Staff Report to the Zoning Administrator

Application Number: 221079

Applicant: Erin Serventi
Owner: Ian & Helen Whiting
APN: 052-281-25
Site Address: 20 Plover Circle, Watsonville

Agenda Date: March 17, 2023
Agenda Item #: 1
Time: After 9:00 a.m.

Project Description: Proposal to construct a 260 square foot addition to an existing three story single family dwelling. Project includes construction of new deck/patio areas at the first, second, and third level and replacement of all windows, exterior siding, and roofing material. Project requires approval of a Coastal Development Permit.

Location: Project located on the southwest side of Plover Circle approximately 300 feet west of the intersection with Rio Boca in Pajaro Dunes (20 Plover Circle).

Permits Required: Coastal Development Permit

Supervisorial District: Second District (District Supervisor: Zach Friend)

Staff Recommendation:

- Determine that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- Approval of Application 221079, based on the attached findings and conditions.

Project Description & Setting

Pajaro Dunes is a gated community that includes both single-family and multi-family dwellings, along with recreational and service facilities, that has been developed along an area of coastal dunes lying between the Watsonville Slough to the northeast and the beach fronting onto the Pacific Ocean to the southwest.

The single-family homes within Pajaro Dunes are all unique in design and built by individual property owners. Though homes in the area exhibit different design features including two and three-story structures, development within Pajaro Dunes is relatively consistent in terms of the use of varying roof pitches/angles and predominantly finished with wood shingles. Many of the homes are connected by a network of boardwalks and trails that meander through sensitive coastal dune habitat.

This is a proposal to construct a first second and third story addition to an existing three story

single family dwelling including remodel of the existing floor plan to create an additional bedroom at the third level. The existing siding would be replaced with new Hardie lap siding painted a muted earth tone (beige) to blend with the surrounding development and dune habitat. The project includes additions to existing exterior deking at the first second and third levels. Decking at the second level is proposed to be pulled back to eliminate all existing decking that extends beyond the building envelope.

The project is located in a sensitive area containing a convergence of biotic resources and situated in a coastal hazards area subject to coastal flooding and wave inundation and a highly erosive sand dune. The project site is also located within a mapped scenic area as identified in the County General Plan/LCP. Due to the location of the subject property and proposed scope of work, a Coastal Development Permit is required to ensure the project will not result in adverse impacts to Coastal Resources or the surrounding environment.

Zoning & General Plan Consistency

The subject property is an 13,982 square foot lot, located in the SU (Special Use) zone district, a designation which allows residential uses. The proposed single family dwelling is a principal permitted use within the zone district and the zoning is consistent with the site's R-UL (Urban Low Density Residential) General Plan designation.

The project is located within the Pajaro Dunes Planned Unit Development (PUD) which has specific site and development standards approved under 74-400-PUD. Additionally, the subject parcel has a 50'x50' building envelope. As proposed, the project complies with all of the applicable site and development standards for the PUD and all development (with the exception of the access boardwalk) will be contained within the designated building envelope.

Design Review

The proposed project complies with the requirements of the County Design Review Ordinance, in that the proposed project will incorporate site and architectural design features such as the use of natural appearing colors and materials and variation in wall planes to reduce the visual impact of the proposed development on surrounding land uses and the natural landscape. The project has been sited to minimize grading activities and conforms to the natural topography to the extent practicable. The project has been conditioned to reduce potential environmental impacts that will result in enhancements to the surrounding dune habitat and aesthetic qualities of the project site. The project has been submitted for review to the Pajaro Dunes Architectural Review committee and received preliminary approval.

Local Coastal Program Consistency

The proposed addition and remodel of the existing single family dwelling is in conformance with the County's certified Local Coastal Program, in that the structure is sited and designed to be visually compatible, in scale with, and integrated with the character of the surrounding neighborhood. Developed parcels in the area contain single family dwellings. Size and architectural styles vary in the area, and the design submitted is consistent with the existing range of styles. The project site is located between the shoreline and the first public road and is not identified as a priority acquisition site in the County's Local Coastal Program. Public beach

access is available at Sunset State Beach, Palm Beach approximately 0.8 miles north of the project site and existing beach access for Pajaro Dunes is located approximately 200 feet to the south and 300 feet to the north of the project site. Consequently, the proposed project will not interfere with public access to the beach, ocean, or other nearby body of water.

Conclusion

As proposed and conditioned, the project is consistent with all applicable codes and policies of the Zoning Ordinance and General Plan/LCP. Please see Exhibit "B" ("Findings") for a complete listing of findings and evidence related to the above discussion.

Staff Recommendation

- Determine that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.

- **APPROVAL** of Application Number **221079,** based on the attached findings and conditions.

Supplementary reports and information referred to in this report are on file and available for viewing at the Santa Cruz County Planning Department, and are hereby made a part of the administrative record for the proposed project.

The County Code and General Plan, as well as hearing agendas and additional information are available online at: www.sccoplanning.com

Report Prepared By: Nathan MacBeth
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Exhibits

A. Categorical Exemption (CEQA determination)
B. Findings
C. Conditions
D. Project plans
E. Assessor's, Location, Zoning and General Plan Maps
F. Parcel information
G. Biotic Report Acceptance Letter

CALIFORNIA ENVIRONMENTAL QUALITY ACT
NOTICE OF EXEMPTION

The Santa Cruz County Planning Department has reviewed the project described below and has determined that it is exempt from the provisions of CEQA as specified in Sections 15061 - 15332 of CEQA for the reason(s) which have been specified in this document.

Application Number: 221079
Assessor Parcel Number: 052-281-25
Project Location: 20 Plover Circle, Watsonville 95076

Project Description: Remodel and construction of an approximately 260 square foot addition to an existing single family residence.

Person or Agency Proposing Project: Erin Serventi, EL Designs

Contact Phone Number: (831) 840-0282

A. _____ The proposed activity is not a project under CEQA Guidelines Section 15378.
B. _____ The proposed activity is not subject to CEQA as specified under CEQA Guidelines Section 15060 (c).
C. _____ **Ministerial Project** involving only the use of fixed standards or objective measurements without personal judgment.
D. _____ **Statutory Exemption** other than a Ministerial Project (CEQA Guidelines Section 15260 to 15285).

E. __X__ **Categorical Exemption**

Specify type: Class 1 – Existing Facilities (Section 15301) & Class 3 -New Construction or Conversion of Small Structures (Section 15303)

F. Reasons why the project is exempt:

Addition to an existing single family residence located in an area designated for residential uses.

In addition, none of the conditions described in Section 15300.2 apply to this project.

_____ Date:_____
Nathan MacBeth, Project Planner

EXHIBIT A

Coastal Development Permit Findings

1. That the project is a use allowed in one of the basic zone districts that are listed in LCP Section 13.10.170(D) as consistent with the LCP Land Use Plan designation of the site.

This finding can be made, in that the property is zoned SU (Special Use), a designation which allows residential uses. The proposed single family dwelling is a principal permitted use within the zone district, and the zoning is consistent with the site's R-UL (Urban Low Density Residential) General Plan designation.

2. That the project does not conflict with any existing easement or development restrictions such as public access, utility, or open space easements.

This finding can be made, in that no such easements or restrictions are known to encumber the project site.

3. That the project is consistent with the design criteria and special use standards and conditions of this chapter pursuant to SCCC 13.20.130 and 13.20.140 et seq.

This finding can be made, in that the development is consistent with the surrounding neighborhood in terms of architectural style; the site is surrounded by lots developed to an urban density; the colors will be natural in appearance and complementary to the site; and the development site is located on beach/sand dune which is currently developed with an existing single family dwelling. The proposed redevelopment of the subject parcel will be consistent in terms of density and design with the surrounding pattern of development. The project will be conditioned to minimize adverse impacts to sensitive habitat in the vicinity of the project site.

4. That the project conforms with the public access, recreation, and visitor-serving policies, standards and maps of the LCP Land Use Plan, including Chapter 2: Section 2.5 and Chapter 7.

This finding can be made, in that the project site is not identified as a priority acquisition site in the County Local Coastal Program and public beach access is available at Sunset State Beach, Palm Beach approximately 0.8 miles north of the project site.

5. That the project conforms to all other applicable standards of the certified LCP.

This finding can be made, in that the structure is sited and designed to be visually compatible and integrated with the character of the surrounding neighborhood. Additionally, residential uses are allowed uses in the SU (Special Use) zone district, as well as the General Plan and Local Coastal Program land use designation. Developed parcels in the area contain single family dwellings. Size and architectural styles vary in the area, and the design submitted is consistent with the pattern of development within the surrounding neighborhood.

6. If the project is located between the nearest through public road and the sea or the shoreline of any body of water located within the Coastal Zone, that the project conforms to the public access and public recreation policies of Chapter 3 of the Coastal Act.

This finding can be made, in that the project site is located between the shoreline and the first public road however, the proposed project will not interfere with existing public access to the beach, ocean, or any nearby body of water. Further, the project site is not identified as a priority acquisition site in the County Local Coastal Program.

Development Permit Findings

1. That the proposed location of the project and the conditions under which it would be operated or maintained will not be detrimental to the health, safety, or welfare of persons residing or working in the neighborhood or the general public, and will not result in inefficient or wasteful use of energy, and will not be materially injurious to properties or improvements in the vicinity.

This finding can be made, in that the project is located in an area designated for residential uses. Construction will comply with prevailing building technology, the California Building Code, and the County Building ordinance to ensure the optimum in safety and the conservation of energy and resources.

2. That the proposed location of the project and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the zone district in which the site is located.

This finding can be made, in that the proposed location of the single family dwelling and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the SU (Special Use) zone district as the primary use of the property will be one single family dwelling that meets all current site standards for the zone district.

3. That the proposed use is consistent with all elements of the County General Plan and with any specific plan which has been adopted for the area.

This finding can be made, in that the proposed residential use is consistent with the use and density requirements specified for the R-UL (Urban Low Density Residential) land use designation in the County General Plan.

The proposed single family dwelling will not adversely impact the light, solar opportunities, air, and/or open space available to other structures or properties, and meets all current site and development standards for the zone district as specified in Policy 8.1.3 (Residential Site and Development Standards Ordinance), in that the single family dwelling will not adversely shade adjacent properties, and will meet current setbacks for the zone district.

The proposed single family dwelling will be properly proportioned to the parcel size and the character of the neighborhood as specified in General Plan Policy 8.6.1 (Maintaining a Relationship Between Structure and Parcel Sizes), in that the proposed single family dwelling will comply with the site standards for the SU zone district (including setbacks, lot coverage, floor area ratio, height, and number of stories) and will result in a structure consistent with a design that could be approved on any similarly sized lot in the vicinity.

A specific plan has not been adopted for this portion of the County.

4. That the proposed use will not overload utilities, and will not generate more than the acceptable level of traffic on the streets in the vicinity.

This finding can be made, in that the proposed single family dwelling is to be constructed on an existing developed lot and served by existing utilities. Existing level of traffic is not anticipated to increase as a result of the proposed project and will remain one peak trip per day (1 peak trip per dwelling unit). The project will not adversely impact existing roads or intersections in the surrounding area and not expected to overload existing utilities serving the site.

5. That the proposed project will complement and harmonize with the existing and proposed land uses in the vicinity and will be compatible with the physical design aspects, land use intensities, and dwelling unit densities of the neighborhood.

This finding can be made, in that the proposed structure is located in a mixed neighborhood containing a variety of architectural styles, and the proposed single family dwelling is consistent with the land use intensity and density of the neighborhood.

6. The proposed development project is consistent with the Design Standards and Guidelines (sections 13.11.070 through 13.11.076), and any other applicable requirements of this chapter.

This finding can be made, in that the proposed single family dwelling will be of an appropriate scale and type of design that will enhance the aesthetic qualities of the surrounding properties and will not reduce or visually impact available open space in the surrounding area.

Conditions of Approval

Exhibit D: Project plans, prepared by Erin Serventi, revised 7/29/22.

I. This permit authorizes the construction of an addition and remodel of an existing single family dwelling as indicated on the approved Exhibit "D" for this permit. This approval does not confer legal status on any existing structure(s) or existing use(s) on the subject property that are not specifically authorized by this permit. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant/owner shall:

A. Sign, date, and return to the Planning Department one copy of the approval to indicate acceptance and agreement with the conditions thereof.

B. Obtain a Building Permit from the Santa Cruz County Building Official.

1. Any outstanding balance due to the Planning Department must be paid prior to making a Building Permit application. Applications for Building Permits will not be accepted or processed while there is an outstanding balance due.

C. Obtain a Grading Permit from the Santa Cruz County Building Official.

II. Prior to issuance of a Building Permit the applicant/owner shall:

A. Submit final architectural plans for review and approval by the Planning Department. The final plans shall be in substantial compliance with the plans marked Exhibit "D" on file with the Planning Department. Any changes from the approved Exhibit "D" for this development permit on the plans submitted for the Building Permit must be clearly called out and labeled by standard architectural methods to indicate such changes. Any changes that are not properly called out and labeled will not be authorized by any Building Permit that is issued for the proposed development. The final plans shall include the following additional information:

1. A copy of the text of these conditions of approval incorporated into the full size sheets of the architectural plan set.

2. One elevation shall indicate materials and colors as they were approved by this Discretionary Application. If specific materials and colors have not been approved with this Discretionary Application, in addition to showing the materials and colors on the elevation, the applicant shall supply a color and material sheet in 8 1/2" x 11" format for Planning Department review and approval.

3. Grading, drainage, and erosion control plans.

4. A stormwater pollution control plan that meets the requirements set forth

in the County's Construction Site Stormwater Pollution Control BMP Manual.

5. The building plans must include a roof plan and a surveyed contour map of the ground surface, superimposed and extended to allow height measurement of all features. Spot elevations shall be provided at points on the structure that have the greatest difference between ground surface and the highest portion of the structure above. This requirement is in addition to the standard requirement of detailed elevations and cross-sections and the topography of the project site which clearly depict the total height of the proposed structure. Maximum height is 30 feet.

6. Details showing compliance with fire department requirements. If the proposed structure(s) are located within the State Responsibility Area (SRA) the requirements of the Wildland-Urban Interface code (WUI), California Building Code Chapter 7A, shall apply.

7. A Water Efficient Landscape Plan prepared in accordance with the requirements of the Water Efficient Landscape Ordinance (County Code Chapter 13.13) by a certified/licensed landscape architect, landscape contractor, civil engineer, landscape irrigation designer, landscape irrigation auditor, or water manager. WELO-exempt projects, residential projects of up to two units, or landscapes where at least 30% of the water use is provided by graywater, recycled water or captured rainwater may provide either a signed Water Efficient Landscape Checklist or a Water Efficient Landscape Plan.

    a. Any landscape plan submitted to comply with SCCC Ch. 13.13 shall include a Water Efficient Landscape Plan Submittal Compliance Statement.

B. The applicant shall provide written documentation that the Pajaro Dunes HOA has reviewed and approved the proposed development. The documentation shall reference Exhibit D of application 221079.

C. Meet all requirements of the County Department of Public Works, Stormwater Management. Drainage fees will be assessed on the net increase in impervious area.

D. Meet all requirements of the Watsonville Water District. Proof of water service availability is required prior to application for a Building Permit.

E. Meet all requirements of the Santa Cruz County Sanitation District. Proof of sanitary sewer service availability is required prior to application for a Building Permit.

F. Meet all requirements of the Environmental Planning section of the Planning Department including all requirements and conditions contained in the Biotic

Report and Biotic Report Acceptance letter dated September 22, 2022.

G. Meet all requirements and pay any applicable plan check fee of the Pajaro Dunes Fire Protection District.

H. Submit 3 copies of plan review letters prepared and stamped by the project Geotechnical Engineer.

I. Pay the current fees for Parks mitigation.

J. Pay the current fees Child Care mitigation.

K. Pay the current fees for Roadside and Transportation improvements. Please contact the Department of Public Works for a current list of fees.

L. Pay the current Affordable Housing Impact Fee. The fees are based on unit size and charged based on net new square footage.

M. Submit a written statement signed by an authorized representative of the school district in which the project is located confirming payment in full of all applicable developer fees and other requirements lawfully imposed by the school district.

III. All construction shall be performed according to the approved plans for the Building Permit. Prior to final building inspection, the applicant/owner must meet the following conditions:

A. Prior to the start of construction a pre-construction meeting shall be held with Environmental Planning staff, the soils engineer, civil engineer, general contractor, and consulting biologist. This requirement shall be clearly noted on the first page of the building permit plans.

B. A qualified biologist shall be on site to monitor initial ground disturbance and vegetation removal activities to recover any coast horned lizards or Northern California legless lizards that may be excavated/unearthed. If the animals are in good health, they will be immediately relocated to a designated release site outside of the work area. If they are injured, the animals will be released to a CDFW-approved rehabilitation specialist until they are in a condition to be released into the designated release site.

C. If a special-status animal is identified at any time prior to or during construction, work shall cease immediately in the vicinity of the individual. The animal shall either be allowed to move out of harm's way on its own or a qualified biologist shall move the animal out of harm's way to a safe relocation site.

D. Every individual working on the Project must attend biological awareness training prior to working on the job site. The training shall be delivered by a qualified biologist and shall include information regarding the location and identification of sensitive habitats and all special-status species with potential to occur in the

project area, the importance of avoiding impacts to special-status species and sensitive habitats, and the steps necessary if any special-status species is encountered at any time.

E. All site improvements shown on the final approved Building Permit plans shall be installed.

F. All inspections required by the building permit shall be completed to the satisfaction of the County Building Official.

G. The project must comply with all recommendations of the approved soils reports.

H. A Landscape Installation Certificate prepared in accordance with the Water Efficient Landscape Ordinance (County Code Chapter 13.13) shall be provided.

I. Pursuant to Sections 16.40.040 and 16.42.080 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.080, shall be observed.

IV. Operational Conditions

A. In the event that future County inspections of the subject property disclose noncompliance with any Conditions of this approval or any violation of the County Code, the owner shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including permit revocation.

V. Indemnification

The applicant/owner shall indemnify, defend with counsel approved by the COUNTY, and hold harmless the COUNTY, its officers, employees, and agents from and against any claim (including reasonable attorney's fees, expert fees, and all other costs and fees of litigation), against the COUNTY, its officers, employees, and agents arising out of or in connection to this development approval or any subsequent amendment of this development approval which is requested by the applicant/owner, regardless of the COUNTY's passive negligence, but excepting such loss or damage which is caused by the sole active negligence or willful misconduct of the COUNTY. Should the COUNTY in its sole discretion find the applicant's/owner's legal counsel unacceptable, then the applicant/owner shall reimburse the COUNTY its costs of defense, including without limitation reasonable attorney's fees, expert fees, and all other costs and fees of litigation. The applicant/owner shall promptly pay any final judgment rendered against the COUNTY (and its officers, employees, and agents) covered

by this indemnity obligation. It is expressly understood and agreed that the foregoing provisions are intended to be as broad and inclusive as is permitted by the law of the State of California and will survive termination of this development approval.

A. The COUNTY shall promptly notify the applicant/owner of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. The COUNTY shall cooperate fully in such defense.

B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:

1. COUNTY bears its own attorney's fees and costs; and

2. COUNTY defends the action in good faith.

C. Settlement. The applicant/owner shall not be required to pay or perform any settlement unless such applicant/owner has approved the settlement. When representing the COUNTY, the applicant/owner shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the COUNTY.

D. Successors Bound. The "applicant/owner" shall include the applicant and/or the owner and the successor'(s) in interest, transferee(s), and assign(s) of the applicant and/or the owner.

Minor variations to this permit which do not affect the overall concept or density may be approved by the Planning Director at the request of the applicant or staff in accordance with Chapter 18.10 of the County Code.

Please note: This permit expires three years from the effective date listed below unless a building permit (or permits) is obtained for the primary structure described in the development permit (does not include demolition, temporary power pole or other site preparation permits, or accessory structures unless these are the primary subject of the development permit). Failure to exercise the building permit and to complete all of the construction under the building permit, resulting in the expiration of the building permit, will void the development permit, unless there are special circumstances as determined by the Planning Director.

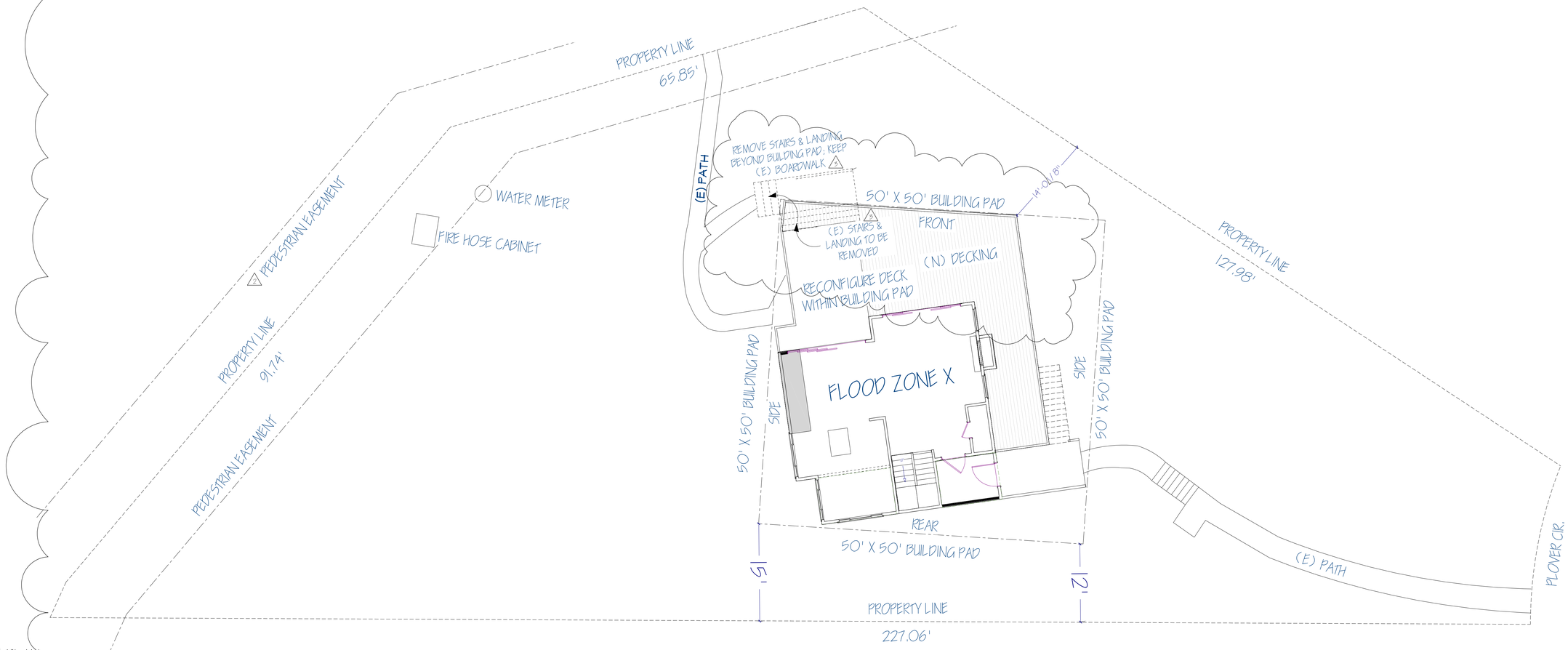
Approval Date: _____

Effective Date: _____

Expiration Date: _____

Jocelyn Drake
Deputy Zoning Administrator

Appeals: Any property owner, or other person aggrieved, or any other person whose interests are adversely affected by any act or determination of the Zoning Administrator, may appeal the act or determination to the Planning Commission in accordance with chapter 18.10 of the Santa Cruz County Code.



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

SHEET INDEX:

HOMEOWNER CONTACT INFORMATION:

IAN & HELEN WHITING
24253 VIA MALPASO
MONTEREY, CA 93940
408-627-5450
WHITING025@GMAIL.COM

REPORT COMPLIANCE: △2

ALL PROJECT DESIGN AND CONSTRUCTION SHALL COMPLY WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL INVESTIGATION PREPARED BY BUTANO GEOTECHNICAL ENGINEERING, INC., DATED MARCH 2021

SCOPE OF WORK:

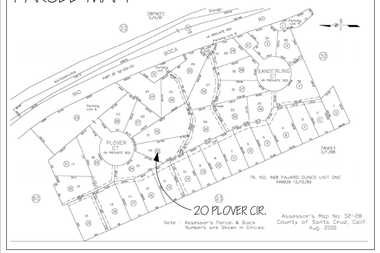
WHOLE HOUSE REMODEL AND ADDITION INCLUDING:
- ADDING A TOTAL OF 265 HABITABLE SQUARE FEET CONSISTING OF 97 SF TO BEDROOM 1, 40 SF TO BEDROOM 2, ~~43 SF TO DINING ROOM, AND 85 SF TO MASTER BEDROOM~~
- ADD 589 SQUARE FEET OF DECKING TO MIDDLE LEVEL △1
- ~~ADD 432 SQUARE FEET OF SLAB ON GRADE PATIO / WALKWAY TO LOWER LEVEL~~
- ADD 30 SQUARE FEET OF DECKING AT UPPER LEVEL
- ADDING A TOTAL OF 237 NON-HABITABLE SQUARE FEET INCLUDING FRAMING IN EXISTING COVERED PORCH (69 SF) TO CREATE ENCLOSED PORCH (NON-CONDITIONED SPACE), FRAMING IN UTILITY AREA UNDER ENTRY ON LOWER LEVEL TO CREATE NEW WEATHER-TIGHT (NON-CONDITIONED) UTILITY ROOM (69 SF) AND FRAMING IN SPACE UNDER ENTRY DECK TO CREATE NON-CONDITIONED, ENCLOSED STORAGE (99 SF)
- ALL NEW MARVIN DOORS AND WINDOWS
- REPLACE EXISTING PERGOLA STRUCTURE WITH NEW METAL PERGOLA, TO MATCH NEW DOORS / WINDOWS
- NEW CARLYLE TPO ROOF
- ALL NEW EXTERIOR SIDING
- NEW METAL CABLE RAILING AND METAL / GLASS RAILINGS
- RECONFIGURE SOUTH WEST DECK TO BE BUILT WITHIN THE DESIGNATED BUILDING PAD △2
- ~~RELOCATE WOOD BURNING FIREPLACE~~
- FULL KITCHEN REMODEL
- FULL MASTER BATH REMODEL
- NEW APPLIANCES AND PLUMBING FIXTURES
- NEW 200 AMP ELECTRICAL PANEL IN (E) LOCATION
- NEW 125 AMP ELECTRICAL SUB-PANEL IN (E) LOCATION
- RE-PIPE ENTIRE HOUSE
- KEEP EXISTING FURNACE AND WATER HEATER

DEFERRED SUBMITTALS: △1
- GLASS & METAL DECK GUARDRAIL SYSTEM
- CABLE DECK RAILING / GUARDRAIL SYSTEM
- THIRD STORY TRELLIS

PROPERTY INFORMATION:

ADDRESS:	20 PLOVER CIR. WATSONVILLE, CA 95076
APN:	052-281-25
HOA:	PAJARO DUNES
APPROX. LOT SIZE:	13,982.76 SF
APPROX. SQUARE FOOTAGE:	1,882 SF
BEDROOM 1 ADDITION:	97 SF
BEDROOM 2 ADDITION:	41 SF
DINING ROOM ADDITION:	43 SF
MASTER BED ADDITION:	85 SF
NEW TOTAL SQ.FT.:	2,148 SF
DECK ADDITION:	589 SF NEW DECKING
1ST FLOOR NON-HABITABLE ADDITION:	150 SF
2ND FLOOR NON-HABITABLE ADDITION:	60 SF
REMODELED SQUARE FOOTAGE:	775 SF
COASTAL ZONE:	CZ APPEAL
ZONING:	SU
OCCUPANCY:	R-3
CONSTRUCTION TYPE:	V-B
SRA / WUI:	LRA / NO
FIRE SPRINKLERS:	NO

PARCEL MAP:



APPLICABLE CODES:

2019 CBC, CRC, CFC, CPC, CMC, CEC, 2019 CAL. GREEN BLDG. STANDARDS, 2019 CAL. ENERGY STANDARDS, & SANTA CRUZ COUNTY AMENDMENTS

EXISTING FAR:	0.13
PROPOSED FAR:	0.15
ALLOWABLE FAR:	0.5:1 (6,991.38 SF)
EXISTING LOT COVERAGE:	6.47%
PROPOSED LOT COVERAGE:	6.98%
ALLOWABLE LOT COVERAGE:	40% (5,593.10 SF)

E.L. DESIGNS
Erin Loftin Serventi
Certified Interior Designer #6532
65 Litchfield Lane
Watsonville, CA 95076
erin@eldesignsco.com
831.840.0282
www.eldesignsco.com

