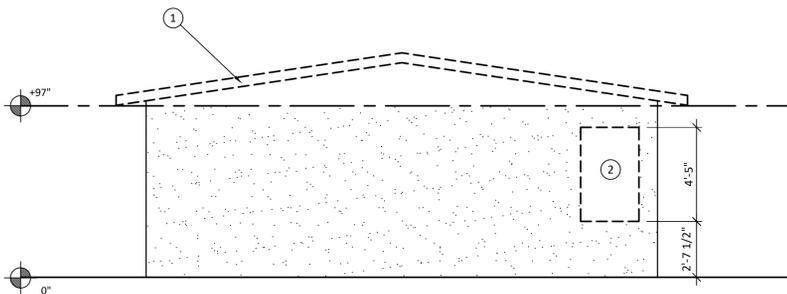
- 1. WASTE DIVERSION WORKSHEET FOR CONSTRUCTION WASTE MANAGEMENT PLAN TO BE SUBMITTED BY CONTRACTOR PRIOR TO PERMIT ISSUANCE.

2 EXISTING/DEMO EXTERIOR ELEVATION - NORTH

A2.0 SCALE: 1/4"=1'-0"

KEYNOTES:

- ① DEMO (E) GARAGE ROOF AND CEILING STRUCTURES. PREP FOR ADDITION OF 2ND STORY. SEE S-2 FOR STRUCTURAL PLANS.
- ② DEMO STUCCO AND WALL AT LOCATION OF NEW WINDOW. SEE 1/A6.0 FOR DOOR/WINDOW SCHEDULE. SEE 8/5-4 FOR FRAMING DETAIL.



GENERAL NOTES:

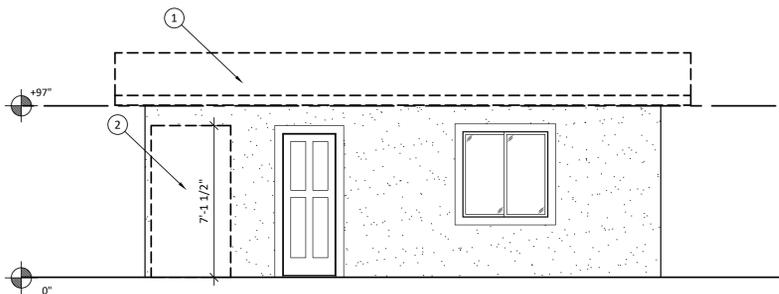
- 1. WASTE DIVERSION WORKSHEET FOR CONSTRUCTION WASTE MANAGEMENT PLAN TO BE SUBMITTED BY CONTRACTOR PRIOR TO PERMIT ISSUANCE.

3 EXISTING/DEMO EXTERIOR ELEVATION - WEST

A2.0 SCALE: 1/4"=1'-0"

KEYNOTES:

- ① DEMO (E) GARAGE ROOF AND CEILING STRUCTURES. PREP FOR ADDITION OF 2ND STORY. SEE S-2 FOR STRUCTURAL PLANS.
- ② DEMO STUCCO AND WALL AT LOCATION OF NEW DOOR. SEE 1/A6.0 FOR DOOR/WINDOW SCHEDULE. SEE 8/5-4 FOR FRAMING DETAIL.



GENERAL NOTES:

- 1. WASTE DIVERSION WORKSHEET FOR CONSTRUCTION WASTE MANAGEMENT PLAN TO BE SUBMITTED BY CONTRACTOR PRIOR TO PERMIT ISSUANCE.

4 EXISTING/DEMO EXTERIOR ELEVATION - SOUTH

A2.1 SCALE: 1/4"=1'-0"

DESIGNER:



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PROJECT:



3431 OHIO AVENUE  
ACCESSORY DWELLING UNIT  
RICHMOND, CA 94804

SUBMITTAL:

PERMIT SET  
4 MARCH 2021

REVISIONS:

| # | DATE        | DESCRIPTION                         |
|---|-------------|-------------------------------------|
| 1 | Sep 20 2021 | CITY OF RICHMOND PART OF PERMIT SET |
| 2 |             |                                     |
| 3 |             |                                     |
| 4 |             |                                     |

CITY OF RICHMOND  
PART OF PERMIT SET  
Sep 20 2021  
By: GAUTAM

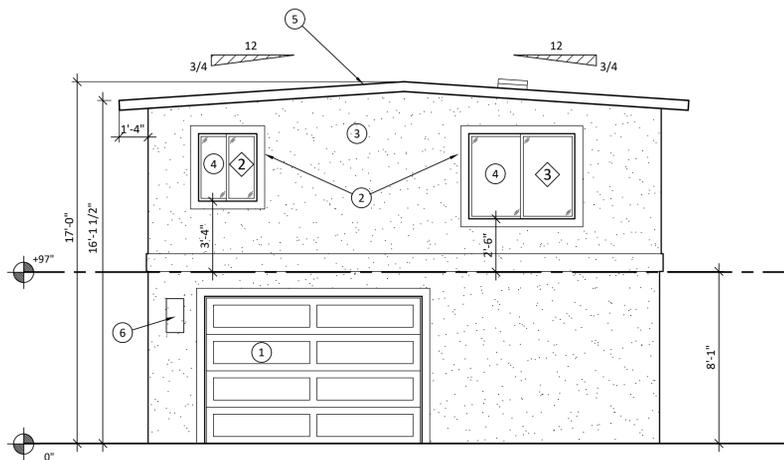
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SHEET TITLE:

EXISTING/DEMO  
ELEVATIONS

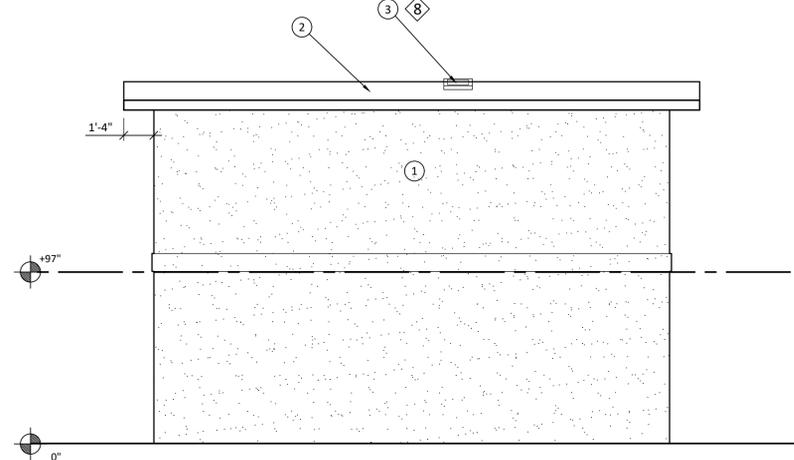
SHEET NUMBER:

A2.0



- KEYNOTES:
- (E) GARAGE DOOR TO REMAIN.
  - WINDOW & DOOR TRIM TO BE STUCCO, MATCH (E).
  - STUCCO TO MATCH (E).
  - INSTALL NEW WINDOW. SEE 5/A1.3 FOR FLASHING DETAIL. SEE 1/A6.0 FOR DOOR/WINDOW SCHEDULE.
  - ROOF TO BE TYPE C FIRE-RATED BUILT-UP ROOF PER TABLE 1505.1, CBC. SEE S1.1 FOR FOR STRUCTURAL DETAILS. ROOF TO BE INSULATED WITH AIR IMPERMEABLE SPRAY FOAM TO R-50.
  - ADU SHALL BE PROVIDED WITH APPROVED ADDRESS IDENTIFICATION, AFFIXED TO THE DWELLING BUILDING. THE ADDRESS IDENTIFICATION CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND, AND EACH CHARACTER SHALL BE NOT LESS THAN 4-INCHES IN HEIGHT WITH A STROKE WIDTH OF NOT LESS THAN 0.5-INCH. THE ADDRESS IDENTIFICATION SIGNS SHALL BE ILLUMINATED DURING ALL HOURS OF DARKNESS TO FACILITATE EMERGENCY RESPONDERS IDENTIFY THE BUILDING IN AN EVENT AN EMERGENCY. CRC §9319.1.

- GENERAL NOTES:
- SEE 1/A6.0 FOR DOOR & WINDOW SCHEDULE FOR WINDOW DETAILS
  - WASTE DIVERSION WORKSHEET FOR CONSTRUCTION WASTE MANAGEMENT PLAN TO BE SUBMITTED BY CONTRACTOR PRIOR TO PERMIT ISSUANCE.

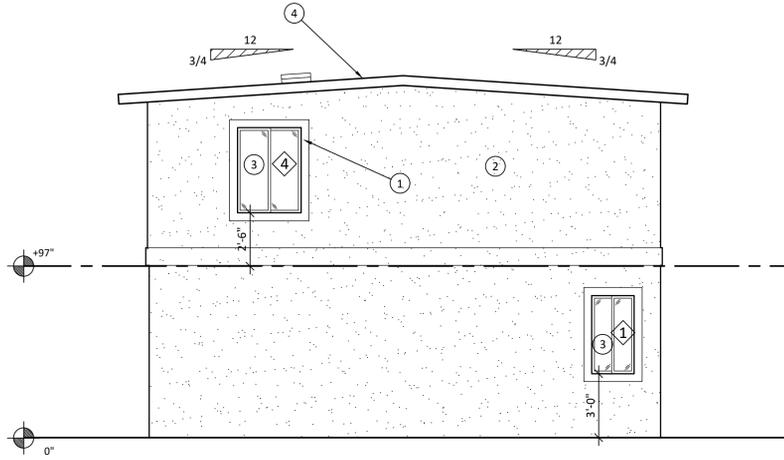


- KEYNOTES:
- STUCCO TO MATCH (E). WALL TO BE FIRE-RATED DUE TO PROXIMITY TO PROPERTY LINE. SEE C/1/A1.3 FOR WALL CONSTRUCTION DETAIL.
  - ROOF TO BE TYPE C FIRE-RATED BUILT-UP ROOF PER TABLE 1505.1, CBC. SEE S1.1 FOR FOR STRUCTURAL DETAILS. ROOF TO BE INSULATED WITH AIR IMPERMEABLE SPRAY FOAM TO R-50.
  - INSTALL SKYLIGHT. 1/A6.0 FOR WINDOW SCHEDULE. SEE 6/A1.3 FOR FLASHING DETAIL.

- GENERAL NOTES:
- WASTE DIVERSION WORKSHEET FOR CONSTRUCTION WASTE MANAGEMENT PLAN TO BE SUBMITTED BY CONTRACTOR PRIOR TO PERMIT ISSUANCE.

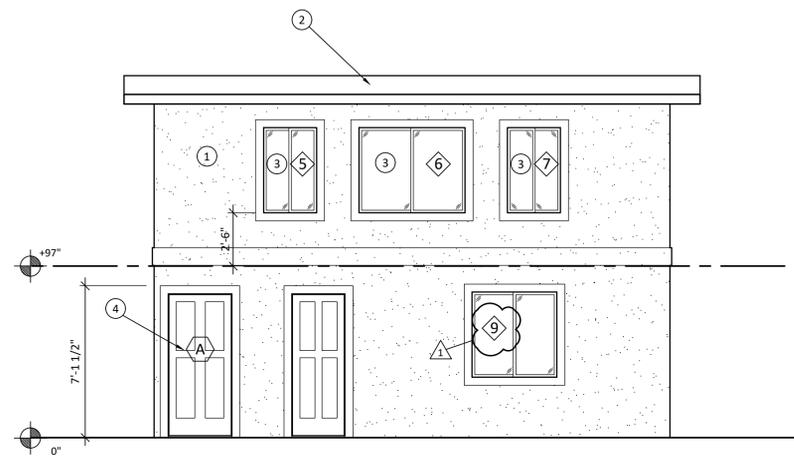
1 A2.1 PROPOSED EXTERIOR ELEVATION - EAST  
SCALE: 3/4"=1'-0"

2 A2.1 PROPOSED EXTERIOR ELEVATION - NORTH  
SCALE: 3/4"=1'-0"



- KEYNOTES:
- WINDOW & DOOR TRIM TO BE STUCCO, MATCH (E).
  - STUCCO TO MATCH (E). WALL TO BE FIRE-RATED DUE TO PROXIMITY TO PROPERTY LINE. SEE C/1/A1.3 FOR WALL CONSTRUCTION DETAIL.
  - INSTALL NEW WINDOW. SEE 5/A1.3 FOR FLASHING DETAIL. SEE 1/A6.0 FOR DOOR/WINDOW SCHEDULE.
  - ROOF TO BE TYPE C FIRE-RATED BUILT-UP ROOF PER TABLE 1505.1, CBC. SEE S1.1 FOR FOR STRUCTURAL DETAILS. ROOF TO BE INSULATED WITH AIR IMPERMEABLE SPRAY FOAM TO R-50.

- GENERAL NOTES:
- SEE 1/A6.0 FOR DOOR & WINDOW SCHEDULE FOR WINDOW DETAILS
  - WASTE DIVERSION WORKSHEET FOR CONSTRUCTION WASTE MANAGEMENT PLAN TO BE SUBMITTED BY CONTRACTOR PRIOR TO PERMIT ISSUANCE.

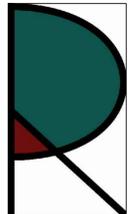


- KEYNOTES:
- STUCCO TO MATCH (E).
  - ROOF TO BE TYPE C FIRE-RATED BUILT-UP ROOF PER TABLE 1505.1, CBC. SEE S1.1 FOR FOR STRUCTURAL DETAILS. ROOF TO BE INSULATED WITH AIR IMPERMEABLE SPRAY FOAM TO R-50.
  - INSTALL NEW WINDOW. SEE 5/A1.3 FOR FLASHING DETAIL. SEE 1/A6.0 FOR DOOR/WINDOW SCHEDULE.
  - INSTALL EXTERIOR DOOR. SEE 5/A1.3 FOR FLASHING DETAIL. SEE 1/A6.0 FOR DOOR/WINDOW SCHEDULE.

- GENERAL NOTES:
- SEE 1/A6.0 FOR DOOR & WINDOW SCHEDULE FOR WINDOW DETAILS
  - WASTE DIVERSION WORKSHEET FOR CONSTRUCTION WASTE MANAGEMENT PLAN TO BE SUBMITTED BY CONTRACTOR PRIOR TO PERMIT ISSUANCE.

3 A2.1 PROPOSED EXTERIOR ELEVATION - WEST  
SCALE: 3/4"=1'-0"

4 A2.1 PROPOSED EXTERIOR ELEVATION - SOUTH  
SCALE: 3/4"=1'-0"

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PROJECT:  


3431 OHIO AVENUE  
 ACCESSORY DWELLING UNIT  
 RICHMOND, CA 94804

SUBMITTAL:

PERMIT SET  
4 MARCH 2021

| REVISIONS: | DATE      | DESCRIPTION   |
|------------|-----------|---------------|
| 1          | 27-MAY 21 | CORRECTIONS 1 |

CITY OF RICHMOND  
 PART OF PERMIT SET  
 Sep 20 2021  
 By: GAUTAM

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SHEET TITLE:  
 PROPOSED ELEVATIONS  
 SHEET NUMBER:

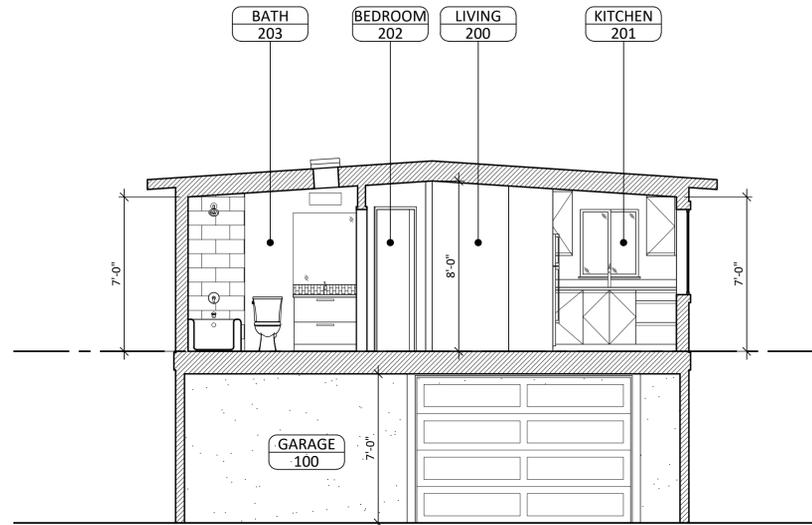
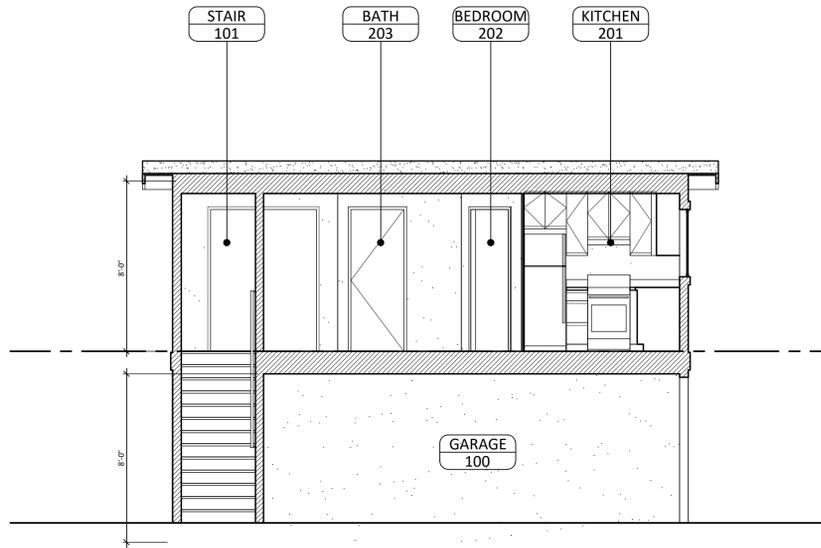
A2.1

| MARK | DESCRIPTION                     | ROOM        | MATERIAL | R.O. SIZE   | SILL HT. | TEMP. | HARDWARE | REMARKS  |
|------|---------------------------------|-------------|----------|-------------|----------|-------|----------|--|
| A    | EXTERIOR GRADE STEEL ENTRY DOOR | STAIR 101   | STEEL    | 38" X 82.5" | ¾" MAX   | N/A   | TBD      | 36"X 80" STEEL ENTRY DOOR, PAINT-GRADE                             |
| B    | FIRE-RATED STEEL DOOR           | STORAGE 102 | STEEL    | 38" X 82.5" | N/A      | N/A   | TBD      | 36"X 80" STEEL ENTRY DOOR, PAINT-GRADE, 1-HOUR RATED, SELF-CLOSING |
| C    | FIRE-RATED STEEL DOOR           | STORAGE 102 | STEEL    | 38" X 82.5" | N/A      | N/A   | TBD      | 36"X 80" STEEL ENTRY DOOR, PAINT-GRADE, 1-HOUR RATED, SELF-CLOSING |
| D    | SLIDING CLOSET DOOR             | LIVING 200  | WOOD     | 61" X 82.5" | N/A      | N/A   | SLIDING  | SLIDING CLOSET DOORS, 30"X80" X2                                   |
| E    | INTERIOR DOOR, PAINT-GRADE      | BATH 203    | WOOD     | 32" X 82.5" | N/A      | N/A   | TBD      | 30" X 80" INTERIOR DOOR  |
| F    | INTERIOR DOOR, PAINT-GRADE      | BEDROOM 202 | WOOD     | 32" X 82.5" | N/A      | N/A   | TBD      | 30" X 80" INTERIOR DOOR  |
| G    | SLIDING CLOSET DOOR             | BEDROOM 202 | WOOD     | 71" X 82.5" | N/A      | N/A   | SLIDING  | SLIDING CLOSET DOORS, 36"X80" X2                                   |

| MARK | DESCRIPTION                        | ROOM        | MATERIAL | OPENING SIZE  | SILL HT. | TEMP. | HARDWARE | REMARKS  |
|------|------------------------------------|-------------|----------|---------------|----------|-------|----------|--|
| 1    | SLIDER, INSULATED GLASS, 24" X 44" | STAIR 101   | VINYL    | 25" X 45"     | 30"      | NO    | TBD      | VINYL DUAL-PANED SLIDER WINDOW   |
| 2    | SLIDER, INSULATED GLASS, 32" X 38" | KITCHEN 201 | VINYL    | 33" X 39"     | 40"      | NO    | TBD      | VINYL DUAL-PANED SLIDER WINDOW   |
| 3    | SLIDER, INSULATED GLASS, 60" X 48" | BEDROOM 202 | VINYL    | 61" X 49"     | 30"      | NO    | TBD      | VINYL DUAL-PANED SLIDER WINDOW, EGRESS NET OPENING AREA 5.7 SF MIN, CLEAR OPENING EXCEEDS 20"W X 24" H REQUIREMENT |
| 4    | SLIDER, INSULATED GLASS, 36" X 48" | LIVING 100  | VINYL    | 37" X 49"     | 30"      | NO    | TBD      | VINYL DUAL-PANED SLIDER WINDOW   |
| 5    | SLIDER, INSULATED GLASS, 30" X 48" | LIVING 100  | VINYL    | 31" X 49"     | 30"      | NO    | TBD      | VINYL DUAL-PANED SLIDER WINDOW   |
| 6    | SLIDER, INSULATED GLASS, 60" X 48" | LIVING 100  | VINYL    | 61" X 49"     | 30"      | NO    | TBD      | VINYL DUAL-PANED SLIDER WINDOW   |
| 7    | SLIDER, INSULATED GLASS, 30" X 48" | LIVING 100  | VINYL    | 31" X 49"     | 30"      | NO    | TBD      | VINYL DUAL-PANED SLIDER WINDOW   |
| 8    | FIXED SKYLIGHT, 22.5" X 22.5"      | BATH 203    | ALUMINUM | 22.5" X 22.5" | 34"      | NO    | SLIDER   | VELUX FCM 2222, SEE 1/A6.1 FOR SPECIFICATIONS. SEE 6/A1.3 FOR CURB DETAIL  |
| 9    | EXISTING SLIDER WINDOW, 48" X 48"  | GARAGE 100  | VINYL    | 48" X 48"     | N/A      | YES   | FIXED    | EXISTING VINYL DUAL-PANED SLIDER WINDOW  |

NOTE: CONTRACTOR TO VERIFY MEASUREMENTS ON SITE. SEE 2/A4.0 FOR FLASHING DETAILS.  
WINDOWS MUST MEET MIN. SGHC OF .50 AND U-FACTOR OF .20 PER TITLE 24 REQUIREMENTS.

1 A6.0 DOOR & WINDOW SCHEDULE



2 A6.0 BUILDING SECTION  
SCALE: ¼"=1'-0"

3 A6.0 BUILDING SECTION  
SCALE: ¼"=1'-0"

DESIGNER:  
  
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 OWNERS:  
 PATRICIA RODRIGUEZ & LUIS GONZALEZ  
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 510-978-0860

PROJECT:  


3431 OHIO AVENUE  
 ACCESSORY DWELLING UNIT  
 RICHMOND, CA 94804

SUBMITTAL:

PERMIT SET  
 4 MARCH 2021

| REVISIONS: | DATE      | DESCRIPTION   |
|------------|-----------|---------------|
| 1          | 27-MAY 21 | CORRECTIONS 1 |

CITY OF RICHMOND  
 PART OF PERMIT SET  
 Sep 20 2021  
 By: GAUTAM

These drawings, specifications, ideas, designs, and arrangements presented hereby are and shall remain the property of Richard A. Depolo. No part thereof shall be copied, disclosed to others or used in connection with any work or project other than the specific project for which they were prepared and developed without the written consent of Richard A. Depolo. Visual contact with these drawings or specifications shall constitute conclusive evidence of acceptance of these restrictions.

SHEET TITLE:

DOOR & WINDOW  
 SCHEDULE  
 BLDG SECTIONS

SHEET NUMBER:

A6.0

- ALL ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH LATEST CITY OF RICHMOND ELECTRICAL CODE, 2019 CALIFORNIA ELECTRICAL CODE, 2019 CALIFORNIA ENERGY STANDARDS, AND 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CGBC).
- BEFORE STARTING WORK, EXAMINE THE COMPLETE SET OF DRAWINGS FOR ALL TRADES, INCLUDING ARCHITECTURAL AND PLUMBING. VERIFY ALL DIMENSIONS, SPACE REQUIREMENTS AND POINTS OF CONNECTION TO ALL EQUIPMENT. MAKE ANY MINOR ADJUSTMENTS NECESSARY TO AVOID CONFLICTS WITH OTHER TRADES. MAJOR DISCREPANCIES SHALL BE RESOLVED IN WRITING PRIOR TO COMMENCING WORK.
- THE DRAWINGS INDICATE, IN A DIAGRAMMATIC MANNER, THE DESIRED LOCATIONS AND ARRANGEMENT OF THE COMPONENTS OF THE ELECTRICAL WORK. DETERMINE EXACT CONDUIT ROUTING, CONDUIT BENDS, AUXILIARY JUNCTION BOXES, SUPPORTS AND UNDEFINED CONSTRUCTION DETAILS AS A JOB CONDITION TO BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS.
- PROVIDE AND MAINTAIN RECORD DRAWINGS ON THE JOB THAT ACCURATELY REFLECT CURRENT AS-BUILT STATUS OF THE PROJECT.
- SEE REFLECTED CEILING PLAN AND ARCHITECTURAL ELEVATIONS FOR EXACT LOCATION OF ALL LIGHT FIXTURES.
- MATERIALS AND EQUIPMENT SHALL BE NEW AND LISTED BY AND BEAR THE LABEL OF THE UNDERWRITER'S LABORATORY OR OTHER APPROVED INDEPENDENT TESTING LABORATORY, WHERE SUBJECT TO SUCH APPROVAL, AND SHALL BE APPROVED BY ALL LOCAL AUTHORITIES HAVING JURISDICTION.
- ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION OR RECOMMENDATION.
- ITEMS OF A SIMILAR NATURE SHALL BE OF THE SAME TYPE AND MANUFACTURE.
- ALL EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL WITH OR AT RIGHT ANGLES TO ARCHITECTURAL FEATURES SUCH AS THE BUILDING LINE, BEAMS OR CEILINGS.
- ALL DEVICE LOCATIONS SHALL BE COORDINATED WITH THE ARCHITECTURAL ELEVATION PRIOR TO INSTALLATION.
- FEEDER RUNS IN A NON-METALLIC CONDUIT SHALL CARRY A GREEN INSULATED CODE-SIZED GROUNDING CONDUCTOR PROPERLY CONNECTED FOR ELECTRICAL GROUND CONTINUITY.
- BATHROOM LIGHTING TO BE HIGH EFFICACY, CONTROLLED BY MANUAL ON, AUTO OFF SWITCH. EXHAUST FANS TO BE INSTALLED WITH HUMIDISTAT CONTROL.
- STORAGE AND UTILITY ROOM LIGHTING TO BE HIGH EFFICACY, CONTROLLED BY MANUAL ON, AUTO OFF SWITCH.
- ALL PERMANENTLY INSTALLED OUTDOOR LIGHTING SHALL BE CONTROLLED BY A PHOTOCONTROL OR ASTRONOMICAL TIME SWITCH THAT AUTOMATICALLY TURNS OFF THE OUTDOOR LIGHTING WHEN DAYLIGHT IS AVAILABLE. (CEC Sec.132(c)1)
- SMOKE ALARMS SHALL BE PROVIDED AT ALL BEDROOMS AND IN AREAS LEADING TO BEDROOMS. SMOKE ALARMS MUST BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. SMOKE ALARMS TO HAVE PERMANENT POWER SUPPLY WITH BATTERY BACKUP AND BE INTERCONNECTED. SMOKE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS [CRC §R314.4]. SMOKE ALARM MUST BE LISTED IN ACCORDANCE WITH UL 217 AND CALIFORNIA STATE FIRE MARSHAL APPROVED FOR SMOKE ALARMS [CRC §R314.1.1].
- CARBON MONOXIDE ALARMS SHALL BE PROVIDED OUTSIDE OF EACH SLEEPING AREA IN THE IMMEDIATE VICINITY OF EVERY BEDROOM AND ON EVERY LEVEL INCLUDING BASEMENTS. CARBON MONOXIDE ALARMS MUST BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. CARBON MONOXIDE ALARM TO HAVE PERMANENT POWER SUPPLY WITH BATTERY BACKUP [CRC 315]. CARBON MONOXIDE ALARM MUST BE LISTED IN ACCORDANCE WITH UL 2034. §R315.1.1.
- ALL 120-VOLT, SINGLE PHASE, 15- AND 20-AMP BRANCH CIRCUITS SUPPLYING OUTLETS IN FAMILY/LIVING/DINING ROOMS, BEDROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS/AREAS (EXCEPT KITCHEN/BATHROOMS/LAUNDRY) SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUITS. (CEC ART.210.12 (B)).
- ALL 125-VOLT, 15- AND 20- AMPERE RECEPTACLE OUTLETS SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES PER CEC 406.12.
- INSTALL TWO 20-AMP DEDICATED CIRCUITS FOR SMALL APPLIANCES AT THE KITCHENS PER CEC 210.52(B)
- VENTILATION: EACH BATHROOM CONTAINING A BATHTUB, SHOWER OR TUB/SHOWER COMBINATION SHALL BE MECHANICALLY VENTILATED AND SHALL COMPLY WITH THE FOLLOWING: [CRC §R303.3.CMC §402.5 AND CGBC §4.506.1]
  - FANS SHALL BE ENERGY STAR COMPLIANT AND DUCTED TO TERMINATE OUTSIDE THE BUILDING.
  - BATHROOM EXHAUST FAN(S) MUST BE CONTROLLED BY A HUMIDISTAT WHICH SHALL BE READILY ACCESSIBLE.
  - A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO THE EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL (I.E., BUILT IN).
  - EXHAUST FANS SHALL BE SWITCHED SEPARATELY FROM LIGHTING SYSTEM. [CENC§150.0(K)2B]
  - TOILET ROOMS, WHICH ARE NOT EQUIPPED WITH A WINDOW THAT PROVIDES A VENTILATION OPENING OF AT LEAST 1.5 SQUARE FEET, SHALL BE PROVIDED WITH MECHANICAL VENTILATION WITH AN EXHAUST CAPACITY OF AT LEAST 50 CUBIC FEET PER MINUTE. [CRC §R303.3]
  - TERMINATION OF ALL ENVIRONMENTAL AIR DUCTS (E.G., BATH FAN, DRYER VENT, ETC.) SHALL BE AT LEAST 3 FEET FROM A PROPERTY LINE AND FROM OPENINGS INTO THE BUILDING, AND 10' FROM A FORCED AIR INLET. [CMC §502.2.1]
- SERVICE PANEL FOR ADU SHALL HAVE A SERVICE DISCONNECTING MEANS OF NOT LESS THAN 100 AMPERES, 3-WIRE [CEC 230.79(C)]

**2 ELECTRICAL NOTES**

E1.0

| SYMBOL     | DESCRIPTION   | SYMBOL | DESCRIPTION                                |
|------------|---|--------|--|
| Ⓢ          | SWITCH  | ☉      | CEILING-MOUNTED LIGHT FIXTURE              |
| Ⓢ 3        | 3-WAY SWITCH  | Ⓜ      | ELECTRICAL SUBPANEL                        |
| Ⓢ 1        | SINGLE-GANG OUTLET, 15 AMP, TAMPER RESISTANT                            | Ⓛ      | LED SHOP LIGHT                             |
| Ⓢ GFCI     | SINGLE-GANG GFCI OUTLET, 15 AMP, MOISTURE RESISTANT, WITH OUTDOOR COVER | ☼      | EXHAUST FAN                                |
| Ⓢ GFCI (W) | SINGLE-GANG GFCI OUTLET, 15 AMP, MOISTURE RESISTANT                     | Ⓢ M    | SWITCH W/ MANUAL ON/AUTO OFF/MOTION SENSOR |
| Ⓢ GFCI     | SINGLE-GANG GFCI OUTLET, 15 AMP, MOISTURE RESISTANT                     | Ⓢ CO   | CARBON MONOXIDE ALARM                      |
| Ⓢ          | WALL-MOUNTED LIGHT FIXTURE  | Ⓢ S    | SMOKE ALARM                                |

**3 ELECTRICAL NOTES**

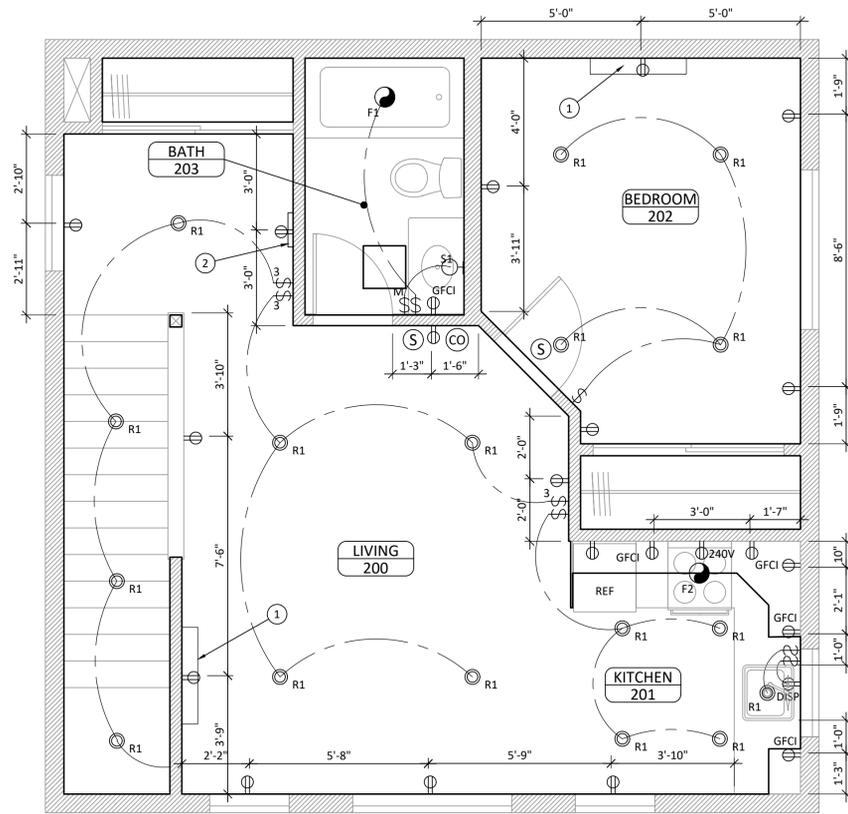
E1.0

| LIGHTING SCHEDULE |              |                               |           |     |   |
|-------------------|--------------|-------------------------------|-----------|-----|---|
| MARK              | MANUFACTURER | DESCRIPTION                   | WATTS     | QTY | REMARKS   |
| F1                | TBD          | EXHAUST FAN/LIGHT COMBINATION | 60W MAX.  | 1   | 80 CFM EXHAUST FAN W/ LED LIGHT HUMIDISTAT-CONTROLLED |
| F2                | TBD          | RANGE HOOD                    | TBD       | 1   | 250 CFM EXHAUST FAN W/ LED LIGHT                      |
| R1                | TBD          | 4" RECESSED LED FIXTURE       | 13W MAX.  | 17  | HIGH-EFFICACY, DIMMER-CONTROLLED                      |
| S1                | TBD          | BATHROOM WALL SCONCE          | 120W MAX. | 1   | MANUAL ON/AUTO OFF                                    |
| S2                | TBD          | EXTERIOR WALL SCONCE          | 13W MAX.  | 2   | LED FIXTURE, PHOTO OR ASTRO-CONTROLLED                |
| C1                | TBD          | LED SHOP LIGHT                | 40W MAX.  | 4   | HIGH-EFFICACY, MANUAL ON/AUTO OFF                     |

| APPLIANCE SCHEDULE |              |            |          |  |
|--------------------|--------------|------------|----------|--|
| TYPE               | MANUFACTURER | MODEL      | BTU/AMP  | REMARKS  |
| WATER HEATER       | A.O. SMITH   | HPTU50-N   | 152K MAX | HYBRID ELECTRIC HEAT PUMP 50-GALLON WATER HEATER |
| HEAT PUMP          | LG           | LMU18CHV   | 17K/HR   | INVERTER/HEAT PUMP MINI SPLIT UNITS              |
| RANGE              | WHIRLPOOL    | WFE320M0ES | 40 AMP   | 24 INCH ELECTRIC RANGE                           |

**4 LIGHTING & APPLIANCE SCHEDULE**

E1.0



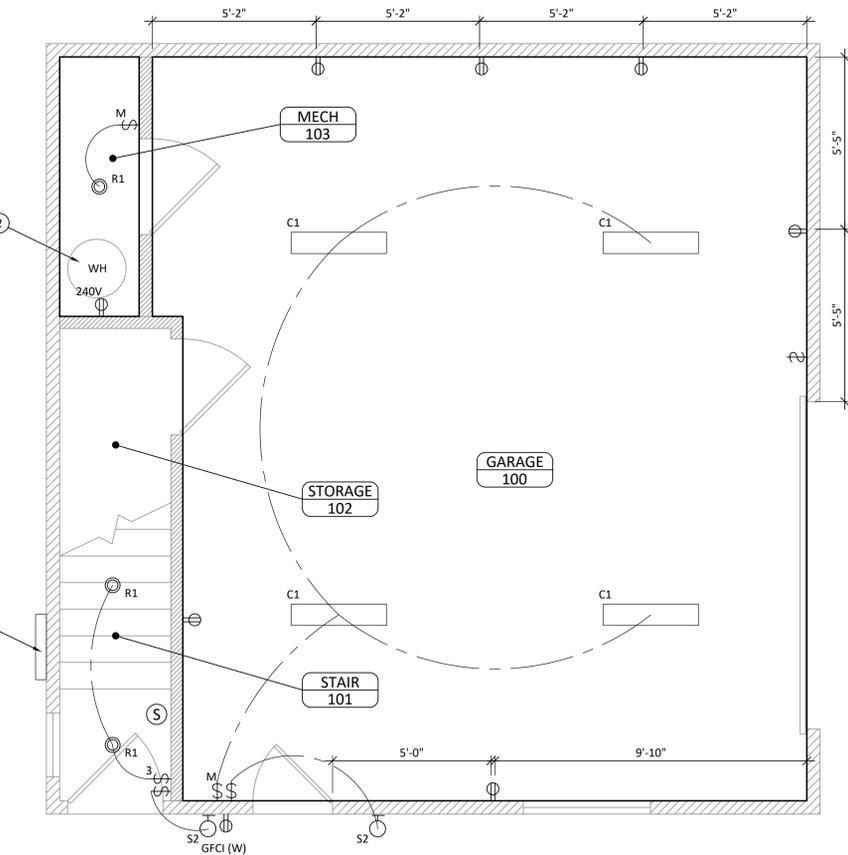
**1 PROPOSED ELECTRICAL PLAN - SECOND FLOOR**

E1.0 SCALE: 3/8"=1'-0"

SOLAR INSTALLATION UNDER SEPARATE PERMIT.  
STANDARD DESIGN PV CAPACITY: 1.51 kWdc WITH BATTERY  
REQUIRED PER TITLE 24 REPORT

- KEYNOTES:
- INSTALL HVAC MINISPLIT SYSTEM. SEE 4/E1.0 & 2/E1.1 FOR SPECIFICATIONS
  - INSTALL ELECTRICAL SUBPANEL

- GENERAL NOTES:
- SEE 2/E1.0 FOR ADDITIONAL ELECTRICAL REQUIREMENTS.
  - SEE 4/E1.0 FOR APPLIANCE & LIGHTING SCHEDULE
  - SEE AG.1 FOR WATER HEATER AND HVAC SPECIFICATIONS.
  - EACH BATHROOM SHALL BE MECHANICALLY VENTILATED WITH AN ENERGY STAR COMPLIANT DEVICE AND BE DUCTED TO TERMINATE OUTSIDE OF THE BUILDING
  - EXHAUST FANS MUST BE HUMIDISTAT-CONTROLLED.
  - GROUNDING ELECTRODE SYSTEM TO BE INSTALLED PER CEC 250.50
  - AN ENGINEERING PERMIT WILL BE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY, INCLUDING BUT NOT LIMITED TO CONSTRUCTION STAGING, RESERVED CONSTRUCTION PARKING, SIDEWALK, DRAINAGE, OR SEWER WORK. THE ENGINEERING PERMIT CAN BE ISSUED AFTER THE BUILDING PERMIT IS APPROVED AND ISSUED. UTILITY WORK (GAS, ELECTRICAL, WATER) REQUIRES A SEPARATE ENGINEERING UTILITY PERMIT FROM THE ENGINEERING DIVISION. APPROVAL OF THIS BUILDING PERMIT DOES NOT AUTHORIZE WORK IN THE PUBLIC RIGHT-OF-WAY.



**1 PROPOSED ELECTRICAL PLAN - FIRST FLOOR**

E1.0 SCALE: 3/8"=1'-0"

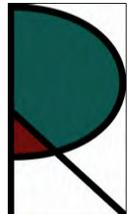
SOLAR INSTALLATION UNDER SEPARATE PERMIT.  
STANDARD DESIGN PV CAPACITY: 1.51 kWdc WITH BATTERY  
REQUIRED PER TITLE 24 REPORT

CITY OF RICHMOND  
PART OF PERMIT SET  
Sep 22, 2021  
By: myersD

- KEYNOTES:
- LOCATION OF NEW ELECTRICAL SERVICE PANEL. SERVICE PANEL FOR ADU SHALL HAVE A SERVICE DISCONNECTING MEANS OF NOT LESS THAN 100 AMPERES, 3-WIRE [CEC 230.79(C)]
  - INSTALL HYBRID ELECTRIC WATER HEATER. SEE 4/E1.0 & 1/E1.1 FOR SPECIFICATIONS

- GENERAL NOTES:
- SEE 2/E1.0 FOR ADDITIONAL ELECTRICAL REQUIREMENTS.
  - SEE 4/E1.0 FOR APPLIANCE & LIGHTING SCHEDULE
  - SEE AG.1 FOR WATER HEATER AND HVAC SPECIFICATIONS.
  - EACH BATHROOM SHALL BE MECHANICALLY VENTILATED WITH AN ENERGY STAR COMPLIANT DEVICE AND BE DUCTED TO TERMINATE OUTSIDE OF THE BUILDING
  - EXHAUST FANS MUST BE HUMIDISTAT-CONTROLLED.
  - GROUNDING ELECTRODE SYSTEM TO BE INSTALLED PER CEC 250.50
  - AN ENGINEERING PERMIT WILL BE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY, INCLUDING BUT NOT LIMITED TO CONSTRUCTION STAGING, RESERVED CONSTRUCTION PARKING, SIDEWALK, DRAINAGE, OR SEWER WORK. THE ENGINEERING PERMIT CAN BE ISSUED AFTER THE BUILDING PERMIT IS APPROVED AND ISSUED. UTILITY WORK (GAS, ELECTRICAL, WATER) REQUIRES A SEPARATE ENGINEERING UTILITY PERMIT FROM THE ENGINEERING DIVISION. APPROVAL OF THIS BUILDING PERMIT DOES NOT AUTHORIZE WORK IN THE PUBLIC RIGHT-OF-WAY.



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PROJECT:  
  
**3431 OHIO AVENUE  
ACCESSORY DWELLING UNIT  
RICHMOND, CA 94804**

SUBMITTAL:  
PERMIT SET  
4 MARCH 2021

| REVISIONS: | DATE        | DESCRIPTION                         |
|------------|-------------|-------------------------------------|
| 1          | 1 AUG 19    | CORRECTIONS 1                       |
| 2          | SEP 20 2021 | CITY OF RICHMOND PART OF PERMIT SET |

PROJECT TITLE:  
These drawings, specifications, ideas, designs, and arrangements presented hereby are and shall remain the property of Richard A. Depolo. No part thereof shall be copied, disclosed to others or used in connection with any work or project other than the specific project for which they were prepared and developed without the written consent of Richard A. Depolo. Visual contact with these drawings or specifications shall constitute conclusive evidence of acceptance of these restrictions.

**ELECTRICAL PLAN**

SHEET NUMBER:

**E1.0**

Job Name/Location: \_\_\_\_\_ Tag #: \_\_\_\_\_  
 Date: \_\_\_\_\_ For:  File  Resubmit  
 PO No.: \_\_\_\_\_  Approval  Other \_\_\_\_\_  
 Architect: \_\_\_\_\_ GC: \_\_\_\_\_  
 Engr: \_\_\_\_\_ Mech: \_\_\_\_\_  
 Rep: \_\_\_\_\_ (Company) \_\_\_\_\_ (Project Manager)

**LMN079HVT**  
 Multi F Wall Mounted High Efficiency Indoor Unit  
 7,000 Btu/h

**Performance:**  
 Nominal Cooling Capacity (Btu/h) 7,000  
 Nominal Heating Capacity (Btu/h) 8,100

Cooling Nominal Test Conditions: Indoor: 80°F DB / 67°F WB Heating Nominal Test Conditions: Indoor: 70°F DB / 60°F WB  
 Outdoor: 95°F DB / 75°F WB Outdoor: 47°F DB / 43°F WB

**Electrical:**  
 Power Supply (V/Hz/Ø) 208-230/60/1  
 Rated Amps (A) 0.4

**Piping:**  
 Installed Liquid Pipe (in., O.D.) ø1/4  
 Installed Vapor Pipe (in., O.D.) ø3/8  
 Liquid Connection (in., O.D.) ø1/4  
 Vapor Connection (in., O.D.) ø3/8  
 Drain (in., O.D. / I.D.) 27/32 / 5/8  
 Temperature Sensor Thermistor

**Controls Features:**  
 • 4-Way auto swing  
 • 24-Hour on/off timer  
 • Auto operation  
 • Auto restart  
 • Chaos wind  
 • Inverter (variable speed fan)

**Included Accessories:**  
 • Wireless Remote Controller — AKB74955602

**Optional Accessories:**  
 MultiSITE™ CR1 - PREMTBVC0  
 MultiSITE CR1L - PREMTBVC1  
 Dry Contact - PDRCYB300

**Entering Mixed Air:**  
 Cooling (°F DB) 57 ~ 77  
 Heating (°F WB) 59 ~ 81

**Unit Data:**  
 Refrigerant Type R410A  
 Refrigerant Control EEV  
 Sound Pressure (H/M/L) (±3 dB(A)) 35 / 31 / 26  
 Primary Filter Washable Pre-Filter  
 Secondary Filter 3M Micro Dust  
 Net Weight (lbs.) 18.3  
 Shipping Weight (lbs.) 23.4

**Fan:**  
 Type Cross Flow  
 Quantity 1  
 Motor/Drive Brushless Digitally Controlled/Direct  
 Air Flow H/M/L (CFM) 254 / 204 / 148

**Notes:**  
 1. Acceptable operating voltage: 187V-233V.  
 2. Sound Pressure levels are tested in an anechoic chamber under ISO Standard 3743.  
 3. See Engineering Manual for sensible and latent capacities.  
 4. All communications (connection between) cables from the outdoor unit to the indoor unit is field supplied and must be a minimum of 100 feet.  
 5. All communications (connection between) cables from the outdoor unit to the indoor unit is field supplied and must be a minimum of 100 feet.  
 6. The indoor unit comes with a dry helium charge.  
 7. Condensate piping length is in accordance with standard length of each outdoor unit and the level difference is 0 ft. All capacities are not with a combination ratio between 95 - 100%.  
 8. Must follow installation instructions in the applicable LG installation manual.

For a complete list of available accessories, contact your LG representative. SB\_MuIF\_WallMount\_HIEFI\_IDU\_LMN079HVT\_2018\_03\_20\_064546  
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Job Name/Location: \_\_\_\_\_ Tag #: \_\_\_\_\_  
 Date: \_\_\_\_\_ For:  File  Resubmit  
 PO No.: \_\_\_\_\_  Approval  Other \_\_\_\_\_  
 Architect: \_\_\_\_\_ GC: \_\_\_\_\_  
 Engr: \_\_\_\_\_ Mech: \_\_\_\_\_  
 Rep: \_\_\_\_\_ (Company) \_\_\_\_\_ (Project Manager)

**LMN079HVT**  
 Multi F Wall Mounted High Efficiency Indoor Unit  
 7,000 Btu/h

**Performance:**  
 Nominal Cooling Capacity (Btu/h) 7,000  
 Nominal Heating Capacity (Btu/h) 8,100

Cooling Nominal Test Conditions: Indoor: 80°F DB / 67°F WB Heating Nominal Test Conditions: Indoor: 70°F DB / 60°F WB  
 Outdoor: 95°F DB / 75°F WB Outdoor: 47°F DB / 43°F WB

**Electrical:**  
 Power Supply (V/Hz/Ø) 208-230/60/1  
 Rated Amps (A) 0.4

**Piping:**  
 Installed Liquid Pipe (in., O.D.) ø1/4  
 Installed Vapor Pipe (in., O.D.) ø3/8  
 Liquid Connection (in., O.D.) ø1/4  
 Vapor Connection (in., O.D.) ø3/8  
 Drain (in., O.D. / I.D.) 27/32 / 5/8  
 Temperature Sensor Thermistor

**Controls Features:**  
 • 4-Way auto swing  
 • 24-Hour on/off timer  
 • Auto operation  
 • Auto restart  
 • Chaos wind  
 • Inverter (variable speed fan)

**Included Accessories:**  
 • Wireless Remote Controller — AKB74955602

**Optional Accessories:**  
 MultiSITE™ CR1 - PREMTBVC0  
 MultiSITE CR1L - PREMTBVC1  
 Dry Contact - PDRCYB300

**Entering Mixed Air:**  
 Cooling (°F DB) 57 ~ 77  
 Heating (°F WB) 59 ~ 81

**Unit Data:**  
 Refrigerant Type R410A  
 Refrigerant Control EEV  
 Sound Pressure (H/M/L) (±3 dB(A)) 35 / 31 / 26  
 Primary Filter Washable Pre-Filter  
 Secondary Filter 3M Micro Dust  
 Net Weight (lbs.) 18.3  
 Shipping Weight (lbs.) 23.4

**Fan:**  
 Type Cross Flow  
 Quantity 1  
 Motor/Drive Brushless Digitally Controlled/Direct  
 Air Flow H/M/L (CFM) 254 / 204 / 148

**Notes:**  
 1. Acceptable operating voltage: 187V-233V.  
 2. Sound Pressure levels are tested in an anechoic chamber under ISO Standard 3743.  
 3. See Engineering Manual for sensible and latent capacities.  
 4. All communications (connection between) cables from the outdoor unit to the indoor unit is field supplied and must be a minimum of 100 feet.  
 5. All communications (connection between) cables from the outdoor unit to the indoor unit is field supplied and must be a minimum of 100 feet.  
 6. The indoor unit comes with a dry helium charge.  
 7. Condensate piping length is in accordance with standard length of each outdoor unit and the level difference is 0 ft. All capacities are not with a combination ratio between 95 - 100%.  
 8. Must follow installation instructions in the applicable LG installation manual.

For a complete list of available accessories, contact your LG representative. SB\_MuIF\_WallMount\_HIEFI\_IDU\_LMN079HVT\_2018\_03\_20\_064546  
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Job Name/Location: \_\_\_\_\_ Tag #: \_\_\_\_\_  
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 PO No.: \_\_\_\_\_  Approval  Other \_\_\_\_\_  
 Architect: \_\_\_\_\_ GC: \_\_\_\_\_  
 Engr: \_\_\_\_\_ Mech: \_\_\_\_\_  
 Rep: \_\_\_\_\_ (Company) \_\_\_\_\_ (Project Manager)

**LMU18CHV**  
 Multi F Inverter Heat Pump Outdoor Unit

**Performance:**  
 Nominal Cooling Capacity (Btu/h) 15,600  
 Nominal Heating Capacity (Btu/h) 17,000  
 Cooling Power Input (kW) 1.31  
 Heating Power Input (kW) 2.04

Cooling Nominal Test Conditions: Indoor: 80°F DB / 67°F WB Heating Nominal Test Conditions: Indoor: 70°F DB / 60°F WB  
 Outdoor: 95°F DB / 75°F WB Outdoor: 47°F DB / 43°F WB

**Electrical:**  
 Power Supply (V/Hz/Ø) 208-230/60/1  
 MOP (A) 20  
 MCA (A) 13.3  
 Cooling Rated Amps (A) 11.09  
 Heating Rated Amps (A) 11.09  
 Compressor (A) 8.9  
 Fan Motor (A) 0.59

**MOP - Maximum Overcurrent Protection: MCA - Minimum Circuit Ampacity**

**Piping:**  
 Refrigerant Charge (lbs) 3.97  
 Liquid Line (in, OD) 1/4 x 2  
 Vapor Line (in, OD) 3/8 x 2  
 Max Total Piping (ft) 164  
 Piping Length (no add'l refrigerant, ft) 82  
 Max ODU to IDU Piping (ft) 49.2  
 Max Elevation between ODU and IDU (ft) 49.2  
 Max Elevation between IDU and IDU (ft) 24.6

**Controls Features:**  
 • Auto operation  
 • Auto restart operation  
 • Defrost/Deicing  
 • Inverter (variable speed compressor)  
 • Soft start

**Optional Accessories:**  
 PI-48S Integration Board - PMNPF14A0  
 AC Smart Premium - PQCSW421E0A  
 AC Ez - PQCSZ250S0  
 Power Distribution Indicator - PQNUD1500

For a complete list of available accessories, contact your LG representative. SB-MAHF-LMU18CHV-08-14 Page 1 of 2

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 510-978-0860

PROJECT:  
  
 3431 OHIO AVENUE  
 ACCESSORY DWELLING UNIT  
 RICHMOND, CA 94804

1 HVAC SPECIFICATIONS

**AC Smith** Residential Electric Water Heater

**VOLTEX® HYBRID ELECTRIC HEAT PUMP WATER HEATER**

The Voltex Hybrid Electric heat pump water heater from A. O. Smith is the most cost effective energy-efficient option available for consumers who want to save money on their utility bills. Voltex can reduce water heating costs up to 71% and provide payback in 2-3 years. With annual savings of \$437 or more, there is no better way to go green than Voltex.