PROPOSED SITE PLAN, PROJECT INFORMATION, SCOPE OF WORK

WHITING RESIDENCE
20 PLOVER CIR.
WATSONVILLE, CA 95076
APN: 052-281-25

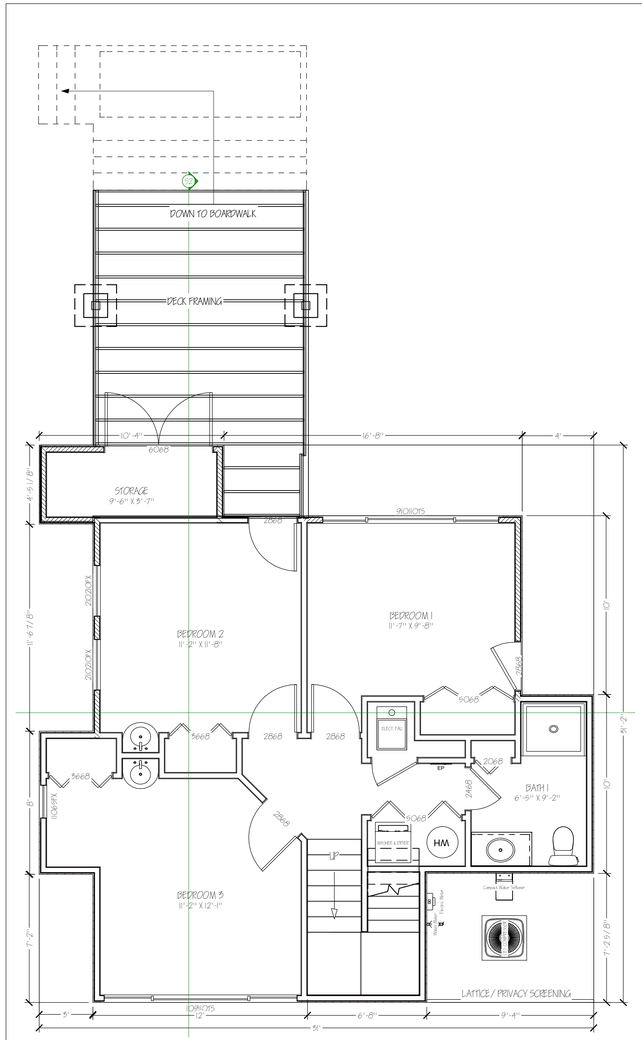
REVISIONS		
△	DATE	REVISION
1	10/26/21	PLAN CHECK COMMENTS
2	5/9/22	INCOMPLETE COMMENTS
3	7/29/22	INCOMPLETE COMMENTS

SCALE: AS NOTED

DATE: 7/25/21

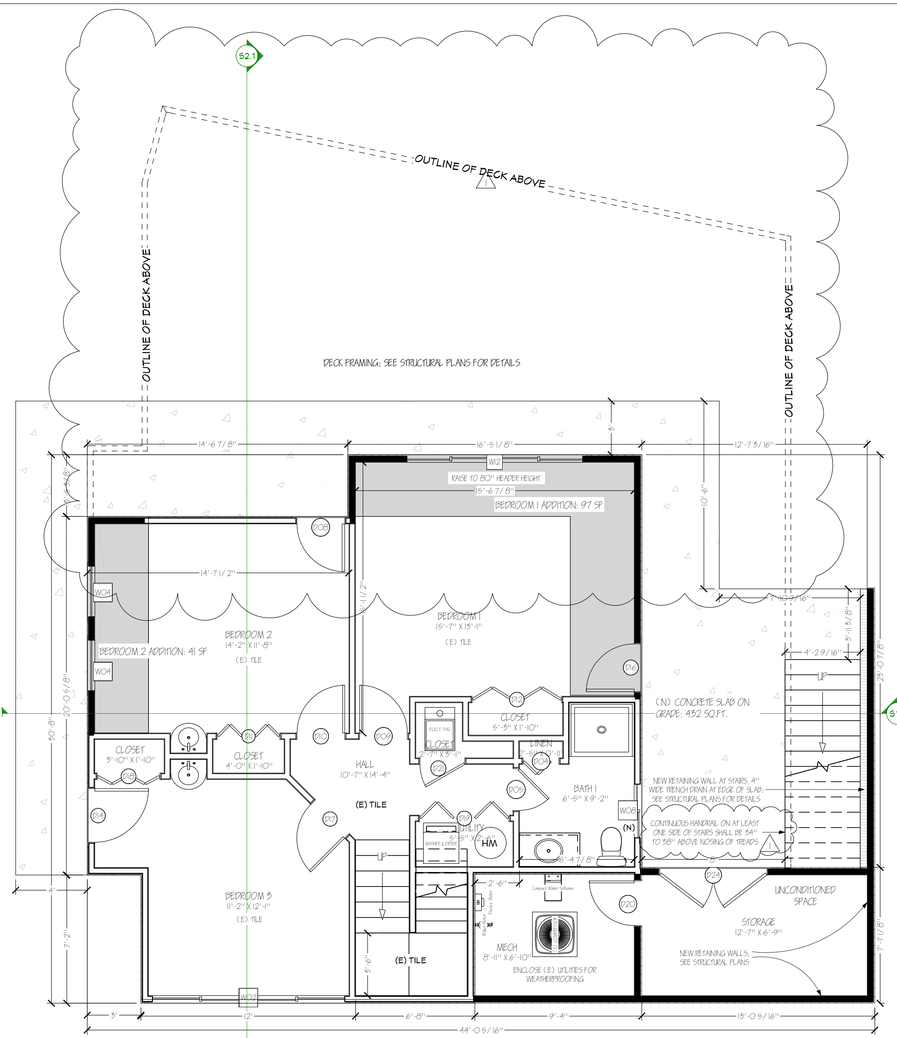
PAGE: A-1

Exhibit D



EXISTING LOWER LEVEL

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



PROPOSED LOWER LEVEL

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

WALLS TO REMAIN

WALLS TO BE REMOVED

WALLS TO REMAIN

NEW WALLS

NEW SF / ADDITION

DOOR SCHEDULE

NUMBER	LABEL	QTY	ROOM NAME	SIZE	TEMPERED	U-FACTOR	WIDTH	HEIGHT	MANUFACTURER	COMMENTS
D01	12068	1	LIVING/ DECK	12068 L/ R EX.	YES	0.3	144 "	80 "	MARVIN	
D02	12068	1	DINING/ DECK	12068 L EX.	YES	0.3	144 "	80 "	MARVIN	
D03	10068	1	MASTER BDRM/ MASTER DECK	10068 L IN	YES	0.3	120 "	80 "	MARVIN	
D04	2068	1	BATH 1/ LINEN	2068 R		0.3	24 "	80 "		
D05	2468	1	BATH 1/ HALL	2468 L IN		0.3	28 "	80 "		
D06	2468	1	ENTRY/ 1/ 2 BATH	2468 R IN		0.3	28 "	80 "		
D07	2868	1	MASTER BDRM/ MASTER BATH	2868 R		0.3	32 "	80 "		
D08	2868	1	BEDROOM 2	2868 L EX.	YES	0.3	32 "	80 "	MARVIN	
D09	2868	1	HALL/ BEDROOM 1	2868 L IN		0.3	32 "	80 "		
D10	2868	1	HALL/ BEDROOM 2	2868 R IN		0.3	32 "	80 "		
D11	5068	1	CLOSET/ BEDROOM 2	5068 L/ R		0.3	60 "	80 "		
D12	5068	1	BEDROOM 1/ CLOSET	5068 L/ R		0.3	60 "	80 "		
D13	3668	1	ENTRY/ PORCH	3668 R EX.	YES	0.3	42 "	80 "		EGRESS
D14	5068	1	BEDROOM 3	5068 L/ EX.	YES	0.3	60 "	80 "	MARVIN	
D16	2868	1	BEDROOM 1	2868 L EX.	YES	0.3	32 "	80 "	MARVIN	
D17	2868	1	BEDROOM 3/ HALL	2868 L IN		0.3	32 "	80 "		
D18	3668	1	BEDROOM 3/ CLOSET	3668 L/ R		0.3	42 "	80 "		
D19	5068	1	UTILITY/ HALL	5068 L/ R		0.3	60 "	80 "		LOUVERED
D20	2668	1	MECH/ STORAGE	2668 R IN		0.3	30 "	80 "		LOUVERED
D21	2668	1	HALL/ CLOSET	2668 L IN		0.3	30 "	80 "		
D22	21068	1	MASTER BDRM/ MASTER DECK	21068 R IN	YES	0.3	84 "	80 "	MARVIN	
D23	3668	1	PORCH/ UNSPECIFIED	3668 R EX.	YES	0.3	42 "	80 "		EGRESS
D24	6068	1	STORAGE	6068 L/ R EX.		0.3	72 "	80 "		

WINDOW SCHEDULE

NUMBER	LABEL	QTY	ROOM NAME	SIZE	TEMPERED	U-FACTOR	WIDTH	HEIGHT	MANUFACTURER
W01	10052DS	1	MASTER BDRM	10052TS	YES	0.3	120 "	62 "	MARVIN
W02	10911DS	1	BEDROOM 3	10911TS	YES	0.3	129 "	22 "	MARVIN
W04	21021DFX	2	BEDROOM 2	21021DFX	YES	0.3	54 "	54 "	MARVIN
W05	3016RS	2	MASTER BATH	3016RS	YES	0.3	36 "	18 "	MARVIN
W06	3105DFX	1	STAIRS	3105DFX		0.3	46 "	46 "	MARVIN
W07	3413AW	2	LIVING/ DECK	3413AW		0.3	40 "	15 "	MARVIN
W08	3016RS	1	BATH 1	3016RS	YES	0.3	36 "	18 "	MARVIN
W09	6834DS	1	KITCHEN	6834TS	YES	0.3	80 "	40 "	MARVIN
W10	6016RS	1	MASTER BDRM	6016RS	YES	0.3	72 "	18 "	MARVIN
W11	6813DS	1	KITCHEN	6813TS	YES	0.3	80 "	15 "	MARVIN
W12	9011DDS	1	BEDROOM 1	9011DTS	YES	0.3	118 "	22 "	MARVIN
W13	6213DS	1	KITCHEN	6213TS	YES	0.3	74 "	15 "	MARVIN

SKYLIGHT SCHEDULE

LABEL	QTY	ROOM NAME	SIZE	TEMPERED	U-FACTOR	WIDTH	LENGTH	MANUFACTURER/ SPECIFICATION
8080	1	ENCLOSED PORCH	3030	YES	0.3	36"	36"	VELUX CURVETECH SKYLIGHT
6090	1	KITCHEN	2030	YES	0.3	24"	36"	VELUX CURVETECH SKYLIGHT
6090	2	MASTER BEDROOM	2030	YES	0.3	24"	36"	VELUX CURVETECH SKYLIGHT
6090	1	MASTER BATH	2030	YES	0.3	24"	36"	VELUX CURVETECH SKYLIGHT

GENERAL NOTES:

TYPICAL CONSTRUCTION REQUIREMENTS OF THE 2019 CRC SHALL APPLY WHERE APPLICABLE AND WHEN NOT SPECIFICALLY NOTED OTHERWISE ON THE DRAWING.

ALL NEW WORK SHALL CONFORM TO THE 2019 CALIFORNIA BUILDING CODE, 2019 CALIFORNIA RESIDENTIAL CODE, 2019 CALIFORNIA FIRE CODE, 2019 CALIFORNIA PLUMBING CODE, 2019 CALIFORNIA MECHANICAL CODE, 2019 CALIFORNIA ELECTRIC CODE, 2019 CALIFORNIA GREEN BUILDING STANDARDS, 2019 CALIFORNIA ENERGY STANDARDS, AND THE SANTA CRUZ COUNTY CODE AMENDMENTS. IN THE EVENT OF CONFLICT BETWEEN PERTINENT CODES AND REGULATIONS AND THE REQUIREMENTS OF THE REFERENCED STANDARDS OF THESE NOTES, THE PROVISIONS OF THE MORE STRINGENT SHALL GOVERN.

CONSTRUCTION DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL BE CARRIED OUT BY RESPECTIVE CONTRACTORS IN ACCORDANCE WITH THE BEST COMMON PRACTICE AND / OR WITH MANUFACTURER'S SPECIFICATIONS FOR INSTALLATION FOR THEIR MATERIALS OR ITEMS.

CONTRACTORS SHALL VERIFY ALL EXISTING SITE & BUILDING CONDITIONS AND DIMENSIONS PRIOR TO START OF WORK. CONTRACTOR SHALL ALSO REVIEW THESE PLANS AND ALL OTHER ADDITIONAL DOCUMENTS AND NOTIFY DESIGNER OF ANY CHANGES IN THE WORK, INCLUDING CODE REQUIREMENTS, PRIOR TO ANY WORK COMMENCING. IF ANY DISCREPANCIES OCCUR BETWEEN THE DRAWINGS AND ACTUAL FIELD CONDITIONS, NOTIFY THE DESIGNER AT ONCE BEFORE COMMENCING ANY CONSTRUCTION.

THESE DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO DESCRIBE THE PROJECT SUFFICIENTLY, BY REFERENCE OR IMPLICATION TO CAUSE A COMPLETE OPERATIONAL PROJECT. THEY DO NOT REPRESENT TO SHOW OR INCLUDE EVERY SPECIFIC ITEM WHICH MAY BE NECESSARY TO COMPLETE THIS PROJECT. NOT ALL CODES AND ORDINANCES PERTAINING TO THIS PROJECT HAVE BEEN INCORPORATED INTO THESE PLANS.

WHERE DETAILS ARE NOT PROVIDED WITHIN THESE PLANS AND ADDITIONAL CONSTRUCTION DOCUMENTS, THE CONTRACTOR SHALL WORK TO ACCEPTED STANDARDS OF GOOD CONSTRUCTION PRACTICE TO ENSURE A SOUND, WEATHERPROOF STRUCTURE. IN THE CASE OF UNCERTAINTY, THE CONTRACTOR SHALL CONSULT THE DESIGNER PRIOR TO COMMENCEMENT OF WORK.

THE GENERAL CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THIS RESPONSIBILITY SHALL EXTEND CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE DESIGNER FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING FROM THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGNER.

DIMENSIONS ARE TO FACE OF SHEETROCK, UNLESS NOTED OTHERWISE. PLEASE VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH WORK.

ALL PLYWOOD PANELS WHICH HAVE ANY EDGE OR SURFACE PERMANENTLY EXPOSED TO WEATHER SHALL BE CLASSED EXTERIOR GRADE PLYWOOD. FLOOR SHEATHING SHALL BE LAYED WITH FACE GRAIN PERPENDICULAR TO THE SUPPORTS. PLYWOOD SHALL BE EXTERIOR GRADE UNDER ALL TILE FLOORS.

PROVIDE FLASHING AND CAULKING FOR A WEATHERTIGHT JOB.

EXTERIOR DOORS AND DOORS SEPARATING CONDITIONED SPACE FROM NON-CONDITIONED SPACE SHALL HAVE WEATHER STRIPPING.

ALL EMERGENCY ESCAPE WINDOWS SHALL HAVE A NET CLEAR OPENING OF NOT LESS THAN 5.7 SQUARE FEET. THE NET CLEAR HEIGHT OPENING SHALL NOT BE LESS THAN 24 INCHES AND THE NET CLEAR WIDTH SHALL NOT BE LESS THAN 20 INCHES. GRADE FLOOR OPENINGS SHALL HAVE A NET CLEAR OPENING OF NOT LESS THAN 5 SQUARE FEET. A GRADE FLOOR OPENING, AS DEFINED IN CHAPTER 2 IS AN OPENING WITH A SILL HEIGHT NO GREATER THAN 44 INCHES ABOVE FINISHED GROUND (SOIL / PAVEMENT OUTSIDE THE WINDOW) .

THERE SHALL BE A LANDING OR FLOOR ON EACH SIDE OF EACH EXTERIOR DOOR. THE WIDTH OF EACH LANDING SHALL BE NOT LESS THAN THE DOOR SERVED. EVERY LANDING SHALL HAVE A DIMENSION OF NOT LESS THAN 36 INCHES MEASURED IN THE DIRECTION OF TRAVEL. THE SLOPE AT EXTERIOR LANDINGS SHALL NOT EXCEED ¼ UNIT VERTICAL IN 12 UNITS HORIZONTAL (2 PERCENT) . R311.3

LANDINGS OR FINISHED FLOORS AT THE REQUIRED EGRESS DOOR SHALL BE NOT MORE THAN 1-1/ 2 INCHES LOWER THAN THE TOP OF THE THRESHOLD. THE LANDING OR FLOOR ON THE EXTERIOR SIDE SHALL BE NOT MORE THAN 7-3/ 4 INCHES BELOW THE TOP OF THE THRESHOLD PROVIDED THE DOOR DOES NOT SWING OVER THE LANDING OR FLOOR. R311.3.1

DOORS OTHER THAN THE REQUIRED EGRESS DOOR SHALL BE PROVIDED WITH LANDINGS OR FLOORS NOT MORE THAN 7-3/ 4 INCHES BELOW THE TOP OF THE THRESHOLD. R311.3.2

ALL NEW GLASS DOORS ARE TO HAVE TEMPERED GLAZING. ALL GLAZING IN ANY AREAS SUBJECT TO HUMAN IMPACT SHALL BE TEMPERED GLASS. GLAZING WITHIN 24" OF ANY EDGE OF DOOR OR WITHIN 18" OF THE FLOOR MUST COMPLY.

ALL GLAZING WITHIN A 24 INCH ARC OF EITHER VERTICAL EDGE OF A DOOR IN THE CLOSED POSITION SHALL BE SAFETY GLAZED.

LABELS TO REMAIN ON ALL NEW WINDOWS, DOORS, AND SKYLIGHTS FOR INSPECTION.

WINDOWS MAX. U-FACTOR OF 0.4 FOR UP TO 75 SQUARE FEET, FOR AREAS GREATER THAN 75 SQUARE FEET THE MAX U-FACTOR SHALL BE 0.30.

SKYLIGHTS MAX. U-FACTOR OF 0.55 AND MAX. SHGC OF 0.30 FOR TOTAL NEW AREA OF 16 SQ. FT. MAX.

FOR ALL REMODELS, INSULATION MEETING THE MANDATORY FEATURE REQUIREMENTS IN THE CALIFORNIA ENERGY CODE SHALL BE INSTALLED AT CEILINGS, WALLS, FLOORS, AND WATER PIPES, WHEN THESE AREAS ARE EXPOSED DURING REMODELING. SCC CODE 12.10.250.

SEAL ALL PENETRATIONS THROUGH WATERPROOFING MEMBRANES, INCLUDING NEW OR EXISTING WEATHER RESISTIVE BARRIER, DECK COATING, AND ROOFING MEMBRANE WITH MANUFACTURER APPROVED SEALANT, TYP.

ALL NEW SPACE CONDITIONING EQUIPMENT, WATER HEATERS, SHOWER HEADS, AND FAUCETS MUST BE CERTIFIED AS COMPLYING WITH THE APPLIANCE EFFICIENCY STANDARDS & CALGREEN STANDARDS.

INSTALL A MINIMUM OF 1.5 INCH THICK INSULATION ON ALL HOT WATER PIPES AND COLD WATER PIPES FOR THE FIRST 5 FEET FROM A STORAGE TANK. PIPES 2 INCHES IN DIAMETER REQUIRE A MINIMUM OF 2 INCH THICK INSULATION. HOT WATER PIPES BURIED BELOW GRADE MUST BE INSTALLED IN A WATER PROOF NON-CRUSHABLE CASING OR SLEEVE. INSULATION OUTSIDE CONDITIONED SPACE SHALL BE PROTECTED. CEnC 150.0 (j) & TABLE 120.3-A, CPC 609.11.

ALL NEW PLUMBING FIXTURES MUST BE CERTIFIED AS COMPLYING WITH THE APPLIANCE EFFICIENCY STANDARDS & CAL GREEN STANDARDS REFERENCED IN TABLE 4.303.1 AND CPC 407.2, 408.2, 411.2, 412.
A. KITCHEN FAUCETS: 1.8 GPM @ 60 PSI
B. LAVATORY FAUCETS: 1.2 GPM @ 60 PSI
C. BATHROOM TOILETS: 1.28 GPF
D. SHOWER HEADS: 1.8 GPM @ 80 PSI
E. MULTIPLE SHOWERHEADS: COMBINED FLOW RATE OF ALL SHOWERHEADS AND / OR OTHER SHOWER OUTLETS CONTROLLED BY A SINGLE VALVE SHALL NOT EXCEED 1.8 GPM @ 80 PSI OR ONLY ONE SHOWER OUTLET IS TO BE IN OPERATION AT A TIME.

FOR ALL BUILDING ALTERATIONS OR IMPROVEMENTS TO A SINGLE FAMILY RESIDENTIAL PROPERTY, EXISTING PLUMBING FIXTURES IN THE ENTIRE HOUSE THAT DO NOT MEET COMPLIANT FLOW RATES WILL NEED TO BE UPGRADED PER CALIFORNIA CIVIL CODE ARTICLE 1101.4 AND CALGREEN SECTION 301.1.
A. WATER CLOSETS WITH A FLOW RATE IN EXCESS OF 1.6 GPF WILL NEED TO BE REPLACED WITH WATER CLOSETS WITH A MAXIMUM FLOW RATE OF 1.28 GPF.
B. SHOWER HEADS WITH A FLOW RATE GREATER THAN 2.5 GPM WILL NEED TO BE REPLACED WITH A MAXIMUM 1.8 GPM SHOWER HEAD.
C. LAVATORY AND KITCHEN FAUCETS WITH A FLOW RATE GREATER THAN 2.2 GPM WILL NEED TO BE REPLACED WITH A FAUCET WITH MAXIMUM FLOW RATE OF 1.2 GPM (OR 1.8 GPM FOR KITCHEN FAUCETS) .

NO DOMESTIC DISHWASHING MACHINE SHALL BE DIRECTLY CONNECTED TO A DRAINAGE SYSTEM OR FOOD WASTE DISPOSER WITHOUT THE USE OF AN APPROVED DISHWASHER AIR GAP FITTING ON THE DISCHARGE SIDE OF THE DISHWASHING MACHINE. LISTED AIR GAPS SHALL BE INSTALLED WITH THE FLOOD-LEVEL (FL) MARKING AT OR ABOVE THE FLOOD LEVEL OF THE SINK OR DRAINBOARD, WHICHEVER IS HIGHER. CPC 807.3

WHEN > 40 FEET OF NEW OR REPLACEMENT SPACE CONDITIONING DUCT SYSTEM DUCTS ARE INSTALLED, THE DUCTS SHALL BE INSULATED, SEALED AND FIELD TESTED. DUCTS SHALL BE INSULATED WITH A MINIMUM OF R6 IN UNCONDITIONED SPACE AND A MINIMUM OF R4.2 IN CONDITIONED SPACE. CEnC150.2(b)1E, 150.0(m)1

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EXISTING AND PROPOSED LOWER LEVEL PLANS, SCHEDULES, GENERAL NOTES

WHITING RESIDENCE
20 PLOVER CIR.
WATSONVILLE, CA 95076
APN: 052-281-25

REVISIONS

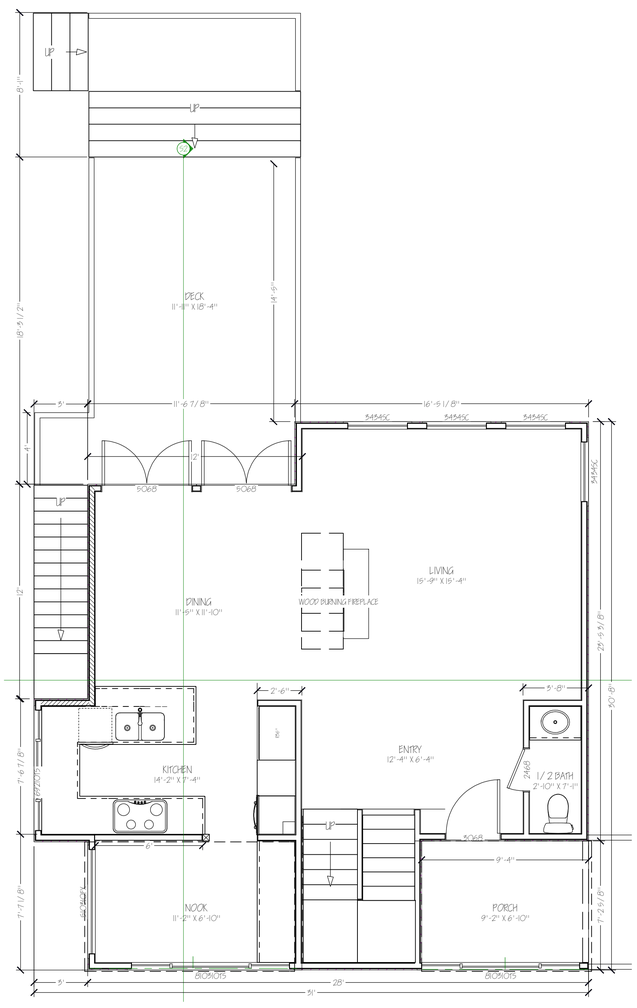
	DATE	REVISION
1	10/ 26/ 21	PLAN CHECK COMMENTS
2	5/ 9/ 22	INCOMPLETE COMMENTS
3	7/ 29/ 22	INCOMPLETE COMMENTS

SCALE: AS NOTED

DATE: 7/ 25/ 21

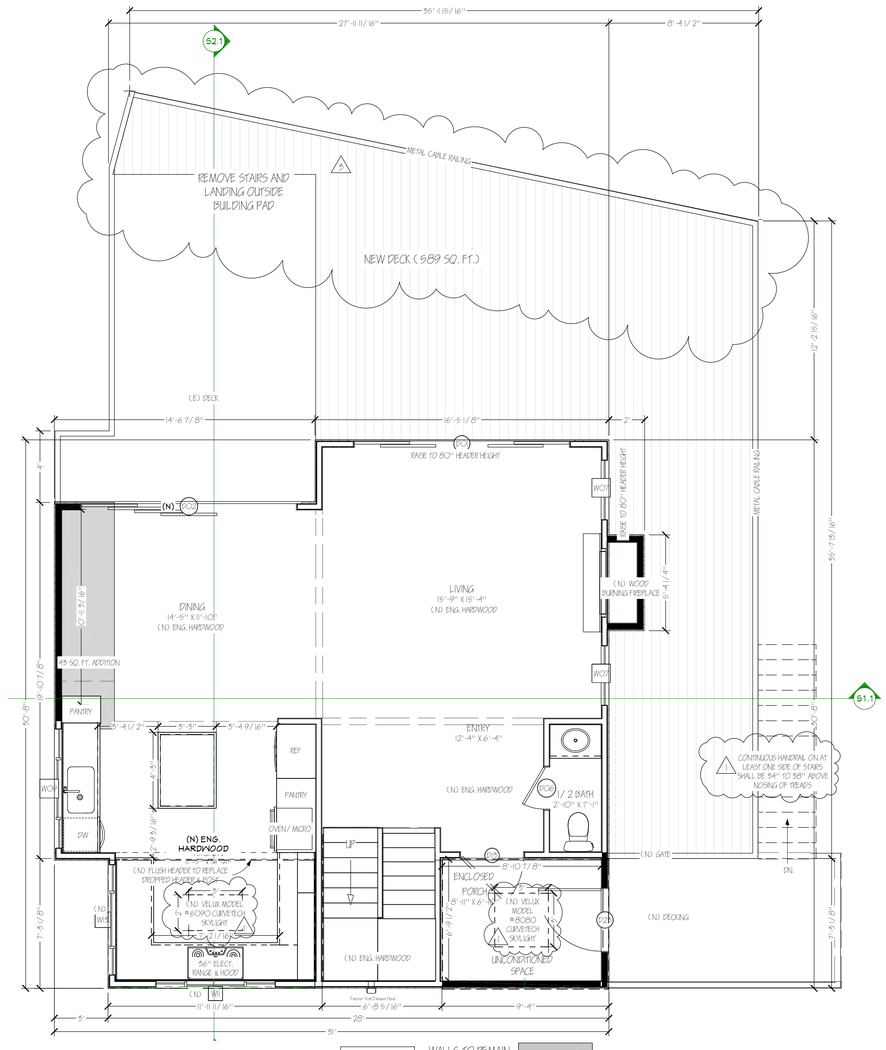
PAGE: A-2

Exhibit D



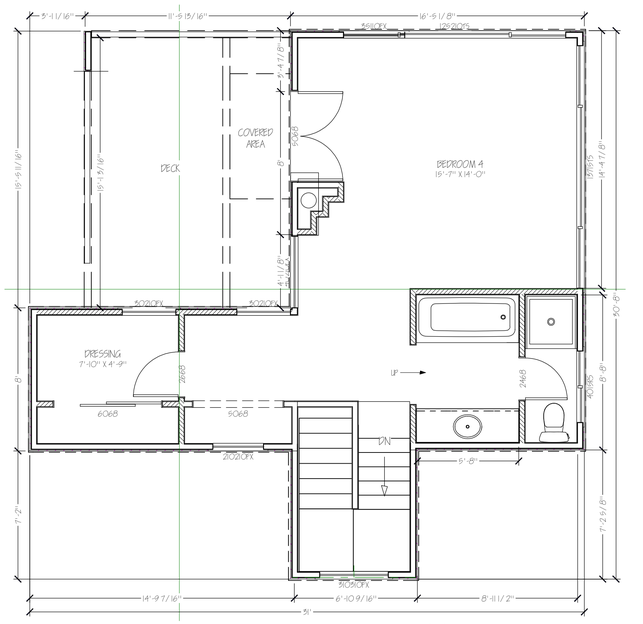
EXISTING MIDDLE LEVEL

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



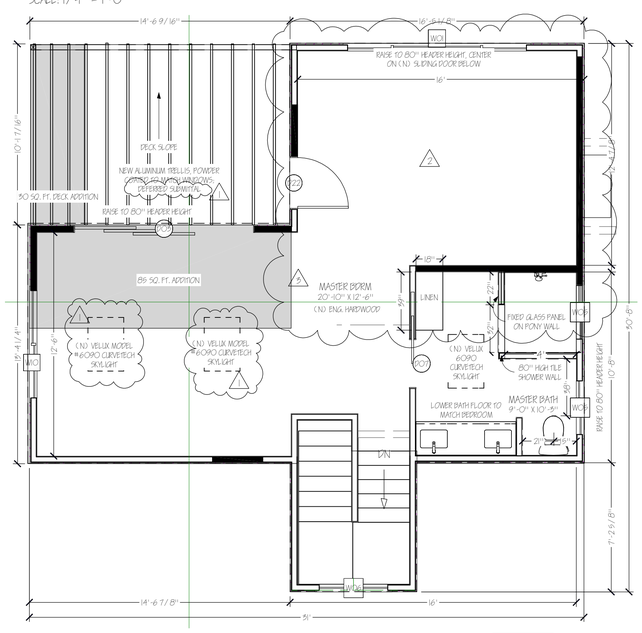
PROPOSED MIDDLE LEVEL

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



EXISTING UPPER LEVEL

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



PROPOSED UPPER LEVEL

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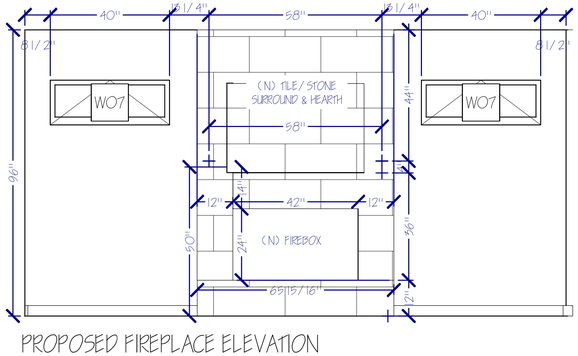
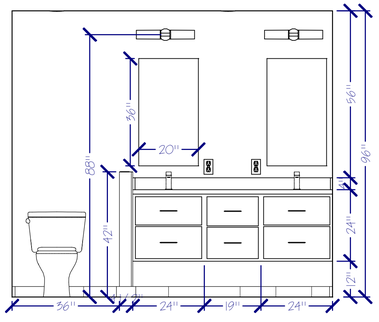


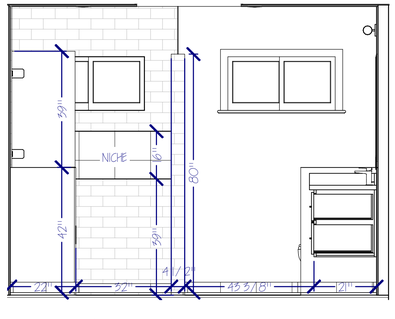
PROPOSED FIREPLACE ELEVATION

SCALE: 1/ 2" = 1'-0"



PROPOSED MASTER BATH ELEVATION

SCALE: 1/ 2" = 1'-0"



PROPOSED MASTER BATH ELEVATION

SCALE: 1/ 2" = 1'-0"

BATH NOTES:

SHOWER FLOORS AND WALLS WITHIN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH WALL SURFACE SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR PER CRC R307.2.