**HOW DO THEY WORK?**  
 Absorb ambient heat from the surrounding air to heat water using a compressor and "Environmentally-Friendly" R134a refrigerant

• Self-contained heat pump unit is integrated into the top of the tank  
 • Multiple operating modes to maximize efficiency and performance

**QUALIFIES FOR MANY STATE AND LOCAL UTILITY REBATES - CHECK WWW.DSIREUSA.ORG**

**INCREASED ENERGY EFFICIENCY**  
 • Improved efficiency designed in, to ensure available hot water at the lowest possible cost. Up to a 3.24 Energy Factor (EF) Rating conserves energy and meets ENERGY STAR® qualifications

**CHOICE OF OPERATING MODES**  
 • Select from Efficiency, Hybrid, or Electric modes to match heating requirements to environmental conditions.  
 • Hybrid mode automatically adjusts between compressor and element, depending upon heat requirements.  
 • Vacation mode reduces operating costs and provides freeze protection during extended absence

**BACKUP ELECTRIC ELEMENTS**  
 • Long-lasting backup heating elements help heat water according to environmental conditions, demand, and the chosen operating mode

**COREGARD™ ANODE ROD**  
 • Our anode rods have a stainless steel core that extends the life of the anode rod allowing superior tank protection far longer than standard anode rods  
 • 66 and 80 gallon models have dual anodes for added protection.

**DRY FIRE PROTECTION**  
 • Control system checks to ensure the tank is full of water during start up to prevent dry firing the heating elements

**ELECTRONIC USER INTERFACE**  
 • User-friendly electronic interface allows easy control of temperature setting, operating mode, and communicates diagnostics  
 • Easy to read temperature display (see back) shows temperature in °F or °C  
 • Advanced diagnostics convey error messages for service purposes. The last four error messages are saved in the control system memory.

**OTHER FEATURES**  
 • Ideal for basements or garage installations; the compressor transfers heat to the water while dehumidifying and cooling the ambient air  
 • Washable air filter is easily removed for routine cleaning

**OPTIONAL AIR DUCT ADAPTER KIT**  
 • Permits installation in confined spaces

**TEN YEAR LIMITED WARRANTY**  
 • For complete information, consult written warranty or go to hotwater.com

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**AC Smith** Residential Electric Water Heater

| Model Number | Gallon Capacity | Energy Factor by Mode |          | 1st Hour Rating (Gal) By Mode |          | Dimensions in Inches |      |    |    |        | Approx. Shipping Weight (lbs) | Warranty Term |     |    |
|--------------|-----------------|-----------------------|----------|-------------------------------|----------|----------------------|------|----|----|--------|-------------------------------|---------------|-----|----|
|              |                 | Hybrid                | Electric | Hybrid                        | Electric | A                    | B    | C  | D  | E      |                               |               |     |    |
| HPTU-50N     | 50              | 3.61                  | 3.24     | 0.93                          | 44.4     | 70                   | 57.3 | 63 | 22 | 40-5/8 | 3-3/4                         | 40-1/2        | 196 | 10 |
| HPTU-66N     | 66              | 3.44                  | 3.17     | 0.92                          | 62.5     | 80                   | 78.6 | 61 | 27 | 38     | 4                             | 38            | 289 | 10 |
| HPTU-80N     | 80              | 3.27                  | 3.06     | 0.92                          | 76.3     | 95                   | 90.1 | 69 | 27 | 46     | 4                             | 46            | 307 | 10 |

Requires 30 amp breaker. Top T&P option not available.

**ELECTRONIC USER INTERFACE**  
 • User friendly, easy to read display.  
 • LEDs clearly indicate the current operating mode.  
 • Easily select operating mode:  
 • Efficiency  
 • Hybrid  
 • Electric  
 • Vacation  
 • Display communicates current status, mode and set point, and displays error messages when applicable.

**EFFICIENCY MODE**  
 • Utilizes the heat pump for all water heating.  
 • Automatically reverts to heating element if ambient air or water temperatures are outside optimal operating range for heat pump.

**HYBRID MODE**  
 • Utilizes the heat pump or heating element, depending on demand.

**ELECTRIC MODE**  
 • Standard electric water heater operation.

**VACATION MODE**  
 • One touch operation maintains tank temperature of 60°F (15.6°C) during vacation or extended absence to reduce operating costs and provide freeze protection.  
 • Programmable up to 99 days.

**OTHER FEATURES:**  
 • Sacrificial anode to protect against tank corrosion.  
 • Environmentally-friendly non-CFC foam insulation.  
 • Durable, enhanced-flow brass drain valve.  
 • CSA certified and ASME rated temperature & pressure relief valve.

**OPERATING REQUIREMENTS:**  
 • Requires provision for condensate draining; if a suitable drain is not available, a condensate pump is required.  
 • 208/240 VAC 60Hz single phase 30 amp power supply.

For Technical Information, call 800-527-1953. A. O. Smith Corporation reserves the right to make product changes or improvements without prior notice. © May 2016 A. O. Smith Corporation. All Rights Reserved. www.hotwater.com | 800-527-1953 Toll-Free USA Page 2 of 2 A05XE50004

Job Name/Location: \_\_\_\_\_ Tag #: \_\_\_\_\_  
 Date: \_\_\_\_\_ For:  File  Resubmit  
 PO No.: \_\_\_\_\_  Approval  Other \_\_\_\_\_  
 Architect: \_\_\_\_\_ GC: \_\_\_\_\_  
 Engr: \_\_\_\_\_ Mech: \_\_\_\_\_  
 Rep: \_\_\_\_\_ (Company) \_\_\_\_\_ (Project Manager)

**LMU18CHV**  
 Multi F Inverter Heat Pump Outdoor Unit

**Performance:**  
 Nominal Cooling Capacity (Btu/h) 15,600  
 Nominal Heating Capacity (Btu/h) 17,000  
 Cooling Power Input (kW) 1.31  
 Heating Power Input (kW) 2.04

Cooling Nominal Test Conditions: Indoor: 80°F DB / 67°F WB Heating Nominal Test Conditions: Indoor: 70°F DB / 60°F WB  
 Outdoor: 95°F DB / 75°F WB Outdoor: 47°F DB / 43°F WB

**Electrical:**  
 Power Supply (V/Hz/Ø) 208-230/60/1  
 MOP (A) 20  
 MCA (A) 13.3  
 Cooling Rated Amps (A) 11.09  
 Heating Rated Amps (A) 11.09  
 Compressor (A) 8.9  
 Fan Motor (A) 0.59

**MOP - Maximum Overcurrent Protection: MCA - Minimum Circuit Ampacity**

**Piping:**  
 Refrigerant Charge (lbs) 3.97  
 Liquid Line (in, OD) 1/4 x 2  
 Vapor Line (in, OD) 3/8 x 2  
 Max Total Piping (ft) 164  
 Piping Length (no add'l refrigerant, ft) 82  
 Max ODU to IDU Piping (ft) 49.2  
 Max Elevation between ODU and IDU (ft) 49.2  
 Max Elevation between IDU and IDU (ft) 24.6

**Controls Features:**  
 • Auto operation  
 • Auto restart operation  
 • Defrost/Deicing  
 • Inverter (variable speed compressor)  
 • Soft start

**Optional Accessories:**  
 PI-48S Integration Board - PMNPF14A0  
 AC Smart Premium - PQCSW421E0A  
 AC Ez - PQCSZ250S0  
 Power Distribution Indicator - PQNUD1500

For a complete list of available accessories, contact your LG representative. SB-MAHF-LMU18CHV-08-14 Page 1 of 2

SUBMITTAL:  
 PERMIT SET  
 4 MARCH 2021

REVISIONS:

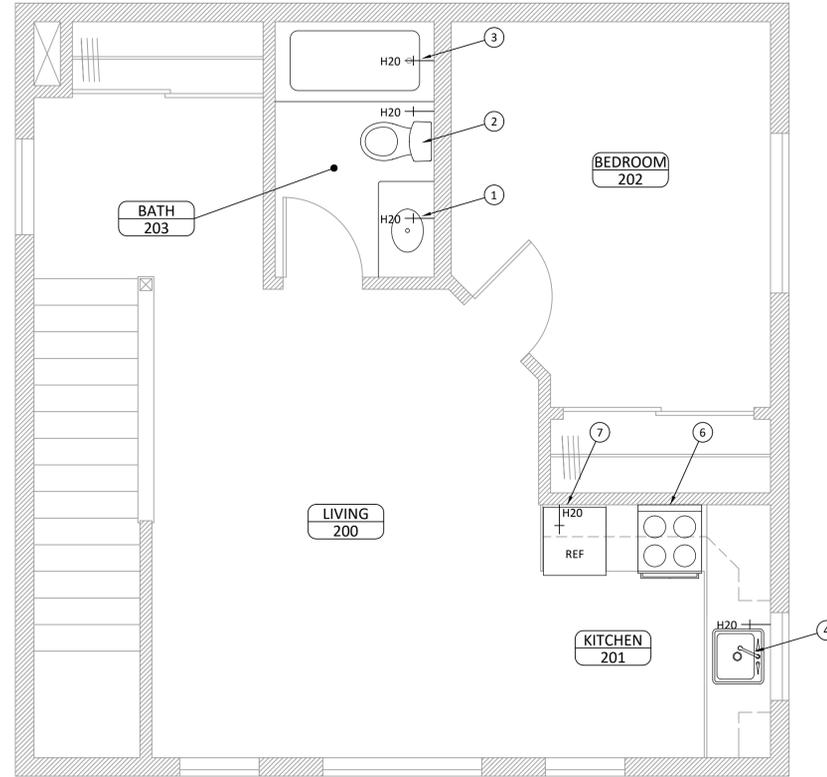
| # | DATE         | DESCRIPTION                         |
|---|--------------|-------------------------------------|
| 1 | SEP 22, 2021 | CITY OF RICHMOND PART OF PERMIT SET |
| 2 | SEP 20, 2021 | GAUTAM                              |

SHEET TITLE:  
 SPECIFICATIONS

SHEET NUMBER:  
 E1.1

2 WATER HEATER SPECIFICATIONS

- ALL PLUMBING WORK SHALL BE INSTALLED IN ACCORDANCE WITH LATEST CITY OF RICHMOND PLUMBING CODE AND 2019 CALIFORNIA PLUMBING CODE.
- BEFORE STARTING WORK, EXAMINE THE COMPLETE SET OF DRAWINGS FOR ALL TRADES, INCLUDING ARCHITECTURAL AND ELECTRICAL. VERIFY ALL DIMENSIONS, SPACE REQUIREMENTS AND POINTS OF CONNECTION TO ALL EQUIPMENT. MAKE ANY MINOR ADJUSTMENTS NECESSARY TO AVOID CONFLICTS WITH OTHER TRADES. MAJOR DISCREPANCIES SHALL BE RESOLVED IN WRITING PRIOR TO COMMENCING WORK.
- THE DRAWINGS INDICATE, IN A DIAGRAMMATIC MANNER, THE DESIRED LOCATIONS AND ARRANGEMENT OF THE COMPONENTS OF THE PLUMBING WORK. DETERMINE EXACT PIPE ROUTING AND UNDEFINED CONSTRUCTION DETAILS AS A JOB CONDITION TO BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS.
- PROVIDE AND MAINTAIN RECORD DRAWINGS ON THE JOB THAT ACCURATELY REFLECT CURRENT AS-BUILT STATUS OF THE PROJECT. MATERIALS AND EQUIPMENT SHALL BE NEW, AND SHALL BE APPROVED BY ALL LOCAL AUTHORITIES HAVING JURISDICTION.
- PLUMBING EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION OR RECOMMENDATION.
- ITEMS OF A SIMILAR NATURE SHALL BE OF THE SAME TYPE AND MANUFACTURE.
- ANY EXPOSED PIPES SHALL BE INSTALLED PARALLEL WITH OR AT RIGHT ANGLES TO ARCHITECTURAL FEATURES SUCH AS THE BUILDING LINE, BEAMS OR CEILINGS.
- WATER HEATER TO BE STRAPPED AND FITTED WITH PRESSURE RELEASE VALVE DRAINING TO EXTERIOR AND VENT TO EXTERIOR
- ANNULAR SPACES AROUND PIPES, ELECTRICAL CABLES, CONDUITS, ETC. TO BE FILLED TO PREVENT RODENT INTRUSION
- THE EFFECTIVE FLUSH VOLUME OF ALL WATER CLOSETS SHALL NOT EXCEED 1.28 GPF.
- SHOWERHEADS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 1.8 GPM AT 80 PSI.
- THE MAXIMUM FLOW RATE OF LAVATORY FAUCETS SHALL NOT EXCEED 1.5 GPM AT 60 PSI. THE MINIMUM FLOW RATE OF RESIDENTIAL LAVATORY FAUCETS SHALL NOT BE LESS THAN 0.8 GPM AT 20 PSI.
- THE MAXIMUM FLOW RATE OF KITCHEN FAUCETS SHALL NOT EXCEED 1.8 GPM AT 60 PSI. KITCHEN FAUCET TO BE REPLACED PER CAL GREEN REQUIREMENT.
- MOISTURE EXHAUST DUCT CONFIGURATION AND TERMINATION AS FOLLOWS: (A) SHALL TERMINATE TO THE OUTSIDE AND SHALL BE EQUIPPED WITH A BACK-DRAFT DAMPER. (B) EXHAUST DUCT LENGTH IS LIMITED TO A COMBINED HORIZONTAL AND VERTICAL LENGTH OF 14 FEET WITH 2 ELBOWS. TWO FEET SHALL BE DEDUCTED FOR EACH 90 DEGREE ELBOW IN EXCESS OF TWO. (CMC §504.4.2.1 AND §504.1.1)
- DOWNSPOUTS TO BE DIRECTED TO GARDEN. SOIL TO SLOPE 1/4" MIN. PER FOOT WITHIN 5' OF PERIMETER OF DWELLING.
- HOSE BIBS TO BE PROTECTED WITH A NON-REMOVABLE HOSE-BIB-TYPE BACKFLOW PREVENTER, A NONREMOVABLE HOSE-BIB-TYPE VACUUM BREAKER, OR BY AN ATMOSPHERIC VACUUM BREAKER INSTALLED NOT LESS THAN 6 INCHES ABOVE THE HIGHEST POINT OF USAGE LOCATED ON THE DISCHARGE SIDE OF THE LAST VALVE. CPC 603.5.7
- AN ENGINEERING PERMIT WILL BE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY, INCLUDING BUT NOT LIMITED TO CONSTRUCTION STAGING, RESERVED CONSTRUCTION PARKING, SIDEWALK, DRAINAGE, OR SEWER WORK. THE ENGINEERING PERMIT CAN BE ISSUED AFTER THE BUILDING PERMIT IS APPROVED AND ISSUED. UTILITY WORK (GAS, ELECTRICAL, WATER) REQUIRES A SEPARATE ENGINEERING UTILITY PERMIT FROM THE ENGINEERING DIVISION. APPROVAL OF THIS BUILDING PERMIT DOES NOT AUTHORIZE WORK IN THE PUBLIC RIGHT-OF-WAY.



KEYNOTES:

- INSTALL NEW BATHROOM SINK SUPPLIES/DRAIN
- INSTALL NEW LOW-LOW TOILET, NOT TO EXCEED 1.28 GPF. SEE 2/P1.0 FOR DETAILS
- INSTALL NEW TUB W/ TILE SURROUND. SEE 4/P1.0 FOR DETAILS
- INSTALL NEW KITCHEN SINK SUPPLIES/DRAIN. SEE 4/P1.0 FOR DETAILS
- NOT USED
- INSTALL RANGE HOOD, 300 CFM MAX. SEE 3/P1.0 GENERAL NOTES FOR VENTING REQUIREMENTS
- INSTALL ICE MAKER SUPPLY LINE
- LOCATION OF (E) GAS METER TO REMAIN. AUTOMATIC GAS SHUTOFF VALVE AT GAS METER TO BE INSTALLED PER BMC 19.34.040
- INSTALL NEW WATER HEATER AND GAS SUPPLY LINE. SEE 4/P1.0 FOR DETAILS. WATER HEATER TO BE STRAPPED AND FITTED WITH PRESSURE RELEASE VALVE DRAINING TO EXTERIOR AND VENT TO EXTERIOR

GENERAL NOTES:

- PRIVATE SEWER LATERAL HAS BEEN REPLACED.
- AN ENGINEERING PERMIT WILL BE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY, INCLUDING BUT NOT LIMITED TO CONSTRUCTION STAGING, RESERVED CONSTRUCTION PARKING, SIDEWALK, DRAINAGE, OR SEWER WORK. THE ENGINEERING PERMIT CAN BE ISSUED AFTER THE BUILDING PERMIT IS APPROVED AND ISSUED. UTILITY WORK (GAS, ELECTRICAL, WATER) REQUIRES A SEPARATE ENGINEERING UTILITY PERMIT FROM THE ENGINEERING DIVISION. APPROVAL OF THIS BUILDING PERMIT DOES NOT AUTHORIZE WORK IN THE PUBLIC RIGHT-OF-WAY.

3 P1.0 PLUMBING NOTES

1 P1.0 PROPOSED PLUMBING PLAN - SECOND FLOOR

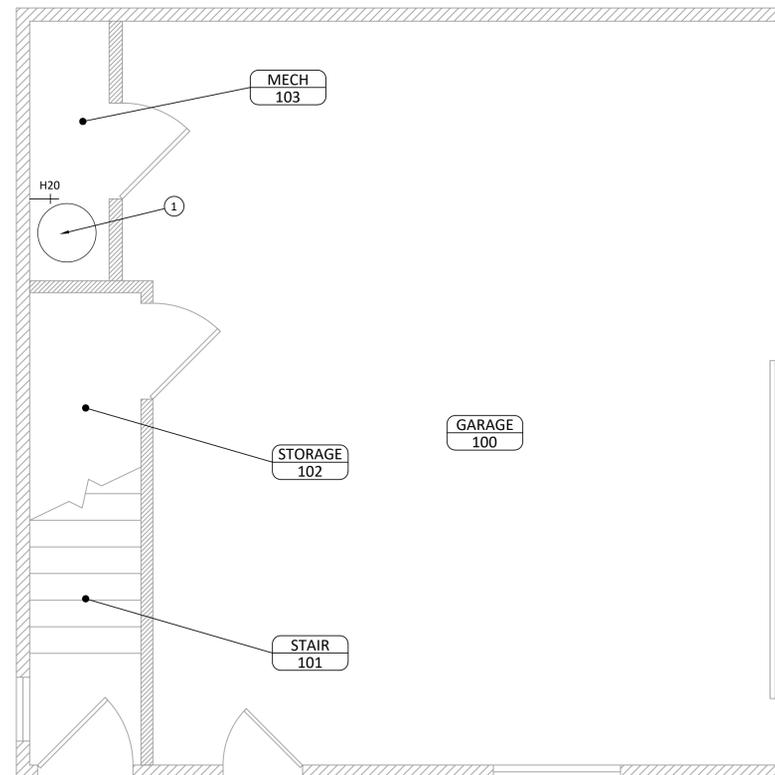
SCALE: 3/8"=1'-0"

| PLUMBING FIXTURE SCHEDULE |              |           |  |
|---------------------------|--------------|-----------|--|
| TYPE                      | MANUFACTURER | MODEL     | REMARKS  |
| TOILET                    | GLACIER BAY  | N2316     | 2-PIECE HIGH EFFICIENCY DUAL FLUSH ELONGATED TOILET IN WHITE, 1.28 GPF |
| LAV. FAUCET               | DELTA        | 520-A-DST | SINGLE HANDLE FAUCET, CHROME, ADA COMPLIANT, 1.5 GPM MAX, OR SIMILAR   |
| BATH FAUCET               | MOEN         | TS2143    | ICON POSI-TEMP 1-HANDLE BATH SHOWER FAUCET KIT IN CHROME, 2.0 GPM      |
| SHOWER FAUCET             | MOEN         | TS2142EP  | ICON POSI-TEMP 1-HANDLE 1-SPRAY SHOWER ONLY KIT IN CHROME, 1.8 GPM     |
| KITCHEN FAUCET            | KOHLER       | K-596-CP  | SIMPLICE PULL-DOWN SPRAYER KITCHEN FAUCET, CHROME, 1.8 GPM             |

FIXTURES ABOVE COMPLY WITH CAL GREEN SPECIFICATIONS. ANY SUBSTITUTIONS MUST PERFORM AT SAME OR HIGHER EFFICIENCY.

| APPLIANCE SCHEDULE |              |            |            |  |
|--------------------|--------------|------------|------------|--|
| TYPE               | MANUFACTURER | MODEL      | BTU/AMP    | REMARKS  |
| WATER HEATER       | A.O. SMITH   | HPTU50-N   | 30 AMP     | HYBRID ELECTRIC HEAT PUMP 50-GALLON WATER HEATER |
| HEAT PUMP          | LG           | LMU18CHV   | 17K BTU/HR | INVERTER/HEAT PUMP MINI SPLIT UNITS              |
| RANGE              | WHIRLPOOL    | WFE320MOES | 40 AMP     | 24 INCH ELECTRIC RANGE                           |

SEE A6.1 FOR WATER HEATER AND FURNACE SPECIFICATIONS.



KEYNOTES:

- INSTALL NEW WATER HEATER AND GAS SUPPLY LINE. SEE 4/P1.0 FOR DETAILS. WATER HEATER TO BE STRAPPED AND FITTED WITH PRESSURE RELEASE VALVE DRAINING TO EXTERIOR AND VENT TO EXTERIOR

GENERAL NOTES:

- PRIVATE SEWER LATERAL HAS BEEN REPLACED.
- WATER SUPPLY FROM EXISTING METER.
- AN ENGINEERING PERMIT WILL BE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY, INCLUDING BUT NOT LIMITED TO CONSTRUCTION STAGING, RESERVED CONSTRUCTION PARKING, SIDEWALK, DRAINAGE, OR SEWER WORK. THE ENGINEERING PERMIT CAN BE ISSUED AFTER THE BUILDING PERMIT IS APPROVED AND ISSUED. UTILITY WORK (GAS, ELECTRICAL, WATER) REQUIRES A SEPARATE ENGINEERING UTILITY PERMIT FROM THE ENGINEERING DIVISION. APPROVAL OF THIS BUILDING PERMIT DOES NOT AUTHORIZE WORK IN THE PUBLIC RIGHT-OF-WAY.

4 P1.0 PLUMBING FIXTURE SCHEDULE

1 P1.0 PROPOSED PLUMBING PLAN - FIRST FLOOR

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

DESIGNER:

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EMAIL: radepolo@gmail.com

OWNERS:

PATRICIA RODRIGUEZ & LUIS GONZALEZ  
3431 OHIO AVENUE  
RICHMOND, CA 94804  
510-978-0860

PROJECT:

3431 OHIO AVENUE  
ACCESSORY DWELLING UNIT  
RICHMOND, CA 94804

SUBMITTAL:

PERMIT SET  
4 MARCH 2021

REVISIONS:

| # | DATE        | DESCRIPTION                         |
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By: GAUTAM

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SHEET TITLE:

PROJECT NORTH

PLUMBING PLAN

SHEET NUMBER:

P1.0

DESIGNER:



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510-978-0860

PROJECT:



# 3431 OHIO AVENUE ACCESSORY DWELLING UNIT RICHMOND, CA 94804

SUBMITTAL:

PERMIT SET  
4 MARCH 2021

REVISIONS:

| # | DATE | DESCRIPTION |
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CITY OF RICHMOND  
PART OF PERMIT SET  
Sep 20 2021  
By: GAUTAM

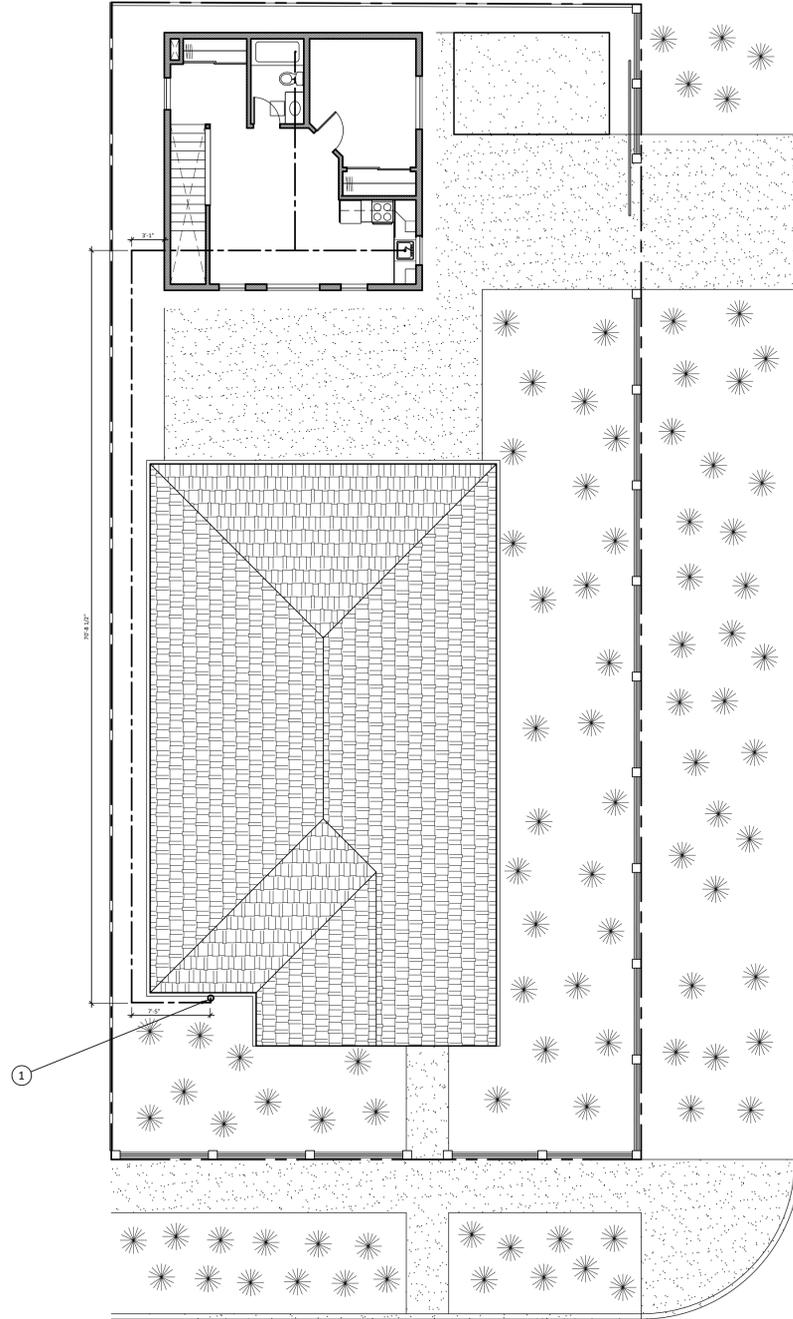
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SHEET TITLE:

## SEWER LATERAL CONNECTION

SHEET NUMBER:

# P1.1



KEYNOTES:  
① TIE NEW SEWER LATERAL TO EXISTING AT FRONT OF RESIDENCE. CLEANOUT TO BE PROVIDED.

SEWER LATERAL DEPTH CALCULATION:

|  |                  |
|--|------------------|
| START OF LATERAL TO POINT OF CONNECTION:           | 81'-2"           |
| ELEVATION CHANGE DUE TO REQUIRED SLOPE (81' X 2%): | 19.4 INCHES      |
| REQUIRED DEPTH OF SEWER LATERAL:                   | 12 INCHES        |
| REQUIRED DEPTH OF LATERAL AT POINT OF CONNECTION:  | 31.4 INCHES MIN. |

DEPTH OF LATERAL IS APPROXIMATELY 36" BELOW GRADE PER SEWER LATERAL INSPECTION

# GENERAL NOTES

## GENERAL:

THESE PLANS ARE A BUILDER'S SET. VIT HANACEK ENGINEERING, INC. WAS CONTRACTED TO PROVIDE A BUILDER'S SET WITH THE AGREEMENT THAT AN EXPERIENCED AND KNOWLEDGEABLE CONTRACTOR SHALL CONSTRUCT THIS PROJECT. THE PLANS CONTAIN INFORMATION FOR GENERAL CONSTRUCTION AND BUILDING PERMIT PURPOSES ONLY AND ARE NOT EXTENSIVELY DETAILED NOR ARE SPECIFICATIONS PROVIDED. FOR ITEMS, METHODS AND/OR MATERIALS NOT SHOWN, THE MINIMUM REQUIREMENT OF THE 2019 CBC SHALL GOVERN.

ANY OR PART OF ALL SYSTEMS, MATERIALS, CONNECTIONS, AND DETAILS NOT SPECIFICALLY PROVIDED IN THESE PLANS ARE THE SOLE AND COMPLETE RESPONSIBILITY OF THE CONTRACTOR TO PROPERLY VERIFY AND INSTALL. THE ENGINEER DOES NOT PROVIDE CONTINUOUS CONSTRUCTION OBSERVATION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE QUALITY AND CONSTRUCTION STANDARDS FOR THIS PROJECT.

## JOB SAFETY:

- THE ENGINEER IS NOT RESPONSIBLE FOR THE FABRICATION, ERECTION, AND/OR JOB SAFETY. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL SAFETY REGULATIONS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL SHORING, BRACING, FORM WORK, ETC., AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING THE CONSTRUCTION OF THE BUILDING.
- VERIFICATION: CONTRACTOR'S RESPONSIBILITY IS TO VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING THE WORK. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES. ALL FRAMING MEMBERS SHOWN AS EXISTING (E) ON THE STRUCTURAL DRAWINGS WERE NOT VERIFIED BY ENGINEER AND MUST BE COMPARED WITH ACTUAL EXISTING DIMENSIONS AND SPECIFICATIONS AND ALL CONFLICTING DISCREPANCIES MUST BE CLARIFIED WITH ENGINEER.
- CONFLICTS: NOTES AND DETAILS ON THE DRAWINGS TAKE PRECEDENCE OVER THE GENERAL NOTES AND TYPICAL DETAILS IN CASE OF CONFLICT.
- CODES: ALL MATERIALS AND WORK SHALL CONFORM TO THE REQUIREMENTS OF THE [2019 CALIFORNIA BUILDING CODE (CBC)].
- SUBSTITUTIONS: PROVIDE MANUFACTURER'S APPROVED PRODUCT EVALUATION REPORTS (CBO REPORTS) AND A LIST OF ALL PROPOSED SUBSTITUTIONS TO THE ENGINEER FOR REVIEW AND WRITTEN APPROVAL BEFORE FABRICATION.
- SIMILAR WORK: WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE THE SAME AS FOR SIMILAR WORK SHOWN ON THE DRAWINGS.
- PIPES, DUCTS, SLEEVES, CHASES, ETC.: SHALL NOT BE PLACED IN SLABS, BEAMS, OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC., UNLESS SPECIFICALLY SHOWN. OBTAIN PRIOR WRITTEN APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.
- EXCAVATIONS: LOCATE AND PROTECT UNDERGROUND OR CONCEALED CONDUIT, PLUMBING OR OTHER UTILITIES WHERE NEW WORK IS BEING PERFORMED.
- CONSTRUCTION LOADS: MATERIALS SHALL BE EVENLY DISTRIBUTED IF PLACED ON FRAMED FLOORS OR ROOFS. LOADS SHALL NOT EXCEED THE ALLOWABLE LOADING FOR THE SUPPORTING MEMBERS AND THEIR CONNECTIONS.
- CONSTRUCTION METHODS AND PROJECT SAFETY: THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE METHODS, PROCEDURES OR SEQUENCE OF CONSTRUCTION. TAKE NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE DURING CONSTRUCTION. NEITHER THE OWNER NOR ARCHITECT/ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
- CHANGES TO DRAWINGS: OBTAIN PRIOR WRITTEN APPROVAL FROM THE ENGINEER.

## SHOP DRAWINGS:

SHOP DRAWINGS ARE AN AID FOR FIELD PLACEMENT AND ARE SUPERSEDED BY THE ARCHITECTURAL DRAWINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE CERTAIN THAT THE SHOP DRAWINGS AND CONSTRUCTION ARE IN CONFORMANCE WITH THE LATEST ARCHITECTURAL AND STRUCTURAL DRAWINGS. AT LEAST 3 WEEKS BEFORE FABRICATION, THE CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO THE ENGINEER/ARCHITECT FOR REVIEW TO DETERMINE GENERAL COMPLIANCE WITH THE DRAWINGS. OUR REVIEW DOES NOT GUARANTEE IN ANY WAY THAT THE SHOP DRAWINGS ARE IN COMPLIANCE WITH THE LATEST DRAWINGS.

## SITE OBSERVATIONS:

THE CONTRACTOR SHALL GIVE ENGINEER 72 HOURS MINIMUM NOTICE AS TO THE TIME OF THE SITE OBSERVATION FOR ANY OBSERVATION REQUIRED BY C.B.C. 2019 CHAPTER 17 OR ANY OTHERS WHICH MAY BE REQUIRED. ALL WRITTEN SITE OBSERVATIONS/INSPECTIONS REPORTS BY THE REGULATORY AGENCY SHALL BE COPIED TO THE ENGINEER.

## FOUNDATION:

DESIGN WAS BASED ON THE MINIMUM REQUIREMENTS OF 2019 CBC.

## CONCRETE NOTES:

- CONCRETE SHALL CONFORM TO ASTM-94 AND SHALL HAVE A 28 DAY (MINIMUM) COMPRESSIVE STRENGTH OF 2500 PSI. SPECIAL INSPECTION IS NOT REQUIRED.
- LARGEST AGGREGATE : 3/4 INCH. MAX.
- SLUMP: 4 INCHES MAX.
- REINFORCING SHALL BE FREE OF LOOSE RUST OR OTHER DELETERIOUS COATING.
- USE  $F_y=60$  ksi, TYPICAL AND 40 KSI FOR TIES AND STIRRUPS.
- REINFORCING MIN. COVER SHALL BE AS FOLLOWS:
 

|   |            |
|---|------------|
| CONCRETE CAST AGAINST EARTH                 | 3 INCHES   |
| FORMED CONCRETE EXPOSED TO EARTH OR WEATHER | 2 INCHES   |
| NOT EXPOSED TO EARTH OR WEATHER             | 1 1/2 INCH |
- REINFORCING STEEL SHOP DRAWINGS SHALL BE SUBMITTED BY CONTRACTOR FOR REVIEW & APPROVAL BY ENGINEER, AT LEAST 3- WEEKS BEFORE FABRICATION.
- FORMWORK FOR THE FOUNDATION SHOULD BE REVIEWED AND SIGNED OFF BY THE STRUCTURAL ENGINEER PRIOR TO THE PLACEMENT OF CONCRETE

## CARPENTRY:

- STUDS: 2x6 STUDS- STRUCTURAL NO. 2
- RAFTERS AND JOISTS: STRUCTURAL NO. 1
- PLATES, BLOCKS AND MISCELLANEOUS: CONSTRUCTION GRADE
- POSTS: 4x AND 6x - STRUCTURAL NO. 1
- CONCEALED BEAMS - STRUCTURAL NO. 1.
- EXPOSED BEAMS: STRUCTURAL NO. 1 APPEARANCE GRADE, FOHC.
- ROOF PLYWOOD: 1/2 INCH 24/16 CD-X

FLOOR PLYWOOD: 3/4 INCH (48/24) T&G EDGES WITH EXT. GLUE, U.O.N. ON PLANS.  
SHEARWALLS: 1/2 INCH STR. 1 PLYWOOD. ALL PLYWOOD TO CONFORM TO A.P.A. STD. PS-1.

- SILL PLATES: PRESSURE-TREATED DOUGLAS FIR. ALL SILL PLATE ANCHOR BOLTS SHALL HAVE 3"x3"x0.229" WASHERS, TYP. ALL ANCHOR BOLTS SHALL BE 5/8" @ 4'-0" o.c., UNLESS NOTED OTHERWISE ON SHEARWALL SCHEDULE.

- GLUE FOR FLOOR CONSTRUCTION: APA PERFORMANCE SPECIF. AFG-01.

- FASTENERS, HANGERS AND CONNECTIONS: SIMPSON STRONG TIE (AS NOTED ON THE DRAWINGS), OR APPROVED EQUAL. CONTRACTOR SHALL DEMONSTRATE WITH CALCULATIONS THAT PROPOSED SUBSTITUTION MEET OR EXCEED THE CAPACITY AND QUALITY OF FASTENERS ORIGINALLY SPECIFIED.

BOLTS AND NUTS SHALL BE ASTM F1554, Grade 36 STEEL. ALL BOLT TREAD AND NUTS THAT BEAR ON WOOD SHALL HAVE MALLEABLE IRON WASHERS IF EXPOSED OR CUT WASHER IF CONCEALED.

- NAILING: AS NOTED ON DRAWINGS. IF NOT SHOWN ON DRAWINGS, NAILING OF FRAMING COMPONENTS SHALL CONFORM TO CBC 2019 TABLE 2304.10.1, AS A MINIMUM. ALL NAILS SHALL BE COMMON WIRE GAUGE. IF POWER DRIVEN NAILS ARE TO BE USED, SUBMIT CERTIFICATION FOR WIRE GAUGE, LENGTH AND HEAD DIAMETER FOR REVIEW, IF NOT EQUAL TO COMMON WIRE SPECS.

- GLULAMS (WHERE REQUIRED): GLULAMS SHALL BE INDUSTRIAL GRADE IF CONCEALED AND ARCHITECTURAL GRADE IF EXPOSED, AND SHALL HAVE 1600 FEET RADIUS CAMBER, UNLESS NOTED OTHERWISE. GLULAMS THAT ARE CONTINUOUS OVER A SUPPORT SHALL HAVE TENSION LAMINATIONS ON TOP OF BEAM. MARK TOP AND ORIENTATION OF ALL GLULAMS.  $F_b = 2400$  PSI;  $F_c = 690$  PSI;  $F_v = 165$  PSI;  $E = 1,800,000$  PSI. SUBMIT AITC CERTIFICATIONS FOR ALL GLULAM BEAMS.

- HORIZONTAL AND VERTICAL WOOD STRUCTURAL MEMBERS USED IN EXPOSED DECKS, BALCONIES, PORCHES OR SUPPORTING MOISTURE PERMEABLE FLOOR OR ROOF SHALL BE PRESSURE TREATED OR MATERIALS OF NATURAL RESISTANCE TO DECAY. SEC. 2304.9 AND 2304.12 C.B.C.

- MANUFACTURED BEAM AND JOISTS: ALL MANUFACTURED BEAM AND JOISTS (I.E. "TRUSS JOIST MACMILLAN'S FRAME WORKS" PARALLAM, MICROLAM AND TJ) USED ON THESE PLANS SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE DESIGN VALUES:

- 3 1/2" WIDE AND LARGER :

SHEAR MODULUS OF ELASTICITY \_\_\_\_\_  $G = 12500$  PSI

MODULUS OF ELASTICITY \_\_\_\_\_  $E = 2.0 \times 10^6$  PSI

FLEXURAL STRESS \_\_\_\_\_  $F_b = 2900$  PSI

COMPRESSION PERPENDICULAR \_\_\_\_\_  $F_c = 650$  PSI

TO GRAIN, PARALLEL TO WIDE

FACE OF STRANDS

COMPRESSION PARALLEL TO GRAIN \_\_\_\_\_  $F_c = 2900$  PSI

HORIZONTAL SHEAR PERPENDICULAR \_\_\_\_\_  $F_v = 240$  PSI

TO WIDE FACE OF STRAND

- 1 7/8" WIDE AND LESS:

SHEAR MODULUS OF ELASTICITY \_\_\_\_\_  $G = 11250$  PSI

MODULUS OF ELASTICITY \_\_\_\_\_  $E = 1.8 \times 10^6$  PSI

FLEXURAL STRESS \_\_\_\_\_  $F_b = 2250$  PSI

COMPRESSION PERPENDICULAR \_\_\_\_\_  $F_c = 750$  PSI

TO GRAIN, PARALLEL TO GLUE

COMPRESSION PARALLEL TO GRAIN \_\_\_\_\_  $F_c = 285$  PSI

HORIZONTAL SHEAR PERPENDICULAR

TO GLUE LINE

ALL BLOCKING AND NAILING SHALL CONFORM WITH THE MANUFACTURER'S RECOMMENDATION. EQUIVALENT PRODUCTS MAY BE SUBSTITUTED, AND THE PROVIDED ESR REPORT SHALL BE SUBMITTED TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO INSTALLATION.

- ALL NEW FRAMING LUMBER SHALL HAVE 19% MAXIMUM MOISTURE CONTENT AT TIME OF INSTALLATION AND FABRICATION.

- FASTENERS FOR PRESSURE-PRESERVATIVE TREATED WOOD SHALL BE HOT-DIPPED ZINC COATED GALVANIZED, STAINLESS STEEL, SILICON BRONZE OR COPPER. CBC 2304.10.5.1.

## QUALITY ASSURANCE:

- ADDITIONAL CONTRACTOR SUBMITTALS:
  - UPON REQUEST, CERTIFICATION THAT THE MATERIALS BEING USED MEET THE REQUIREMENTS SPECIFIED.
  - MANUFACTURER'S DATA FOR GROUTS AND EPOXIES.

- OBSERVATION: THE ENGINEER SHALL BE NOTIFIED TO VISIT THE PROJECT SITE AS DICTATED BY CONSTRUCTION PROGRESS TO MAKE STRUCTURAL OBSERVATIONS ON THE WORK FOR GENERAL CONFORMANCE TO THE DESIGN INTENT PER CBC SECTION 1702.

- GENERAL: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE QUALITY OF ALL MATERIALS USED ON THE PROJECT AND SHALL BEAR THE BURDEN OF PROOF THAT THE MATERIALS USED COMPLY WITH THE PROJECT REQUIREMENTS.

# ABBREVIATIONS

|        |                          |          |                           |
|--------|--------------------------|----------|---------------------------|
| &      | AND                      | MECH.    | MECHANICAL                |
| @      | AT                       | MET.     | METAL                     |
| A.B.   | ANCHOR BOLT              | MIN.     | MINIMUM                   |
| ARCH.  | ARCHITECTURAL            | MISC.    | MISCELLANEOUS             |
| BLDG.  | BUILDING                 | N.I.C.   | NOT IN CONTRACT           |
| BLK'G. | BLOCKING                 | NOM.     | NOMINAL                   |
| BM.    | BEAM                     | NS       | NEAR SIDE                 |
| B.O.   | BOTTOM OF                | NTS      | NOT TO SCALE              |
| BOT.   | BOTTOM                   | O.C.     | ON CENTER                 |
| ⊕      | CENTER LINE              | O.D.     | OUTSIDE DIAMETER          |
| C.J.   | CONSTRUCTION JOINT       | O.H.     | OPPOSITE HAND             |
| CLR.   | CLEAR                    | OPN'G.   | OPENING                   |
| COL.   | COLUMN                   | OPP.     | OPPOSITE                  |
| CONN.  | CONNECTION               | PL       | PLATE                     |
| CONT.  | CONTINUOUS               | PLY      | PLYWOOD                   |
| C.P.   | COMPLETE PENETRATION     | PSL      | PARALLEL STRAND LUMBER    |
| CTR.   | CENTER                   | PT.      | POINT                     |
| DET.   | DETAIL                   | PTN.     | PARTITION                 |
| ∅      | DIAMETER                 | REF.     | REFERENCE                 |
| D.F.   | DOUGLAS FIR              | REINF.   | REINFORCEMENT             |
| DWG.   | DRAWING                  | REQ'D.   | REQUIRED                  |
| (E)    | EXISTING                 | RWD.     | REDWOOD                   |
| EA.    | EACH                     | S.A.D.   | SEE ARCHITECTURAL DRAWING |
| E.F.   | EACH FACE                | SCHED.   | SCHEDULE                  |
| EL.    | ELEVATION                | S.D.M.S. | SELF DRILLING METAL SCREW |
| ELECT. | ELECTRICAL               | SECT.    | SECTION                   |
| E.W.   | EACH WAY                 | SHT.     | SHEET                     |
| EXT.   | EXTERIOR                 | SIM.     | SIMILAR                   |
| FDN.   | FOUNDATION               | SPEC.    | SPECIFICATIONS            |
| FIN.   | FINISH                   | SQ.      | SQUARE                    |
| FL.    | FLOOR                    | STD.     | STANDARD                  |
| F.O.   | FACE OF                  | STL.     | STEEL                     |
| F.O.C. | FACE OF CONCRETE         | S.T.M.S. | SELF TAPPING METAL SCREW  |
| F.O.S. | FACE OF STUD             | STRUCT.  | STRUCTURAL                |
| F.S.   | FAR SIDE                 | SYM.     | SYMMETRICAL               |
| FTG.   | FOOTING                  | T & B    | TOP AND BOTTOM            |
| GA.    | GAUGE                    | T & G    | TONGE AND GROOVE          |
| GALV.  | GALVANIZED               | T.O.     | TOP OF                    |
| GLB    | GLU-LAMINATED BEAM       | T.O.C.   | TOP OF CONCRETE           |
| HD     | HOLD DOWN                | T.O.C.P. | TOP OF CONCRETE PAVEMENT  |
| HORIZ. | HORIZONTAL               | T.O.D.   | TOP OF DECK               |
| HT.    | HEIGHT                   | T.O.F.   | TOP OF FOOTING            |
| INT.   | INTERIOR                 | T.O.M.   | TOP OF MASONRY            |
| JT.    | JOINT                    | T.O.S.   | TOP OF STEEL              |
| LL.H.  | LONG LEG HORIZONTAL      | T.P.     | TOP OF PLATE              |
| LL.V.  | LONG LEG VERTICAL        | TYP.     | TYPICAL                   |
| LT.    | LIGHT                    | U.O.N.   | UNLESS OTHERWISE NOTED    |
| M.B.   | UNFINISHED MACHINE BOLTS | VERT.    | VERTICAL                  |
| MAX.   | MAXIMUM                  | W/       | WITH                      |
|        |                          | W/O      | WITHOUT                   |
|        |                          | WF       | WIDE FLANGE               |
|        |                          | W.P.     | WORK POINT                |
|        |                          | WT.      | WEIGHT                    |

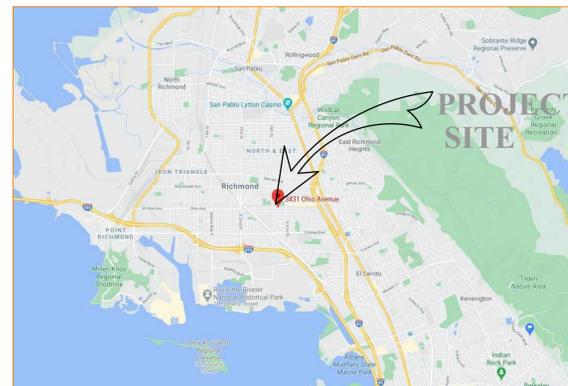
# DRAWING INDEX

- S-1 GENERAL NOTES, VICINITY MAP, DRAWING INDEX
- S-2 FOUNDATION PLAN, SECOND FLOOR FRAMING PLAN & ROOF FRAMING PLAN
- S-3 STRUCTURAL DETAILS
- S-4 TYPICAL STRUCTURAL DETAILS

# CODE REFERENCE

- 2019 CALIFORNIA BUILDING CODE  
2019 CALIFORNIA ELECTRIC CODE  
2019 CALIFORNIA PLUMBING CODE  
2019 CALIFORNIA MECHANICAL CODE  
2019 CALIFORNIA RESIDENTIAL CODE  
2019 CALIFORNIA GREEN BUILDING CODE

# LOCATION MAP



# DESIGN BASIS

- APPLICABLE CODE  
CALIFORNIA BUILDING CODE (CBC) 2019 EDITION
- VERTICAL LIVE LOADS  
2.1. ROOF 20 PSF  
2.2. FLOOR 40 PSF
- MINIMUM LATERAL FORCES  
3.1. SEISMIC  
 $V = 0.7 \cdot I \cdot S_{ds} \cdot W$   
R
- WIND  
3.2.1. BASIC WIND SPEED 110 MPH  
3.2.2. WIND IMPORTANCE FACTOR I=1.0  
3.2.3. WIND PRESSURE B  
3.2.4. INTERNAL PRESSURE COEFFICIENT ±0.18  
3.2.5. COMPONENTS AND CLADDING DESIGN WIND PRESSURE 32 PSF
- SEISMIC DESIGN CRITERIA  
4.1. SEISMIC IMPORTANCE FACTOR I=1.0  
4.2. OCCUPANCY CATEGORY II  
4.3. MAPPED SPECTRAL RESPONSE ACCELERATIONS  
S<sub>s</sub>=2.051  
S<sub>1</sub>=0.788  
D  
S<sub>ds</sub>=1.641  
S<sub>d1</sub>=0.788  
D  
LIGHT-FRAMED WALL WITH WOOD STRUCTURAL PANELS  
0.23\*W  
C<sub>s</sub>=0.23  
4.10. RESPONSE MODIFICATION FACTOR(S) R=6.5  
4.11. ANALYSIS PROCEDURE USED LATERAL FORCE ANALYSIS
- SITE CLASS  
4.5. SPECTRAL RESPONSE COEFFICIENTS
- SEISMIC DESIGN CATEGORY  
4.6. SEISMIC DESIGN CATEGORY  
4.7. BASIC SEISMIC-FORCE-RESISTING SYSTEM(S)
- DESIGN BASE SHEAR  
4.9. SEISMIC RESPONSE COEFFICIENT(S)  
4.10. RESPONSE MODIFICATION FACTOR(S)  
4.11. ANALYSIS PROCEDURE USED
- LATITUDE AND LONGITUDE SITE COORDINATE DATA  
LATITUDE 37.9311° N  
LONGITUDE 122.3369° W

# DEFERRED SUBMITTALS

- ROOF TRUSS DRAWINGS AND CALCULATIONS WILL BE PROVIDED TO THE BUILDING INSPECTION DIVISION FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

CITY OF RICHMOND  
PART OF PERMIT SET  
Sep 22, 2021  
By: *myersfz*

CITY OF RICHMOND  
PART OF PERMIT SET  
Sep 20 2021  
By: *GAUTAM*

Vit Hanacek Engineering  
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Tel. (925) 262-7401  
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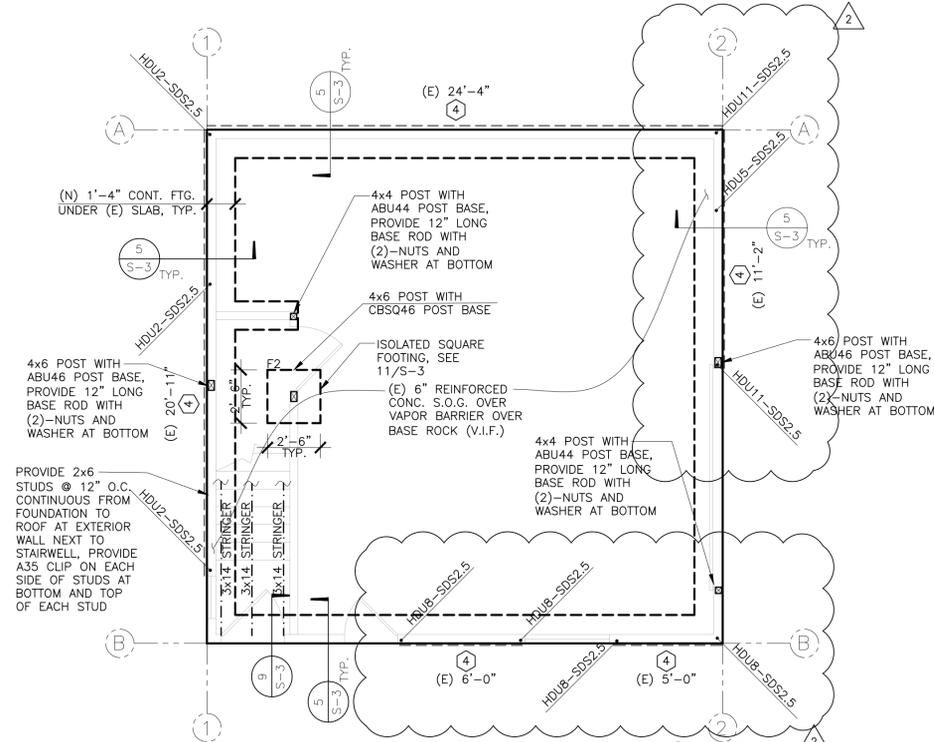


| ISSUANCE AND REVISIONS: | NO. | DATE       | DESCRIPTION |
|-------------------------|-----|------------|-------------|
|                         | 1   | 09/23/2021 | PERMIT SET  |
|                         | 1   | 09/26/2021 | PC COMMENTS |

PROJECT NAME:  
**SECOND STORY ADU**  
3431 OHIO AVE.  
RICHMOND, CA

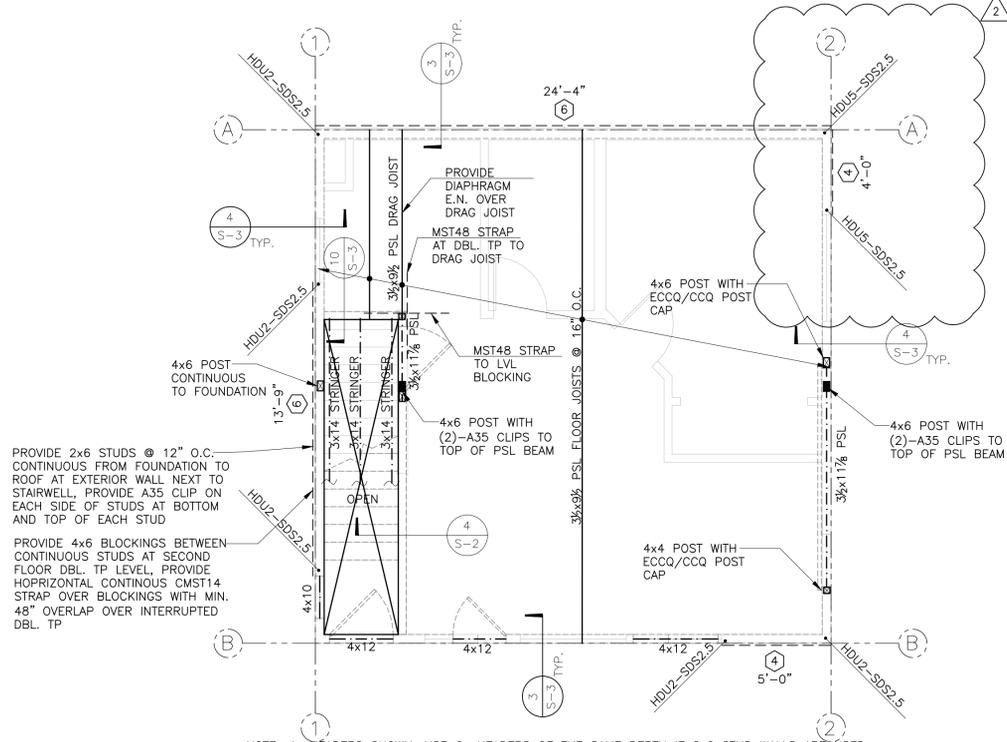
SHEET TITLE:  
GENERAL NOTES, VICINITY MAP  
& DRAWING INDEX

SHEET NO.:  
**S-1**  
PROJECT: 20-0962



NOTE: ALL EXTERIOR PLYWOOD SHEATHING ON FIRST FLOOR IS EXISTING STRUCTURAL #1 PLYWOOD WITH 10d @ 4" O.C.E.N., 10d @ 10" O.C.F.N. VERIFY IN FIELD.