CLEARANCES REQUIRED FOR TOILET: 30 INCHES SPACE WITH 24 INCHES CLEAR IN FRONT. CPC 402.5

PRESSURE BALANCE OR THERMOSTATIC MIXING VALVES ARE REQUIRED AT TUB/ SHOWER WITH 120 DEGREE MAX.

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EXISTING & PROPOSED MIDDLE AND UPPER LEVEL PLANS, BATH & FIREPLACE ELEVATIONS

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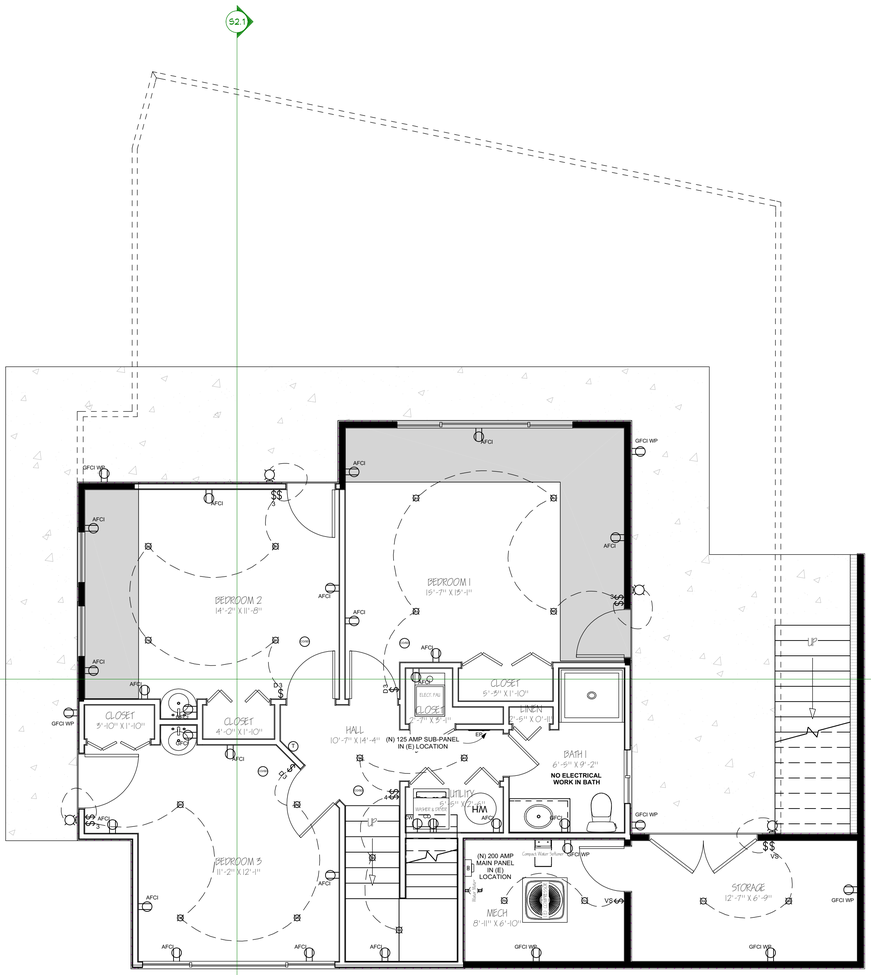

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	CHANDELIER LIGHT FIXTURE
	CEILING MOUNTED LIGHT FIXTURES: SURFACE/ PENDANT, RECESSED
	WALL MOUNT FIXTURES: SINGLE FIXTURE, DOUBLE FIXTURE
	VENTILATION FANS: CEILING MOUNTED, WALL MOUNTED
	240V RECEPTACLE
AFCI GFCI	110V RECEPTACLES: DUPLEX, ARC-FAULT, GFCI
WP 3 4	SWITCHES: SINGLE POLE, WEATHER PROOF, 3-WAY, 4-WAY
D VS	SWITCHES: DIMMER, VACANCY SENSOR
CS CSTV TV	WALL JACKS: CAT5, CAT5+TV, TV/CABLE
T	THERMOSTAT
CO/SM	CARBON MONOXIDE/SMOKE DETECTOR: CEILING MOUNTED, IN
EP	ELECTRICAL SUB-PANEL

TABLE 150.0-A CLASSIFICATION OF HIGH EFFICACY LIGHT SOURCES

High Efficacy Light Sources Light sources shall comply with one of the columns below:	
Light sources in this column other than those installed in ceiling recessed downlight luminaires are classified as high efficacy and are **not** required to comply with Reference Joint Appendix JA8 1. Pin-based linear fluorescent or compact fluorescent light sources using electronic ballasts 2. Pulse-start metal halide light sources. 3. High pressure sodium light sources. 4. Luminaires with hardwired high frequency generator and induction lamp. 5. LED light sources installed outdoors. 6. Inseparable SSL luminaires containing colored light sources that are installed to provide decorative lighting.	Light sources in this column are only considered to be high efficacy if they are certified to the Commission as High Efficacy Light Sources in accordance with Reference Joint Appendix JA8 and marked as required by JA8 7. All light sources installed in ceiling recessed downlight luminaires. Note that ceiling recessed downlight luminaires shall not have screw bases regardless of lamp type as described in Section 150.0(k)1C 8. Any light source not otherwise listed in this table.

ELECTRICAL NOTES:

ANY NEW RECEPTACLE OUTLETS IN ROOMS OTHER THAN THE KITCHEN, BATHROOMS, CLOSETS, UTILITY ROOMS, HALL AREAS, AND THE GARAGE SHALL BE PROVIDED SO THAT NO POINT ALONG THE FLOOR LINE IS MORE THAN 6 FEET MEASURED HORIZONTALLY FROM AN OUTLET IN THAT SPACE, INCLUDING ANY WALL SPACE 2 FEET OR MORE IN WIDTH. FLOOR MOUNTED RECEPTACLES LOCATED WITHIN 18 INCHES OF THE WALL MAY BE COUNTED AS PART OF THE REQUIRED NUMBER OF OUTLETS. OUTLETS SATISFYING GENERAL OUTLET SPACING SHALL BE LOCATED WITHIN 5 ½ FEET VERTICALLY ABOVE THE FLOOR.

AT LEAST ONE 20 AMP BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY LAUNDRY RECEPTACLE OUTLETS. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS.

ALL 120-VOLT, SINGLE PHASE, 15 AND 20-AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS OR DEVICES INSTALLED IN DWELLING UNIT KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED COMBINATION-TYPE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) INSTALLED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT.

ALL NEW ELECTRICAL OUTLETS TO BE TAMPER PROOF. CEC 406.12

KITCHEN WALL COUNTER SPACE OUTLETS SHALL BE INSTALLED AT EACH WALL COUNTERSPACE THAT IS 12 INCHES OR WIDER. OUTLETS SHALL BE INSTALLED SO THAT NO POINT ALONG THE WALL LINE IS MORE THAN 24 INCHES MEASURED HORIZONTALLY FROM AN OUTLET IN THAT SPACE. COUNTER SPACES SEPARATED BY RANGE TOPS, REFRIGERATORS, OR SINKS SHALL BE CONSIDERED AS SEPARATE COUNTERTOP SPACES.

KITCHEN WALL COUNTER SPACE OUTLETS SHALL BE INSTALLED ABOVE, BUT NOT MORE THAN 20 INCHES ABOVE, THE COUNTERTOP. THEY MAY ALSO BE MOUNTED NOT MORE THAN 12 INCHES BELOW THE COUNTERTOP, PROVIDED THE COUNTERTOP DOES NOT EXTEND MORE THAN 6 INCHES BEYOND ITS SUPPORT BASE.

GFCI REQUIRED AT ALL KITCHEN COUNTERTOP RECEPTACLES AND THE DISHWASHER PER CEC 210.8(D) ; WITHIN 6 FEET OF A SINK PER CEC 210.8(A)(7) ; WITHIN 6 FEET OF A BATHTUB OR SHOWER PER CEC 210.8(A)(9) ; LAUNDRY AREAS PER CEC 210.8(A)(10) .

A MIN. OF TWO 20 AMP SMALL BRANCH CIRCUITS SHALL BE PROVIDED FOR ALL RECEPTACLE OUTLETS IN THE KITCHEN, DINING ROOM, PANTRY, OR OTHER SIMILAR AREAS.

ALL NEW APPLIANCES SHALL BE ENERGY STAR RATED PER CODE.

A MINIMUM OF 100 CFM LOCAL EXHAUST FAN SHALL BE INSTALLED FOR THE KITCHEN, WHICH MAY BE ACHIEVED BY A RANGE HOOD. CA ENERGY STANDARD 150(O), ASHRAE STANDARD 62.2

SMOKE DETECTORS SHALL BE LOCATED IN EACH BEDROOM AND IN THE HALL BETWEEN THE KITCHEN AND THE BEDROOMS. FOR A REMODEL, THESE MAY BE BATTERY OPERATED. FOR NEW CONSTRUCTION, ALL NEW SMOKE DETECTORS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING AND SHALL ALSO BE EQUIPPED WITH A BATTERY BACKUP. THEY MUST ALSO BE INTERCONNECTED UNLESS TESTS DEMONSTRATE THAT THE ALARM FROM ANY DETECTOR IS AUDIBLE IN ALL SLEEPING AREAS.

CARBON MONOXIDE ALARMS SHALL BE PROVIDED ON THE CEILING OR WALL OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF BEDROOMS (I.E. HALLWAY) IN DWELLINGS WHERE TWO OR MORE CARBON MONOXIDE ALARMS ARE REQUIRED, THEY SHALL BE INTERCONNECTED IN SUCH A MANNER THAT ACTUATION OF ONE SHALL CAUSE ACTUATION OF ALL IN THE DWELLING UNIT.

A SUPPLEMENTAL HEATING UNIT MAY BE INSTALLED IN A SPACE SERVED DIRECTLY OR INDIRECTLY BY A PRIMARY HEATING SYSTEM, PROVIDED THAT THE UNIT THERMAL CAPACITY DOES NOT EXCEED 2kW OR 7,000 Btu/ hr AND IS CONTROLLED BY A TIME-LIMITING DEVICE NOT EXCEEDING 30 MINUTES. SECTION 150.0(c)6 EXCEPTION - FOR RADIANT HEAT

ELECTRICAL NOTES CONTD.:

AT LEAST ONE WALL RECEPTACLE OUTLET SHALL BE INSTALLED IN BATHROOMS WITHIN 3 FEET OF OUTSIDE EDGE OF EACH BASIN. CEC 210-52(3)(d)

BATHROOM RECEPTACLE OUTLETS SHALL BE SUPPLIED BY AT LEAST ONE 20-AMP BRANCH CIRCUIT. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS.

GFCI PROTECTION REQUIRED FOR ALL BATHROOM OUTLET RECEPTACLES. CEC 210-8(a)(1)

ALL LUMINARIES IN BATHROOMS SHALL BE HIGH EFFICACY AND AT LEAST ONE SHALL BE CONTROLLED BY A VACANCY SENSOR. T-6 AND COMPACT FLUORESCENT ARE HIGH EFFICACY LUMINARIES. T-24.

A MIN 50 CFM BATHROOM EXHAUST FAN IS REQUIRED FOR EACH BATHROOM. THESE FANS SHALL BE ENERGY STAR RATED AND WHEN NOT PART OF THE WHOLE HOUSE VENTILATION SYSTEM, SHALL HAVE HUMIDISTAT CONTROL.

ALL INSTALLED LIGHTING SHALL BE HIGH EFFICACY IN ACCORDANCE WITH TABLE 150.0-A OF THE CALIFORNIA ENERGY CODE. CEnC150.0(K)1A

ALL NEW LIGHTING IN BATHROOMS, GARAGES, LAUNDRY AND UTILITY ROOMS SHALL BE HIGH EFFICACY AND AT LEAST ONE LUMINAIRE IN EACH SPACE SHALL BE CONTROLLED BY A VACANCY SENSOR.

ALL NEW LIGHTING IN OTHER ROOMS SHALL BE HIGH EFFICACY AND CONTROLLED BY A VACANCY SENSOR OR DIMMER. CLOSETS THAT ARE LESS THAN 70 SQUARE FOOT ARE EXEMPT FROM THIS REQUIREMENT.

ALL NEW EXTERIOR LIGHTING MOUNTED TO THE BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL BE HIGH EFFICACY AND SHALL BE CONTROLLED BY A PHOTOCONTROL / MOTION SENSOR COMBINATION.

RECESSED DOWNLIGHT LUMINARIES IN CEILINGS MUST BE INSTALLED PER CEnC150.0(K)1C, BE LISTED IC RATED, LABELED FOR AIR LEAKAGE LESS THAN 2.0 CFM, BE SEALED WITH A GASKET OR CAULK TO THE CEILING, HAVE ACCESSIBLE BALLASTS/ DRIVERS IF HARDWIRED, NOT CONTAIN A SCREW BASE SOCKETS, COMPLY WITH JA8, AND MARKED JA8-2016-E AS SPECIFIED IN REFERENCE APPENDIX JA8. CEnC 150.0(K)1C.

JA8-2016 OR JA8-2016O-E LABELING IS REQUIRED FOR LIGHTING. DIMMERS OR VACANCY SENSORS SHALL CONTROL ALL LUMINARIES REQUIRED TO HAVE LIGHTING SOURCES COMPLIANT WITH REFERENCE JOINT APPENDIX JA8. CEnC150.0(K)1G, 150.0(K)2K, TABLE 150.0-A. EXCEPTIONS ARE PROVIDED FOR CLOSETS SMALLER THAN 70 SQUARE FEET IN FLOOR AREA AND LIGHT FIXTURES FOR HALLWAYS. CEnC150.0(K)2K.

SCREW BASED LUMINARIES SHALL BE HIGH EFFICACY AND CONTROLLED BY DIMMERS OR VACANCY SENSORS. INSTALLED LAMPS SHALL BE MARKED WITH JA8-2016 OR JA8-2016-E AS SPECIFIED IN REFERENCE JOINT APPENDIX JA8. LIGHT SOURCES NOT MARKED JA8-2016-E SHALL NOT BE INSTALLED IN ENCLOSED LUMINARIES. CEnC150.0(K)1G&H, 150.0(K)2K.

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ELECTRICAL PLANS AND NOTES

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REVISIONS		
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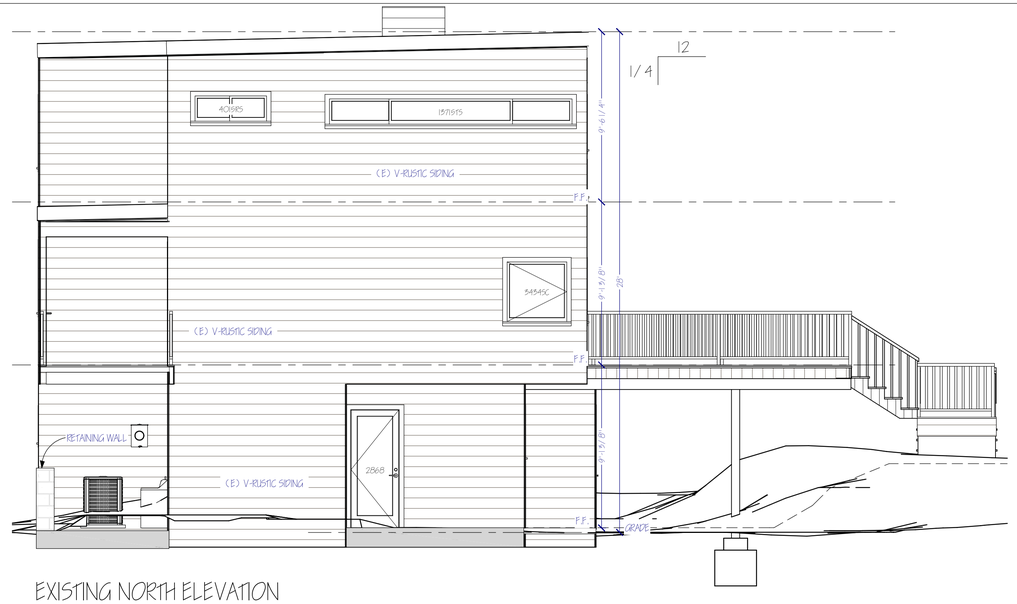
3	7/ 29/ 22	INCOMPLETE COMMENTS

SCALE: AS NOTED

DATE: 7/ 25/ 21

PAGE: A-4

Exhibit D



EXISTING NORTH ELEVATION

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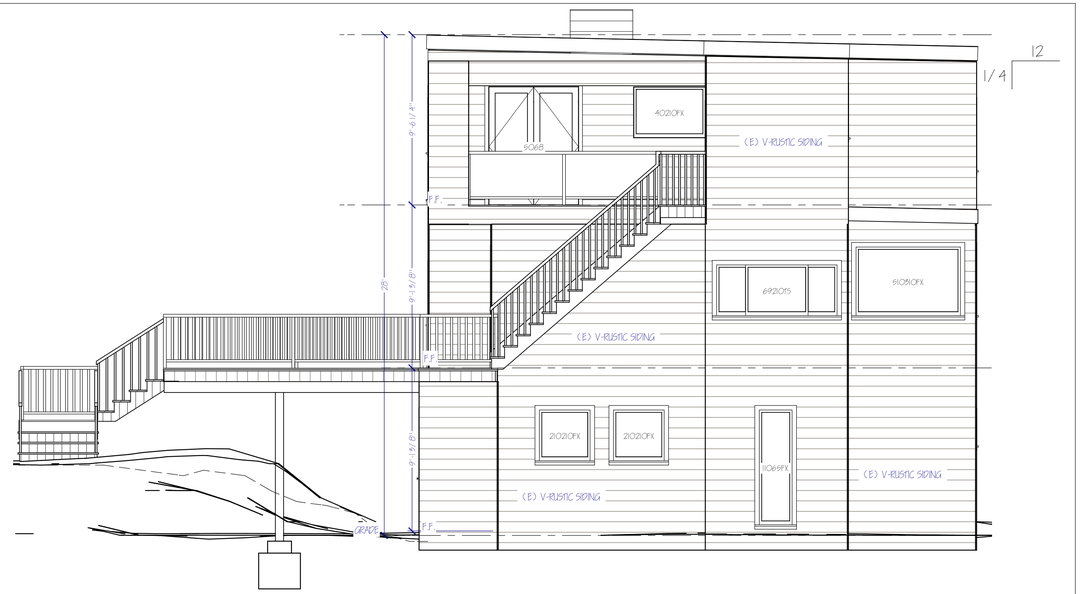

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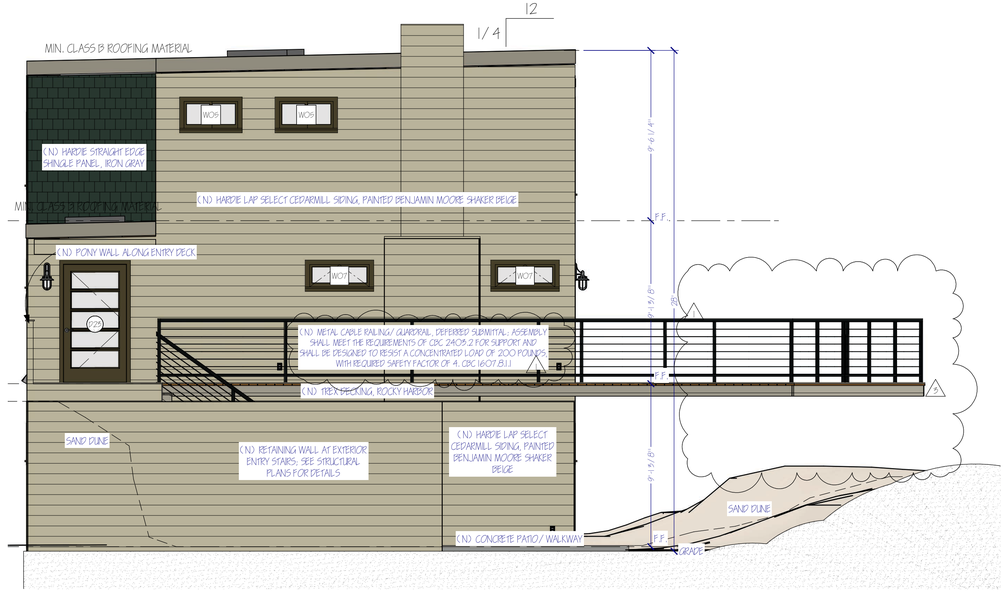

PROPOSED NORTH ELEVATION

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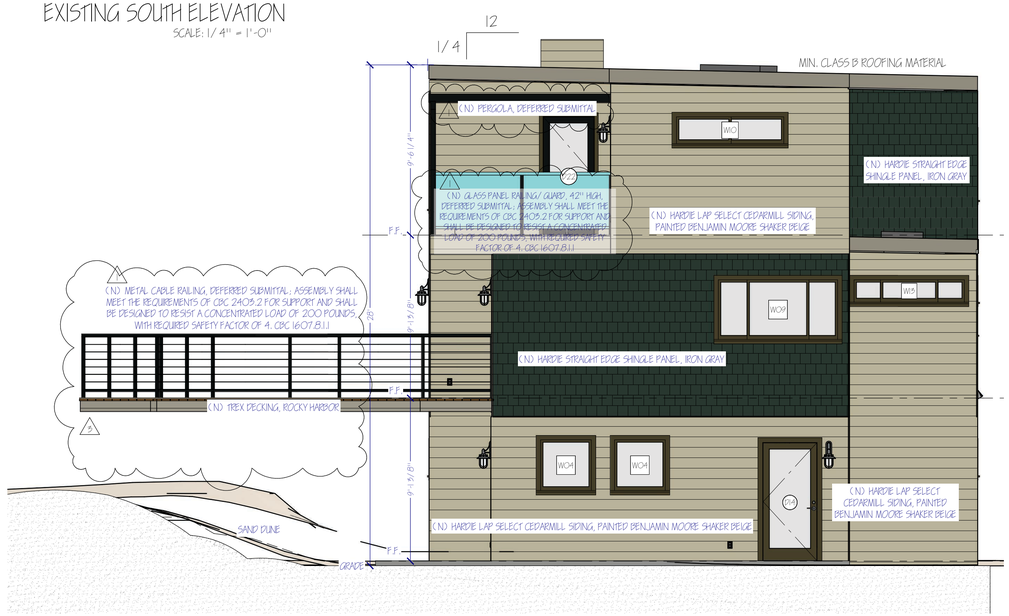
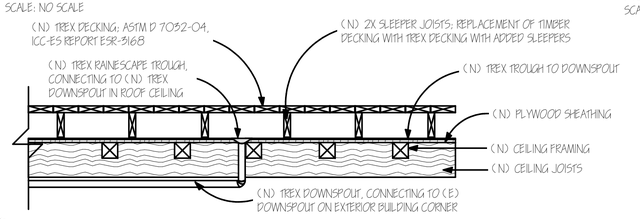


PROPOSED SOUTH ELEVATION

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

DECK OVER LIVING SPACE DETAIL △

SCALE: NO SCALE



ROOF DRAINAGE DETAIL △

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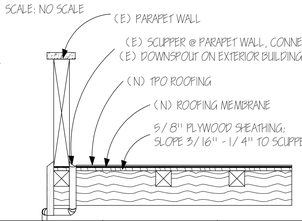

EXTERIOR STAIRS & HANDRAIL DETAILS

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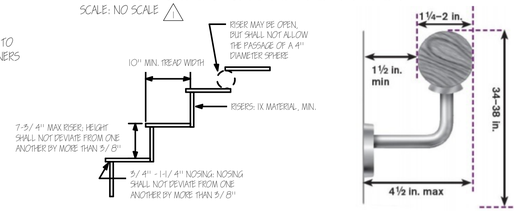

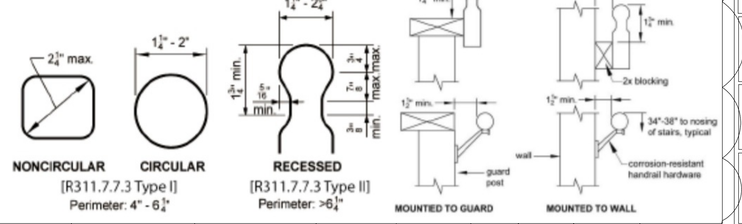

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EXISTING & PROPOSED EXTERIOR ELEVATIONS, DETAILS

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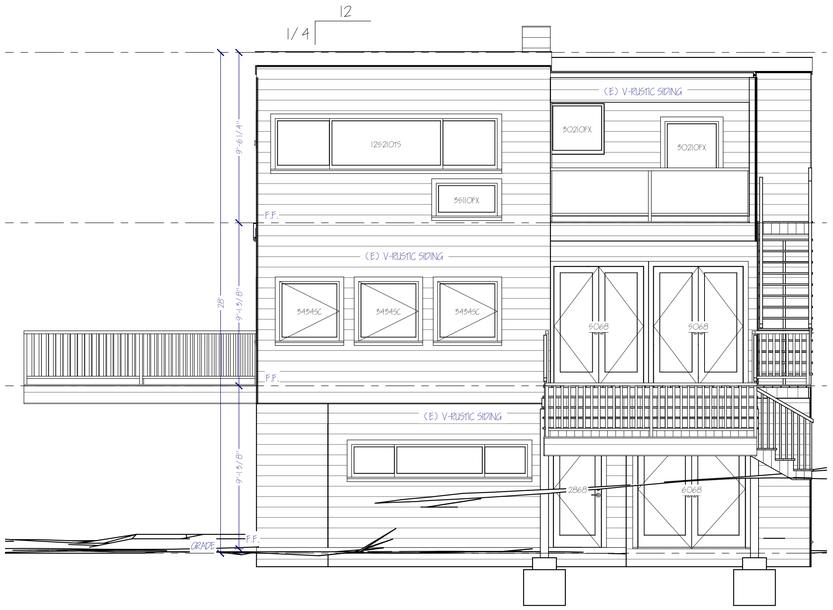
Exhibit D