**1 FOUNDATION PLAN**  
SCALE: 1/4"=1'-0"

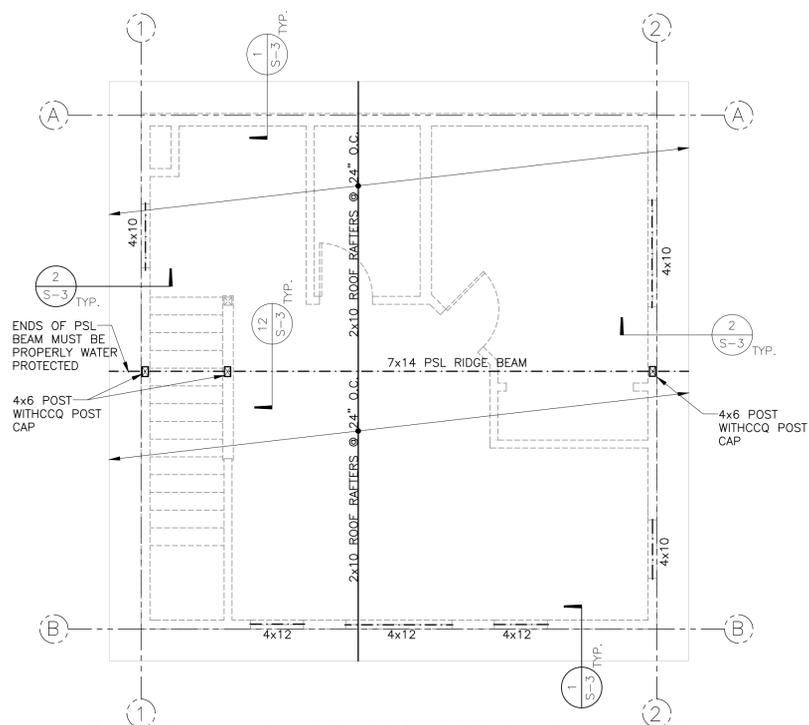


PROVIDE 2x6 STUDS @ 12" O.C. CONTINUOUS FROM FOUNDATION TO ROOF AT EXTERIOR WALL NEXT TO STAIRWELL, PROVIDE A35 CLIP ON EACH SIDE OF STUDS AT BOTTOM AND TOP OF EACH STUD

PROVIDE 4x6 BLOCKINGS BETWEEN CONTINUOUS STUDS AT SECOND FLOOR DBL. TP LEVEL, PROVIDE HOPRIZONTAL CONTINUOUS CMST14 STRAP OVER BLOCKINGS WITH MIN. 48" OVERLAP OVER INTERRUPTED DBL. TP

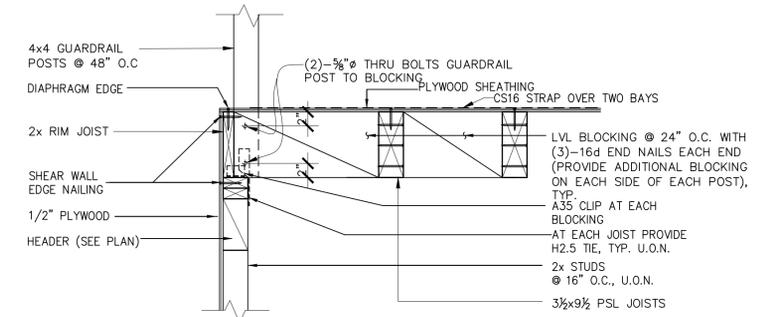
NOTE: 4x HEADERS SHOWN. USE 6x HEADERS OF THE SAME DEPTH IF 2x6 STUD WALLS ARE USED.

**2 SECOND FLOOR FRAMING PLAN**  
SCALE: 1/4"=1'-0"



NOTE: 4x HEADERS SHOWN. USE 6x HEADERS OF THE SAME DEPTH IF 2x6 STUD WALLS ARE USED.

**3 ROOF FRAMING PLAN**  
SCALE: 1/4"=1'-0"

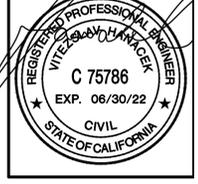


**4 DETAIL AT GUARDRAIL**  
NOT TO SCALE

**LEGEND**

|  |  |
|--|--|
|  | (N) FOUNDATION WALL AND FOOTING  |
|  | (E) FOUNDATION WALL  |
|  | HOLDDOWN (BY SIMPSON STRONG-TIE) ON MINIMUM OF (2)-2x STUDS, UNLESS OTHERWISE NOTED AS 4x OR 6x STUD. ALL FASTENERS SHALL BE AS PER MANUFACTURER'S SPECIFICATIONS; SEE SHEAR WALL SCHEDULE FOR SHEAR WALL ANCHOR BOLTING INTO (E) AND (N) FOUNDATIONS, AND SHEAR WALL FASTENING INFORMATION, SEE DETAILS |
|  | PLYWOOD SHEAR WALL WITH SPACING OF EDGE NAILING AS INDICATED PER SHEAR WALL SCHEDULE. LENGTH OF SHEARWALL IS ALSO CALLED OUT.  |
|  | FOR SHEAR WALL ANCHOR BOLTING INTO (E) AND (N) FOUNDATIONS, AND SHEAR WALL FASTENING INFORMATION, SEE DETAILS  |
|  | SIMPSON 'STRONG-WALL'. SEE SCHEDULE.   |

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| ISSUANCE AND REVISIONS | NO. | DATE       | DESCRIPTION |
|------------------------|-----|------------|-------------|
| PERMIT SET             | 1   | 03/23/2021 |             |
| PC COMMENTS            | 1   | 05/26/2021 |             |

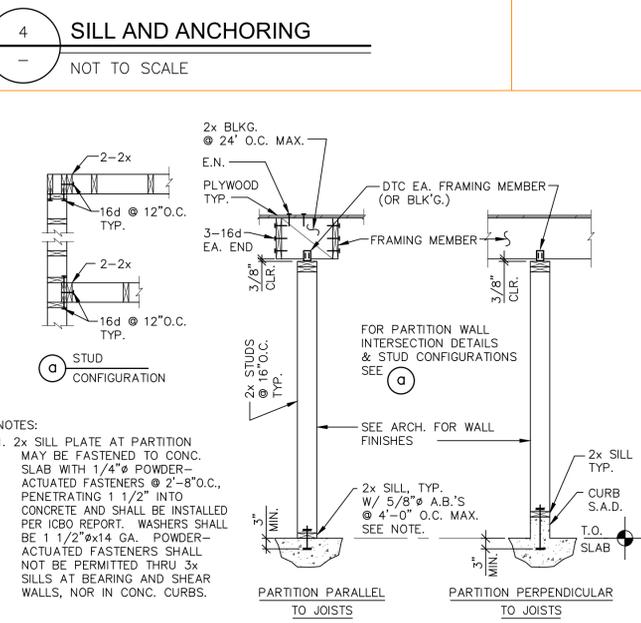
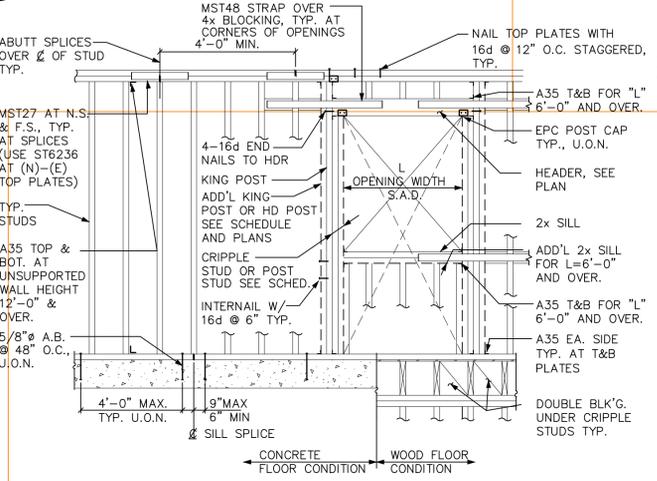
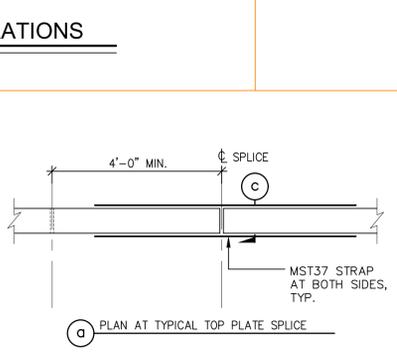
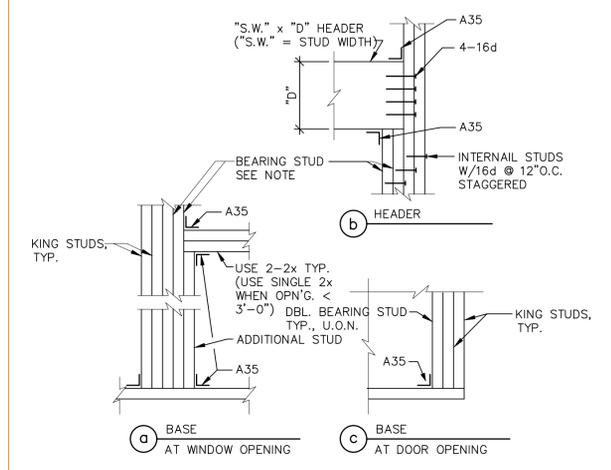
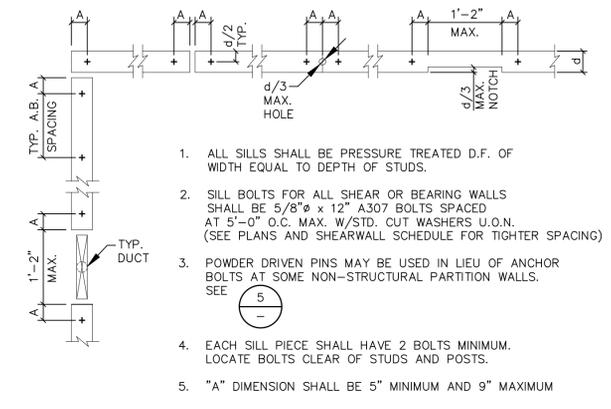
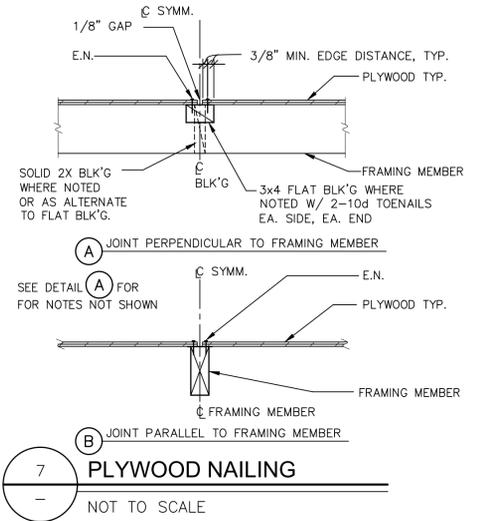
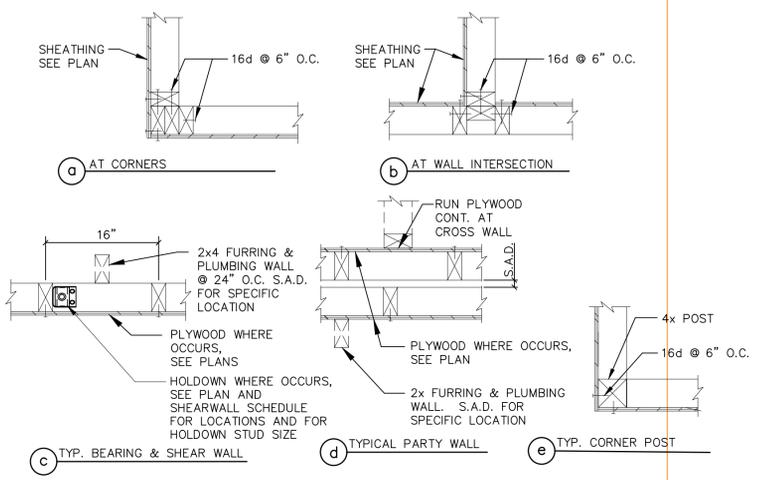
**SECOND STORY ADU**  
3431 OHIO AVE.  
RICHMOND, CA

FOUNDATION PLAN, SECOND FLOOR FRAMING PLAN & ROOF FRAMING PLAN

CITY OF RICHMOND  
PART OF PERMIT SET  
Sep 20 2021  
By: GAUTAM

SHEET NO.:  
**S-2**  
PROJECT: 20-0962

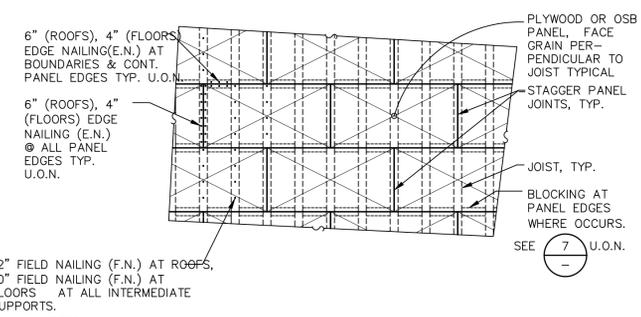
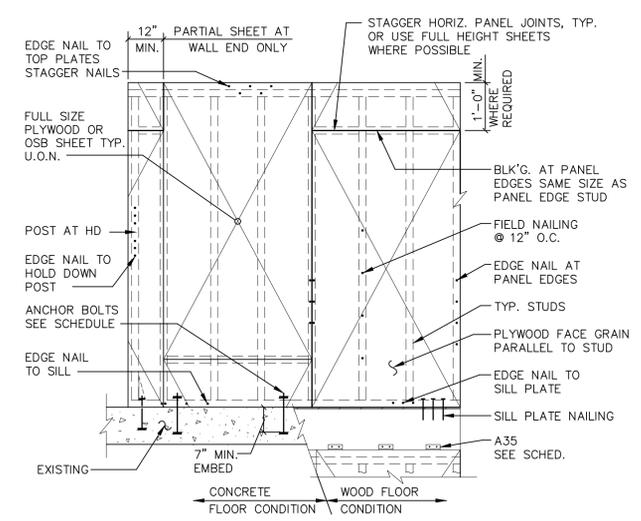
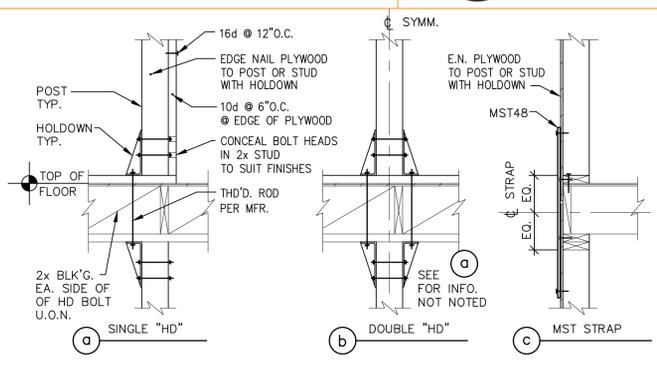




**TALL STRUCTURAL WALL FRAMING SCHEDULE**

| MAX. HEIGHT "H"     | STUD SIZE | SPACING  | REMARKS / CONNECTION |
|---------------------|-----------|----------|----------------------|
| 10'-0" < H ≤ 15'-0" | 2x4 MIN.  | 12" O.C. | A35 EA. END          |

**2 STRUCTURAL WALL FRAMING SCHEDULE**  
 NOT TO SCALE



**STRAIGHT BARS**

| BAR SIZE | DEVELOPMENT LENGTH |
|----------|--------------------|
| #3       | 12"                |
| #4       | 12"                |
| #5       | 14"                |
| #6       | 18"                |

**HOOKED BARS**

| BAR SIZE | DEVELOPMENT LENGTH | DIA. (DB) |
|----------|--------------------|-----------|
| #3       | 8"                 | .376      |
| #4       | 8"                 | .500      |
| #5       | 11"                | .625      |
| #6       | 15"                | .750      |

**REINFORCING BAR SPLICE LENGTH SCHEDULE**

| BAR SIZE | SPLICE LENGTH | BAR SIZE | SPLICE LENGTH |
|----------|---------------|----------|---------------|
| #3       | 18"           | #5       | 30"           |
| #4       | 24"           | #6       | 36"           |

**NOTES:**  
 1. USE 10d COMMON NAILS AT FLOORS; 10d COMMON NAILS AT ROOFS PER 3/S-1.  
 2. GLUE PLYWOOD OR OSB TO FLOOR FRAMING MEMBERS PRIOR TO NAILING.  
 3. MINIMUM PLYWOOD OR OSB WIDTH IS 24".  
 4. SEE GENERAL NOTES FOR PLYWOOD OR OSB THICKNESS & GRADE.

**REMARKS:**  
 CITY OF RICHMOND  
 PERMIT SET  
 Sep 20 2021  
 GAUTAM

**3 REBAR SCHEDULE**  
 NOT TO SCALE

ISSUANCE AND REVISIONS:

| NO. | DATE       | DESCRIPTION | PERMIT SET | PC COMMENTS |
|-----|------------|-------------|------------|-------------|
| 1   | 03/23/2021 |             |            |             |
| 1   | 05/26/2021 |             |            |             |

**SECOND STORY ADU**  
 3431 OHIO AVE.  
 RICHMOND, CA

TYPICAL STRUCTURAL DETAILS

# GENERAL NOTES

## GENERAL:

THESE PLANS ARE A BUILDER'S SET. VIT HANACEK ENGINEERING, INC. WAS CONTRACTED TO PROVIDE A BUILDER'S SET WITH THE AGREEMENT THAT AN EXPERIENCED AND KNOWLEDGEABLE CONTRACTOR SHALL CONSTRUCT THIS PROJECT. THE PLANS CONTAIN INFORMATION FOR GENERAL CONSTRUCTION AND BUILDING PERMIT PURPOSES ONLY AND ARE NOT EXTENSIVELY DETAILED NOR ARE SPECIFICATIONS PROVIDED. FOR ITEMS, METHODS AND/OR MATERIALS NOT SHOWN, THE MINIMUM REQUIREMENT OF THE 2019 CBC SHALL GOVERN.

ANY OR PART OF ALL SYSTEMS, MATERIALS, CONNECTIONS, AND DETAILS NOT SPECIFICALLY PROVIDED IN THESE PLANS ARE THE SOLE AND COMPLETE RESPONSIBILITY OF THE CONTRACTOR TO PROPERLY VERIFY AND INSTALL. THE ENGINEER DOES NOT PROVIDE CONTINUOUS CONSTRUCTION OBSERVATION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE QUALITY AND CONSTRUCTION STANDARDS FOR THIS PROJECT.

## JOB SAFETY:

- THE ENGINEER IS NOT RESPONSIBLE FOR THE FABRICATION, ERECTION, AND/OR JOB SAFETY. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL SAFETY REGULATIONS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL SHORING, BRACING, FORM WORK, ETC., AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING THE CONSTRUCTION OF THE BUILDING.
- VERIFICATION: CONTRACTOR'S RESPONSIBILITY IS TO VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING THE WORK. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES. ALL FRAMING MEMBERS SHOWN AS EXISTING (E) ON THE STRUCTURAL DRAWINGS WERE NOT VERIFIED BY ENGINEER AND MUST BE COMPARED WITH ACTUAL EXISTING DIMENSIONS AND SPECIFICATIONS AND ALL CONFLICTING DISCREPANCIES MUST BE CLARIFIED WITH ENGINEER.
- CONFLICTS: NOTES AND DETAILS ON THE DRAWINGS TAKE PRECEDENCE OVER THE GENERAL NOTES AND TYPICAL DETAILS IN CASE OF CONFLICT.
- CODES: ALL MATERIALS AND WORK SHALL CONFORM TO THE REQUIREMENTS OF THE [2019 CALIFORNIA BUILDING CODE (CBC)].
- SUBSTITUTIONS: PROVIDE MANUFACTURER'S APPROVED PRODUCT EVALUATION REPORTS (CBO REPORTS) AND A LIST OF ALL PROPOSED SUBSTITUTIONS TO THE ENGINEER FOR REVIEW AND WRITTEN APPROVAL BEFORE FABRICATION.
- SIMILAR WORK: WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE THE SAME AS FOR SIMILAR WORK SHOWN ON THE DRAWINGS.
- PIPES, DUCTS, SLEEVES, CHASES, ETC.: SHALL NOT BE PLACED IN SLABS, BEAMS, OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC., UNLESS SPECIFICALLY SHOWN. OBTAIN PRIOR WRITTEN APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.
- EXCAVATIONS: LOCATE AND PROTECT UNDERGROUND OR CONCEALED CONDUIT, PLUMBING OR OTHER UTILITIES WHERE NEW WORK IS BEING PERFORMED.
- CONSTRUCTION LOADS: MATERIALS SHALL BE EVENLY DISTRIBUTED IF PLACED ON FRAMED FLOORS OR ROOFS. LOADS SHALL NOT EXCEED THE ALLOWABLE LOADING FOR THE SUPPORTING MEMBERS AND THEIR CONNECTIONS.
- CONSTRUCTION METHODS AND PROJECT SAFETY: THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE METHODS, PROCEDURES OR SEQUENCE OF CONSTRUCTION. TAKE NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE DURING CONSTRUCTION. NEITHER THE OWNER NOR ARCHITECT/ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
- CHANGES TO DRAWINGS: OBTAIN PRIOR WRITTEN APPROVAL FROM THE ENGINEER.

## SHOP DRAWINGS:

SHOP DRAWINGS ARE AN AID FOR FIELD PLACEMENT AND ARE SUPERSEDED BY THE ARCHITECTURAL DRAWINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE CERTAIN THAT THE SHOP DRAWINGS AND CONSTRUCTION ARE IN CONFORMANCE WITH THE LATEST ARCHITECTURAL AND STRUCTURAL DRAWINGS. AT LEAST 3 WEEKS BEFORE FABRICATION, THE CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO THE ENGINEER/ARCHITECT FOR REVIEW TO DETERMINE GENERAL COMPLIANCE WITH THE DRAWINGS. OUR REVIEW DOES NOT GUARANTEE IN ANY WAY THAT THE SHOP DRAWINGS ARE IN COMPLIANCE WITH THE LATEST DRAWINGS.

## SITE OBSERVATIONS:

THE CONTRACTOR SHALL GIVE ENGINEER 72 HOURS MINIMUM NOTICE AS TO THE TIME OF THE SITE OBSERVATION FOR ANY OBSERVATION REQUIRED BY C.B.C. 2019 CHAPTER 17 OR ANY OTHERS WHICH MAY BE REQUIRED. ALL WRITTEN SITE OBSERVATIONS/INSPECTIONS REPORTS BY THE REGULATORY AGENCY SHALL BE COPIED TO THE ENGINEER.