EXISTING WEST ELEVATION

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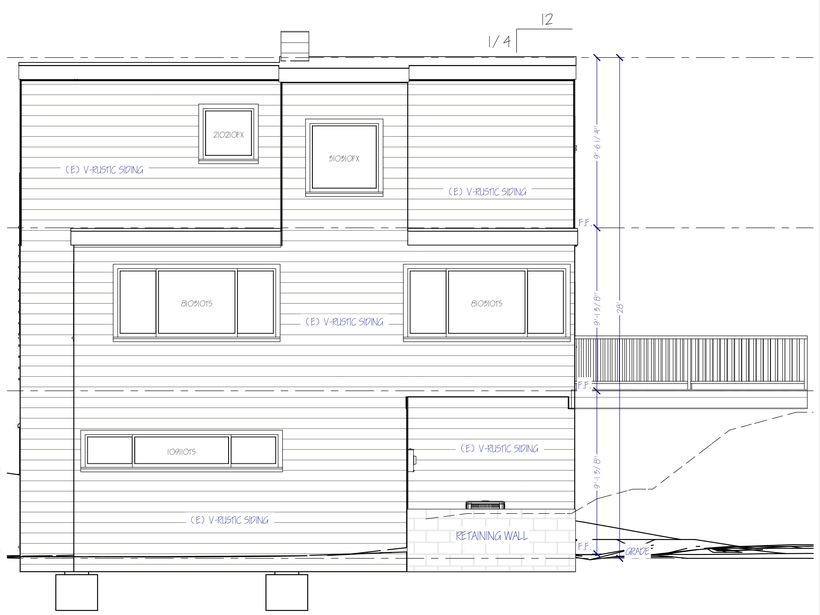

EXISTING EAST ELEVATION

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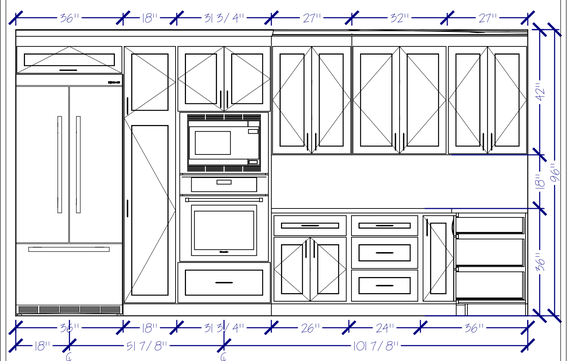
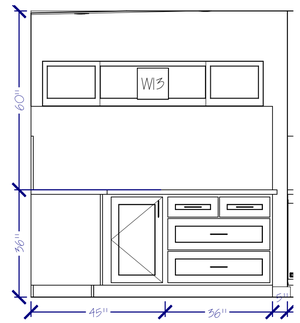
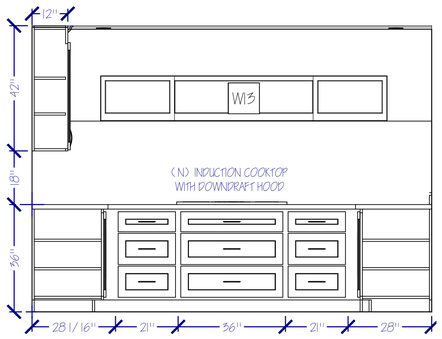
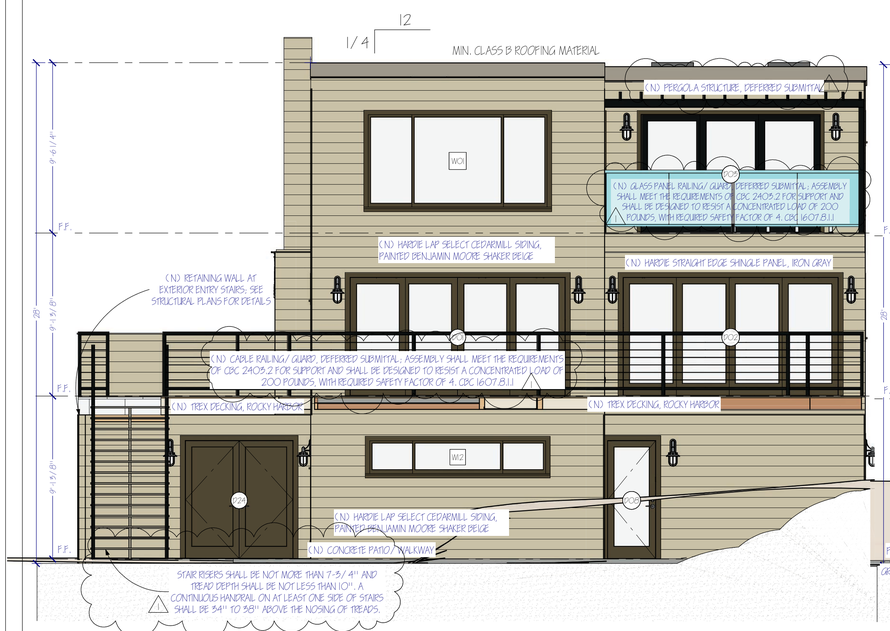






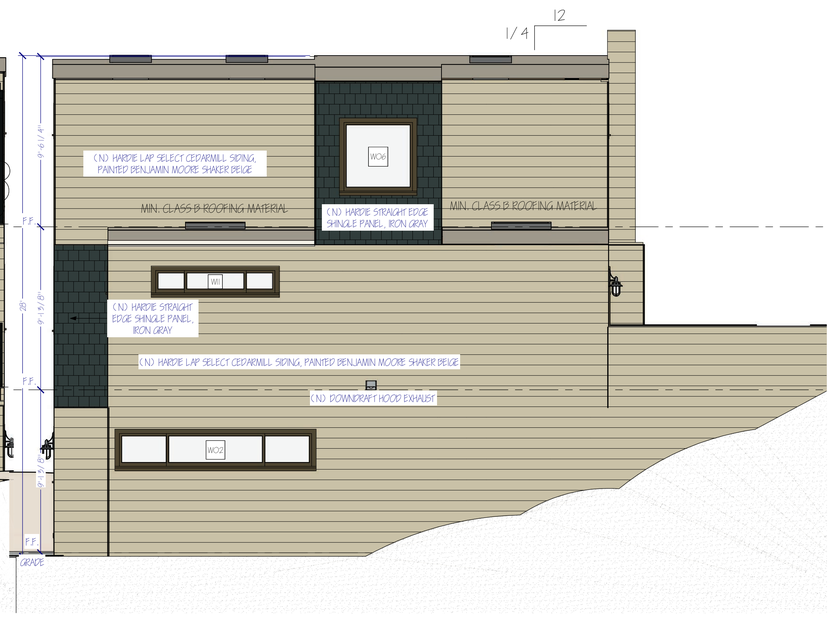
PROPOSED KITCHEN ELEVATIONS

SCALE: 1/2" = 1'-0"



PROPOSED WEST ELEVATION

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



PROPOSED EAST ELEVATION

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

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EXISTING & PROPOSED EXTERIOR ELEVATIONS, KITCHEN ELEVATIONS

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Exhibit D

EXISTING PUBLIC BEACH VIEW 1 NO SCALE

PROPOSED PUBLIC BEACH VIEW 1 NO SCALE

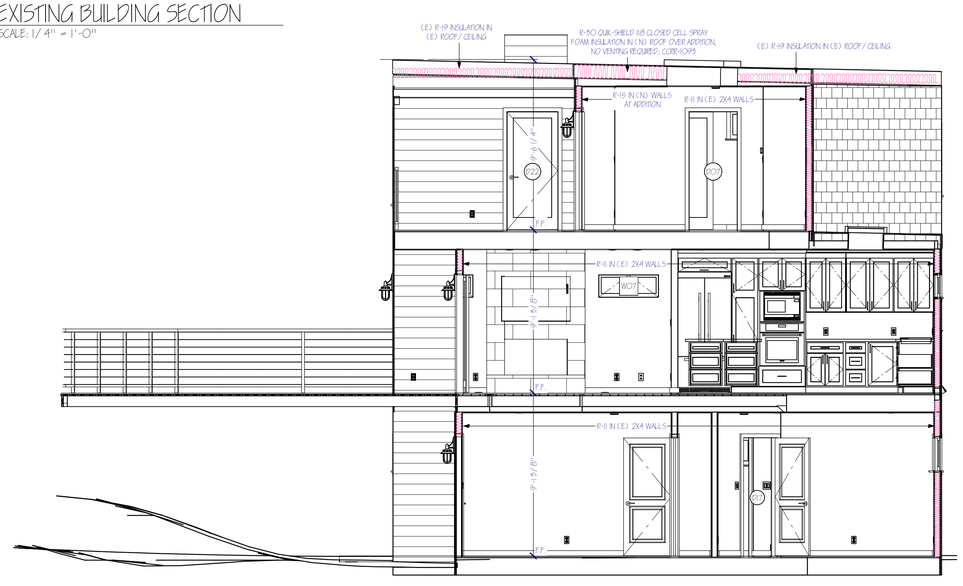
PROPOSED WEST RENDERING 1 2 NO SCALE

PROPOSED NORTH RENDERING 1 2 NO SCALE

S1 EXISTING BUILDING SECTION
SCALE: 1/4" = 1'-0"

S2 EXISTING BUILDING SECTION
SCALE: 1/4" = 1'-0"

S1.1 PROPOSED BUILDING SECTION
SCALE: 1/4" = 1'-0"



S2.1 PROPOSED BUILDING SECTION
SCALE: 1/4" = 1'-0"

(N) HARDIE LAP SELECT CEDARMILL SIDING, PAINTED BENJAMIN MOORE SHAKER BEIGE

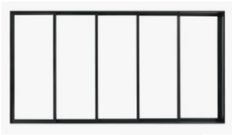
(N) HARDIE STRAIGHT EDGE SHINGLE PANEL, IRON GRAY

TREX ENHANCED ROCKY HARBOR DECKING

CARLYLE TPO ROOFING SYSTEMS, SLATE GRAY

COPPER GUTTERS

VELUX CURVETECH SKYLIGHTS FOR FLAT ROOFS



MARVIN FIBERGLASS DOORS AND WINDOWS IN BLACK

BLACK METAL CABLE RAILING AT DECKS / STAIRS

MATERIAL SPECIFICATIONS

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MATERIAL / FINISH SELECTIONS,
1 BUILDING SECTIONS & PUBLIC BEACH VIEW

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Exhibit D

TECHNICAL SPECIFICATIONS

GENERAL NOTES
1. ANY FEATURE OF CONSTRUCTION NOT FULLY SHOWN OR DETAILED SHALL BE OF THE SAME TYPE AS SHOWN ON THE PLANS FOR SIMILAR CONSTRUCTION.
2. ALL DIMENSIONS SHOWN ON THESE PLANS ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH THE ARCHITECTS PLANS AND NOTIFY THE ENGINEER IN THE EVENT OF A CONFLICT, PRIOR TO PROCEEDING WITH CONSTRUCTION.
3. ANY REQUEST FOR ALTERATIONS OR SUBSTITUTIONS MUST BE PRESENTED TO THE ENGINEER IN THE FORM OF A DETAILED SKETCH FOR REVIEW BEFORE AN APPROVAL WILL BE GIVEN, AND BEFORE PROCEEDING WITH THE WORK.
4. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THE CALIFORNIA BUILDING CODE, 2019 EDITION.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION, AND TO NOTIFY THE ENGINEER IN THE EVENT OF A CONFLICT.
6. THE CONTRACTOR SHALL SECURE ALL REQUIRED CONSTRUCTION PERMITS FROM BUILDING DEPARTMENT OF JURISDICTION PRIOR TO THE START OF WORK.
7. THE CONTRACTOR SHALL NOTIFY THE BUILDING INSPECTOR AT LEAST 48 HOURS PRIOR TO POURING ANY CONCRETE.
8. USE APPROPRIATE FASTENERS FOR NAILING INTO TREATED LUMBER, IE GALVANIZED OR STAINLESS STEEL
9. SHEARWALL HOLDOWN LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATION TO BE DETERMINED BY CONTRACTOR SUCH THAT THE HOLDOWNS ARE SITUATED AT EACH ENDS OF THE SHEARWALLS SHOWN, AND THEY ARE CONNECTED TO BOUNDARY MEMBERS AS SHOWN IN THE FRAMING DETAILS,
10. SHEARWALL LENGTHS SHOWN ARE CONSIDERED MINIMUMS AND DO NOT NECESSARILY REFLECT THE TRUE LENGTH OF THE FRAMED WALL. NOTIFY THE ENGINEER IN THE EVENT THAT THE FRAMED WALL WILL BE LESS THAN THE SHEARWALL LENGTH STATED, PRIOR TO PROCEEDING.

CONCRETE
1. ALL CONCRETE WORK SHALL BE DONE IN CONFORMANCE WITH THE LATEST EDITION OF THE ACI BUILDING CODE AND THE LATEST EDITION OF THE MANUALS OF CONCRETE PRACTICE.
2. THE CONCRETE FOR THE BUILDING FOUNDATIONS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2500 PSI. THE USE OF ANY ADMIXTURE SHALL BE APPROVED BY THE ENGINEER.
3. THE MAXIMUM AGGREGATE SIZE SHALL BE 3/4" INCH FOR PUMP DELIVERED CONCRETE.
4. REINFORCEMENT, ANCHOR BOLTS, SLEEVES, AND OTHER SUCH ITEMS TO BE CAST MONOLITHICALLY IN CONCRETE SHALL BE SECURELY FASTENED AND IN PLACE PRIOR TO CALLING FOR INSPECTION.
5. RECYCLED FLY ASH MAY BE SUBSTITUTED FOR THE REQUIRED CEMENT CONTENT AT THE RATE OF 25% MAXIMUM.
6. CONCRETE FORM BOARDS SHALL BE REUSED OR RECYCLED.
7. SUBMIT MIX DESIGN AND CURING METHOD TO THE ENGINEER FOR REVIEW PRIOR TO PLACING CONCRETE.
8. VAPOR BARRIER UNDER INTERIOR BUILDING SLABS SHALL BE 10 MIL VAPOR BARRIER.

REINFORCING STEEL
1. REINFORCING STEEL SHALL COMPLY WITH ASTM A615, GRADE 40 FOR #4 AND SMALLER BARS, GRADE 60 FOR #5 AND LARGER BARS. SPLICES SHALL BE STAGGERED WHERE POSSIBLE. SPLICE BARS 40 BAR DIAMETERS, MINIMUM.
2. SUPPORTING DEVICES FOR THE REINFORCEMENT SHALL BE SPACED SUFFICIENTLY TO PROPERLY SUPPORT THE REINFORCEMENT AND PREVENT EXCESSIVE DEFLECTION THAT MAY RESULT IN IMPROPER BAR PLACEMENT.
3. THE FOLLOWING MINIMUM BAR COVERS SHALL BE MAINTAINED:
   CONCRETE EXPOSED TO EARTH OR WEATHER: 1 ½ INCHES
   CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3 INCHES
4. ALL ANCHOR BOLTS SHALL BE 5/8" DIAMETER BY 12" LONG HOT DIPPED GALVANIZED "J" BOLTS WITH 3" SQUARE X 1/4" PLATE WASHERS. USE TWO BOLTS MINIMUM PER SILL PLATE MEMBER, 6" MINIMUM AND 12" MAXIMUM FROM EACH END.

FOUNDATION EXCAVATION NOTES
1. THE FOUNDATION ELEMENTS SHOWN HEREON WERE DESIGNED BASED ON THE GEOTECHNICAL ENGINEERS REPORT BY BUTANO GEOTECHNICAL ENGINEERING, INC., THEIR REPORT NO. 21-122SC DATED MARCH 2021. THE CONTRACTOR SHALL REVIEW THE REQUIREMENTS OF THE SOILS REPORT AND COORDINATE ALL REQUIRED INSPECTIONS BY THE GEOTECHNICAL ENGINEER AS OUTLINED IN THEIR REPORT.
2. THE FOUNDATION DIMENSIONS SHOWN ON THESE PLANS SHOULD BE CONSIDERED MINIMUMS. ALL FOOTINGS SHALL BE EXCAVATED TO THE MINIMUM DEPTHS SHOWN AND BEAR ON COMPACTED NATIVE SOIL OR IMPORTED FILL. SEE SOILS REPORT FOR MORE INFORMATION ABOUT FOUNDATION REQUIREMENTS.
3. NOTIFY THE GEOTECHNICAL ENGINEER PRIOR TO PROCEEDING IN THE EVENT THAT UNUSUAL SOIL CONDITIONS ARE ENCOUNTERED.
4. ALL EXCAVATED MATERIAL SHALL BE DEPOSITED OFF SITE IN A LEGAL MANNER, OR INCORPORATED INTO OTHER ONSITE GRADING PROVIDED IT IS DONE SO BASED ON ACCEPTED STANDARDS TO PREVENT EROSION.

FRAMING NOTES
1. IN ADDITION TO THOSE FASTENERS SHOWN ON THESE PLANS, THE CONTRACTOR IS DIRECTED TO TABLE 2304.10.1 OF THE 2019 CALIFORNIA BUILDING CODE, "FASTENING SCHEDULE" FOR FURTHER NAILING REQUIREMENTS.
2. ALL PLYWOOD WALL SHEATHING SHALL BE ½" CDX AND NAILED AT 6" OC, EDGE AND 12" OC FIELD WITH 8d'S UNLESS NOTED OTHERWISE AT SHEARWALL LOCATIONS.
3. ALL ROOF SHEATHING SHALL BE ⅝" CDX MINIMUM, AND NAILED AT 6" EDGE, 12" FIELD WITH 10d'S.
4. ROOF SHEATHING SHALL INCORPORATE A RADIANT BARRIER IF REQUIRED BY ARCHITECTS PLANS. VERIFY WITH ARCHITECT.
5. USE DOUBLE JOISTS UNDER PARALLEL WALLS, TYPICAL UNLESS NOTED OTHERWISE.
6. FLOOR SHEATHING SHALL BE 3/4" T&G CDX PLYWOOD NAILED WITH 10D'S AT 6" OC EDGE, 12" FIELD UNLESS NOTED OTHERWISE. USE SUBFLOOR ADHESIVE AS WELL.
7. IN GENERAL, OSB SHEATHING MAY BE SUBSTITUTED FOR PLYWOOD SHEATHING PROVIDED IT HAS THE EQUIVALENT APA RATING- FOR BOTH FLOOR AND WALL SHEATHING.
8. PROTECT ANNULAR SPACES AROUND OPENINGS IN PLATES AND EXTERIOR WALLS.
9. ALL HOLDOWN ANCHOR BOLTS SHALL BE RE-TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING

WOOD FRAMING
1. ALL 2X FRAMING MEMBERS SHALL BE DOUGLAS FIR NO. 2 OR BETTER, UNLESS NOTED OTHERWISE ON THE PLANS. ALL STUDS SHALL BE STUD GRADE DOUGLAS FIR.
2. ALL BEAMS OTHER THAN DOOR HEADERS SHALL BE DOUGLAS FIR NO. 1 OR ENGINEERED LUMBER BEAMS AS NOTED ON THE PLANS.
3. ALL WOOD MEMBERS EXPOSED TO WEATHER ON IN CONTACT WITH CONCRETE SHALL BE PRESSURE PRESERVATIVE TREATED DOUGLAS FIR NO. 2 OR CALIFORNIA REDWOOD. THE EXPOSED ENDS OF FIELD CUT TREATED MEMBERS SHALL HAVE A BRUSH APPLIED PRESERVATIVE ADDED PER THE MANUFACTURER'S RECOMMENDATIONS.
4. OTHER THAN AS STATED IN CBC 2308.7.4, NO FRAMING MEMBERS SHALL BE CUT OR NOTCHED WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
5. ALL BOLTS SHALL BE ZINC COATED AND HAVE CUT FLAT WASHERS ON EACH END. BOLT HOLES SHALL BE 1/16" IN DIAMETER LARGER THEN THE BOLT DIAMETER UNLESS EXPOSED TO THE WEATHER. ALL EXPOSED FASTENERS SHALL BE HOT DIPPED GALVANIZED.
6. ALL NAILS EXPOSED TO THE WEATHER SHALL BE GALVANIZED. IN ADDITION, ALL FASTENERS IN CONTACT WITH TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL.
7. ALL FRAMING CONNECTORS AND OTHER HARDWARE SHALL BE SIMPSON BRAND OR THE APPROVED EQUIVALENT. FRAMING CONNECTORS IN CONTACT WITH TREATED LUMBER SHALL BE TRIPLE ZINC COATED (G185) OR STAINLESS STEEL AS RECOMMENDED BY SIMPSON.
8. GLULAM BEAMS SHALL HAVE A MINIMUM ALLOWABLE BENDING STRESS OF 2400 PSI, AND AN ALLOWABLE SHEAR OF 165 PSI. GLULAM BEAMS SHALL BE MARKED ANSI/AITC STANDARD 190.1.
9. ALL ENGINEERED LUMBER JOISTS AND BEAMS SHOWN ON THE PLANS SHALL BE BY THE BOISE CASCADE COMPANY OR THE APPROVED EQUIVALENT. THE CONTRACTOR SHALL REVIEW AND FOLLOW ALL OF THE MANUFACTURER'S DETAILS FOR THE PROPER INSTALLATION OF THE JOISTS INCLUDING BUT NOT LIMITED TO BRACING, BLOCKING, NAILING, NOTCHING, BORING, ETC.
10. ALL LVL BEAMS NOTED ON THE PLANS SHALL BE VERSALAM LVL 2.0 BY BOISE CASCADE OR APPROVED EQUIVALENT. 3½", 5¼", AND 7" WIDE LVL BEAMS SHOULD BE VERSALAM 2.0 3100 WITH A BENDING STRESS OF 3100 PSI. 1¾" WIDE LVL BEAMS SHOULD BE 2.0 2800 WITH A BENDING STRESS OF 2800 PSI. ALL LVL BEAMS SHOULD HAVE A MODULUS OF ELASTICITY OF 2,000,000 AND AN ALLOWABLE SHEAR STRESS OF Fv=285 PSI.

STRUCTURAL STEEL
1. ALL WORK DONE UNDER THIS SECTION SHALL CONFORM TO THE REQUIREMENTS OF THE AISC SPECIFICATIONS AND THE CODE OF STANDARD PRACTICE, OR THE PWS SPECIFICATIONS FOR WELDING (AWS D1.1-75)
2. STRUCTURAL STEEL PLATES AND BARS SHALL CONFORM TO ASTM A36.
3. STRUCTURAL STEEL WIDE FLANGES SHAPES SHALL HAVE A MINIMUM YIELD OF 50 KSI.
4. STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE B.
5. STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500, GRADE B.
6. ALL BOLTS SHALL BE ASTM A325 OR BETTER, UNLESS NOTED OTHERWISE.
7. ALL STEEL FASTENERS EXPOSED TO THE WEATHER SHALL BE HOT DIPPED GALVANIZED.
8. ALL STRUCTURAL STEEL MEMBERS SHALL BE PAINTED WITH A SHOP PRIMER SUCH AS THAT BY TNEMEC BRAND OR EQUAL
9. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND FIELD CONDITIONS PRIOR TO FABRICATING THE STRUCTURAL STEEL MEMBERS. IN THE EVENT OF A DISCREPANNCY OR CONFLICT, NOTIFY THE ENGINEER PRIOR TO PROCEEDING.
10. ALL STRUCTURAL STEEL WELDING AND HIGH STRENGTH BOLTING SHALL BE DONE SO WITH SPECIAL INSPECTION AS REQUIRED PER THE 2019 CBC.

ABBREVIATIONS

AB	ANCHOR BOLT	HSS	HOLLOW STEEL SECTION
AC	ASPHALT CONCRETE	HORIZ	HORIZONTAL
ARCH	ARCHITECTURAL	LF	LINEAL FEET
ATR	ALL THREAD ROD	MAX	MAXIMUM
CL	CENTERLINE	MIN	MINIMUM
COL	COLUMN	MB	MACHINE BOLT
CONC	CONCRETE	(N)	NEW
DBL	DOUBLE	OC	ON CENTER
DEG	DEGREE	OPP	OPPOSITE
DF	DOUGLAS FIR	PL	PROPERTY LINE
DIA	DIAMETER	PLF	POUNDS PER LINEAL FOOT
(E)	EXISTING	PSF	POUNDS PER SQUARE FOOT
EA	EACH	PTDF	PRESSURE TREATED DOUGLAS FIR
EMBED	EMBEDMENT	S.A.D.	SEE ARCHITECTS DRAWINGS
EQ	EQUAL	SQ	SQUARE
EX	EXISTING	STD	STANDARD
FF	FINISHED FLOOR	T.E.N.	TYPICAL EDGE NAILING
FG	FINISHED GRADE	TS	TUBE STEEL
FT	FEET	TYP	TYPICAL
GALV	GALVANIZED	UNO	UNLESS NOTED OTHERWISE
GL	GRIDLINE	VAR	VARIES
GLB	GLULAM BEAM	VERT	VERTICAL
HDR	HEADER	V.I.F.	VERIFY IN FIELD

STATEMENT OF SPECIAL INSPECTION:
PURSUANT TO SECTION 1705 OF THE 2019 CBC, THE FOLLOWING SPECIFIC REQUIREMENTS SHALL APPLY TO THE PROJECT WITH RESPECT TO TESTING AND SPECIAL INSPECTIONS AS REQUIRED BY THE CBC. THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS STATED HEREIN AND HAVE ALL REQUIRED INSPECTIONS PERFORMED AND PROVIDE REQUIRED DOCUMENTATION TO THE BUILDING OFFICIALS. IT IS THE CONTRACTORS RESPONSIBILITY TO RETAIN THE PROPER AGENCY TO PERFORM THE REQUIRED TEST OR INSPECTION.

SOILS INSPECTION: INSPECTIONS TO BE PERFORMED BY SOILS ENGINEER OF RECORD

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	ADDITIONAL ACTIONS REQUIRED
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		X	
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X	
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS		X	
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X		
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X	

STRUCTURAL STEEL INSPECTION: TESTING AND INSPECTION TO BE PERFORMED BY THIRD PARTY AGENCY APPROVED BY BUILDING DEPARTMENT

SPECIAL INSPECTION FOR STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	ADDITIONAL ACTIONS REQUIRED
1. SINGLE PASS FILLET WELDS		X	CONTRACTOR SHALL ARRANGE TO HAVE WELDING INSPECTED PRIOR TO INSTALLATION

WOOD CONSTRUCTION: TESTING AND INSPECTION TO BE PERFORMED BY THE STRUCTURAL ENGINEER OF RECORD

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	ADDITIONAL ACTIONS REQUIRED
1. INSPECTION OF NAILING FOR SHEARWALLS WHERE THE NAIL SPACING IS LESS THAN 6" OC		X	
2. INSPECTION OF EPOXY INSTALLATION OF SHEARWALL ELEMENTS		X	

SHEARWALL SCHEDULE
1/2" STRUCTURAL 1 RATED PLYWD SHEATHING [11]

SYMBOL	TYPICAL WALL SHEATHING EDGE NAILING (T.E.N.) [8,9]	ANCHOR BOLTS [5,6]	SOLE PLATE		FRAMING CLIPS [10]	ALLOWABLE SHEAR
			NAILING	SDS SCREWS		
1	8d's NAILS AT 6" OC: 0.131" X 2½" COMMON OR 0.113" X 2½" GALV BOX	5/8" DIA. X 12" LONG BOLTS AT 4'-0" ON CENTER	(3) 16d'S EVERY 16" ON CENTER	¼" DIA. X 3 ½" SDS SCREWS AT 24" OC	A35 FRAMING CLIPS AT 24" ON CENTER	280 PLF
2	8d's NAILS AT 4" OC: 0.131" X 2½" COMMON OR 0.113" X 2½" GALV BOX	5/8" DIA. X 12" LONG BOLTS AT 3'-0" ON CENTER	16d'S EVERY 4" ON CENTER	¼" DIA. X 3 ½" SDS SCREWS AT 15" OC	A35 FRAMING CLIPS AT 16" ON CENTER	430 PLF
3	8d's NAILS AT 3" OC: 0.131" X 2½" COMMON OR 0.113" X 2½" GALV BOX	5/8" DIA. X 12" LONG BOLTS AT 30" ON CENTER	16d'S EVERY 3" ON CENTER	¼" DIA. X 3 ½" SDS SCREWS AT 12" OC	A35 FRAMING CLIPS AT 12" ON CENTER	550 PLF
4	5/8" CDX PLYWD SHEATHING 10d's NAILS AT 3" OC: 0.148" X 3" COMMON OR 0.128" X 3" GALV BOX	5/8" DIA. X 12" LONG BOLTS AT 30" ON CENTER	16d NAILS EVERY 2"	¼" DIA. X 3 ½" SDS SCREWS AT 10" OC	A35 FRAMING CLIPS AT 12" ON CENTER	665 PLF
5	8d's NAILS AT 3" OC: 0.131" X 2½" COMMON OR 0.113" X 2½" GALV BOX EACH SIDE OF WALL	5/8" DIA. X 12" LONG BOLTS AT 15" ON CENTER	N/A	¼" DIA. X 3 ½" SDS SCREWS AT 6" OC	A35 FRAMING CLIPS AT 6" ON CENTER	1100 PLF

NOTES
1. USE 4X BOUNDARY MEMBER AT EACH END OF SHEARWALL OR DBL 2X STITCHED TOGETHER WITH (2) 10d NAILS AT 12" OC.
2. WHERE PANELS ARE APPLIED TO BOTH SIDES OF WALL, OFFSET PANEL JOINTS FROM EACH SIDE.
3. ALL PANEL EDGE SHALL BE BACKED BY 2 INCH NOMINAL OR WIDER FRAMING.
4. ALL BRACED WALL LINES HAVING SHEARWALLS SHALL HAVE A DOUBLE TOP PLATE SPLICED AS SHOWN ON THIS SHEET, OR TIED TO A COLLECTOR MEMBER AS SHOWN ON THE FRAMING PLANS.
5. ALL ANCHOR BOLTS SHALL HAVE A MINIMUM OF A 3"X3"X1/4" PLATE WASHER PER CBC2308.3.2
6. EXCEPT FOR SHEAR SYMBOL 1, MEMBERS RECEIVING EDGE NAILING FROM ADJOINING PANELS SHALL BE NOT LESS THAN 3 INCH NOMINAL FRAMING. NAILS SHALL BE STAGGERED
7. ALL NAILS SHALL BE COMMON NAILS OR HOT DIPPED GALVANIZED BOX NAILS.
8. ALL NAILS INSTALLED INTO PRESERVATIVE TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL DUE TO THE CORROSIVE NATURE OF THIS MATERIAL ON FASTENERS.
9. FRAMING CLIPS PER THIS SCHEDULE ARE ONLY REQUIRED AT LOCATIONS WHERE THE SHEARWALL PLYWD IS INTERUPTED, IE AT INTERIOR SHEARWALL LOCATIONS WHERE THE SECOND FLOOR FRAMING CAUSES A BREAK IN THE SHEARWALL SHEATHING.
10. WHERE THE SHEARWALL SHEATHING IS APPLIED OVER ½" DRYWALL, USE 10d NAILS.
11. VALUES SHOWN ARE FOR 15/32" STRUCTURAL 1 RATED PANELS EXCEPT FOR TYPE 4 SHEARWALLS AS NOTED.

SEISMIC DESIGN CRITERIA:

RESIDENTIAL SEISMIC DESIGN CATEGORY	D2
SOIL SITE CLASS	D
SITE COEFICIENTS	Fa=1.0 Fv=1.7
SHORT PERIOD MAP VALUE	Ss=1.845
1.0S PERIOD MAP VALUE	S1=0.681
SPECTRAL RESPONSE ACCELERATION FOR SHORT PERIOD	Sds=1.23
SPECTRAL RESPONSE ACCELERATION FOR 1-SECOND PERIOD	Sd1=0.78
SEISMIC COEFF.	Cs=.18

	DESIGN LOADS	
DEAD LOAD	(E) ROOF FRAMING	10 PSF
	(N) ROOF FRAMING	10 PSF
	(N) FLOOR FRAMING	14 PSF
	EXTERIOR WALLS DEAD LOAD	12 PSF
	INTERIOR WALLS	8 PSF
LIVE LOAD	FLOOR LL	40 PSF
	ROOF LL	20 PSF
	DECK LL	60 PSF
SOIL LOAD	BEARING PRESSURE	1000 PSF

1 RETAINING WALL DESIGN VALUES PER PROJECT GEOTECHNICAL ENGINEER:

ACTIVE PRESSURE= 37.5 PSF/FT
AT REST PRESSURE= 57.5 PSF/FT
AND SEISMIC PRESSURE FOR ACTIVE CONDITION IS 10H^2 AT .6H AND 15H^2 FOR RESTRAINED CONDITION, ACTING AT .3H

LEGEND

- ⊠ POST MEMBER BEAM/HEADER SUPPORT
- SHEAR WALL LOCATION. SEE SHEAR WALL SCHEDULE FOR MORE INFORMATION
- LOCATION OF HOLD DOWN DEVICE AT SHEAR WALL END, SEE HOLD DOWN SCHEDULE.
- MINIMUM SHEAR WALL LENGTH (*4'-9")
- INDICATES PERFORATED SHEARWALL WITH STRAPS AROUND OPENING
- (2) GRID LINE FOR REFERENCE, TYPICAL
- DROPPED BEAM
- FLUSH BEAM
- HEADER

HOLDOWN SCHEDULE SLAB ON GRADE FOUNDATION

SYMBOL		SIMPSON HOLDOWN	REFERENCE DETAIL	NOTES		ALLOWABLE LOADS
		HOLDOWN ON UPPER LEVEL OF STRUCTURE				
1	1A	CS16 STRAP			SECOND FLOOR HOLDOWN STRAP FROM SHEAR WALL BOUNDARY MEMBER IN WALL ABOVE AND BELOW ALIGNED.	1705
	1B	MST37				2460
	1C	MST48				3950
2	2A	LSTA18			SECOND FLOOR HOLDOWN STRAP FROM SHEARWALL BOUNDARY MEMBER TO FLOOR FRAMING MEMBER BELOW.	1235
	2B	ST6224				2540
	2C	MSTC48B3				3975
3	3A	HDU2-SDS2.5	11/S5	4X4 OR DBL 2X4	SECOND FLOOR HOLD DOWN DEVICE IN PAIR WITH ⅝" DIAMETER ALL THREAD ROD BETWEEN FROM SHEAR WALL BOUNDARY MEMBER ABOVE TO SAME BELOW.	3075
	3B	HDU4-SDS2.5		4X4		4565
	3C	HDU5-SDS2.5		4X4		5645
	3C	HDU8-SDS2.5		4X4		6970

FOUNDATION LEVEL HOLDOWN

		SIMPSON HOLDOWN	REFERENCE DETAIL	BOUNDARY MEMBER	ANCHOR DIAMETER	SIMPSON BRAND ANCHOR BOLT: STEM WALL	SIMPSON BRAND ANCHOR BOLT: SLAB ON GRADE	ALLOWABLE LOADS
4	4A	HDU2-SDS2.5	1/S0	4X4 OR DBL 2X4	⅝"	SSTB24	SSTB16	3075
	4B	HDU4-SDS2.5	1/S0	4X4 OR DBL 2X4	⅝"	SB5/8X24	SSTB20	4565
	4C	HDU5-SDS2.5	1/S0	4X4 OR DBL 2X4	⅝"	SB5/8X24	SSTB24	5645
	4D	HDU8-SDS2.5	1/S0	4X4	7/8"	PAB7-30	SSTB28	6970
	4E	HDU11-SDS2.5	N/A	4X6	1"	PAB8-30	SB1X30	9335

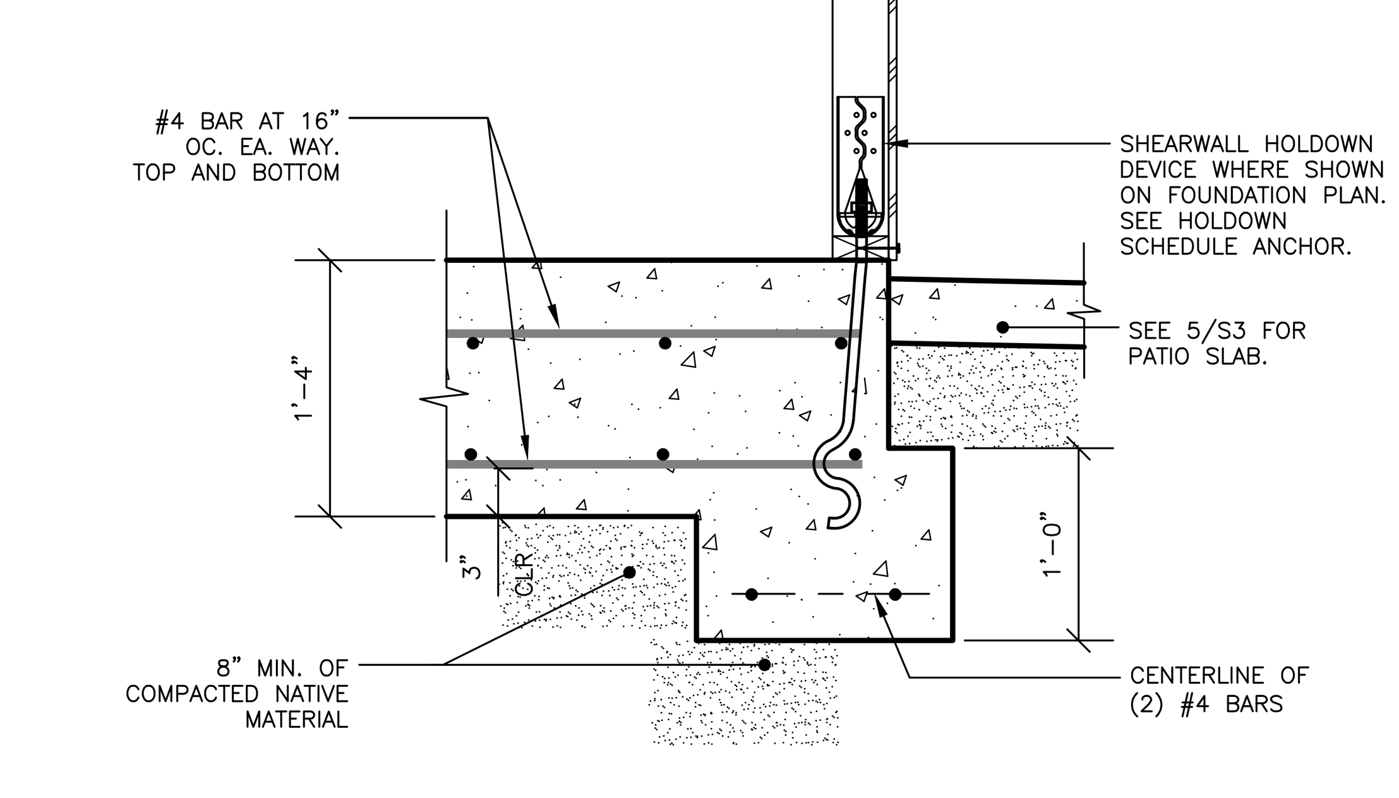
NOTES:
1. SEE REFERENCED DETAILS IN THE ABOVE SCHEDULE FOR MORE INFORMATION.
2. INSTALL SIMPSON PARTS PER THE MANUFACTURERS INSTRUCTIONS. NOTIFY THE ENGINEER IN THE EVENT OF A CONFLICT.
3. THE ANCHORS ARE FOR STEM WALL FOUNDATIONS 8" MIN. WIDTH.
4. THESE ANCHORS ARE FOR SLAB ON GRADE FOUNDATIONS, POURED MONOLITHICALLY. (IF STEM IS POURED SEPERATELY, USE ANCHORS UNDER "STEM WALL" HEADING.

RETROFIT FOUNDATION HOLDOWNS INSTALLED INTO OR THROUGH (E) 8" MAT SLAB OR CMU WALL

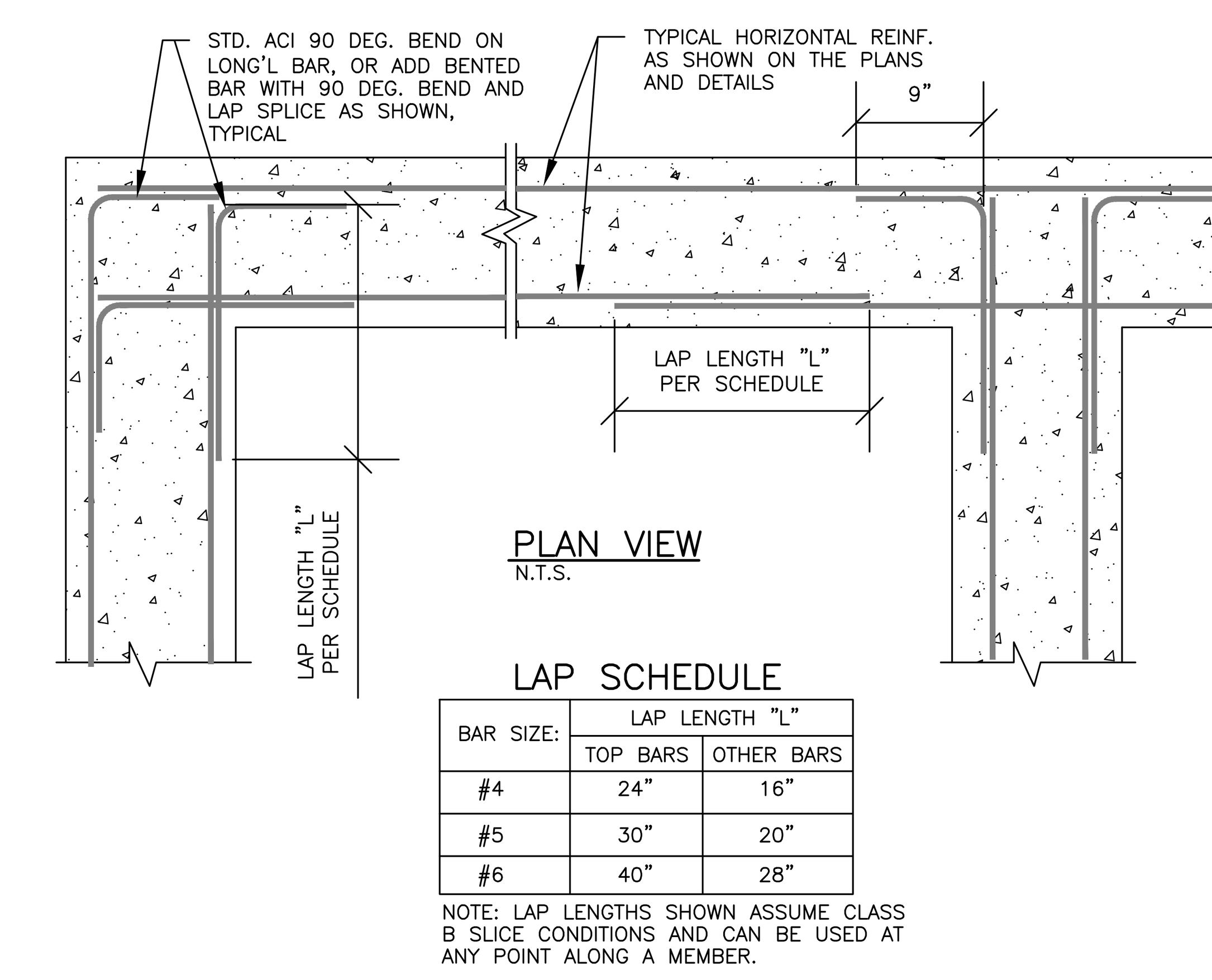
		SIMPSON HOLDOWN	REFERENCE DETAIL	BOUNDARY MEMBER	ANCHOR DIA.	EDGE DIST.	END DIST.	EMBED. "D"	ALLOWABLE LOADS	NOTES:
5	5A	HDU2-SDS2.5	N/A	4X4 OR DBL 2X4	⅝" ATR	2.75"	6"	8"	1530 LBS	INSTALL IN SOLID GROUTED CMU WALL
	5B	HDU2-SDS2.5		4X4 OR DBL 2X4	⅝" ATR	12"	N/A	5"	3000 LBS	INSTALL IN EXISTING 8" THICK MAT SLAB
	5C	HDU2-SDS2.5	10/S3	4X4 OR DBL 2X4	PAB5	SEE REFERENCED DETAIL FOR EMBEDMENT DIMENSIONS.			1400 LBS	INSTALLED THROUGH EXISTING 8" MAT SLAB AND INTO NEW FOOTING CONCRETE.
	5D	HDU4-SDS2.5	10/S3	4X4 OR DBL 2X4	PAB5				4565 LBS	
	5E	HDU5-SDS2.5	10/S3	4X4 OR DBL 2X4	PAB5				5645 LBS	
	5F	HDU11-SDS2.5	10/S3	4X6	PAB8-30				9335	

NOTES:
1. SEE REFERENCED DETAILS IN THE ABOVE SCHEDULE FOR MORE INFORMATION.
2. INSTALL SIMPSON PARTS PER THE MANUFACTURERS INSTRUCTIONS. NOTIFY THE ENGINEER IN THE EVENT OF A CONFLICT.
3. ANCHORS INSTALLED WITH EPOXY IN EXISTING FOUNDATIONS REQUIRES SPECIAL INSPECTION. EPOXY SHALL BE AS SPECFIED ON THESE PLANS.
4. MIN. ANCHOR EMBEDMENT INTO CONCRETE AND DISTANCE FROM END OF FOOTING SHALL BE AS NOTED IN THE ABOVE TABLE. NOTIFY THE ENGINEER IN THE EVENT OF A CONFLICT.
5. EPOXY SHALL BE SET-XP BRAND EPOXY BY SIMPSON STRONGTIE CO.

SHEET INDEX



1/S0 NEW SHEARWALL HOLDOWN ANCHORAGE



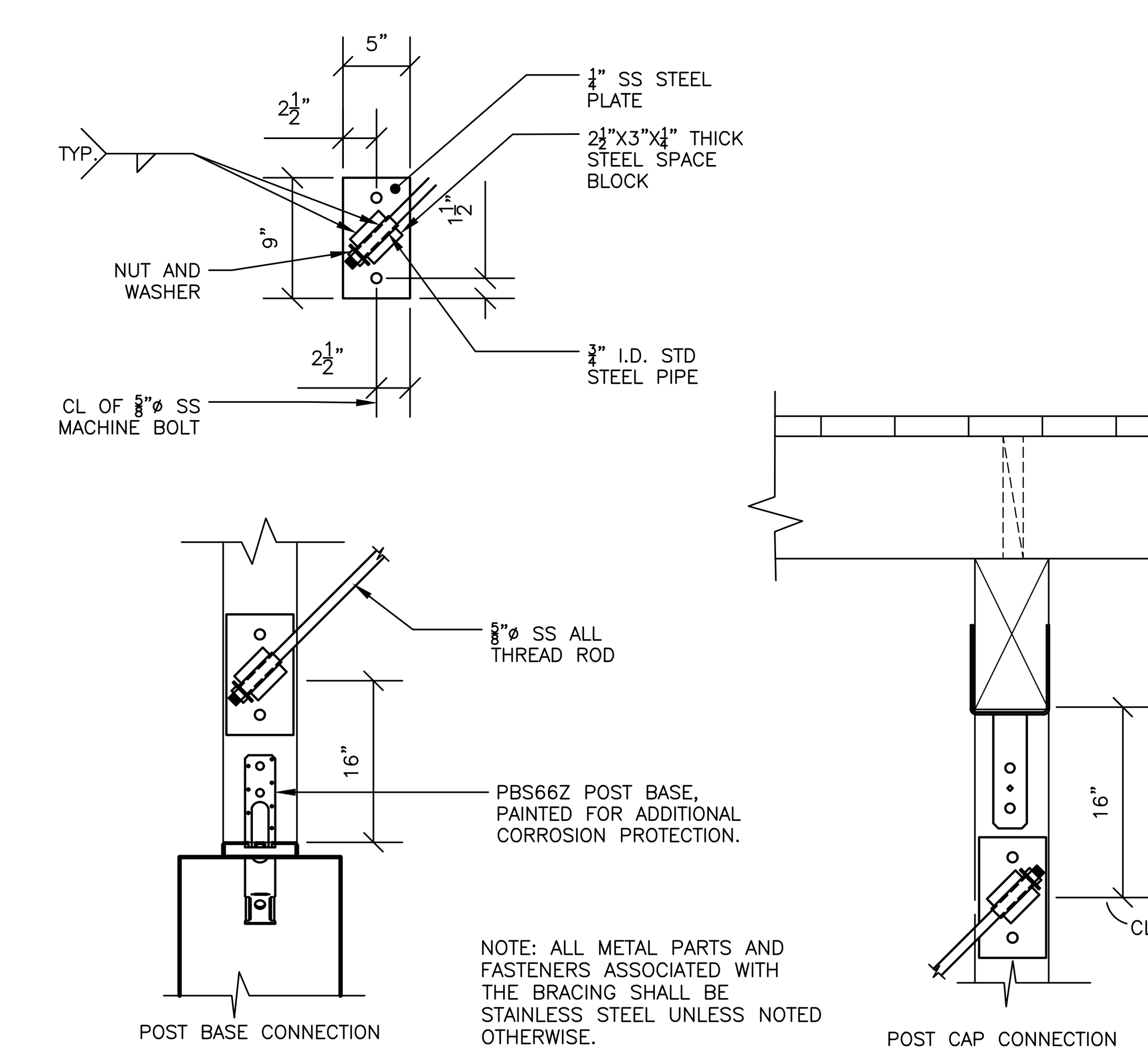
LAP SCHEDULE

BAR SIZE:	LAP LENGTH "L"	
	TOP BARS	OTHER BARS
#4	24"	16"
#5	30"	20"
#6	40"	28"

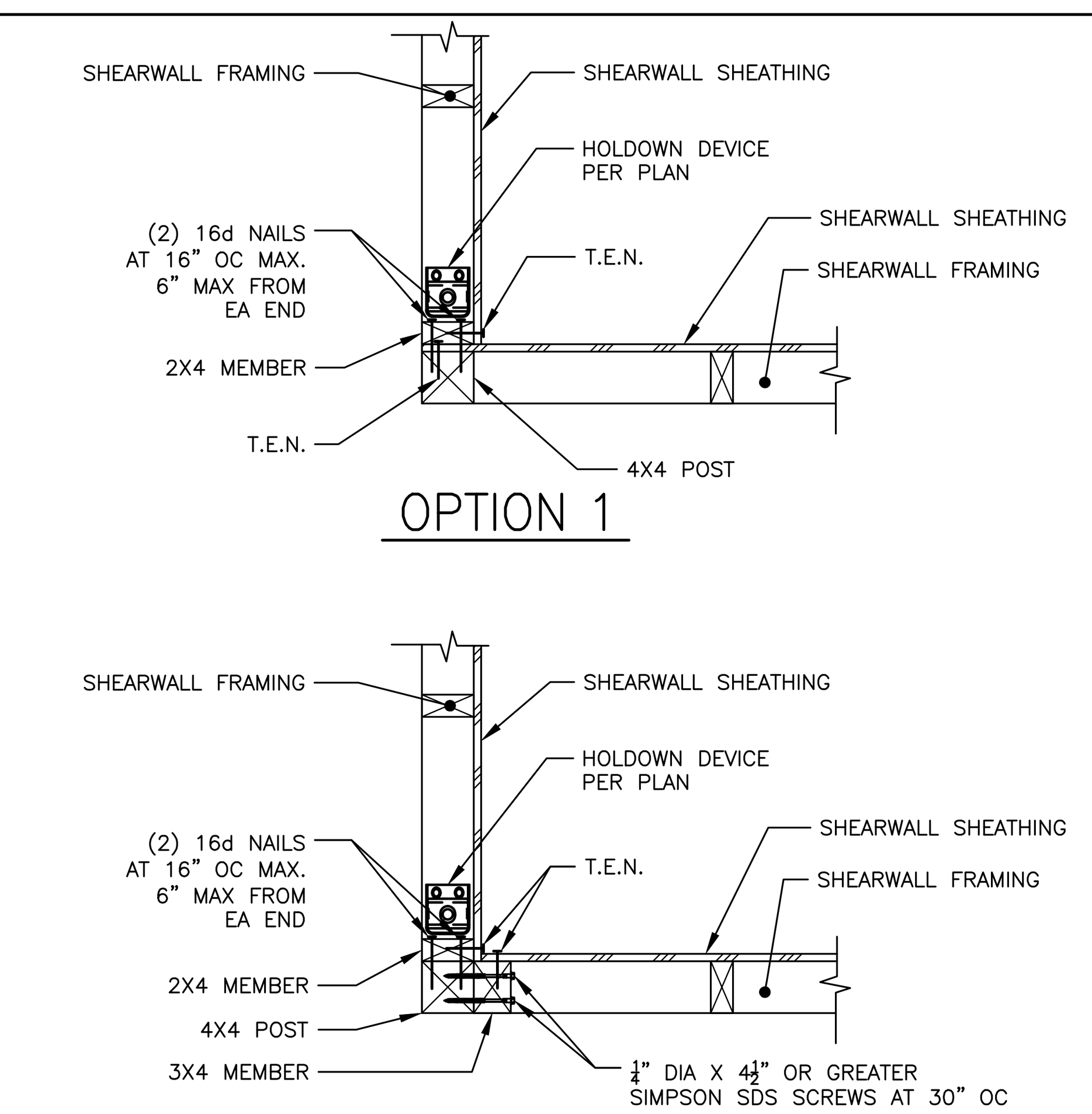
NOTE: LAP LENGTHS SHOWN ASSUME CLASS B SLICE CONDITIONS AND CAN BE USED AT ANY POINT ALONG A MEMBER.

NOTES:
"TOP BARS" OCCUR WHERE AT LEAST 12" OF CONCRETE IS TO BE PLACED BELOW THE REBAR IN QUESTION. OTHERWISE THE BARS ARE "OTHER BARS."
SPLICE ALL SLAB REINFORCING AS SHOWN ON THE "OTHER BAR" COLUMN.

2/S0 TYPICAL REINFORCEMENT DETAILS



4/S0 "X" BRACING DETAIL



3/S0 INSIDE CORNER DETAIL – PLAN VIEW

REVISION	DESCRIPTION	DATE
1	REVISED IN RESPONSE TO PLAN CHECK COMMENTS	1/22/22
2	REVISED IN RESPONSE TO PLAN CHECK COMMENTS	9/29/22

SHEET INDEX, DESIGN LOADS, LEGEND, TECHNICAL SPECIFICATIONS, SHEARWALL AND HOLDOWN SCHEDULE

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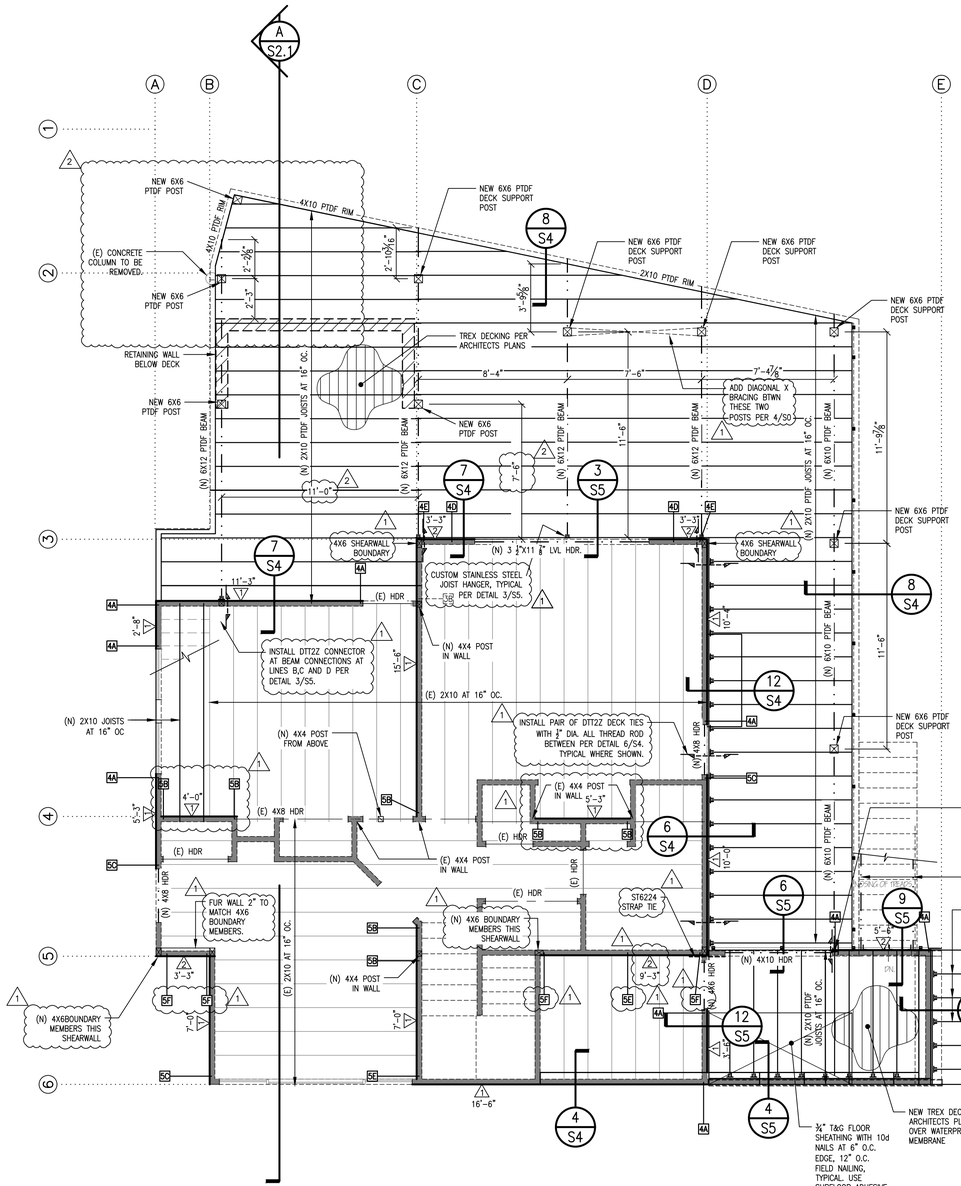
JOB NO.:	20-139
DATE:	6/28/21
DRAWN BY:	MH
SCALE:	AS NOTED
SHEET	S0

Exhibit D



MAIN FLOOR FRAMING

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

FOUNDATION PLAN

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

▨ – EXISTING CONCRETE BLOCK RETAINING WALL.