## FOUNDATION:

DESIGN WAS BASED ON THE MINIMUM REQUIREMENTS OF 2019 CBC.

## CONCRETE NOTES:

- CONCRETE SHALL CONFORM TO ASTM-94 AND SHALL HAVE A 28 DAY (MINIMUM) COMPRESSIVE STRENGTH OF 2500 PSI. SPECIAL INSPECTION IS NOT REQUIRED.
- LARGEST AGGREGATE : 3/4 INCH. MAX.
- SLUMP: 4 INCHES MAX.
- REINFORCING SHALL BE FREE OF LOOSE RUST OR OTHER DELETERIOUS COATING.
- USE Fy=60 ksi, TYPICAL AND 40 KSI FOR TIES AND STIRRUPS.
- REINFORCING MIN. COVER SHALL BE AS FOLLOWS:
 

|   |            |
|---|------------|
| CONCRETE CAST AGAINST EARTH                 | 3 INCHES   |
| FORMED CONCRETE EXPOSED TO EARTH OR WEATHER | 2 INCHES   |
| NOT EXPOSED TO EARTH OR WEATHER             | 1 1/2 INCH |
- REINFORCING STEEL SHOP DRAWINGS SHALL BE SUBMITTED BY CONTRACTOR FOR REVIEW & APPROVAL BY ENGINEER, AT LEAST 3- WEEKS BEFORE FABRICATION.
- FORMWORK FOR THE FOUNDATION SHOULD BE REVIEWED AND SIGNED OFF BY THE STRUCTURAL ENGINEER PRIOR TO THE PLACEMENT OF CONCRETE

## CARPENTRY:

- STUDS: 2x6 STUDS- STRUCTURAL NO. 2
- RAFTERS AND JOISTS: STRUCTURAL NO. 1
- PLATES, BLOCKS AND MISCELLANEOUS: CONSTRUCTION GRADE
- POSTS: 4x AND 6x - STRUCTURAL NO. 1
- CONCEALED BEAMS - STRUCTURAL NO. 1.
- EXPOSED BEAMS: STRUCTURAL NO. 1 APPEARANCE GRADE, FOHC.
- ROOF PLYWOOD: 1/2 INCH 24/16 CD-X

FLOOR PLYWOOD: 3/4 INCH (48/24) T&G EDGES WITH EXT. GLUE, U.O.N. ON PLANS.  
SHEARWALLS: 1/2 INCH STR. 1 PLYWOOD. ALL PLYWOOD TO CONFORM TO A.P.A. STD. PS-1.

- SILL PLATES: PRESSURE-TREATED DOUGLAS FIR. ALL SILL PLATE ANCHOR BOLTS SHALL HAVE 3"x3"x0.229" WASHERS, TYP. ALL ANCHOR BOLTS SHALL BE 5/8" @ 4'-0" o.c., UNLESS NOTED OTHERWISE ON SHEARWALL SCHEDULE.
- GLUE FOR FLOOR CONSTRUCTION: APA PERFORMANCE SPECIF. AFG-01.
- FASTENERS, HANGERS AND CONNECTIONS: SIMPSON STRONG TIE (AS NOTED ON THE DRAWINGS), OR APPROVED EQUAL. CONTRACTOR SHALL DEMONSTRATE WITH CALCULATIONS THAT PROPOSED SUBSTITUTION MEET OR EXCEED THE CAPACITY AND QUALITY OF FASTENERS ORIGINALLY SPECIFIED.

BOLTS AND NUTS SHALL BE ASTM F1554, Grade 36 STEEL. ALL BOLT TREAD AND NUTS THAT BEAR ON WOOD SHALL HAVE MALLEABLE IRON WASHERS IF EXPOSED OR CUT WASHER IF CONCEALED.

- NAILING: AS NOTED ON DRAWINGS. IF NOT SHOWN ON DRAWINGS, NAILING OF FRAMING COMPONENTS SHALL CONFORM TO CBC 2019 TABLE 2304.10.1, AS A MINIMUM. ALL NAILS SHALL BE COMMON WIRE GAUGE. IF POWER DRIVEN NAILS ARE TO BE USED, SUBMIT CERTIFICATION FOR WIRE GAUGE, LENGTH AND HEAD DIAMETER FOR REVIEW, IF NOT EQUAL TO COMMON WIRE SPECS.
- GLULAMS (WHERE REQUIRED): GLULAMS SHALL BE INDUSTRIAL GRADE IF CONCEALED AND ARCHITECTURAL GRADE IF EXPOSED, AND SHALL HAVE 1600 FEET RADIUS CAMBER, UNLESS NOTED OTHERWISE. GLULAMS THAT ARE CONTINUOUS OVER A SUPPORT SHALL HAVE TENSION LAMINATIONS ON TOP OF BEAM. MARK TOP AND ORIENTATION OF ALL GLULAMS. Fb = 2400 PSI; Fc = 690 PSI; Fv = 165 PSI; E = 1,800,000 PSI SUBMIT AITC CERTIFICATIONS FOR ALL GLULAM BEAMS.
- HORIZONTAL AND VERTICAL WOOD STRUCTURAL MEMBERS USED IN EXPOSED DECKS, BALCONIES, PORCHES OR SUPPORTING MOISTURE PERMEABLE FLOOR OR ROOF SHALL BE PRESSURE TREATED OR MATERIALS OF NATURAL RESISTANCE TO DECAY. SEC. 2304.9 AND 2304.12 C.B.C.
- MANUFACTURED BEAM AND JOISTS: ALL MANUFACTURED BEAM AND JOISTS (I.E. "TRUSS JOIST MACMILLAN'S FRAME WORKS" PARALLAM, MICROLAM AND TJ) USED ON THESE PLANS SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE DESIGN VALUES:
  - 3 1/2" WIDE AND LARGER :
 

|  |                  |
|--|------------------|
| SHEAR MODULUS OF ELASTICITY  | G = 12500 PSI    |
| MODULUS OF ELASTICITY  | E = 2.0x10E6 PSI |
| FLEXURAL STRESS  | Fb = 2900 PSI    |
| COMPRESSION PERPENDICULAR TO GRAIN, PARALLEL TO WIDE FACE OF STRANDS | Fc = 650 PSI     |
| COMPRESSION PARALLEL TO GRAIN  | Fc = 2900 PSI    |
| HORIZONTAL SHEAR PERPENDICULAR TO WIDE FACE OF STRAND                | Fv = 240 PSI     |
  - 1 7/8" WIDE AND LESS:
 

|  |                  |
|--|------------------|
| SHEAR MODULUS OF ELASTICITY                          | G = 11250 PSI    |
| MODULUS OF ELASTICITY                                | E = 1.8x10E6 PSI |
| FLEXURAL STRESS                                      | Fb = 2250 PSI    |
| COMPRESSION PERPENDICULAR TO GRAIN, PARALLEL TO GLUE | Fc = 750 PSI     |
| COMPRESSION PARALLEL TO GRAIN                        | Fc = 285 PSI     |
| HORIZONTAL SHEAR PERPENDICULAR TO GLUE LINE          |                  |

ALL BLOCKING AND NAILING SHALL CONFORM WITH THE MANUFACTURER'S RECOMMENDATION. EQUIVALENT PRODUCTS MAY BE SUBSTITUTED, AND THE PROVIDED ESR REPORT SHALL BE SUBMITTED TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO INSTALLATION.

ALL NEW FRAMING LUMBER SHALL HAVE 19% MAXIMUM MOISTURE CONTENT AT TIME OF INSTALLATION AND FABRICATION.

- FASTENERS FOR PRESSURE-PRESERVATIVE TREATED WOOD SHALL BE HOT-DIPPED ZINC COATED GALVANIZED, STAINLESS STEEL, SILICON BRONZE OR COPPER. CBC 2304.10.5.1.

## QUALITY ASSURANCE:

- ADDITIONAL CONTRACTOR SUBMITTALS:
  - UPON REQUEST, CERTIFICATION THAT THE MATERIALS BEING USED MEET THE REQUIREMENTS SPECIFIED.
  - MANUFACTURER'S DATA FOR GROUTS AND EPOXIES.
- OBSERVATION: THE ENGINEER SHALL BE NOTIFIED TO VISIT THE PROJECT SITE AS DICTATED BY CONSTRUCTION PROGRESS TO MAKE STRUCTURAL OBSERVATIONS ON THE WORK FOR GENERAL CONFORMANCE TO THE DESIGN INTENT PER CBC SECTION 1702.
- GENERAL: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE QUALITY OF ALL MATERIALS USED ON THE PROJECT AND SHALL BEAR THE BURDEN OF PROOF THAT THE MATERIALS USED COMPLY WITH THE PROJECT REQUIREMENTS.

# ABBREVIATIONS

|        |                          |          |                           |
|--------|--------------------------|----------|---------------------------|
| &      | AND                      | MECH.    | MECHANICAL                |
| @      | AT                       | MET.     | METAL                     |
| A.B.   | ANCHOR BOLT              | MIN.     | MINIMUM                   |
| ARCH.  | ARCHITECTURAL            | MISC.    | MISCELLANEOUS             |
| BLDG.  | BUILDING                 | N.I.C.   | NOT IN CONTRACT           |
| BLK'G. | BLOCKING                 | NOM.     | NOMINAL                   |
| BM.    | BEAM                     | NS       | NEAR SIDE                 |
| B.O.   | BOTTOM OF                | NTS      | NOT TO SCALE              |
| BOT.   | BOTTOM                   | O.C.     | ON CENTER                 |
| ⊕      | CENTER LINE              | O.D.     | OUTSIDE DIAMETER          |
| C.J.   | CONSTRUCTION JOINT       | O.H.     | OPPOSITE HAND             |
| CLR.   | CLEAR                    | OPN'G.   | OPENING                   |
| COL.   | COLUMN                   | OPP.     | OPPOSITE                  |
| CONN.  | CONNECTION               | PL       | PLATE                     |
| CONT.  | CONTINUOUS               | PLY      | PLYWOOD                   |
| C.P.   | COMPLETE PENETRATION     | PSL      | PARALLEL STRAND LUMBER    |
| CTR.   | CENTER                   | PT.      | POINT                     |
| DET.   | DETAIL                   | PTN.     | PARTITION                 |
| ∅      | DIAMETER                 | REF.     | REFERENCE                 |
| D.F.   | DOUGLAS FIR              | REINF.   | REINFORCEMENT             |
| DWG.   | DRAWING                  | REQ'D.   | REQUIRED                  |
| (E)    | EXISTING                 | RWD.     | REDWOOD                   |
| EA.    | EACH                     | S.A.D.   | SEE ARCHITECTURAL DRAWING |
| E.F.   | EACH FACE                | SCHED.   | SCHEDULE                  |
| EL.    | ELEVATION                | S.D.M.S. | SELF DRILLING METAL SCREW |
| ELECT. | ELECTRICAL               | SECT.    | SECTION                   |
| E.W.   | EACH WAY                 | SHT.     | SHEET                     |
| EXT.   | EXTERIOR                 | SIM.     | SIMILAR                   |
| FDN.   | FOUNDATION               | SPEC.    | SPECIFICATIONS            |
| FIN.   | FINISH                   | SQ.      | SQUARE                    |
| FL.    | FLOOR                    | STD.     | STANDARD                  |
| F.O.   | FACE OF                  | STL.     | STEEL                     |
| F.O.C. | FACE OF CONCRETE         | S.T.M.S. | SELF TAPPING METAL SCREW  |
| F.O.S. | FACE OF STUD             | STRUCT.  | STRUCTURAL                |
| F.S.   | FAR SIDE                 | SYM.     | SYMMETRICAL               |
| FTG.   | FOOTING                  | T & B    | TOP AND BOTTOM            |
| GA.    | GAUGE                    | T & G    | TONGE AND GROOVE          |
| GALV.  | GALVANIZED               | T.O.     | TOP OF                    |
| GLB    | GLU-LAMINATED BEAM       | T.O.C.   | TOP OF CONCRETE           |
| HD     | HOLD DOWN                | T.O.C.P. | TOP OF CONCRETE PAVEMENT  |
| HORIZ. | HORIZONTAL               | T.O.D.   | TOP OF DECK               |
| HT.    | HEIGHT                   | T.O.F.   | TOP OF FOOTING            |
| INT.   | INTERIOR                 | T.O.M.   | TOP OF MASONRY            |
| JT.    | JOINT                    | T.O.S.   | TOP OF STEEL              |
| LL.H.  | LONG LEG HORIZONTAL      | T.P.     | TOP OF PLATE              |
| LL.V.  | LONG LEG VERTICAL        | TYP.     | TYPICAL                   |
| LT.    | LIGHT                    | U.O.N.   | UNLESS OTHERWISE NOTED    |
| M.B.   | UNFINISHED MACHINE BOLTS | VERT.    | VERTICAL                  |
| MAX.   | MAXIMUM                  | W/       | WITH                      |
|        |                          | W/O      | WITHOUT                   |
|        |                          | WF       | WIDE FLANGE               |
|        |                          | W.P.     | WORK POINT                |
|        |                          | WT.      | WEIGHT                    |

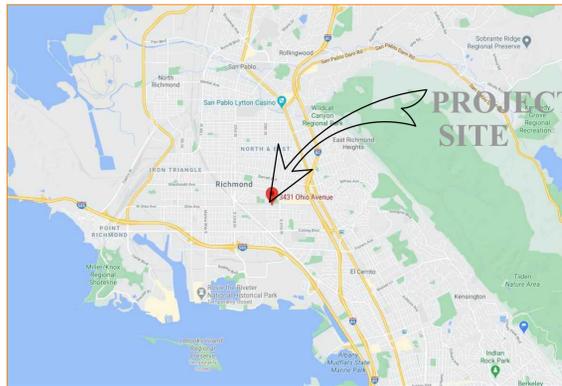
# DRAWING INDEX

- S-1 GENERAL NOTES, VICINITY MAP, DRAWING INDEX
- S-2 FOUNDATION PLAN, SECOND FLOOR FRAMING PLAN & ROOF FRAMING PLAN
- S-3 STRUCTURAL DETAILS
- S-4 TYPICAL STRUCTURAL DETAILS

# CODE REFERENCE

- 2019 CALIFORNIA BUILDING CODE
- 2019 CALIFORNIA ELECTRIC CODE
- 2019 CALIFORNIA PLUMBING CODE
- 2019 CALIFORNIA MECHANICAL CODE
- 2019 CALIFORNIA RESIDENTIAL CODE
- 2019 CALIFORNIA GREEN BUILDING CODE

# LOCATION MAP



# DESIGN BASIS

- APPLICABLE CODE  
CALIFORNIA BUILDING CODE (CBC) 2019 EDITION
- VERTICAL LIVE LOADS
 

|            |        |
|------------|--------|
| 2.1. ROOF  | 20 PSF |
| 2.2. FLOOR | 40 PSF |
- MINIMUM LATERAL FORCES
 

|   |                                |         |
|---|--------------------------------|---------|
| 3.1. SEISMIC  | $V = 0.7 \cdot S_{ds} \cdot W$ |         |
|   | $R$                            |         |
| 3.2. WIND   |                                | 110 MPH |
| 3.2.1. BASIC WIND SPEED                             |                                | I=1.0   |
| 3.2.2. WIND IMPORTANCE FACTOR                       |                                | B       |
| 3.2.3. WIND PRESSURE                                |                                | ±0.18   |
| 3.2.4. INTERNAL PRESSURE COEFFICIENT                |                                | 32 PSF  |
| 3.2.5. COMPONENTS AND CLADDING DESIGN WIND PRESSURE |                                |         |
- SEISMIC DESIGN CRITERIA
 

|   |   |
|---|---|
| 4.1. SEISMIC IMPORTANCE FACTOR              | I=1.0   |
| 4.2. OCCUPANCY CATEGORY                     | II  |
| 4.3. MAPPED SPECTRAL RESPONSE ACCELERATIONS | Ss=2.051                                      |
|   | S1=0.788                                      |
|   | D   |
|   | Sds=1.641                                     |
|   | Sd1=0.788                                     |
|   | D   |
|   | LIGHT-FRAMED WALL WITH WOOD STRUCTURAL PANELS |
|   | 0.23*W  |
|   | Cs=0.23                                       |
|   | R=6.5   |
|   | LATERAL FORCE ANALYSIS                        |
- SITE CLASS
 

|                                     |  |
|-------------------------------------|--|
| 4.4. SITE CLASS                     |  |
| 4.5. SPECTRAL RESPONSE COEFFICIENTS |  |
- SEISMIC DESIGN CATEGORY
 

|  |  |
|--|--|
| 4.6. SEISMIC DESIGN CATEGORY                 |  |
| 4.7. BASIC SEISMIC-FORCE-RESISTING SYSTEM(S) |  |
- DESIGN BASE SHEAR
 

|                                       |  |
|---------------------------------------|--|
| 4.8. DESIGN BASE SHEAR                |  |
| 4.9. SEISMIC RESPONSE COEFFICIENT(S)  |  |
| 4.10. RESPONSE MODIFICATION FACTOR(S) |  |
| 4.11. ANALYSIS PROCEDURE USED         |  |
- LATITUDE AND LONGITUDE SITE COORDINATE DATA
 

|           |             |
|-----------|-------------|
| LATITUDE  | 37.9311° N  |
| LONGITUDE | 122.3369° W |

CITY OF RICHMOND  
**PART OF PERMIT SET**  
Sep 22, 2021

By: myersD

CITY OF RICHMOND  
**PART OF PERMIT SET**  
Sep 20 2021  
By: GAUTAM

Vit Hanacek Engineering  
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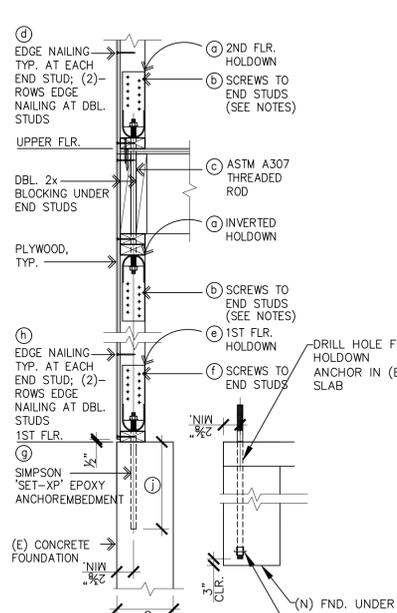
| ISSUANCE AND REVISIONS: | NO. | DATE       | DESCRIPTION |
|-------------------------|-----|------------|-------------|
|                         | 1   | 09/23/2021 | PERMIT SET  |
|                         | 1   | 09/26/2021 | PC COMMENTS |
|                         | 2   | 09/13/2021 | PC COMMENTS |

PROJECT NAME:  
**SECOND STORY ADU**  
3431 OHIO AVE.  
RICHMOND, CA

SHEET TITLE:  
GENERAL NOTES, VICINITY MAP  
& DRAWING INDEX

SHEET NO.:  
**S-1**  
PROJECT: 20-0962





| MARK | HOLDOWN MARK               |                            |                            |                            |                            |                            |
|------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
|      | HU2                        | HU4                        | HU5                        | HU8                        | HU11                       | HU14                       |
| (a)  | HU2-SDS2.5                 | HU4-SDS2.5                 | HU5-SDS2.5                 | HU8-SDS2.5                 | HU11-SDS2.5                | HU14-SDS2.5                |
| (b)  | (6)-SDS1/4x3               | (10)-SDS1/4x3              | (14)-SDS1/4x3              | (20)-SDS1/4x3              | (30)-SDS1/4x3              | (36)-SDS1/4x3              |
| (c)  | (1)-5/8"                   | (1)-5/8"                   | (1)-5/8"                   | (1)-7/8"                   | (1)-1"                     | (1)-1"                     |
| (d)  | 2-ROWS 10d NAILS @ 6" O.C. | 2-ROWS 10d NAILS @ 4" O.C. | 2-ROWS 10d NAILS @ 4" O.C. | 2-ROWS 10d NAILS @ 3" O.C. | 3-ROWS 10d NAILS @ 2" O.C. | 3-ROWS 10d NAILS @ 2" O.C. |
| (e)  | HU2-SDS2.5                 | HU4-SDS2.5                 | HU5-SDS2.5                 | HU8-SDS2.5                 | HU11-SDS2.5                | HU14-SDS2.5                |
| (f)  | (6)-SDS1/4x3               | (10)-SDS1/4x3              | (14)-SDS1/4x3              | (20)-SDS1/4x3              | (30)-SDS1/4x3              | (36)-SDS1/4x3              |
| (g)  | (1)-5/8"                   | (1)-5/8"                   | (1)-5/8"                   | (1)-7/8"                   | (1)-1"                     | (1)-1"                     |
| (h)  | 2-ROWS 10d NAILS @ 6" O.C. | 2-ROWS 10d NAILS @ 4" O.C. | 2-ROWS 10d NAILS @ 4" O.C. | 2-ROWS 10d NAILS @ 3" O.C. | 3-ROWS 10d NAILS @ 2" O.C. | 3-ROWS 10d NAILS @ 2" O.C. |
| (i)  | 12" MIN.                   | 14" MIN.                   | 16" MIN.                   | 18" MIN.                   | 20" MIN.                   | 24" MIN.                   |

NOTES:

- PROVIDE SIMPSON 'SET-XP' EPOXY ADHESIVE COMPLYING WITH ICC ES-2508. UNDERPINNED FOUNDATION MUST BE FULLY CURED BEFORE HOLDOWN EPOXYING.
- AT HU8, PROVIDE 4x6 END STUDS, TYP.
- AT HU11 AND HU14, PROVIDE 6x6 END STUDS, TYP.
- AT HU2, HU4 AND HU5, PROVIDE (2)-2x6 END STUDS, TYP.
- MAIN FLOOR AND UPPER FLOOR, HDU HOLDOWNS MAY BE REPLACED WITH VERTICAL MST STRAPS AS FOLLOWS:
  - a. MST48 FOR HU2.
  - b. MST60 FOR HU4.
  - c. MST60 FOR HU5.
- SSTB BOLTS CAN BE SUBSTITUTED WITH SAME DIAMETER A.T.R. WITH WASHER SANDWICHED BETWEEN TWO NUTS AT BOTTOM OF ROD.

**6 HOLDOWNS SCHEDULE**

NOT TO SCALE

| MARK | TOP PLATE ANCHOR SPACING (a) | SILL PLATE ANCHOR BOLT SPACING (b) | SILL PLATE NAILING SPACING (c) | PLYWOOD EDGE NAILING (d) | PLYWOOD THK. (STR. NO 1) | ALLOWABLE SHEAR STRESS (LB./FT.) |
|------|------------------------------|------------------------------------|--------------------------------|--------------------------|--------------------------|----------------------------------|
| 2    | SIMPSON A35 @ 6" O.C.        | 5/8" A.B @ 12" O.C.                | 20d NAILS @ 2" O.C.            | 10d NAILS @ 2" O.C.      | 1/2"                     | 870                              |
| 3    | SIMPSON A35 @ 8" O.C.        | 5/8" A.B @ 16" O.C.                | 20d NAILS @ 3" O.C.            | 10d NAILS @ 3" O.C.      | 1/2"                     | 665                              |
| 4    | SIMPSON A35 @ 10" O.C.       | 5/8" A.B @ 24" O.C.                | 20d NAILS @ 4" O.C.            | 10d NAILS @ 4" O.C.      | 1/2"                     | 510                              |
| 6    | SIMPSON A35 @ 16" O.C.       | 5/8" A.B @ 32" O.C.                | 20d NAILS @ 6" O.C.            | 10d NAILS @ 6" O.C.      | 1/2"                     | 340                              |

- NOTES:
- WHERE (2)-ROWS OF DIAPHRAGM NAILING OR ANCHORS ARE CALLED OUT, PROVIDE A MINIMUM OF 3-1/2" WIDE BLOCKING OR (2)-SIDES ARE CALLED OUT, PROVIDE PLYWOOD SHEATHING ON BOTH SIDES OF SHEAR WALL AND 3x STUDS (MIN.) @ 16" O.C. MAX., 4x P.T.D.F. SILL PLATE AND 3/4" A.B. @ 10" O.C.
  - WHERE "HEX 3" NAILING ON (2)- SIDES ARE CALLED OUT, PROVIDE PLYWOOD SHEATHING ON BOTH SIDES OF SHEAR WALL AND 3x STUDS (MIN.) @ 16" O.C. MAX., 4x P.T.D.F. SILL PLATE AND 3/4" A.B. @ 8" O.C.
  - WHERE "HEX 2" NAILING ON (2)- SIDES ARE CALLED OUT, PROVIDE PLYWOOD SHEATHING ON BOTH SIDES OF SHEAR WALL AND 3x STUDS (MIN.) @ 16" O.C. MAX., 4x P.T.D.F. SILL PLATE AND 3/4" A.B. @ 8" O.C.
  - AT EXISTING CONCRETE FOUNDATION, PROVIDE 5/8" SIMPSON 'SET-XP' EPOXY ANCHOR BOLTS WITH 10" MINIMUM EMBEDMENT. AT NEW CONCRETE FOUNDATION, PROVIDE 5/8" ANCHOR BOLTS PER SHEARWALL SCHEDULE OR PER CARPENTRY NOTE H ON S-1.
  - ALL FIELD NAILING SHALL BE 10d @ 12" O.C., U.O.N.
  - WHERE ALLOWABLE SHEAR VALUES EXCEED 350 POUNDS PER FOOT, FOUNDATION SILL PLATES AND ALL FRAMING MEMBERS RECEIVING EDGE NAILING FROM ADJUTING PANELS SHALL NOT BE LESS THAN A SINGLE 3-INCH NOMINAL MEMBER. ALL PLYWOOD JOINTS SHALL BE STAGGERED.
  - FOR DOUBLE-SIDED SHEAR WALLS, PROVIDE 3x STUD CONSTRUCTION INCLUDING DOUBLE 3x TOP PLATES AND 3x PRESSURE-TREATED SILL PLATES.
  - ALL ANCHOR BOLTS SHALL HAVE A MINIMUM OF 3"x3"x0.229" STEEL PLATE WASHER.
  - ALL SHEARWALL PLYWOOD PANEL EDGES SHALL BE BLOCKED.
  - FOR DOUBLE-SIDED SHEAR WALLS, REQUIRED SPACING OF ITEMS a, b, c SHALL BE HALVED.