▨ – EXISTING CONCRETE BLOCK RETAINING WALL.

■ – NEW CONCRETE

▨ – DENOTES NEW CONCRETE RETAINING WALL

Exhibit D

REVISION	DESCRIPTION	DATE
1	REVISED IN RESPONSE TO PLAN CHECK COMMENTS	1/22/22
2	REVISED IN RESPONSE TO PLAN CHECK COMMENTS	9/29/22

FOUNDATION PLAN AND MAIN FLOOR FRAMING

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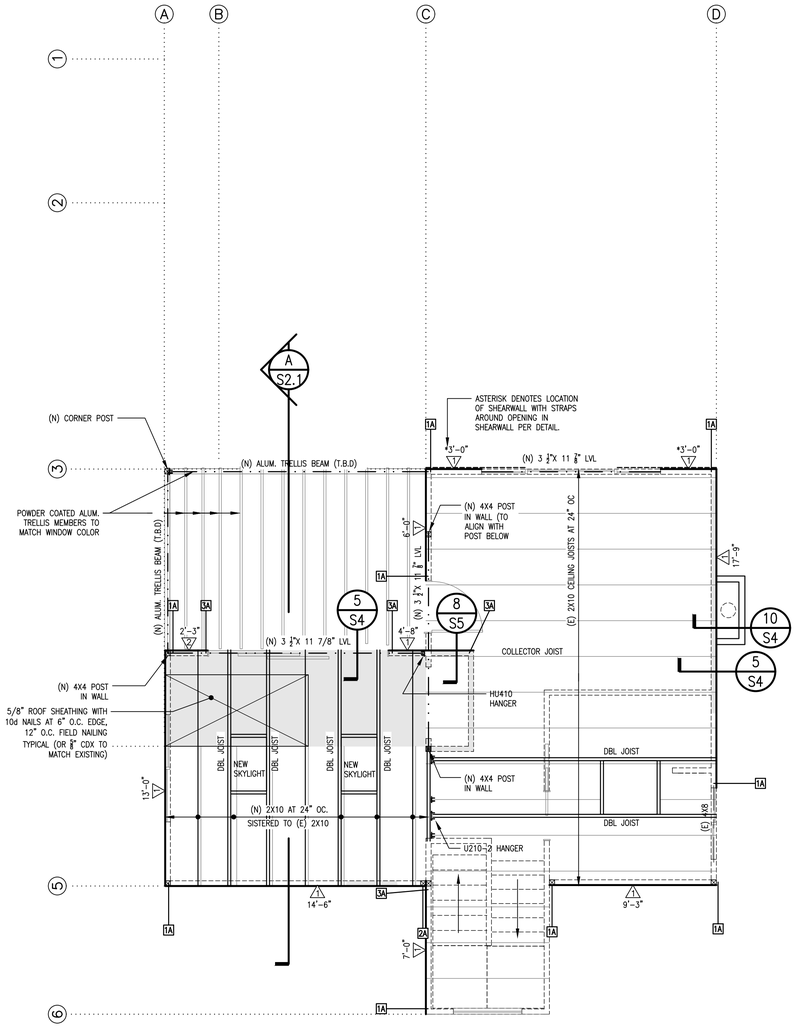
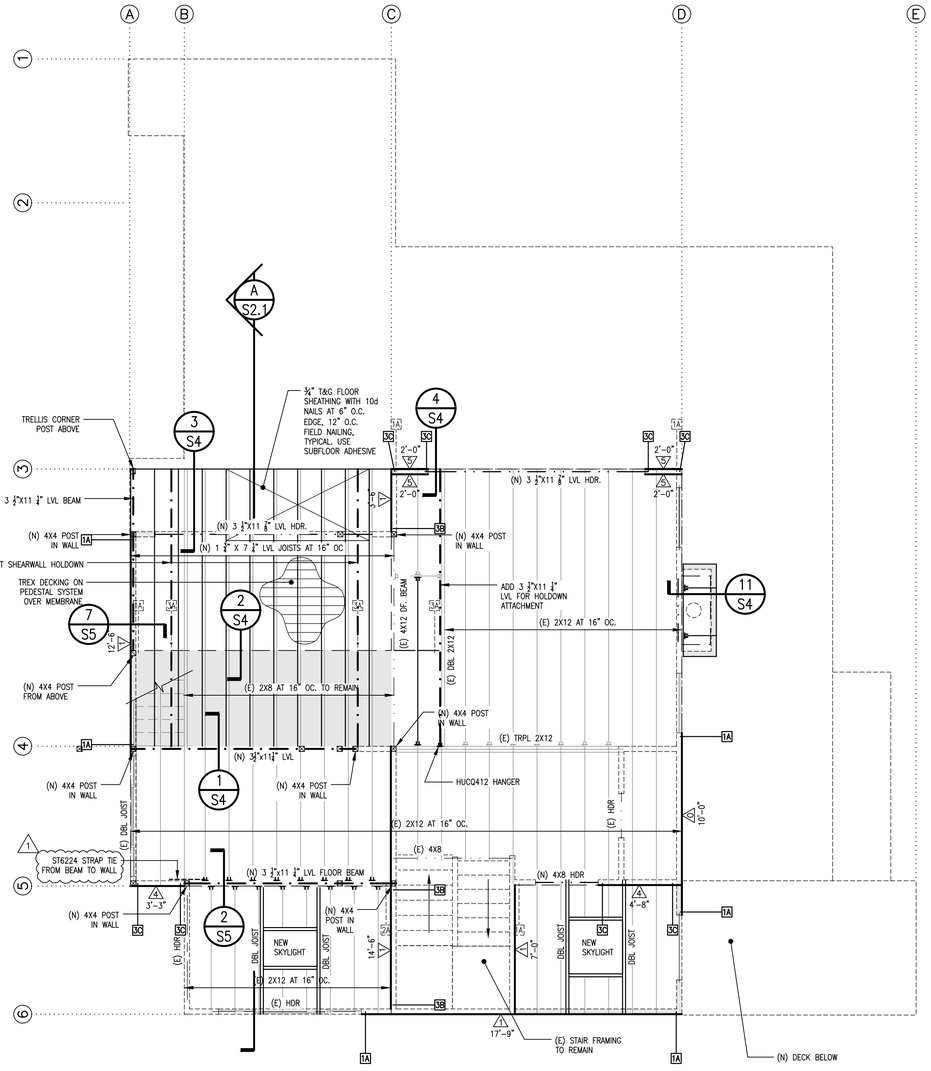
SHEET

S1



ROOF FRAMING PLAN

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



UPPER FLOOR FRAMING

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

GENERAL PLAN NOTES:

1. SEE ARCHITECTS DRAWINGS FOR DIMENSIONS. DIMENSIONS SHOWN HEREON ARE FOR REFERENCE ONLY. VERIFY WITH ARCHITECTS DRAWINGS. NOTIFY THE ENGINEER IN THE EVENT OF A CONFLICT PRIOR TO PROCEEDING.
2. USE APPROPRIATE FASTENERS FOR NAILING INTO TREATED LUMBER, IE GALVANIZED OR STAINLESS STEEL.
3. SHEARWALL HOLDOWN LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATION TO BE DETERMINED BY CONTRACTOR SUCH THAT THE HOLDOWNS ARE SITUATED AT EACH ENDS OF THE SHEARWALLS SHOWN, AND THEY ARE CONNECTED TO BOUNDARY MEMBERS AS SHOWN IN THE FRAMING DETAILS.
4. SHEARWALL LENGTHS SHOWN ARE CONSIDERED MINIMUMS AND DO NOT NECESSARILY REFLECT THE TRUE LENGTH OF THE FRAMED WALL. NOTIFY THE ENGINEER IN THE EVENT THAT THE FRAMED WALL WILL BE LESS THAN THE SHEARWALL LENGTH STATED, PRIOR TO PROCEEDING.

Exhibit D

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1	REVISED IN RESPONSE TO PLAN CHECK COMMENTS	1/22/22
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UPPER FLOOR FRAMING PLAN,
ROOF FRAMING PLAN

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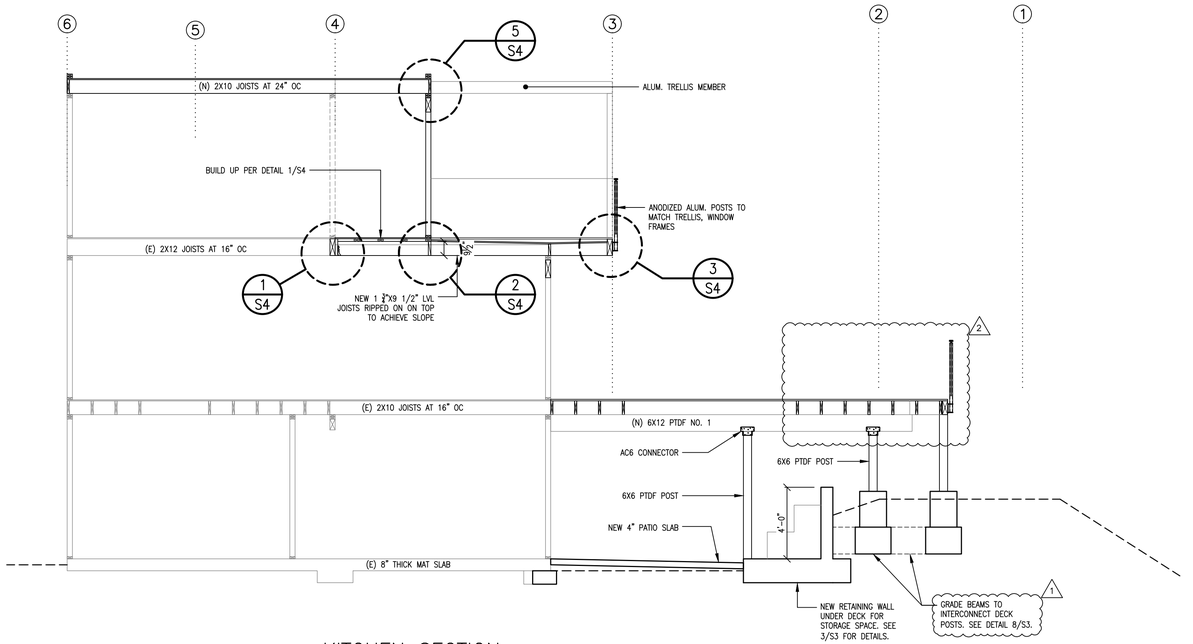
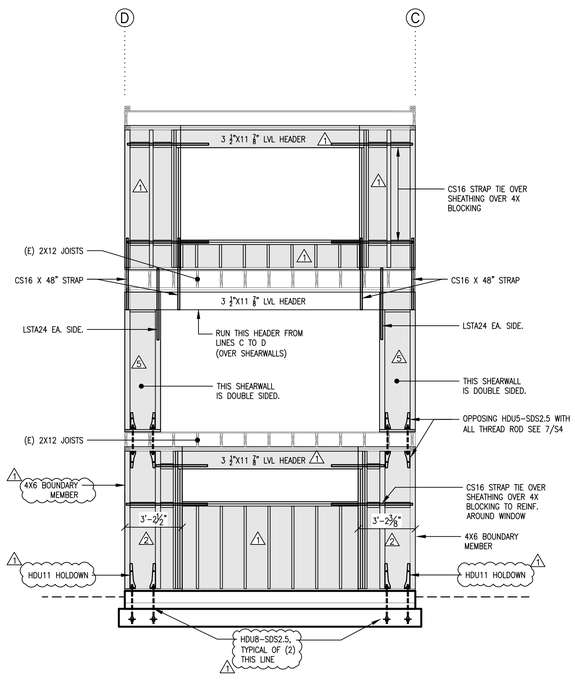
SHEET

S2



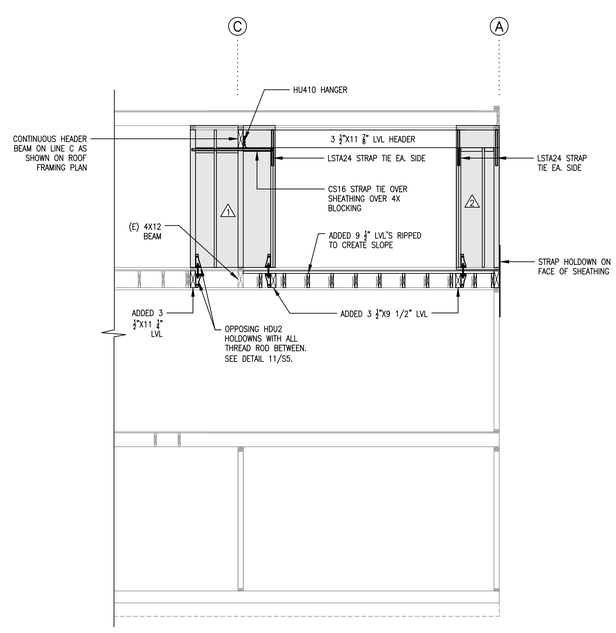
KITCHEN SECTION

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



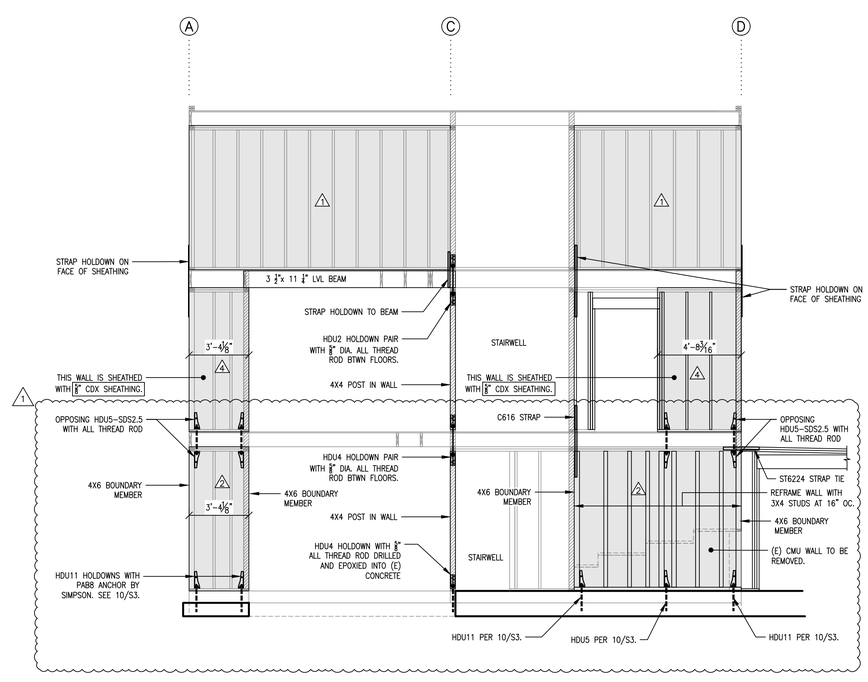
SHEARWALL FRAMING: GRID LINE 3

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



SHEARWALL FRAMING: GRID LINE 3.5

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



SHEARWALL FRAMING: GRID LINE 5

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

Exhibit D

REVISION	DESCRIPTION	DATE
1	REVISED IN RESPONSE TO PLAN CHECK COMMENTS	1/20/22
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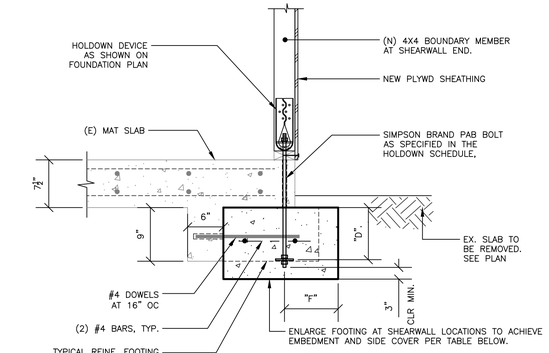
SHEET

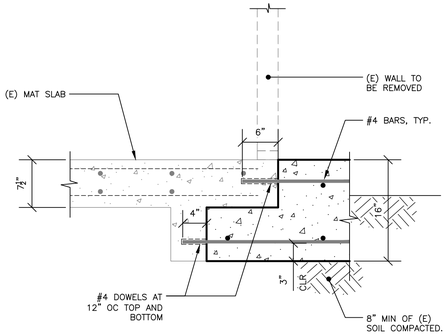
S2.1



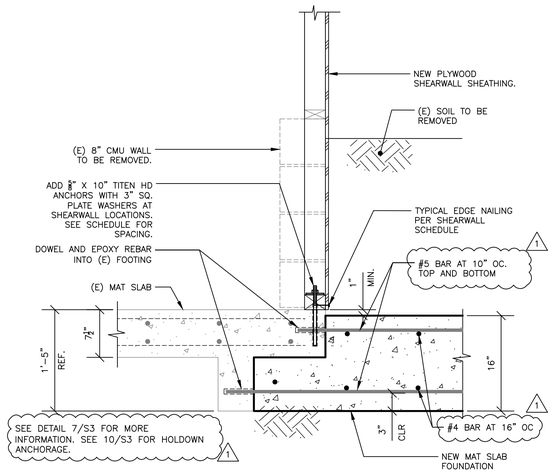
SYMBOL	HOLDOWN	ANCHOR	"F"	"D"
5C	HDU2-SDS2.5	PAB5	10"	9"
5D	HDU4-SDS2.5	PAB5		
5E	HDU5-SDS2.5	PAB5		
5F	HDU11-SDS2.5	PAB8-30	16	11"

NOTES:
INCREASE FOOTING SIZE AT SHEARWALL HOLDOWN TO MAINTAIN THE MIN. SIDE COVER DIMENSION "F" ON ALL SIDES. INCREASE DEPTH AS NECESSARY TO ACHIEVE 3" COVER AT THE BOTTOM OF THE FOOTING.

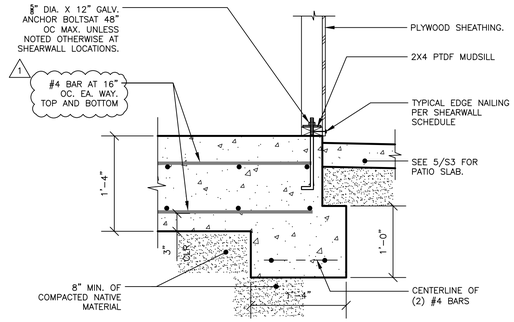
10 / S3 NEW SHEARWALL HOLDOWN AT EXISTING FOUND. 1



7 / S3 NEW MAT SLAB CONFORM



4 / S3 MECH. ROOM SLAB AT (E) CMU RETAINING WALL



1 / S3 NEW MAT SLAB THICKENED EDGE

11 / S3 REINFORCEMENT FOOTING AT (E) FOUNDATION

8 / S3 MAIN LEVEL DECK POST FOOTING DETAIL 1

5 / S3 TYPICAL EXTERIOR WALKWAY SLAB

2 / S3 (E) CENTER THICKENED FOUNDATION

12 / S3 NEW CONCRETE RETAINING WALL AT ENTRY STAIRS, STORAGE UNDER DECK 1

9 / S3 POST FOOTING DETAIL WHERE ADJACENT TO SLOPING SOIL.

6 / S3 NEW DECK STAIRWAY

3 / S3 NEW CONCRETE RETAINING WALL AT ENTRY STRUCTURE

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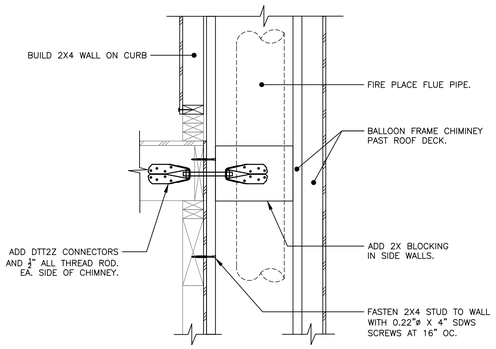
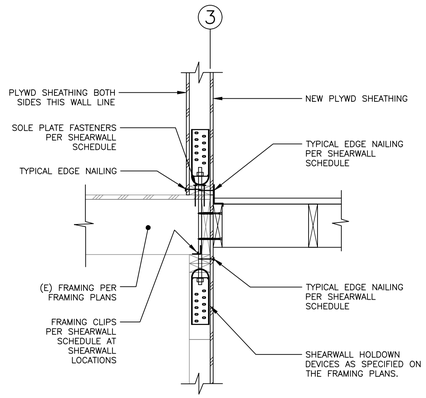
SHEET
S3

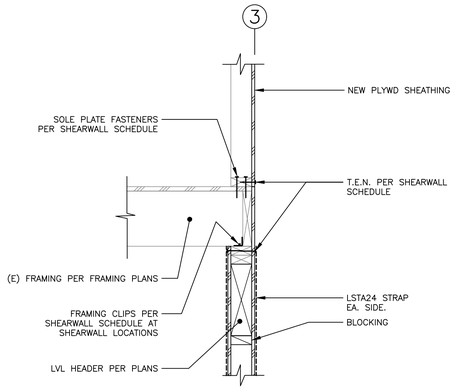
Exhibit D



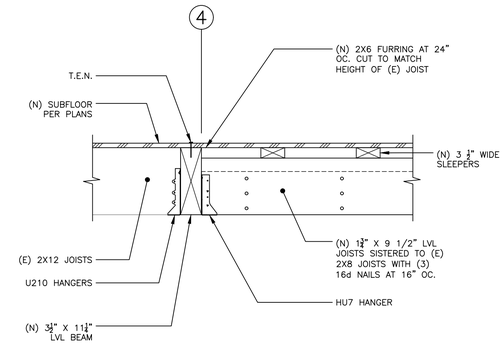
10/S4 FIREPLACE CHIMNEY FRAMING



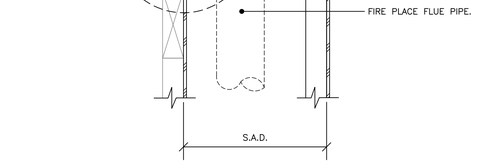
7/S4 FRAMING AT MAIN FLOOR, LINE 3



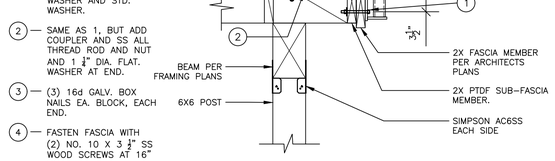
4/S4 UPPER FLOOR FRAMING



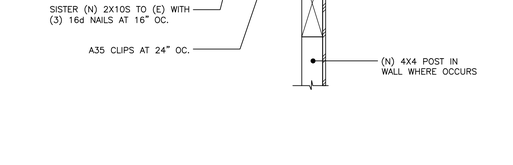
1/S4 FLUSH FLOOR BEAM



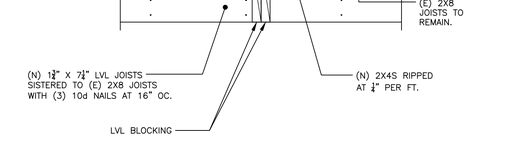
11/S4 FIREPLACE POP-OUT AND FLUE FRAMING AT UPPER FLOOR



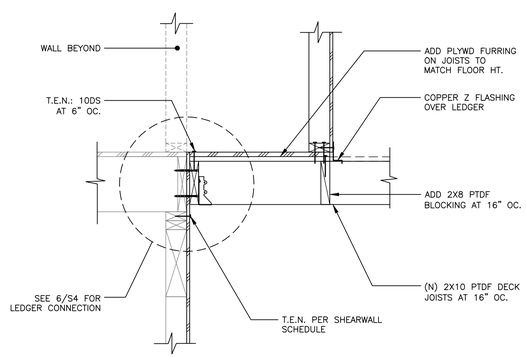
8/S4 TYPICAL DECK FRAMING DETAIL



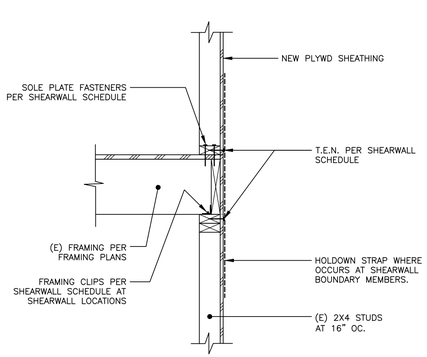
5/S4 TYPICAL ROOF FRAMING



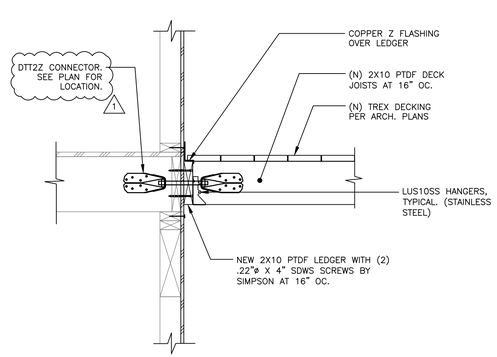
2/S4 DECK TRANSITION



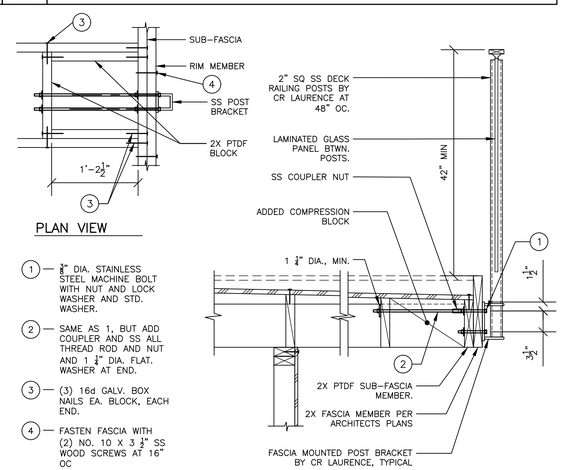
12/S4 FIREPLACE POP-OUT, MAIN LEVEL



9/S4 TYPICAL FLOOR FRAMING



6/S4 DECK LEDGER



3/S4 NEW DECK RAILING THIRD FLOOR DECK

Exhibit D

REVISION	DESCRIPTION	DATE
1	REVISED IN RESPONSE TO PLAN CHECK COMMENTS	1/22/22
2	REVISED IN RESPONSE TO PLAN CHECK COMMENTS	9/29/22

DETAILS

WHITING RESIDENCE
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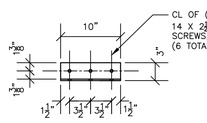
Phone: (831) 459-7296
E-mail: andrew@radovan.us

REGISTERED PROFESSIONAL ENGINEER ANDREW RADOVAN No. C 055138 CIVIL STATE OF CALIFORNIA
9/29/22

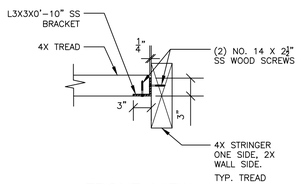
JOB NO.:	20-139
DATE:	6/28/21
DRAWN BY:	MH
SCALE:	AS NOTED

SHEET

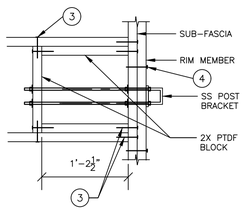
S4



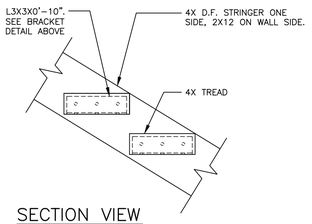
BRACKET DETAIL



FRONT VIEW

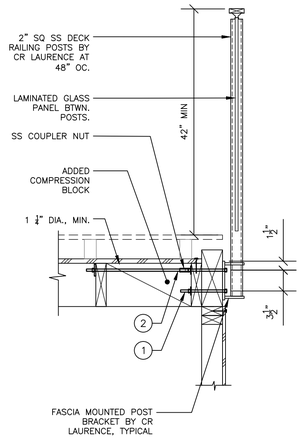


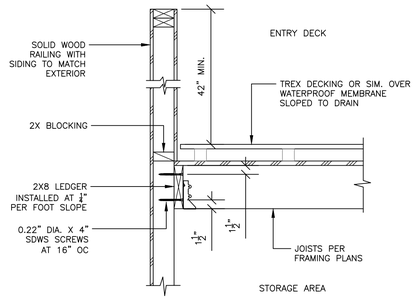
PLAN VIEW

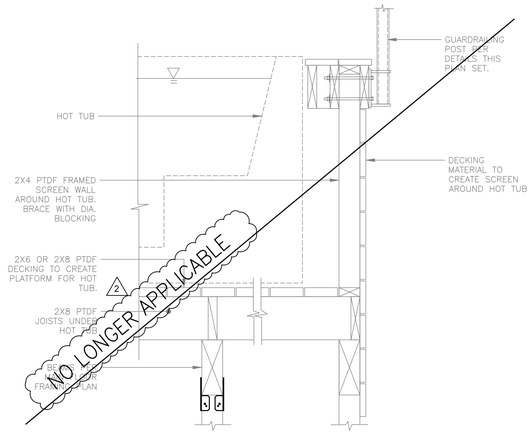


SECTION VIEW

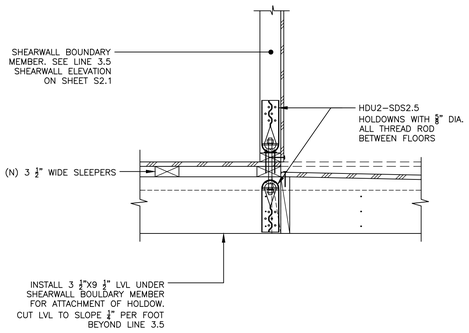
1. — ⅜" DIA. STAINLESS STEEL MACHINE BOLT WITH NUT AND LOCK WASHER AND STD. WASHER.
2. — SAME AS 1, BUT ADD COUPLER AND SS ALL THREAD ROD AND NUT AND 1 ½" DIA. FLAT. WASHER AT END.
3. — (3) 16d GALV. BOX NAILS EA. BLOCK, EACH END.
4. — FASTEN FASCIA WITH (2) NO. 10 X 3 ½" SS WOOD SCREWS AT 16" OC

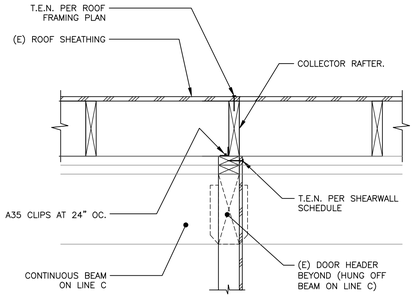


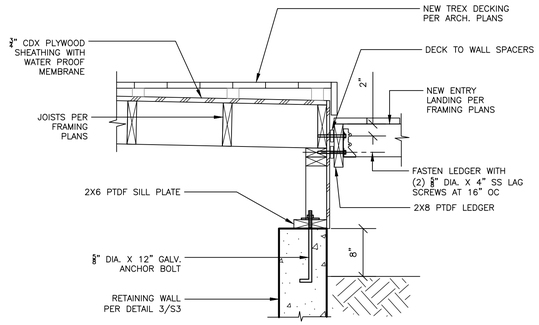


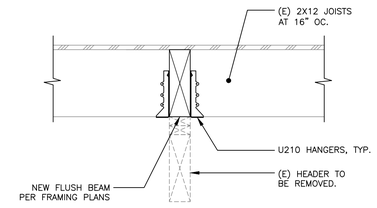


10 / S5	EXTERIOR STAIR TREAD CONNECTION.	7 / S5	NEW DECK RAILING THIRD FLOOR DECK	4 / S5	ENTRY DECK SOLID RAILING	1 / S5	HOT TUB DECK/RAILING

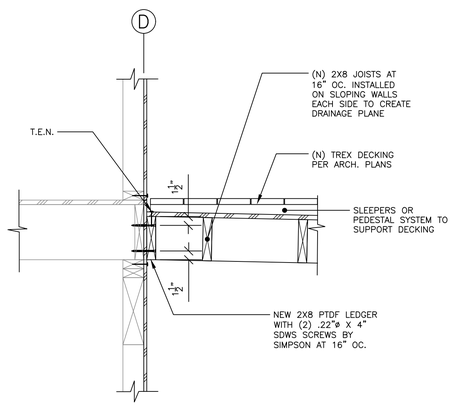


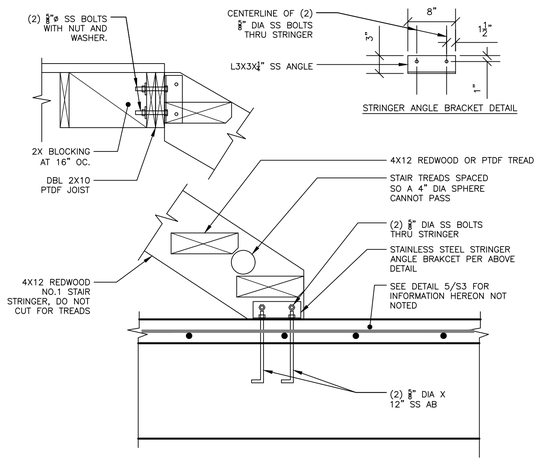


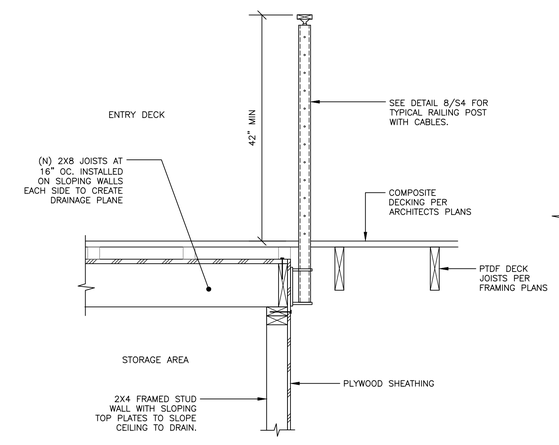


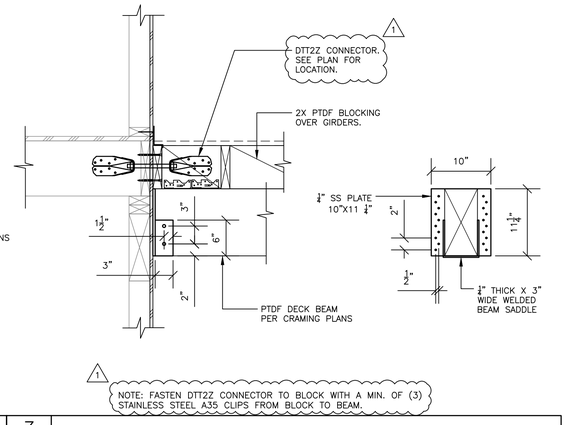


11 / S5	HOLDOWN TO BEAM BELOW	8 / S5	ROOF FRAMING	5 / S5	ENTRY DECK STEP	2 / S5	NEW FLUSH FLOOR BEAM









12 / S5	DECK LEDGER AT FRONT ENTRY	9 / S5	EXTERIOR STAIRS: STRINGER CONNECTIONS	6 / S5	ENTRY DECK INTERIOR RAILING	3 / S5	DECK GIRDER HANGER CUSTOM FABRICATED STAINLESS STEEL

REVISION	DESCRIPTION	DATE
1	REVISED IN RESPONSE TO PLAN CHECK COMMENTS	1/22/22
2	REVISED IN RESPONSE TO PLAN CHECK COMMENTS	9/29/22

DETAILS

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REGISTERED PROFESSIONAL ENGINEER
No. C 055138
CIVIL
STATE OF CALIFORNIA
9/29/22

JOB NO.:	20-139
DATE:	6/28/21
DRAWN BY:	MH
SCALE:	AS NOTED

SHEET
S5

Exhibit D

EROSION CONTROL AND STORM WATER POLLUTION MANAGEMENT NOTES

STORM WATER BEST MANAGEMENT PRACTICES:

1. PAVEMENT:
   - 1.1. NO ERODIBLE AREAS SHALL DRAIN ONTO PAVEMENT
   - 1.2. SUBGRADE SHALL BE UNIFORM AND MINIMALLY COMPACTED
   - 1.3. RESERVOIR BASE COURSE SHALL BE OF OPEN-GRADED CRUSHED STONE. BASE DEPTH SHALL BE ADEQUATE TO RETAIN RAINFALL AND SUPPORT DESIGN LOADS.
   - 1.4. WHERE SUBDRAIN IS PROVIDED, OUTLET ELEVATION SHALL BE 3" ABOVE BOTTOM OF BASE COURSE.
2. CONSTRUCTION MATERIALS:
   - 2.1. LOOSE STOCKPILED MATERIALS THAT ARE NOT ACTIVELY BEING USED SHALL BE COVERED AND BERMED.
   - 2.2. EXPOSURE OF CONSTRUCTION MATERIALS TO PRECIPITATION SHALL BE MINIMIZED.
   - 2.3. ALL CHEMICALS SHALL BE STORED IN WATER TIGHT CONTAINERS OR IN A STORAGE SHED.
   - 2.4. BEST MANAGEMENT PRACTICES TO PREVENT THE OFF-SITE TRACKING OF LOOSE CONSTRUCTION AND LANDSCAPE MATERIALS SHALL BE IMPLEMENTED.
3. WASTE MANAGEMENT:
   - 3.1. DISPOSAL OF ANY RINSE OR WASH WATERS OR MATERIALS ON IMPERVIOUS OR PERVIOUS SURFACES OR INTO THE STORM DRAIN SYSTEM SHALL BE PREVENTED.
   - 3.2. SANITATION FACILITIES SHALL BE CONTAINED TO PREVENT DISCHARGE OF POLLUTANTS TO THE STORM WATER DRAINAGE SYSTEM OR RECEIVING WATER, AND SHALL BE LOCATED A MINIMUM OF 20 FEET AWAY FROM A DRAINAGE FACILITY.
   - 3.3. SANITATION FACILITIES SHALL BE INSPECTED REGULARLY FOR LEAKS AND SPILLS AND MAINTAINED AS NECESSARY.
   - 3.4. COVER WASTE DISPOSAL CONTAINERS AT THE END OF EVERY WORK DAY AND DURING A RAIN EVENT.
   - 3.5. DISCHARGES FROM WASTE DISPOSAL CONTAINERS TO THE STORM WATER DRAINAGE SYSTEM SHALL BE PREVENTED.
   - 3.6. STOCKPILED WASTE MATERIAL SHALL BE CONTAINED AND SECURELY PROTECTED FROM WIND AND RAIN UNLESS BEING ACTIVELY USED.
   - 3.7. PROCEDURES THAT EFFECTIVELY ADDRESS HAZARDOUS AND NON-HAZARDOUS SPILLS SHALL BE IMPLEMENTED.
   - 3.8. EQUIPMENT AND MATERIALS FOR CLEANUP OF SPILLS SHALL BE AVAILABLE ON SITE AND SHALL BE USED TO CLEAN LEAKS OR SPILLS IMMEDIATELY. ASSOCIATED WASTE SHALL BE IMMEDIATELY CLEANED AND DISPOSED OF.
   - 3.9. WASHOUT AREAS THAT MAY CONTAIN POLLUTANTS SHALL BE CONTAINED WITH NO DISCHARGE TO SURROUNDING AREA.
4. VEHICLE STORAGE AND MAINTENANCE:
   - 4.1. MEASURES SHALL BE TAKEN TO PREVENT OIL, GREASE, OR FUEL TO LEAK INTO THE GROUND, STORM DRAINS, OR SURFACE WATERS.
   - 4.2. ALL EQUIPMENT OR VEHICLES, WHICH ARE TO BE FUELED, MAINTAINED, AND STORED ON SITE SHALL BE IN A DESIGNATED AREA FITTED WITH APPROPRIATE BMPs
   - 4.3. LEAKS SHALL BE IMMEDIATELY CLEANED AND LEAKED MATERIALS SHALL BE DISPOSED OF PROPERLY.
5. LANDSCAPE MATERIALS:
   - 5.1. DISCONTINUE APPLICATION OF ANY ERODIBLE LANDSCAPE MATERIAL WITHIN 2 DAYS BEFORE A FORECASTED RAIN EVENT OR DURING PERIODS OF PRECIPITATION.
   - 5.2. CONTAIN STOCKPILED MATERIALS SUCH AS MULCHES AND TOPSOIL WHEN THEY ARE NOT BEING USED.
   - 5.3. CONTAIN FERTILIZERS AND OTHER LANDSCAPE MATERIALS WHEN THEY ARE NOT BEING USED.
   - 5.4. APPLY ERODIBLE LANDSCAPE MATERIAL AT QUANTITIES AND APPLICATION RATES ACCORDING TO MANUFACTURER RECOMMENDATIONS.
   - 5.5. STACK ERODIBLE LANDSCAPE MATERIAL ON PALLETS AND COVERING WHEN NOT BEING USED OR APPLIED.

TEMPORARY EROSION CONTROL MEASURES:

1. EROSION SHALL BE CONTROLLED AT ALL TIMES. SPECIFIC MEASURES STATED HERE ARE TO BE IN EFFECT FROM APRIL 15 TO OCTOBER 15.
2. ALL SITE STORM GENERATED RUNOFF SHALL BE PERCOLATED INTO THE GROUND AS SHOWN ON THE PLANS. NO CONCENTRATED RUNOFF SHALL BE OTHERWISE ALLOWED TO BE DISCHARGED ON THE GROUND. ALL GROUND SURFACES THAT ARE DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE REVEGETATED AS NECESSARY WITH NATIVE VEGETATION
4. ALL EXCAVATED MATERIAL SHALL BE DEPOSITED OFF SITE IN A LEGAL MANNER, OR INCORPORATED INTO OTHER ONSITE GRADING PROVIDED IT IS DONE SO BASED ON ACCEPTED STANDARDS TO PREVENT EROSION.
5. CONTRACTOR SHALL PROVIDE WATER SUPPLY DURING CONSTRUCTION TO AID IN COMPACTION OF SOIL, AND TO PREVENT DUST FROM BECOMING AIRBORNE.
6. TEMPORARY SAND FENCING SHALL BE INSTALLED BELOW AREAS OF WORK PER DETAIL 2/C1.

ABBREVIATIONS:

AB	ANCHOR BOLT
ARCH	ARCHITECTURAL
ATR	ALL THREAD ROD
BTWN	BETWEEN
CL	CENTERLINE
CONN	CONNECTION
DS	DOWNSPOUT
DIA	DIAMETER
EA	EACH
EFP	EQUIVALENT FLUID PRESSURE.
FF	FINISHED FLOOR
FG	FINISHED GRADE
FL	FLOW LINE
FS	FINISHED SURFACE
FT	FEET
GALV	GALVANIZED
HDR	HEADER
INV	INVERT
LF	LINEAL FEET
LSP	LANDSCAPE PLANTER
MAX	MAXIMUM
OC	ON CENTER
OPP	OPPOSITE
PCF	POUNDS PER CUBIC FOOT
PLF	POUNDS PER LINEAL FOOT
PSF	POUNDS PER SQUARE FOOT
S	SLOPE
SCH	SCHEDULE
SQ	SQUARE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL

FLOOD NOTE

PER THE "WATSONVILLE WEST" FLOOD AND LANDSLIDE MAP PROVIDED BY THE COUNTY OF SANTA CRUZ GEOGRAPHIC INFORMATION SERVICES, THE SITE DOES NOT LIE WITHIN THE 100 YEAR FLOOD PLAIN AND IS ABOVE FLOOD ELEVATION.

VEGETATION NOTE

ALL WORK ON THE SITE SHALL BE CONFINED TO THE AREA DELINEATED BY THE DUNE PROTECTION FENCING.

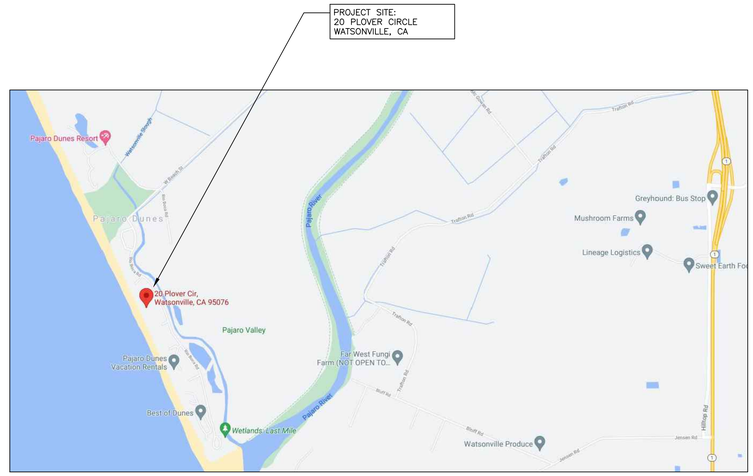
PRIOR TO COMMENCING WORKING, THE CONTRACTOR SHALL REVIEW THE BIOLOGIST REPORT OF SITE, AND PERFORM ALL REQUIRED PRE-CONSTRUCTION SURVEYS REQUIRED BY THE REPORT.

UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL RESTORE AND REVEGETATE THE SITE AS DIRECTED BY THE PROJECT BIOLOGIST, AND AS STATED IN THE BIOLOGIST REPORT.

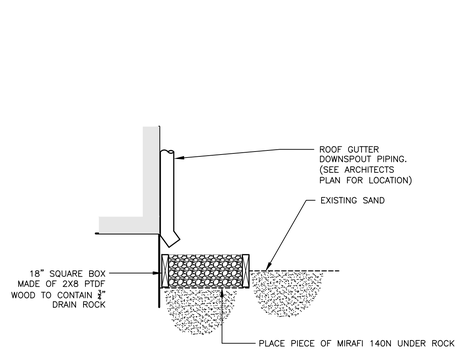
SEE BIOLOGIST REPORT BY BIOTIC RESOURCES GROUP, BRYAN MORI AND KATHY LYONS, DATED 12/3/21 FOR FURTHER INFORMATION.

SITE DRAINAGE ASSESSMENT

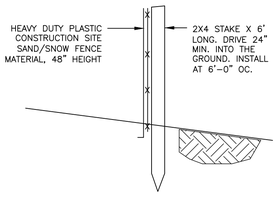
THE ENGINEER OF RECORD (EOR) PERFORMED A SITE VISIT ON 1/19/22 FOR THE PURPOSE OF OBSERVING AND ASSESSING THE EXISTING SITE DRAINAGE CONDITIONS. AT THE THAT TIME, THE EOR OBSERVED THAT THERE WERE NO ADVERSE SITE CONDITIONS PRESENT, NOR WOULD THE PROPOSED PROJECT NEGATIVELY IMPACT THE EXISTING OR NEIGHBORING SITES.



VICINITY MAP

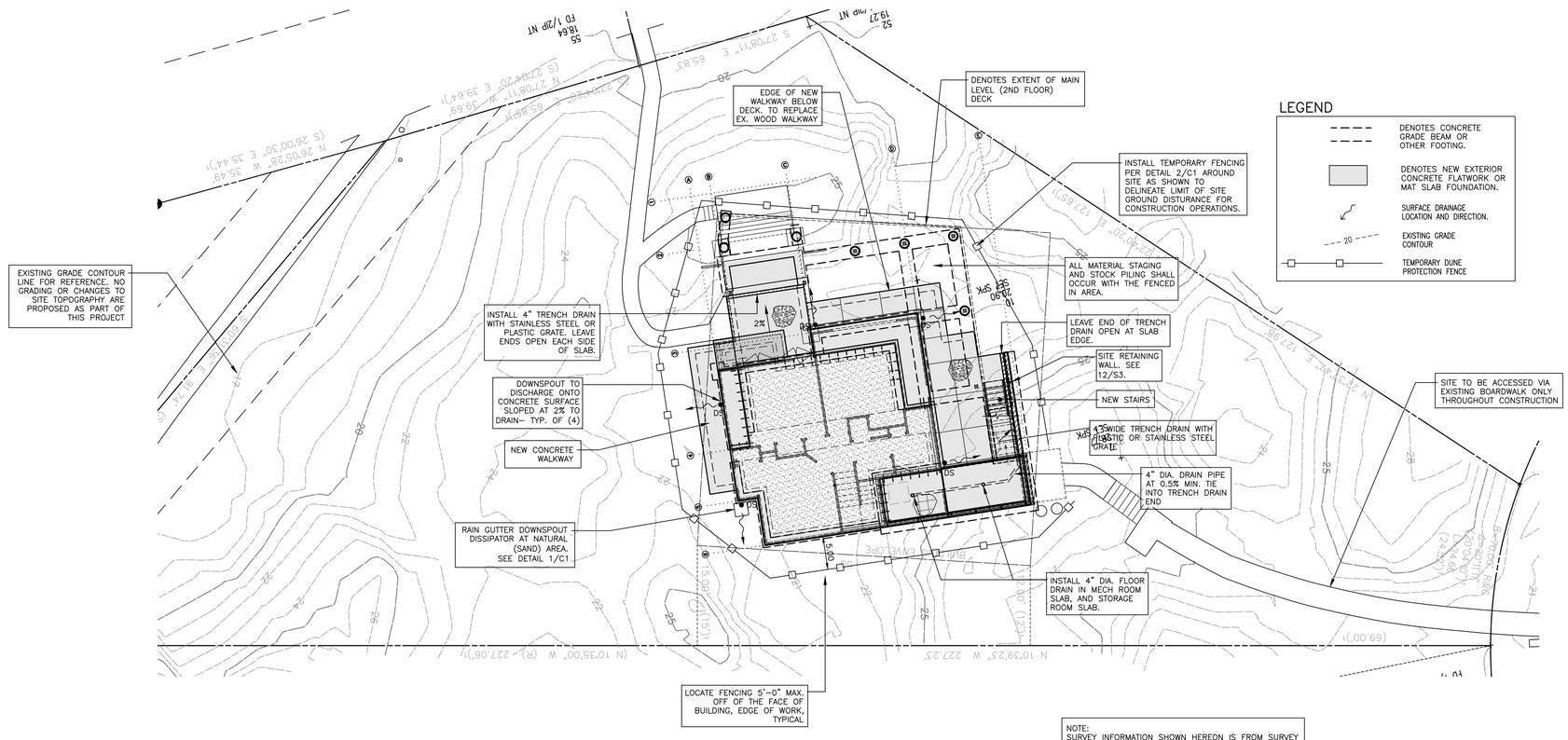


1 / C1 DOWNSPOUT DISSIPATOR



TEMPORARY SAND FENCE

2 / C1 TEMPORARY DUNE PROTECTION FENCING



NOTE:
SURVEY INFORMATION SHOWN HEREON IS FROM SURVEY BY BOWMAN & WILLIAMS CIVIL ENGINEERS, THEIR JOB NUMBER 28422, DATED JUNE 3, 2021.

SITE STORM DRAINAGE AND EROSION CONTROL PLAN

SCALE: 1"=10'-0"

Exhibit D

REVISION	DESCRIPTION	DATE
1	REVISED IN RESPONSE TO PLAN CHECK COMMENTS	1/22/22
2	REVISED IN RESPONSE TO PLAN CHECK COMMENTS	9/29/22

SITE DRAINAGE & DUNE PROTECTION PLAN

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Professional Engineer C55138

REGISTERED PROFESSIONAL ENGINEER ANDREW C. RADOVAN No. C 055138 EXP. 6/30/23 CIVIL STATE OF CALIFORNIA
9/29/22

JOB NO.:	20-139
DATE:	6/28/21
DRAWN BY:	ACR
SCALE:	AS NOTED

SHEET

C1

MAINTENANCE SCHEDULE

FOR SITE DRAINAGE FACILITIES

DRAINAGE FEATURE	INSPECTION FREQUENCY	REQUIRED ACTION
ROOF GUTTERS DOWNSPOUT PIPING	PRIOR TO THE ONSET OF WINTER, AND MONTHLY DURING WINTER AND AFTER STORMS WITH 2" OR MORE RAIN.	CLEAN GUTTERS OF DEBRIS. VERIFY DOWNSPOUT DISSIPATORS ARE CLEAN AND THERE IS NO EROSION AROUND THEM.
PATIO DRAINS	PRIOR TO THE ONSET OF WINTER, ONCE A MONTH DURING WINTER MONTHS.	REMOVE TRENCH DRAIN GRATES. FLUSH AWAY SAND WITH A HOUSE. VERIFY OUTLETS ARE FREE DRAINING.

PLAN NOTES:

A. SEE SHEET C1 FOR VICINITY MAP.
B. SEE SHEET C1 FOR PROPERTY BOUNDARIES BASED ON SITE SURVEY.
C. SEE TITLE BLOCK FOR PARCEL ADDRESS. SITE APN IS 052-281-25.
D. CONTOUR INTERVAL FOR CONTOURS SHOWN HEREON IS 1 FOOT.
E. PROPOSED GRADING CONTOURS ARE SHOWN AS NOTED ON THIS SHEET.
F. THERE IS NO SEPTIC SYSTEM ON SITE. THE SITE HAS WATER AND SEWER PROVIDED BY LOCAL UTILITY.
G. THE OWNER IS IAN WHITING. EMAIL iwhiting025@gmail.com
H. SEE TITLE BLOCK FOR INFORMATION ABOUT THE PREPARER OF THIS PLAN.

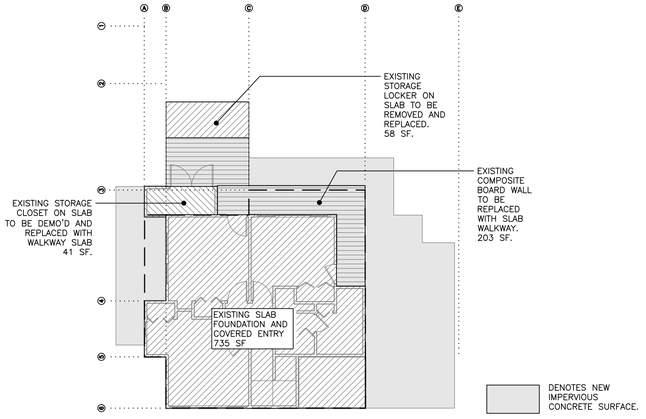
GRADING QUANTITIES:

THERE IS NO PLANNED SITE GRADING OTHER THAT REQUIRED TO CREATE THE STORAGE ARE AND MECH. ROOM UNDER THE ENTRY WALKWAY. THIS WILL REQUIRE APPROXIMATELY 53 CY OF SAND REMOVAL.

THIS NUMBER DOES NOT INCLUDE FOUNDATION SPOILS FOR THE NEW FOUNDATIONS.

THERE IS NO SOIL REMOVAL AND RECOMPACTION THAT WOULD AFFECT THESE GRADING QUANTITIES.

ALL EXCAVATED SOIL SHALL BE REMOVED FROM SITE OR REDISTRIBUTED ON SITE AS ALLOWED BY THE COUNTY AND THE PROJECT BIOLOGIST.

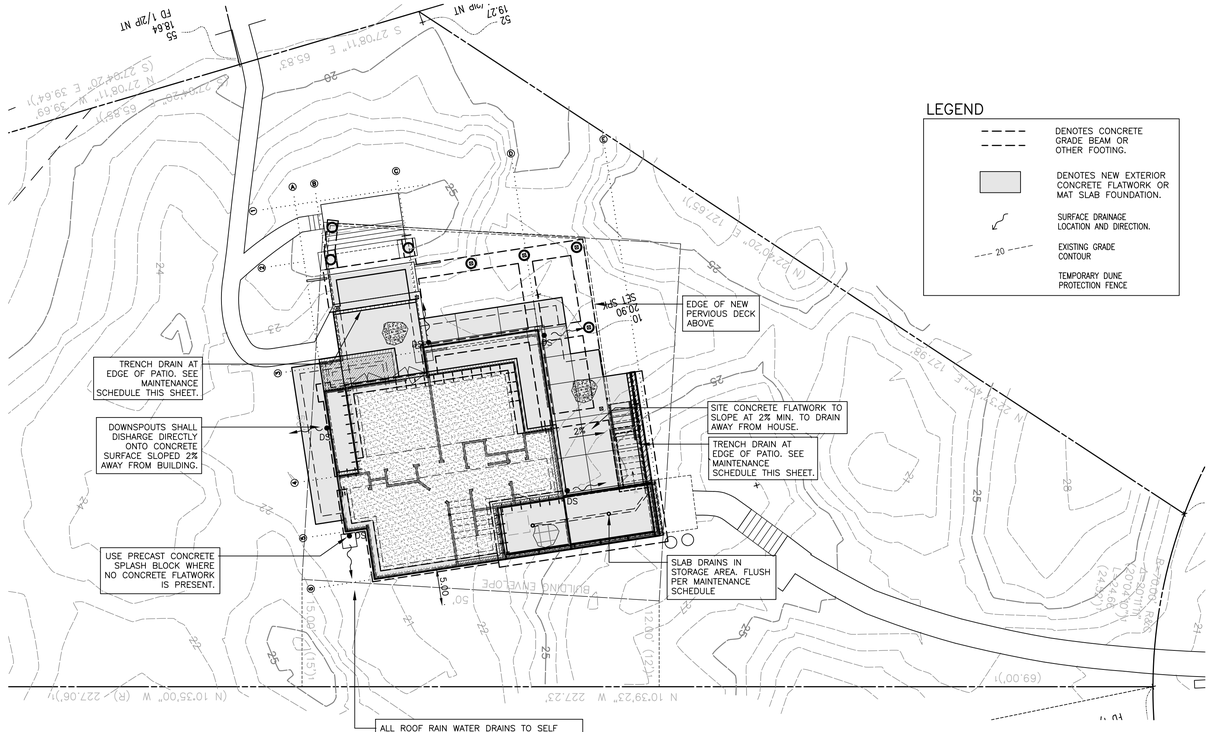


EXISTING IMPERVIOUS SURFACES:		PROPOSED IMPERVIOUS SURFACES	
FOUNDATION	735 SF	NEW SITE CONCRETE FLATWORK	533 SF
STORAGE CLOSET	41 SF	NEW SITE FLATWORK AT EX. BOARDWALK	203 SF
STORAGE LOCKER	58 SF	TOTAL ADDED IMPERVIOUS SURFACES	736 SF
TOTAL EXISTING IMPERVIOUS	834 SF		
TOTAL POST DEVELOPMENT IMPERVIOUS SURFACES	1570 SF		

THE TOTAL IMPERVIOUS SURFACE OF 1570 SF INCLUDES 99 SF OF REPLACED IMPERIOUS SURFACES. (41+58)

IMPERVIOUS SURFACES

SCALE: 1"=10'-0"



SITE STORMWATER MANAGEMENT PLAN

SCALE: 1"=10'-0"

NOTE:
SURVEY INFORMATION SHOWN HEREON IS FROM SURVEY BY BOWMAN & WILLIAMS CIVIL ENGINEERS, THEIR JOB NUMBER 28422, DATED JUNE 3, 2021.