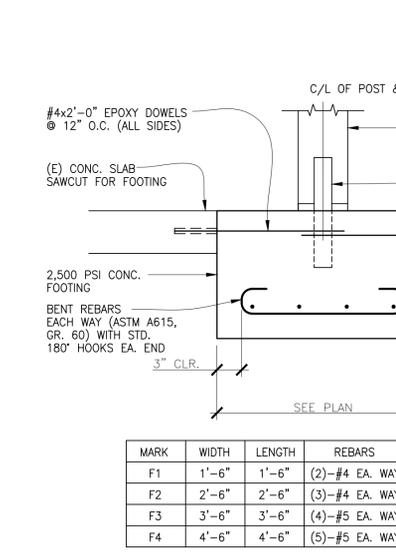
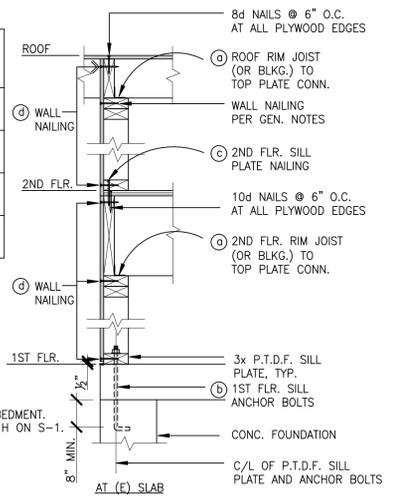
**7 SHEAR WALL FASTENERS SCHEDULE**

NOT TO SCALE

| DIAPHRAGM SCHEDULE                   |  |                             |               |   |                    |
|--------------------------------------|--|-----------------------------|---------------|---|--------------------|
| Material                             | Edge Nailing (E.N.) Boundary Nailing (B.F.) & Field Nailing (F.N.) | Sill Nailing (Sinker Nails) | Anchor Bolts* | Block Nailing (Clips or Sinker Nails as required) | Allow. Shear #/Ft. |
| <b>ROOF DIAPHRAGM (2019 C.B.C.)</b>  |  |                             |               |   |                    |
| 1/2                                  | 8d @ 6" o.c. E.N. 10d @ 12" o.c. F.N.                              |                             |               | A35 @ 24" o.c.                                    | 180                |
| <b>FLOOR DIAPHRAGM (2019 C.B.C.)</b> |  |                             |               |   |                    |
| 3/4                                  | 10d @ 4" o.c. E.N. 10d @ 10" o.c. F.N.                             |                             |               | A35 @ 12" o.c.                                    | 285                |

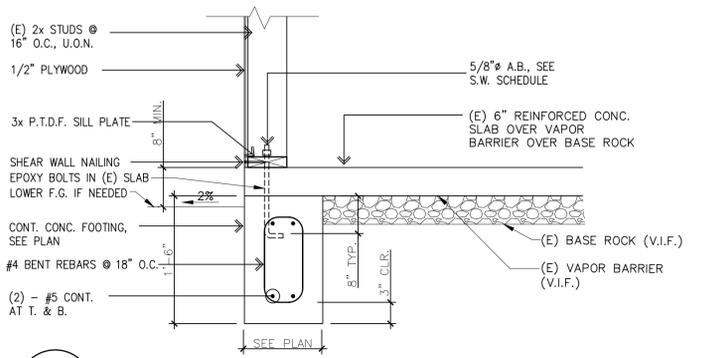
**8 DIAPHRAGM SCHEDULE**

NOT TO SCALE



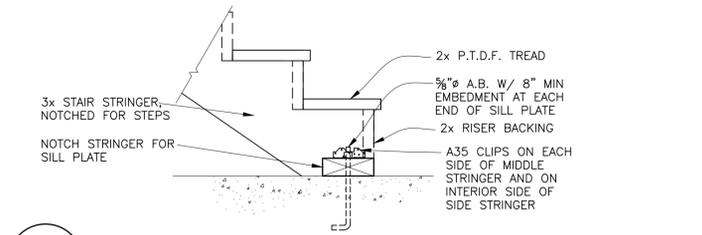
**11 TYPICAL ISOLATED SPREAD FOOTING**

NOT TO SCALE



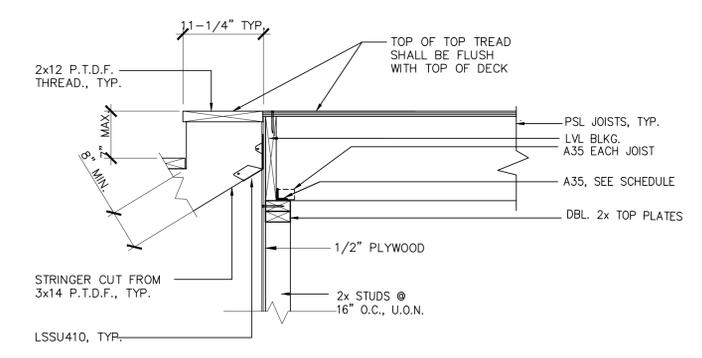
**5 EXT. WALL AT SLAB**

SCALE: 1"=1'-0"



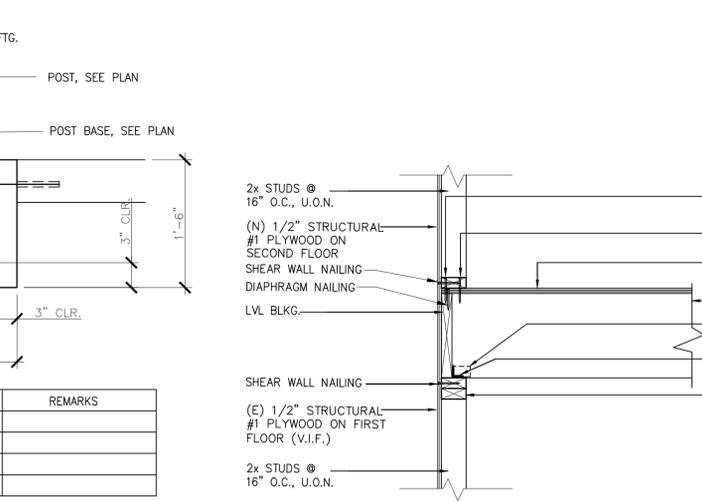
**9 STAIRS AT BOTTOM**

NOT TO SCALE



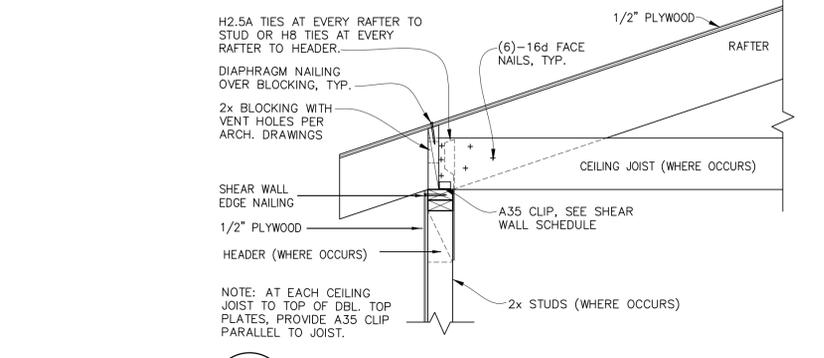
**10 TYP. STAIR STRINGER SUPPORT**

NOT TO SCALE



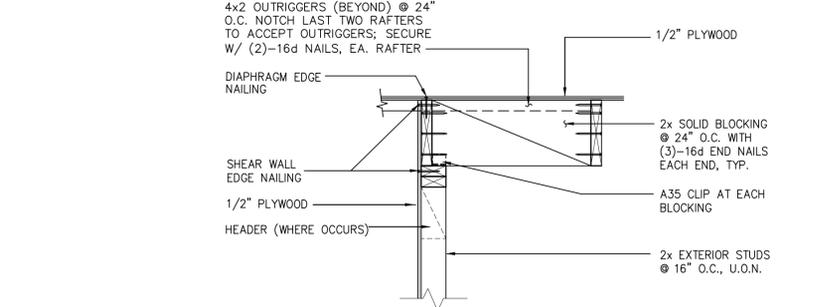
**3 FLOOR JOISTS PERPENDICULAR TO EXTERIOR WALL**

NOT TO SCALE



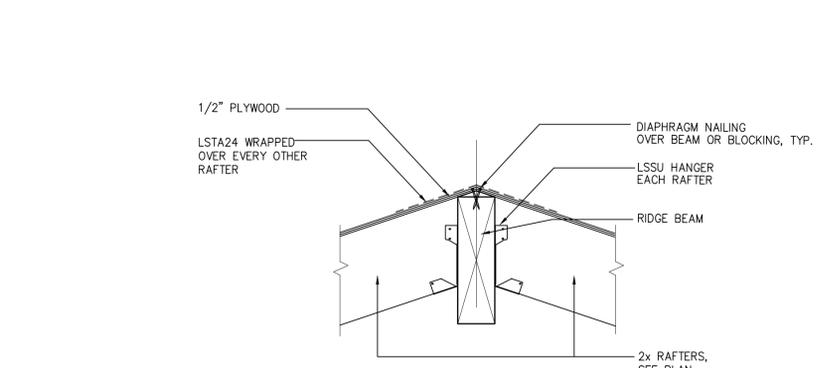
**1 ROOF RAFTERS PERP. TO EXTERIOR WALL**

NOT TO SCALE



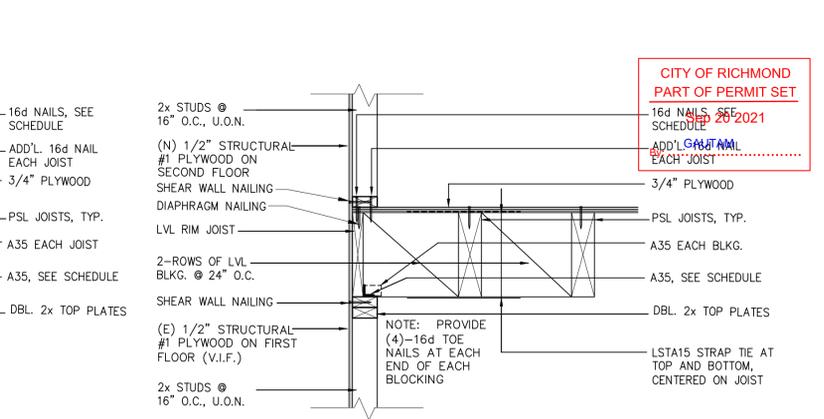
**2 ROOF RAFTERS PARALEL TO EXTERIOR WALL**

NOT TO SCALE



**12 SECTION AT RIDGE BEAM**

NOT TO SCALE



**4 FLOOR JOISTS PARALLEL TO EXTERIOR WALL**

NOT TO SCALE

Vit Hanacek Engineering  
2912 Vessing Rd.  
Pleasant Hill, CA 94523  
Tel. (925) 262-7401  
Fax. (925) 952-7812  
vhanacek@yahoo.com

REGISTERED PROFESSIONAL ENGINEER  
VIT HANACEK  
C 75786  
EXP. 06/30/22  
CIVIL  
STATE OF CALIFORNIA

| ISSUANCE AND REVISIONS: | NO. | DATE       | DESCRIPTION |
|-------------------------|-----|------------|-------------|
|                         | 1   | 03/23/2021 | PERMIT SET  |
|                         | 1   | 05/26/2021 | PC COMMENTS |
|                         | 2   | 08/13/2021 | PC COMMENTS |

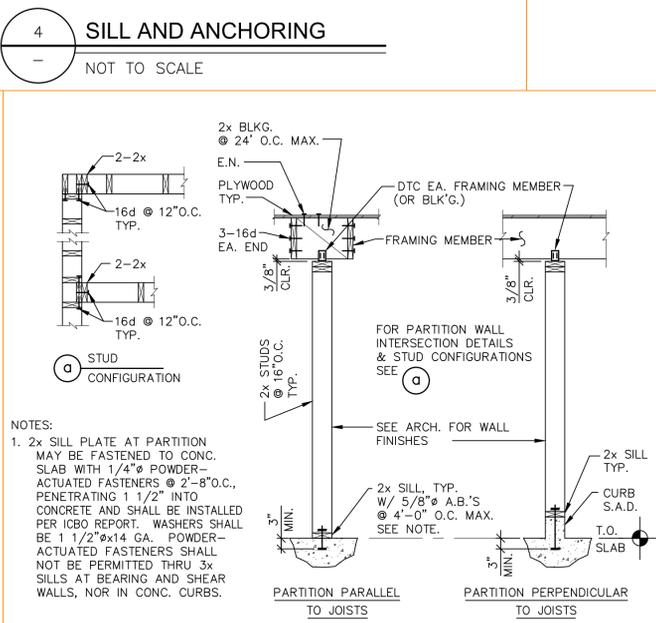
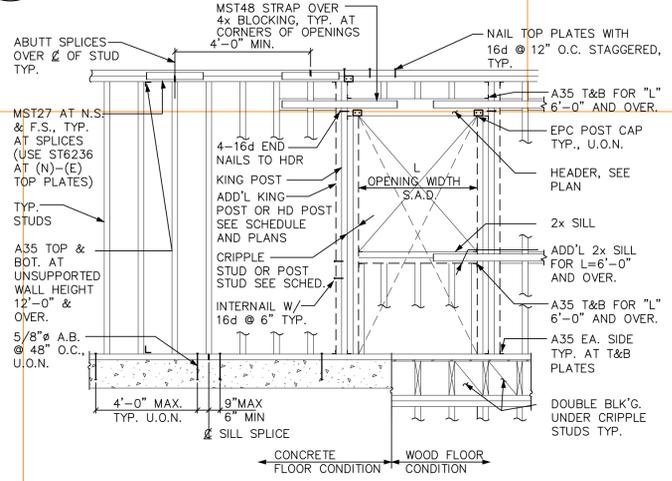
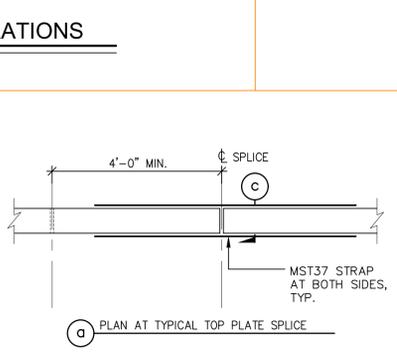
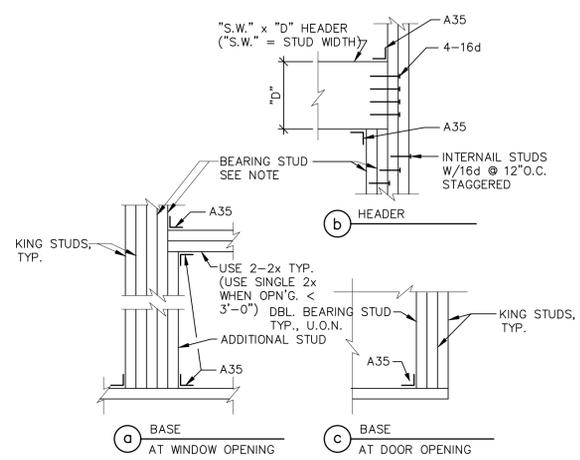
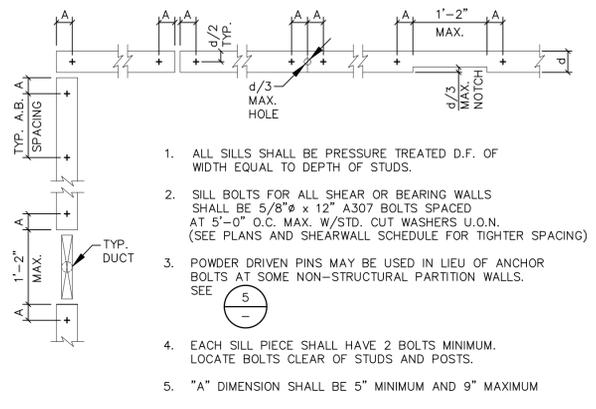
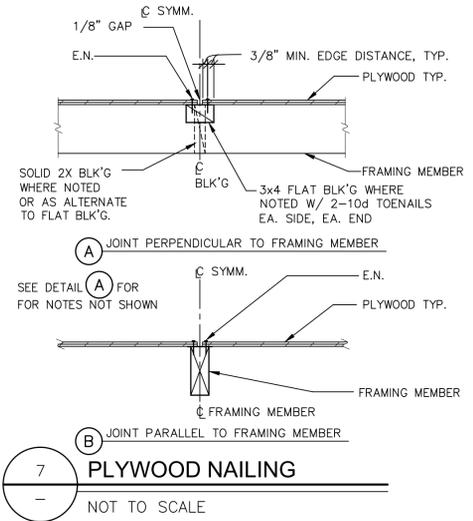
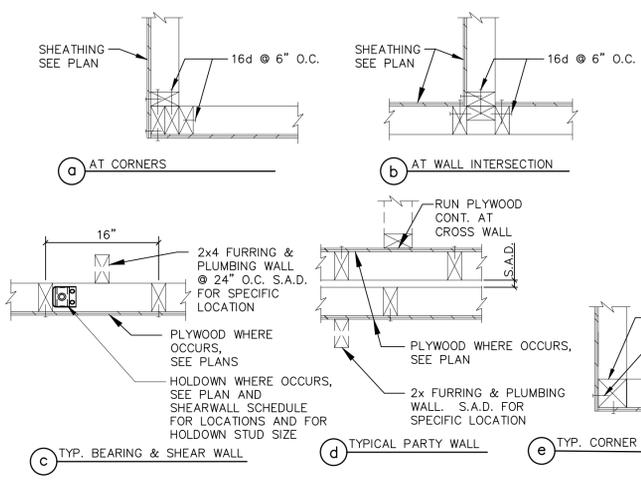
PROJECT NAME:  
**SECOND STORY ADU**  
3431 OHIO AVE.  
RICHMOND, CA

SHEET TITLE:  
STRUCTURAL DETAILS

| ISSUANCE AND REVISIONS:          | NO. | DATE       | DESCRIPTION |
|----------------------------------|-----|------------|-------------|
| REGISTERED PROFESSIONAL ENGINEER |     |            |             |
| VIT HANACEK                      |     |            |             |
| C 75786                          |     |            |             |
| EXP. 06/30/22                    |     |            |             |
| CIVIL                            |     |            |             |
| STATE OF CALIFORNIA              |     |            |             |
| PERMIT SET                       | 1   | 03/23/2021 |             |
| PC COMMENTS                      | 1   | 05/26/2021 |             |
| PC COMMENTS                      | 2   | 08/13/2021 |             |

PROJECT NAME:  
**SECOND STORY ADU**  
 3431 OHIO AVE.  
 RICHMOND, CA

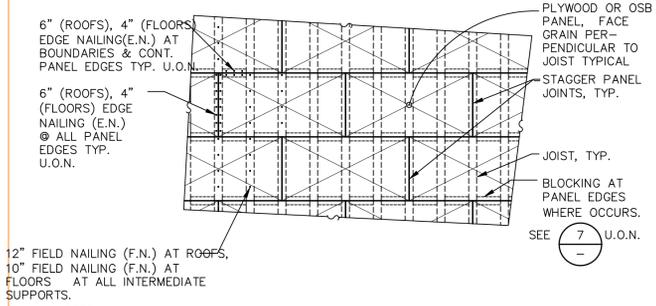
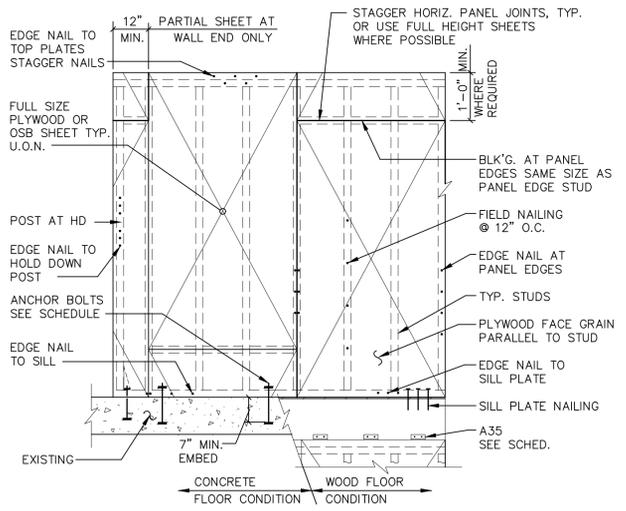
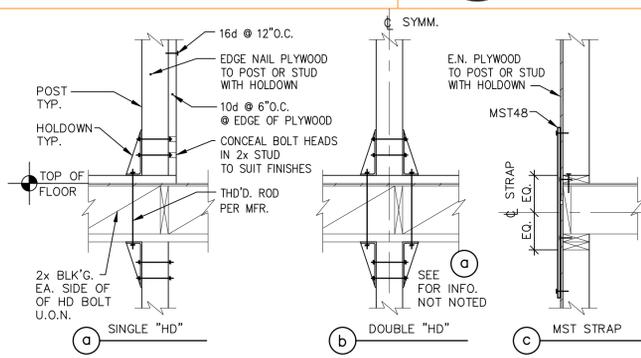
SHEET TITLE:  
**TYPICAL STRUCTURAL DETAILS**



TALL STRUCTURAL WALL FRAMING SCHEDULE

| MAX. HEIGHT "H"     | STUD SIZE | SPACING  | REMARKS / CONNECTION |
|---------------------|-----------|----------|----------------------|
| 10'-0" < H ≤ 15'-0" | 2x4 MIN.  | 12" O.C. | A35 EA. END          |

2 STRUCTURAL WALL FRAMING SCHEDULE  
 NOT TO SCALE



STRAIGHT BARS

| BAR SIZE | DEVELOPMENT LENGTH |
|----------|--------------------|
| #3       | 12"                |
| #4       | 12"                |
| #5       | 14"                |
| #6       | 18"                |

HOOKED BARS

| BAR SIZE | DEVELOPMENT LENGTH | DIA. (DB) |
|----------|--------------------|-----------|
| #3       | 8"                 | .376      |
| #4       | 8"                 | .500      |
| #5       | 11"                |           |
| #6       | 15"                |           |

REINFORCING BAR SPLICE LENGTH SCHEDULE

| BAR SIZE | SPLICE LENGTH | BAR SIZE | SPLICE LENGTH |
|----------|---------------|----------|---------------|
| #3       | 18"           | #5       | 30"           |
| #4       | 24"           | #6       | 36"           |

3 REBAR SCHEDULE  
 NOT TO SCALE

CITY OF RICHMOND  
 PERMIT SET  
 Sep 20 2021  
 GAUTAM

**From:** [thekeating4](#)  
**To:** [City Clerk Dept User](#)  
**Subject:** Comments for Tuesday, February 18, 2025, 4:30 p.m. City Council meeting  
**Date:** Wednesday, February 19, 2025 3:23:20 PM

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Hello.

This email contains comments that I had hoped to give at last night's meeting, but was unable to give due to technical difficulties. I was told that council chambers were unable to hear my comments; the mayor made sure that I understood that my comments could be sent later.

“ Thank you very much for your service.

This letter serves to express our interest in developing our land purchased in 2021. The placeholder address is Ocean Ave, Richmond, California, APN 558232007. The Keller Beach Sanitary Sewer moratorium is preventing us from getting approval for a building permit to build our home.

At this City Council meeting on extending the existing moratorium on Keller Beach Sanitary Sewer (KBSS) sewer connections for an additional 45 days, we believe an extra 45 days to assess a solution that meets the City's and residents' needs is reasonable. A potential solution is to reroute sewage flow from 50 to 60 existing connections in the Golden Gate and Bishop Avenue areas to reduce the burden on the KBSS.

On the other hand, another two-year moratorium would deeply disappoint us as we plan to spend the next decades in Richmond. Our thoughts are as follows:

- Restricting permits through sewer capacity begins to feel like controlling land use that is not in favor of adding housing to an area with a great need for additional housing.
- Smart growth strategies involve use of infrastructure, such as sewer systems, to foster higher density (geographically concentrated) development. Blocking access to existing infrastructure hinders efficient and effective solutions.
- Reserving capacity indefinitely for unquantified or speculative reasons begins to feel like the City is not interested in supporting our rights to develop our land. The lack of action or solutions related to the Baykeeper's settlement agreement with the City of Richmond leads directly to the sense that the moratorium could very well be indefinite without definitive proof of the reasons for such moratorium periods.

In the end, we believe that extending the moratorium without actively responding to possible solutions to “find” potential, existing sewer capacity is directly in conflict with some important objectives and goals of the City Council, such as finding all possibilities to address the housing shortage in a smart growth manner and supporting all taxpayers with achieving their rights to develop their property in a reasonable timeframe.

We have already waited for over three years to build the house of our dreams in a community that we know is filled with upstanding residents with similar values and passions for the beautiful City of Richmond.

Please support the 45-day moratorium and exploration of reasonable solutions to use all available sewer capacity but oppose the two-year moratorium.

In acknowledgment of your contributions to the city of Richmond,

**Tammi and Andy Keating**

7 Ocean Ave – APN 558232007

Richmond, CA”

**From:** [joseph john](#)  
**To:** [City Clerk Dept User](#)  
**Subject:** Re: Public Comment Agenda item P.1 Q. Keller Beach Sanitary Sewer Moratorium- Adoption of Urgency Ordinance  
**Date:** Tuesday, February 18, 2025 11:19:04 AM

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**From:** joseph john <josemon65@hotmail.com>  
**Sent:** Tuesday, February 18, 2025 7:11 PM  
**To:** CityClerkDept@ci.richmond.ca.us <CityClerkDept@ci.richmond.ca.us>  
**Subject:** Public Comment Agenda item 45-day moratorium

Hello Council Members,

We support the 45-day-only moratorium if the City will fast-track the alternate solution of diverting the flow to the other side of the hill thereby significantly reducing the load on the beach line. This is the best cost-effective solution for the City as confirmed by the experienced residents in the neighborhood. We would greatly appreciate your understanding and support for this solution.

Regards

Joseph John

Saru Cownan

February 18, 2025

Subject: **Public Comments on Agenda Item #P.1. Proposed KBSS Urgency Ordinance**

Mayor Martinez and City Council Members:

My name is Norman Hantsche. I'm a 40-year resident, professional environmental engineer, and local business owner in Richmond. I live at 726 Ocean Ave within the Keller Beach Sanitary Sewer (KBSS) service area.

Over the past several years, I've been following and participating where possible in the City and local neighborhood efforts to find a long-term solution to the aging and deteriorating condition of the KBSS.

Since a permanent KBSS fix, whether it be repair, replacement or relocation, is likely to take many years to implement, I understand how critical it is to take steps in the meantime to protect the existing sewer from further deterioration that may be caused or exacerbated by added sewage loading.

**Moratorium made sense three years ago.** I supported the short-term moratorium on new building sewer connections in the KBSS area when it was first adopted by the City three years ago, as that appeared to be the most expedient option to protect against additional sewage loadings and stress on the KBSS.

**Opportunities now identified to significantly reduce sewage loading.** I subsequently reviewed KBSS area sewer maps published by the City in 2022 and found there are alternative steps the City can take to significantly reduce the sewage loading going into the KBSS by up to 20%. This alternate approach could be achieved with a small amount of gravity sewer work that would re-route the sewage flow from 50 to 60 houses on Golden Gate Ave and Bishop Ave so that it no longer drains to the KBSS. The attached map shows the areas I'm referring to.

**Public Works staff aware of the sewer re-routing options.** City Public Works staff were made aware of the sewer re-routing opportunities at a KBSS focus group meeting last October. The response at the meeting seemed positive, but there's been no follow-up by the City since then, and the recently released staff report for the proposed urgency ordinance makes no mention of the sewage re-routing options that have come to light. Also, it is worth noting that re-routing of sewers on Golden Gate Ave was previously covered in recommendations in a February 2020 "Will Serve Letter" from one of the City's long-time wastewater consultants, Vivian Housen (copy attached).

**20% sewage loading reduction makes more sense than moratorium.** The suggested re-routing of 50 to 60 existing sewer connections away from the KBSS makes much more sense than simply

defaulting to a moratorium on new building projects. The sewage flow generated by 50 to 60 houses is approximately 10,000 gallons per day, which amounts to 11 million gallons discharged to the KBSS from these areas since the moratorium was first adopted three years ago.

**State housing regulations.** State regulations preclude the adoption of a local housing moratorium where there are feasible alternate measures to mitigate the specific housing impacts (sewage loading in this case) "... as well or better, with a less burdensome or restrictive effect...".

**Recommendations.** As an alternative to the staff recommendations, I urge the City Council to take the following steps:

1. Adopt the proposed Urgency Ordinance with appropriate amendment or provisions recognizing that there are potential opportunities identified to significantly reduce the sewage load on the KBSS that will be evaluated and reported to the City Council prior to the expiration of the 45-day Urgency Ordinance (per 2 and 3 below). The intent is that findings from this evaluation will be considered by the City Council in any subsequent decision to extend the moratorium and its duration, as applicable.
2. Direct Public Works to complete a feasibility review of the Golden Gate and Bishop Ave sewer re-routing opportunities that have been suggested and report back to the City Council in 30 days (15 days prior to the expiration of the proposed urgency ordinance).
3. If conclusions from this review are favorable, include in the report a preliminary engineer's cost estimate and recommended schedule for design and implementation, recognizing that these should be considered high priority/urgency projects, and prioritizing the shortest timeline project.

Thank you for considering these comments.

Norman Hantzsche  
726 Ocean Avenue



- Legend**
- Parcels
  - Sewer Fitting**
    - Line pipe, Active
    - Line pipe, Private
    - Line pipe, Buried
    - Other
  - Wye
  - Sewer Manhole**
    - Active
    - Buried
  - Sewer Structure**
    - Pumpstation
  - Sewer Force Main**
    - Active
  - Sewer Gravity Main**
    - Active
    - Delet
    - Abandoned

**Potential Opportunities for Reducing Sewage Loading to KBSS (50 to 60 Existing Connections)**

- Parcels Leading to Keller Beach Line**
- Use Code
    - Occupied
    - No Data
    - Common area parcels in PUD's (open spaces, recreational facilities)
    - Government-owned, with or without buildings (federal, state, city, BART)
    - Industrial Vacant Land (not part of industrial park or P, and D)
    - Miscellaneous Improvements, 1 site
    - Multiple Vacant
    - Residential Vacant, 1 site (includes PUD sites)
    - Residential Vacant, unbuildable



V.W. HOUSEN  
& ASSOCIATES

February 5, 2020

Gina Delatorre  
Project Coordinator  
450 Civic Center Plaza  
Richmond, CA 94804

Subject: Will Serve Letter for Property between Ocean Ave. and Western Drive

Dear Ms. Delatorre:

This letter confirms that the City has capacity to serve new development at Ocean Avenue and Western Drive, in the Point Richmond neighborhood. The nearest viable connection is an existing manhole at the intersection of Marine Street and Morgan Avenue. Other existing pipelines that are located closer to Ocean and Western are connected to the Keller Beach Interceptor, which is no longer accepting new flows.

In order to convey flow from the Ocean/Western parcel to the Marine/Morgan intersection, the developer will be required to install a pump station and associated forcemain as shown in the attached figure. The new facilities should be designed to the City's engineering standards; after installation, the facilities could be transferred to the City for ongoing maintenance.

The developer should submit onsite sewer, pump station, and forcemain drawings to the City for review. The proposed infrastructure must meet the District's engineering standards. The developer should also provide estimates of average daily flow and peak wet weather flow from the new development, so we can confirm that the existing sewer pipelines downstream of the tie-in location can accommodate these added flows.

Please let me know if you have questions or need additional information.

Sincerely,  
V. W. Housen & Associates

Vivian Housen, P.E.  
Principal

Scenario 1. Property owner installs and maintains private pump station for parcel flows only, and small forcemain. City installs gravity line. Private facilities will likely be abandoned when the future Keller Beach interceptor project is implemented. Cost to property owner is approximately \$300 to \$400k. City cost for gravity main is approximately \$250k.



Scenario 2. Property owner connects to existing gravity sewer. City installs new pump station at Ocean Ave. and Marine St. New pump station captures local flows and pumps to Tewksbury Ave. City pays for pump station and pipelines - approximately \$800k excluding land purchase if required.



**public comments Agenda Item # P.1 2/18/2025**

today's date:

2/17/2025

Via email: to cityclerkdept@ci.richmond.ca.us by 1:00 p.m. the day of the meeting. Emails MUST contain in the subject line 1) public comments – Open Session prior to Closed Session; 2) public comments – Open Forum; or 3) public comments agenda item #\_\_ [include the agenda item number].

**Regarding Agenda Item P. PUBLIC HEARINGS P.1 Keller Beach Sanitary Sewer Moratorium- Adoption of Urgency Ordinance 475 ADOPT an urgency ordinance, pursuant to Government Code Section 65858, establishing a temporary moratorium (45 days) on the issuance of building permits requiring a new sewer connection to the Keller Beach Sanitary Sewer (KBSS) and declaring the urgency thereof pursuant to Government Code Section 65858.** The ordinance is not a project under the California Environmental Quality Act (CEQA), as it maintains the existing physical environment and prevents changes in the environment, thereby having no potential for direct or reasonably foreseeable indirect physical change (CEQA Guidelines Section 15378(a)). It is also exempt under Guidelines Sections 15060(c)(2), as the activity will not result in a direct or reasonably foreseeable indirect physical change in the environment, and Section 15061(b)(3), as there is no possibility that adoption of this ordinance will have a significant effect on the environment because it maintains the existing condition of the environment - Public Works Department (Daniel Chavarria 510-620-5478/Robert Armijo 510- 620-5477).

**Objection:**

My name is Rodrick I Satre, I am a resident of Richmond California and an Environmental Professional and Engineering Project Manager. I am objecting to this agenda item and wish it be removed from the consent calendar. The Keller Beach Sanitary Sewer (KBSS) subcommittee of Point Richmond Neighborhood Council met and toured portions of the sewer system on February 15<sup>th</sup> and discussed two simple options of redirecting two lines presently loading the KBSS with only two short runs of new piping that will reduce loading of KBSS by approximately 20%. This flow direction change option was proposed by Norm Hanchez during the meeting and has been subject of correspondence between PRNC Board and City Council.

By making this elected choice of two redirected flow lines, the City of Richmond will meet the intent of Bay Keepers to '*reduce the sewer load to KBSS*' and thus the moratorium is moot. In addition, the engineering report by the prior consultant: Coastland Civil Engineering is not reliable as that firm, purchased by a larger firm in 2022 (DCMM), self-removed services to the City of Richmond after the preliminary report was challenged by citizens. DCMM never completely surveyed the line and failed to consider all possible options in updating the KBSS.

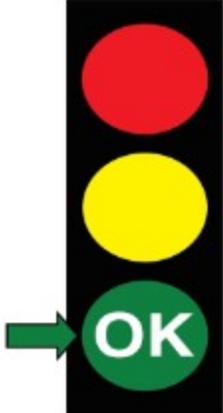
A current water quality report by East Bay Regional Parks District of 2/10/2025 (attached) says the beach is open for swimming with no restrictions. Claims that the sewer line is leaking into the Bay waters and making it unsanitary is unsupported by facts. Bay Keepers' consultant Vivian Housen told me (in 2024) in a phone conversation that Bay Keepers' coastal water testing investigation did not find any indication of leaks from the Keller Beach Sewer Line. Bay Keepers' focus is a reduction of combined storm water/sewer surge causing overflows from the Canal Sewage Treatment plant.

The Moratorium should be removed and the piping flow direction changes that will be suggested by Norm Hanchez should be incorporated.

*Rod Satre*

Rodrick Satre  
 530 Santa Fe Ave  
 Richmond, CA 94801-3900

### Keller Beach Water Quality Status



LOW RISK

**WATER MEETS STATE STANDARDS**

Beach is open. Weekly testing for bacteria is within the state health standards. However, there is always some risk with beach water contact. Beach water contact may cause illness. Do not swallow water. Shower and towel dry after water contact. Water quality conditions can change at any time.

For more information, contact the East Bay Regional Park District (510) 544-2328

RIESGO BAJO

**EL AGUA CUMPLE CON LAS NORMAS ESTATALES**

La playa está abierta. Las pruebas semanales de bacterias en el agua cumplen las normas estatales de salud. Sin embargo, siempre hay cierto riesgo al entrar en contacto con el agua de la playa. El contacto con el agua de la playa puede provocar enfermedades. No trague el agua. Báñese y séquese con una toalla después de haber estado en contacto con el agua. La calidad del agua puede cambiar en cualquier momento.

Para más información, contacte el East Bay Regional Park District (510) 544-2328

**EAST BAY REGIONAL PARK DISTRICT**

**Current Condition = Green Light (Beach is Open. Low Health Risk)**  
**DO NOT SWIM IN BAY FOR UP TO 3 DAYS AFTER RAINSTORM**

**Water Quality "Stop Light" Designations:**

- Red Light **Beach is Closed.** No swimming, wading or water contact. There is a Water Quality Hazard.
- Yellow Light **Beach is Open.** There is an increased health risk for swimming and wading. Bacteria results do NOT meet the State Health Standards.
- Green Light **Beach is Open.** Low health risk for water contact. Bacteria results are within the State Health Standard Limits.

**\*Current Site Conditions**

| DATE                 | NORTH BEACH<br><span style="color: green;">Low Risk - Green Light</span> |                 |           | SOUTH BEACH<br><span style="color: green;">Low Risk - Green Light</span> |                 |           |
|----------------------|--|-----------------|-----------|--|-----------------|-----------|
|                      | Total Coliforms  | Fecal Coliforms | Entero    | Total Coliforms  | Fecal Coliforms | Entero    |
| <b>February 10th</b> | <b>200</b>   | <b>11</b>       | <b>15</b> | <b>190</b>   | <b>11</b>       | <b>22</b> |
| January 27th         | 10   | 1               | 7         | 10   | < 1             | 1         |
| January 15th         | 52   | 2               | 7         | No Sample  | No Sample       | No Sample |
| January 13th         | 220  | 15              | 500       | 55   | 3               | 18        |

**State Water Quality Bacteria Levels:**  
Daily Maximum Level: Total Coliforms: 10,000, Fecal Coliforms: 400, Enterococcus: 104  
 All results expressed as bacterial density (Colony Forming Units or Most Probable Number) per 100 mL.

**FOR FURTHER INFORMATION CONTACT THE EAST BAY REGIONAL PARK DISTRICT  
 WATER MANAGEMENT DEPARTMENT AT: (510) 544-2328**

\* To ensure you are viewing the most current version of the Water Quality Conditions Test Results PDF file please refresh your screen.

**From:** [Rudi Fox](#)  
**To:** [City Clerk Dept User](#)  
**Subject:** Public Comments - Agenda Item #P.1 Keller Beach Moratorium - City Council Meeting 021825  
**Date:** Monday, February 17, 2025 7:47:04 PM  
**Attachments:** [Public Comments - Agenda #P.1 Keller Beach - 021825 City Council Meeting.pdf](#)

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Hello,  
Attached are my comments for Agenda Item # P.1 Keller Beach Moratorium for the City Council Meeting on February 18th, 2025

Thank You!  
-Rudi Garbelmann  
415-413-8322

# Do Not Approve This Ordinance

1. The impact to public safety is **Exaggerated**
2. It's about **Rainfall**, NOT sewer connections
3. The moratorium is **Unenforceable**

# This Ordinance directly affects property owners



This map shows the affected area. All those in yellow (290) already have sewer connections and aren't really "affected" by this moratorium.

Those in red are **really** the ones affected by all these moratorium extensions. There are **ONLY 13 approved projects** being prevented from building their dream homes!

From the original Urgency Ordinance dated January 18th, 2022:

WHEREAS, specifically the City has 13 approved projects, six with issued permits, and 2 with permits currently under review; and

**Lost property tax revenue to the City!**

**13 x ~\$20K = \$260,000  
Over 4yrs = \$1 Million**

# It's NOT about sewer connections, it's about RAINFALL

I've read the Baykeepers settlement, and it doesn't say anything about stopping sewer connections. It's ALL about Sanitary System Overflows (SSO's) due to rainwater from storm events. The agreement stipulates cleaning schedules, root control, etc. NOT who can use or connect to the sewer system. It's about managing max capacity, "*estimated at peak wet weather wastewater flow under the **Design Storm**, and other storm event scenarios, and total wastewater flow capacity when flowing full.*"

A "design storm" is a hypothetical rainfall event used in urban drainage system design. In this settlement, it is defined as a "10-year, 24-hour storm event occurring across the entire area served by Richmond's collection system with wet antecedent soil conditions." Typically measured using 100 years,  $10/100 = 10\%$  chance that a SSO will happen in Richmond in a given year.

**A moratorium on sewer connections will NOT prevent overflows from storm events.**

**Why are stopping connections for a hypothetical scenario?!**

**Please let the 13 approved projects proceed with development**

# This Ordinance is unenforceable until HCD approval

**SECTION 4.** Term of Moratorium. In accordance with Government Code Section 65858, this Ordinance shall be in full force and effect for a period of 45 days from the date of its adoption, i.e., from February 18, 2025 through and including April 4, 2025, or, for housing developments, from the date when the Department of Housing and Community Development approves this moratorium, whichever occurs later. This 45-day period may be extended by the City Council in accordance with the provisions in Government Code Section 65858.

**Even if you approve this ordinance, the moratorium is not enforceable until HCD gives approval.**

**This happened before with Ordinance 05-22 N.S., as stated in the staff report:**

**WHEREAS**, on March 1, 2022, the City Council adopted Urgency Ordinance No. 05-22 N.S., to extend Urgency Ordinance No. 01-22 N.S. in accordance with Government Code Section 65858 for an additional 10 months and 15 days, expiring on January 17, 2023;

**SECTION 7.** Term of Moratorium. In accordance with Government Code Section 65858, this Ordinance shall be in full force and effect for a period of ten months and 15 days from the date of its adoption, or, **when the Department of Housing and Community Development approves this moratorium, whichever occurs later.**

**WHEREAS**, the City has consulted with HCD, and pursuant to GC Section 66300, and this Interim Ordinance **shall not be enforceable until HCD reviews and grants approval** that the moratorium specifically protects against the imminent threat to health and safety of persons residing in, or within the vicinity of, the Sewer Moratorium Area

**BUT, HCD didn't approve the moratorium until March 14, 2023**

**This means there was NO moratorium in effect and, it was unenforceable for over a YEAR!**

STATE OF CALIFORNIA - BUSINESS, CONSUMER SERVICES AND HOUSING AGENCY GAVIN NEWSOM, Governor

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT  
DIVISION OF HOUSING POLICY DEVELOPMENT  
2020 W. El Camino Avenue, Suite 500  
Sacramento, CA 95833  
(916) 263-2911 / Fax (916) 263-7453  
[www.hcd.ca.gov](http://www.hcd.ca.gov)



**March 14, 2023**

Lina Velasco, Director of Community Development  
City of Richmond  
Community Development Department  
450 Civic Center Plaza, 2nd Floor  
Richmond, CA 94804

Dear Lina Velasco:

**RE: Approval of the Sewer Moratorium**

The purpose of this letter is to provide a determination to the City of Richmond (City) regarding the request to approve the adoption of Ordinance No. 02-23 N.S., a Sewer Moratorium (Moratorium) on housing and other development within an area of the City served by a failing sewer line. The California Department of Housing and Community Development (HCD) is statutorily required to provide determination regarding proposed moratoria (Gov. Code, § 66300, subd. (b)(1)(B)(ii)). HCD received a request for approval for the proposed Moratorium, reviewed relevant materials (e.g., Staff letter, Ordinance No. 02-23 N.S, conditions assessment report, etc.), and met with the City staff. Upon review of the written materials and discussion with the local agency, HCD has determined that the current conditions of the failing sewer line pose an imminent threat to the health and safety of persons residing in the area subject to the Moratorium.

# Then WHY wasn't my permit submission reviewed?

**One  
Year**

January 18, 2022 – Ordinance 01-22 N.S. - first 45 day moratorium

March 4th, 2022 – Ordinance 01-22 N.S. expires

**March 1st, 2022** – Ordinance 05-22 N.S. - moratorium extension for 10 months & 15 days, but only after HCD approval

**May 25, 2022** – I submit my permit application

**March 14th, 2023** – HCD approves moratorium

**The City imposed an unenforceable moratorium for nearly a YEAR and prevented owners from building their dream homes.**

**My permit, submitted on May 25th, 2022, should have been processed!**

This is in direct violation of the **Permit Streamlining Act (PSA)**. The PSA sets time limits within which agencies must determine the completeness of an application and either approve or disapprove a permit.

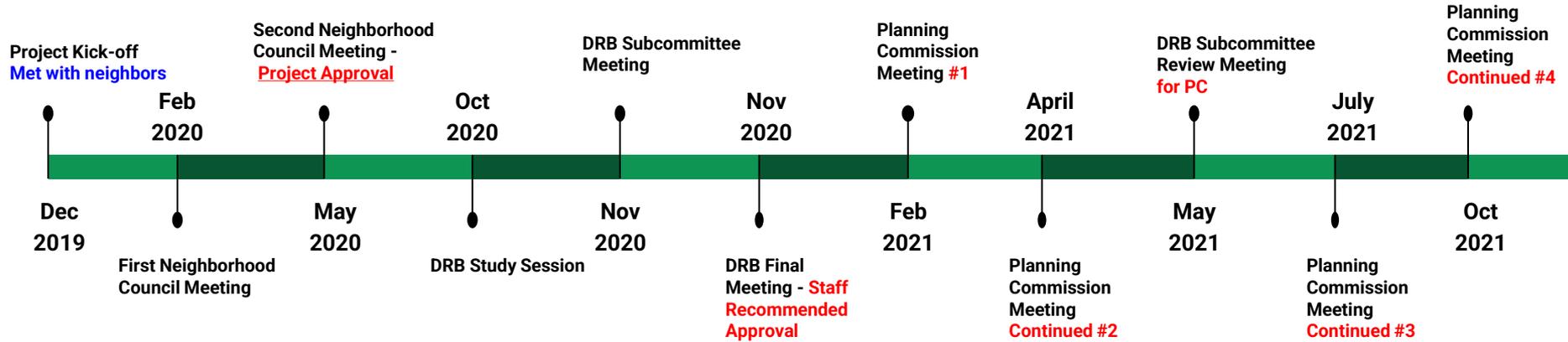
This is grounds for litigation.

**I ask the City Council to deny this moratorium extension**

The screenshot shows a web interface for a permit application system. At the top, there is a navigation bar with links for HOME, DASHBOARD, VIEW/EDIT PROFILE, VIEW CART, and LOG OUT. The user is logged in as RUDI GARBELMANN. Below the navigation bar is a search bar with a dropdown menu for 'SITE\_ADDR', a search type of 'Contains', and a search term of '357 western'. The main content area displays 'Results' for 'Permit #B22-01485'. The permit details include: Type: BLD RESIDENTIAL, Subtype: NEW, Detailed Scope of Work: CONSTRUCTION OF NEW 2-STORY 2,340 SQUARE FOOT, Status: HOLD, Applied Date: 5/25/2022 (highlighted in yellow and underlined), Approved Date: (blank), Issued Date: (blank), Finalized Date: (blank), Expiration Date: (blank), Extended Scope of Work: 2-BEDROOM, 2-BATHROOM SINGLE-FAMILY DWELLING WITH A 440 SQFT, and Work/Notes: 2-CAR ATTACHED GARAGE. At the bottom, there is a section for 'Linked Activities' showing a 'Parent Project' with a link to 'PLN20-043 PLN APPROVED'.

# How long do I have to wait??

## 11 meetings over 22 months



- I started my project in December of 2019
- I won planning approval in February of 2022
- The moratorium started in March of 2022

**I have been waiting for 5 years to build my dream home!!**

**I ask the City Council to deny this moratorium extension**

# Why wasn't the “interim solution” completed yet?

**WHEREAS**, City staff is in the process of developing an **interim solution** in the form of sewage holding tanks that could allow affected property owners to proceed with development, but this solution requires technical standards, regulatory approvals, and implementation planning, which is expected to take six to nine months before it is brought to City Council for approval

Robert initiated an RFP on December 8th, 2023 for Development Standards on Sewage Holding Tanks, with a proposed solution adopted by May 2024. I know of one civil engineer who submitted a proposal (Questa Engineering) and Robert never followed up and all bids were cancelled. **WHY??**

It says below that the City doesn't have a strict deadline. **WHAT??**

**I ask the City Council to mandate Robert to a strict deadline *I could've built my house by now!!***

City of Richmond

< Back to Bid Search

Development of Standards for Sewage Holding Tanks for Single-Family Hom...

Closed

Bid Information Documents Addenda/Emails Q&A Prospective Bidders Bid Results Awards

Bid Detail

|                  |   |
|------------------|---|
| Project Title    | Development of Standards for Sewage Holding Tanks for Single-Family Homes |
| Invitation #     |   |
| Bid Posting Date | 12/08/2023 3:54 PM (PDT)  |
| Project Stage    | Closed  |
| Bid Due Date     | 01/26/2024 3:30 PM (PDT)  |
| Response Format  | Electronic  |

Project Type RFP (Request for Proposal)

**Why??**

Description

Scope of Services The City of Richmond is requesting proposals from qualified wastewater engineering consultants to assist in the development of standards for Sewage Holding Tanks intended for Single Family homes. The purpose of this endeavor is to establish clear and standardized regulations, design requirements, evaluation criteria, approval requirements (e.g. noticing of neighbors), and a structured fee system for the installation and oversight of such facilities. This request for proposal (RFP) describes the project, the required scope of services, the consultant selection process, and the minimum information that must be included in the proposal. Failure to submit information in accordance with the RFP requirements and procedures may be cause for disqualification. **While the City has not set a strict deadline, the goal is to have these standards adopted by April or May of 2024.**

# In Conclusion:

1. There are only 13 approved projects in question here – we should all be grandfathered-in.
  2. It's NOT about sewer connections; it's about RAINFALL, from a 10-year hypothetical "Design Storm". A moratorium on sewer connections will NOT fix the problem.
  3. This moratorium is not enforceable until HCD approval – and was not legally enforceable for the first 10 months. The only legal, enforceable moratorium, as approved by the HCD, ends tomorrow.
  4. Robert stopped a proposed work-around, with a bid in place, for an expected solution a YEAR AGO!
- 

## My proposal to the City Council:

- Do not approve this moratorium extension – it's unenforceable anyway.
- Allow all currently approved projects to proceed to permitting.
- Mandate a hard deadline for Robert to secure a work-around solution for all new projects.
- Give Robert more support by way of executive guidance and project management.
- Question everything.

# The Settlement Agreement - Explained

WHEREAS, on October 17, 2006, the Parties entered into a settlement agreement to informally resolve specified claims in Baykeeper and West County Toxics Coalition v. City of Richmond

WHEREAS, on October 16, 2017, Plaintiffs filed with the Court a Motion for an Order Finding Richmond in Civil **Contempt of Court** (“Motion”), alleging violations of the 2006 Settlement Agreement;

**From the Baykeeper Settlement Agreement - Signed: March 30th, 2018:**

## These settlement topic points give you an idea of items covered:

1. GENERAL OBJECTIVES
2. DEFINITIONS
3. JURISDICTION AND VENUE
4. EFFECT OF 2018 SETTLEMENT AGREEMENT
5. APPLICABILITY
6. EFFECTIVE DATE AND TERMINATION DATE
7. **CAPACITY-RELATED ANALYSIS AND CAPITAL IMPROVEMENTS**
8. **COLLECTION SYSTEM CONDITION ASSESSMENT AND RISK ASSESSMENT ANALYSIS**
9. **REPAIR, REPLACEMENT, AND REHABILITATION**
10. **COLLECTION SYSTEM OPERATIONS AND MAINTENANCE**
11. FATS, OILS, AND GREASE CONTROL
12. **SSO REPORTING AND RESPONSE**
13. SSO REDUCTION ACTION PLAN
14. FEES, COSTS, EXPENSES, AND COMPLIANCE MONITORING FUNDS
15. BREACH OF AGREEMENT AND DISPUTE RESOLUTION PROCEDURES
16. STIPULATED PAYMENTS
17. NOTICES AND SUBMISSIONS

## Excerpts from the settlement agreement:

- Detail procedures used during cleaning for trapping debris, roots, and FOG and quantifying the amount of debris, roots, and FOG removed during cleaning...
- Adhere to the specific cleaning frequencies and response actions in the Cleaning Frequency Response Matrix, attached hereto as Attachment D
- Require that cleaning of gravity sewer line segments by Richmond shall include use of a fixed hydro-flushing nozzle centering device...
- Sewer Line Cleaning: Richmond shall clean all gravity sewer lines in Richmond’s Collection System at least once every four (4) calendar years...
- The Revised SECAP shall identify all measures needed to attain the capacity necessary to convey the **Design Storm** without capacity-related SSOs in Richmond’s Collection System
- The Revised SECAP shall include a hydraulic analysis that includes calculation for all sewer lines and all pump stations of estimated dry weather wastewater flow, estimated peak wet weather wastewater flow under the **Design Storm**, and other storm event scenarios, and total wastewater flow capacity when flowing full.

**It says NOTHING about sewer connections!**