NOTE:
THE PROJECT ENGINEER SHALL OBSERVE THE COMPLETED DRAINAGE IMPROVEMENTS AND PROVIDE A LETTER OF COMPLIANCE UPON COMPLETION OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WITH 48 HRS NOTICE PRIOR TO INSPECTION.

Exhibit D

REVISION	DESCRIPTION	DATE
1	REVISED IN RESPONSE TO PLAN CHECK COMMENTS	1/22/22
2	REVISED IN RESPONSE TO PLAN CHECK COMMENTS	9/29/22

STORMWATER MAINTENANCE PLAN AND MAINTENANCE SCHEDULE.

WHITING RESIDENCE
20 PLOVER CIRCLE
WATSONVILLE, CA 95076

Professional Engineer C55138
Andrew C. Radovan
Civil Engineering Inc.
2815 Mission Street, Santa Cruz, CA 95060
Phone: (831) 459-7296
E-mail: andrew@radovan.us

REGISTERED PROFESSIONAL ENGINEER ANDREW C. RADOVAN No. C 055138 EXP. 6/30/22 CIVIL STATE OF CALIFORNIA
9/29/22

JOB NO.:	20-139
DATE:	6/28/21
DRAWN BY:	ACR
SCALE:	AS NOTED

SHEET
C2

GENERAL INFORMATION

01	Project Name	Whiting Remodel & Addition			
02	Run Title	Title 24 Analysis			
03	Project Location	20 Plover Cr			
04	City	Watsonville	05	Standards Version	2019
06	Zip code	95076	07	Software Version	EnergyPro 8.2
08	Climate Zone	3	09	Front Orientation (deg/ Cardinal)	85
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	AdditionAlteration	13	Number of Bedrooms	4
14	Addition Cond. Floor Area (ft²)	265	15	Number of Stories	3
16	Existing Cond. Floor Area (ft²)	2015	17	Fenestration Average U-factor	0.3
18	Total Cond. Floor Area (ft²)	2280	19	Glazing Percentage (%)	22.19%
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area	n/a
22	Is Natural Gas Available?	Yes			

COMPLIANCE RESULTS

01	Building Complies with Computer Performance
02	Building does not require field testing or HERS verification
03	This building incorporates one or more Special Features shown below

ENERGY USE SUMMARY

Energy Use (kTDV/ft²-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	26.33	21.05	5.28	20.1
Space Cooling	1.69	4.52	-2.83	-167.5
IAQ Ventilation	0	0	0	
Water Heating	40.06	40.06	0	0
Self Utilization/Flexibility Credit	n/a	0	0	n/a
Compliance Energy Total	**68.08**	**65.63**	**2.45**	**3.6**

Registration Number: Registration Date/Time: HERS Provider:

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REQUIRED SPECIAL FEATURES

The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.

- New ductwork added is less than 40 ft. in length

HERS FEATURE SUMMARY

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry

Building-level Verifications:
- -- None --

Cooling System Verifications:
- -- None --

Heating System Verifications:
- -- None --

HVAC Distribution System Verifications:
- -- None --

Domestic Hot Water System Verifications:
- -- None --

BUILDING - FEATURES INFORMATION

01 Project Name	02 Conditioned Floor Area (ft²)	03 Number of Dwelling Units	04 Number of Bedrooms	05 Number of Zones	06 Number of Ventilation Cooling Systems	07 Number of Water Heating Systems
Whiting Remodel & Addition	2280	1	4	2	0	1

ZONE INFORMATION

01 Zone Name	02 Zone Type	03 HVAC System Name	04 Zone Floor Area (ft²)	05 Avg. Ceiling Height	06 Water Heating System 1	07 Water Heating System 2
Existing	Conditioned	Res HVAC1	2015	8	DHW Sys 1	N/A
Addition	Conditioned	Res HVAC1	265	8	DHW Sys 1	N/A

Registration Number: Registration Date/Time: HERS Provider:

CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.300 Schema Version: rev 20200901 Report Generated: 2021-08-04 06:09:56

OPAQUE SURFACES

01 Name	02 Zone	03 Construction	04 Azimuth	05 Orientation	06 Gross Area (ft²)	07 Window and Door Area (ft2)	08 Tilt (deg)	09 Wall Exceptions	10 Status	11 Verified Existing Condition
Front Wall	Existing	R-11 Wall	85	Front	744	43	90	none	Existing	No
Left Wall	Existing	R-11 Wall	175	Left	467	75	90	none	Existing	No
Back Wall	Existing	R-11 Wall	265	Back	441	217	90	none	Existing	No
Right Wall	Existing	R-11 Wall	355	Right	406	18	90	none	Existing	No
Right Wall 2	Existing	R-15 Wall	355	Right	102	0	90	none	Altered	No
Left Wall 2	Addition	R-15 Wall	175	Left	268	19	90	Extension	New	n/a
Back Wall 2	Addition	R-15 Wall	265	Back	303	98	90	none	New	n/a
Right Wall 3	Addition	R-15 Wall	355	Right	227	18	90	Extension	New	n/a
Interior Surface	Existing>>Addition	R-0 Wall	n/a	n/a	303	0	n/a		New	n/a
Interior Surface 2	Addition>>Existing	R-0 Wall	n/a	n/a	268	0	n/a		New	n/a
Roof 2	Existing	R-19 Roof Attic	n/a	n/a	804	n/a	n/a		Existing	No
Roof 3	Addition	R-30 Roof Attic	n/a	n/a	137	n/a	n/a		New	n/a

OPAQUE SURFACES - CATHEDRAL CEILINGS

01 Name	02 Zone	03 Construction	04 Azimuth	05 Orientation	06 Area (ft²)	07 Skylight Area (ft²)	08 Roof Rise (x in 12)	09 Roof Reflectance	10 Roof Emittance	11 Cool Roof	12 Status	13 Verified Existing Condition	14 Existing Construction
Roof	Existing	R-19 Roof Attic1	85	Front	18.1	18	5	0.1	0.85	No	Existing	No	

ATTIC

01 Name	02 Construction	03 Type	04 Roof Rise (x in 12)	05 Roof Reflectance	06 Roof Emittance	07 Radiant Barrier	08 Cool Roof	09 Status	10 Verified Existing Condition
Attic Existing	Attic RoofExisting	Ventilated	5	0.1	0.85	No	No	Existing	No

Registration Number: Registration Date/Time: HERS Provider:

CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.300 Schema Version: rev 20200901 Report Generated: 2021-08-04 06:09:56

ATTIC

01 Name	02 Construction	03 Type	04 Roof Rise (x in 12)	05 Roof Reflectance	06 Roof Emittance	07 Radiant Barrier	08 Cool Roof	09 Status	10 Verified Existing Condition
Attic Addition	Attic RoofAddition	Ventilated	1.4	0.1	0.85	No	No	New	n/a

FENESTRATION / GLAZING

01 Name	02 Type	03 Surface	04 Orientation	05 Azimuth	06 Width (ft)	07 Height (ft)	08 Mult.	09 Area (ft²)	10 U-factor	11 U-factor Source	12 SHGC	13 SHGC Source	14 Exterior Shading	15 Status	16 Verified Existing Condition
Front Windows	Window	Front Wall	Front	85			1	43	0.3	NFRC	0.5	NFRC	Bug Screen	Altered	No
Left Windows	Window	Left Wall	Left	175			1	50	0.3	NFRC	0.5	NFRC	Bug Screen	Altered	No
Left Windows 2	Window	Left Wall	Left	175			1	6	0.3	NFRC	0.5	NFRC	Bug Screen	New	n/a
Left Windows/Door	Window	Left Wall	Left	175			1	19	0.3	NFRC	0.5	NFRC	Bug Screen	Altered	No
Back Windows	Window	Back Wall	Back	265			1	140	0.3	NFRC	0.5	NFRC	Bug Screen	Altered	No
Back Windows 2	Window	Back Wall	Back	265			1	77	0.3	NFRC	0.5	NFRC	Bug Screen	New	n/a
Right Windows	Window	Right Wall	Right	355			1	17	0.3	NFRC	0.5	NFRC	Bug Screen	Altered	No
Right Windows 2	Window	Right Wall	Right	355			1	1	0.3	NFRC	0.5	NFRC	Bug Screen	New	n/a
Left Windows 3	Window	Left Wall 2	Left	175			1	19	0.3	NFRC	0.5	NFRC	Bug Screen	New	n/a
Back Windows 3	Window	Back Wall 2	Back	265			1	18	0.3	NFRC	0.5	NFRC	Bug Screen	New	n/a
Back Windows/Door	Window	Back Wall 2	Back	265			1	80	0.3	NFRC	0.5	NFRC	Bug Screen	New	n/a
Right Windows/Door	Window	Right Wall 3	Right	355			1	18	0.3	NFRC	0.5	NFRC	Bug Screen	New	n/a
Skylight	Skylight	Roof	Front	85			1	18	0.55	Table 110.6-A	0.67	Table 110.6-B	None	Existing	No

Registration Number: Registration Date/Time: HERS Provider:

CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.300 Schema Version: rev 20200901 Report Generated: 2021-08-04 06:09:56

SLAB FLOORS

01 Name	02 Zone	03 Area (ft²)	04 Perimeter (ft)	05 Edge Insul. R-value and Depth	06 Edge Insul. R-value and Depth	07 Carpeted Fraction	08 Heated	09 Status	10 Verified Existing Condition
Slab-on-Grade	Existing	822	115	none	0	80%	No	Existing	No
Slab-on-Grade 2	Addition	137	90	none	0	80%	No	New	n/a

OPAQUE SURFACE CONSTRUCTIONS

01 Construction Name	02 Surface Type	03 Construction Type	04 Framing	05 Total Cavity R-value	06 Interior / Exterior Continuous R-value	07 U-factor	08 Assembly Layers
R-11 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-11	None / None	0.11	Inside Finish: Gypsum Board Cavity / Frame: R-11 / 2x4 Exterior Finish: 3 Coat Stucco
R-15 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-15	None / None	0.095	Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x4 Exterior Finish: 3 Coat Stucco
R-19 Roof Attic1	Cathedral Ceilings	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-19	None / None	0.057	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x4 Inside Finish: Gypsum Board
R-0 Wall	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.277	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Other Side Finish: Gypsum Board
Attic RoofExisting	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / None	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4

Registration Number: Registration Date/Time: HERS Provider:

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OPAQUE SURFACE CONSTRUCTIONS

01 Construction Name	02 Surface Type	03 Construction Type	04 Framing	05 Total Cavity R-value	06 Interior / Exterior Continuous R-value	07 U-factor	08 Assembly Layers
Attic RoofAddition	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / None	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
R-19 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-19	None / None	0.049	Over Ceiling Joists: R-9.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board
R-30 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-30	None / None	0.032	Over Ceiling Joists: R-20.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

01 Quality Insulation Installation (QII)	02 High R-value Spray Foam Insulation	03 Building Envelope Air Leakage	04 CFM50
Not Required	Not Required	Not Required	n/a

WATER HEATING SYSTEMS

01 Name	02 System Type	03 Distribution Type	04 Water Heater Name (#)	05 Solar Heating System	06 Compact Distribution	07 HERS Verification	08 Status	09 Verified Existing Condition	10 Existing Water Heating System
DHW Sys 1	Domestic Hot Water (DHW)	Standard Distribution System	DHW Heater 1 (1)	n/a	None	n/a	Existing	No	

Registration Number: Registration Date/Time: HERS Provider:

CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.300 Schema Version: rev 20200901 Report Generated: 2021-08-04 06:09:56

WATER HEATERS

01 Name	02 Heating Element Type	03 Tank Type	04 # of Units	05 Tank Vol. (gal)	06 Energy Factor or Efficiency	07 Input Rating or Pilot	08 Tank Insulation R-value (Int/Ext)	09 Standby Loss or Recovery Eff	10 1st Hr. Rating or Flow Rate	11 NEEA Heat Pump Brand or Model	12 Tank Location or Ambient Condition	13 Status	14 Verified Existing Condition
DHW Heater 1	Electric Resistance	Consumer Storage	1	48	0.92-UEF	<= 12 kW	0	99	51 gal	n/a	Outside	Existing	No

WATER HEATING - HERS VERIFICATION

01 Name	02 Pipe Insulation	03 Parallel Piping	04 Compact Distribution	05 Compact Distribution Type	06 Recirculation Control	07 Central DHW Distribution	08 Shower Drain Water Heat Recovery
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required	Not Required

SPACE CONDITIONING SYSTEMS

01 Name	02 System Type	03 Heating Unit Name	04 Cooling Unit Name	05 Fan Name	06 Distribution Name	07 Required Thermostat Type	08 Status	09 Verified Existing Condition	10 Heating Equipment Count	11 Cooling Equipment Count
Res HVAC1	Heat pump heating cooling	Heat Pump System 1	Heat Pump System 1	HVAC Fan 1	Air Distribution System 1	n/a	Existing	No	1	1

HVAC - HEAT PUMPS

01 Name	02 System Type	03 Number of Units	04 Heating HSPF/COP	05 Heating Cap 47	06 Heating Cap 17	07 Cooling SEER	08 Cooling EER/CEER	09 Zonally Controlled	10 Compressor Type	11 HERS Verification
Heat Pump System 1	Central split HP	1	8	53000	50000	14	11	Not Zonal	Single Speed	Heat Pump System 1-hers-htpump

Registration Number: Registration Date/Time: HERS Provider:

CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.300 Schema Version: rev 20200901 Report Generated: 2021-08-04 06:09:56

HVAC HEAT PUMPS - HERS VERIFICATION

01 Name	02 Verified Airflow	03 Airflow Target	04 Verified EER	05 Verified SEER	06 Verified Refrigerant Charge	07 Verified HSPF	08 Verified Heating Cap 47	09 Verified Heating Cap 17

HVAC - DISTRIBUTION SYSTEMS

01 Name	02 Type	03 Design Type	04 Duct Ins. R-value Supply	05 Duct Ins. R-value Return	06 Duct Location Supply	07 Duct Location Return	08 Surface Area Supply	09 Surface Area Return	10 Bypass Duct	11 Duct Leakage	12 HERS Verification	13 Status	14 Verified Existing Condition	15 Existing Distribution system	16 New Ducts 40 ft
Air Distribution System 1	Unconditioned attic	Non-Verified	R-4.2	R-4.2	Attic	Attic	n/a	n/a	No Bypass Duct	Existing (not specified)	Air Distribution System 1-hers-dist	Existing + New	No	n/a	n/a

HVAC FAN SYSTEMS - HERS VERIFICATION

01 Name	02 Verified Fan Watt Draw	03 Required Fan Efficacy (Watts/CFM)
HVAC Fan 1-hers-fan	Not Required	0

HERS RATER VERIFICATION OF EXISTING CONDITIONS

Registration Number: Registration Date/Time: HERS Provider:

CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.300 Schema Version: rev 20200901 Report Generated: 2021-08-04 06:09:56

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: James G Blomquist	Documentation Author Signature: J Blomquist
Company:	Signature Date: 8/4/2021
Address: 41C Hangar Way	CEA/ HERS Certification Identification (# applicable): 4CBC-E37B-D1CA-D3BC-66B7-390A-CC77-8F98-F156-0FB9-84FE-5130
City/State/Zip: Watsonville, CA 950769	Phone: 408-310-0081

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name: Erin Loftin Serventi	Responsible Designer Signature: Erin L Serventi
Company: E L Designs	Date Signed: 8/4/21
Address: 65 Litchfield Ln	License: CID #6532
City/State/Zip: Watsonville, CA 95076	Phone: 831.840.0282

Registration Number: Registration Date/Time: HERS Provider:

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JAMES BLOMQUIST
CEA R16-15-20145
CERTIFIED GreenPoint RATER
CABEC California Association of Building Energy Consultants
CERTIFIED ENERGY PLANS EXAMINER
JAMES G. BLOMQUIST
NRO8-10-3719

Energy Compliance

Whiting Remodel & Addition
20 Plover Cr
Watsonville, CA 95076

6275

EN.1

8/4/2021

Exhibit D

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)1:	**Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283 or AAMA/WDMA/CSA 101/I.S.2/A440-2011.'
§ 110.6(a)5:	**Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.'
§ 110.7:	**Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	**Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	**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 placing insulation either above or below the roof deck or on top of a drywall ceiling'.
§ 150.0(b):	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	**Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies mean an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B.'
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.'
§ 150.0(f):	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d).
§ 150.0(g)2:	**Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58; 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)1:	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.
§ 150.0(e)3:	**Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.'
Space Conditioning, Water Heating, and Plumbing System 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 Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.'
§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.'
§ 110.3(c)4:	**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)4.
§ 110.3(c)6:	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.
§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters.'
§ 150.0(h)1:	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.

2019 Low-Rise Residential Mandatory Measures Summary

§ 150.0(k)2G:	**Interior Switches and Controls.** 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(o); and meets all other requirements in § 150.0(k)2.
§ 150.0(k)2H:	**Interior Switches and Controls.** A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2.
§ 150.0(k)2I:	**Interior Switches and Controls.** 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:	**Interior Switches and Controls.** 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:	**Interior Switches and Controls.** Under cabinet lighting must be controlled separately from ceiling-installed lighting systems.
§ 150.0(k)3A:	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must meet the requirement in item § 150.0(k)3Ai (ON and OFF switch) and the requirements in either § 150.0(k)3Aii (photocell) and either a motion sensor or automatic time switch control) or § 150.0(k)3Aiii (astronomical time clock), or an EMCS.
§ 150.0(k)3B:	**Residential Outdoor Lighting.** 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:	**Residential Outdoor Lighting.** 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:	**Internally illuminated address signs.** 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:	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
§ 150.0(k)6A:	**Interior Common Areas of Low-rise Multifamily Residential Buildings.** 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 comply with Table 150.0-A and be controlled by an occupant sensor.
§ 150.0(k)6B:	**Interior Common Areas of Low-rise Multifamily Residential Buildings.** 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: i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and 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.
Solar Ready Buildings:	
§ 110.10(a)1:	**Single Family Residences.** Single family residences located in subdivisions with 10 or more single family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b) through § 110.10(e).
§ 110.10(a)2:	**Low-rise Multifamily Buildings.** 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(d).
§ 110.10(b)1:	**Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. 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:	**Azimuth.** All sections of the solar zone located on sleep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north.
§ 110.10(b)3A:	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.'
§ 110.10(b)3B:	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the 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:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b) through § 110.10(c) must be provided to the occupant.
§ 110.10(e)1:	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric".

2019 Low-Rise Residential Mandatory Measures Summary

§ 150.0(h)3A:	**Clearances.** Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer
§ 150.0(h)3B:	**Liquid Line Drier.** Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	**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)2A:	**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)3:	**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 retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(j)1:	**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 draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour.
§ 150.0(j)2:	**Recirculating Loops.** Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.
§ 150.0(j)3:	**Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the Executive Director.
Ducts and Fans Measures:	
§ 110.8(d)3:	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	**CMC Compliance.** All air-distribution system ducts and plenums must meet the requirements of the CMC §§ 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. 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 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 fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ 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 area.
§ 150.0(m)2:	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	**Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage, 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 retardant and provides shielding from solar radiation.
§ 150.0(m)10:	**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)11:	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with § 150.0(m)11 and Reference Residential Appendix RA3.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Pressure drops and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service.*
§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.*

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

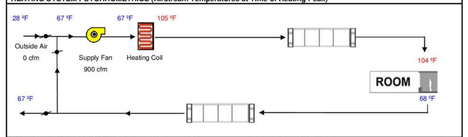
Project Name	Whiting Remodel & Addition
System Name	Res HVAC
Date	8/4/2021
Floor Area	2,280

ENGINEERING CHECKS	
Number of Systems	1
Heating System	
Output per System	53,000
Total Output (Btuh)	53,000
Output (Btuh/sqft)	23.2
Cooling System	
Output per System	48,000
Total Output (Btuh)	48,000
Total Output (Tons)	4.0
Total Output (Btuh/sqft)	21.1
Total Output (sqft/Ton)	570.0
Air System	
CFM per System	900
Airflow (cfm)	900
Airflow (cfm/sqft)	0.39
Airflow (cfm/Ton)	225.0
Outside Air (%)	0.0 %
Outside Air (cfm/sqft)	0.00

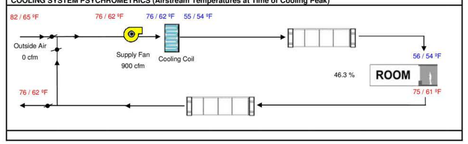
SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
	CFM	Sensible	Latent	CFM	Sensible
Total Room Loads	1,758	35,509	1,082	776	29,894
Return Vented Lighting		0			
Return Air Ducts		1,515			1,501
Return Fan		0			0
Ventilation	0	0	0	0	0
Supply Fan		0			0
Supply Air Ducts		1,515			1,501
TOTAL SYSTEM LOAD		38,539	1,082		32,895

HVAC EQUIPMENT SELECTION				
Std FAU no AC	47,160	0		34,928
Total Adjusted System Output (Adjusted for Peak Design conditions)	47,160	0		34,928
TIME OF SYSTEM PEAK	Aug 3 PM			Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



2019 Low-Rise Residential Mandatory Measures Summary

Requirements for Ventilation and Indoor Air Quality:	
§ 150.0(o)1:	**Requirements for Ventilation and Indoor Air Quality**. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1.
§ 150.0(o)1C:	**Single Family Detached Dwelling Units.** 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(o)1C.
§ 150.0(o)1E:	**Multifamily Attached Dwelling Units.** Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B 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(o)1F:	**Multifamily Building Central Ventilation Systems.** 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-B. 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(o)1G:	**Kitchen Range Hoods.** Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** 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 HVI 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):	**Certification by Manufacturers.** 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)1:	**Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	**Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	**Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	**Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.'
Lighting Measures:	
§ 110.9:	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.'
§ 150.0(k)1A:	**Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A.
§ 150.0(k)1B:	**Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device 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:	**Recessed Downlight Luminaires in Ceilings.** 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:	**Electronic Ballasts for Fluorescent Lamps.** 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:	**Night Lights, Step Lights, and Path Lights.** 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:	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).
§ 150.0(k)1G:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.'
§ 150.0(k)1H:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	**Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	**Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems.'
§ 150.0(k)2C:	**Interior Switches and Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.*
§ 150.0(k)2D:	**Interior Switches and Controls.** Controls and equipment must be installed in accordance with manufacturer's instructions.
§ 150.0(k)2E:	**Interior Switches and Controls.** 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:	**Interior Switches and Controls.** Lighting controls must comply with the applicable requirements of § 110.9.

ENERGY NOTES:

Attention designers, owners, builders. It is your responsibility to review the T24 documents for the required building features, and HERS measures.
If you have any questions, call before you build or buy.

The following values and systems are required for this project to meet the State Energy Code. Unless the performance calculation states otherwise please use these **NEW INSULATION VALUES Prescriptive Min.**
Performance Calculation are custom to your project and may be less REVIEW THE CF1R T24 DOCUMENTS.

NEW ENVELOPE PERFORMANCE
Calculation are custom to your project REVIEW THE CF1R T24 DOCUMENTS.

NEW WINDOW PERFORMANCE—REVIEW THE CF1R T24 DOCUMENTS
Please bring the CF-1R when you order your windows. Verify that the window values on the CF-1R are the same as the windows you buy and install.
Calculation are custom to your project REVIEW THE CF1R T24 DOCUMENTS.

NEW HVAC PERFORMANCE
Unless we are informed prior to performing the calculation these are the default values we will use.
93% AFUE FAU or higher
No planned AC
R-8 duct insulation Unless noted otherwise in T24 Calc
Ducts located in attic for worst case compliance.
ACCA Manual J, D&S calculations are required to be submitted for plan review, followed by installing contractor and field inspected for compliance. T24 Load calc is based on ACCA J and be used as sizing reference. See T24 load calc page.

SAMPLE EQUIPMENT (Use any equipment that matches the min efficiencies)

Indoor Air Quality (IAQ) House Fan: Per ASHRAE 62.2
29 CFM. 1 Sones Sound Rating Max./ Sample Model # Broan QTXE0
If this project is an addition under a 1,000 sf, the whole house fan is not required.
Kitchen Fan: 250 CFM 1.5 Sones. Example—Broan Sahale BKD Series | 7" smooth duct.
HVAC: FAU W/AC | AFUE: 95
Water Heater: Navien | EF: 95

Sample Sign for IAQ Fan:
To maintain minimum levels of outside air ventilation required for good health, the fan control should be on at all times when the building is occupied, unless there is severe outdoor air contamination.

The exhaust fan control(s) used for whole-building continuous operation is labeled to communicate the required continuous building ventilation function and importance with a statement to make clear how the control (e.g., on/off switch) is to be operated. At a minimum, the label should communicate: "to maintain minimum levels of outside air ventilation required for good health, the fan control should be on at all times when the building is occupied, unless there is severe outdoor air contamination." It is recommended that the label text should be in bold type, placed on a white background, and no smaller than the equivalent of Arial 12 point type. (Design)

HERS FEATURE SUMMARY is located in the CF1R. Make sure you review all of the REQUIREMENTS prior to beginning construction. For HERS Testing call 831-728-5503 for an appointment.

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JAMES G. BLOMQUIST
NR08-10-3719

Energy Compliance

Whiting Remodel & Addition
20 Plover Cr
Watsonville, CA 95076

6275

EN.2

8/4/2021

Exhibit D

Whiting Remodel & Addition

CALIFORNIA MANDATORY GREEN MEASURES

Division 4.5 ENVIRONMENTAL QUALITY CONT.

Description	Sheet
4.504.2.1 Adhesives, sealants and caulks. Adhesives, sealants and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply: 1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below. 2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with Section 94507.	A2,3
4.504.2.2 Paints and coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-high Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat- high Gloss VOC limit in Table 4.504.3 shall apply.	A2,3
4.504.2.3 Aerosol paints and coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(e)(1) and (f)(1) of California Code of Regulations, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.	A2,3
4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following: 1. Manufacturer's product specification. 2. Field verification of on-site product containers	A2,3
4.504.3 Carpet systems. All carpet installed in the building interior shall meet the testing and product requirements of one of the following: 1. Carpet and Rug Institute's Green Label Plus Program. 2. California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350.) 3. NSF/ANSI 140 at the Gold level. 4. Scientific Certifications Systems Indoor Advantage™ Gold.	A2,3
4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.	A2,3
4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.	A2,3
4.504.4 Resilient flooring systems. Where resilient flooring is installed, at least 80 percent of floor area receiving resilient flooring shall comply with one or more of the following: 1. Products compliant with the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350), certified as a CHPS Low-Emitting Material in the Collaborative for High Performance Schools (CHPS) High Performance Products Database. 2. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children & Schools program). 3. Certification under the Resilient Floor Covering Institute (RFCI) Floor Score program. 4. Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350).	A2,3
4.504.5 Composite wood products. 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 specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5.	A2,3
4.504.5.1 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following: 1. Product certifications and specifications. 2. Chain of custody certifications. 3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.). 4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269, European 636 3S, and Canadian CSA O121, CSA O151, CSA O153 and CSA O325 standards. 5. Other methods acceptable to the enforcing agency.	A2,3
4.505.1 General. Buildings shall meet or exceed the provisions of the California Building Standards Code.	A2,3
4.505.2 Concrete slab foundations. Concrete slab foundations required to have a vapor retarder by the CBC, Chapter 19 or concrete slab-on-ground floors required to have a vapor retarder by the California Residential Code, Chapter 5, shall also comply with this section.	A2,3
4.505.2.1 Capillary break. A capillary break shall be installed in compliance with at least one of the following: 1. A 4-inch-thick (101.6 mm) base of 1/2 inch (12.7 mm) or larger clean aggregate shall be provided with a vapor retarder in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06. 2. Other equivalent methods approved by the enforcing agency. 3. A slab design specified by a licensed design professional.	A2,3
4.505.3 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-percent 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 enforcing agency and shall satisfy requirements found in Section 101.8 of this code.2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece to be verified. 3. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing. 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 manufacturers' drying recommendations prior to enclosure.	A2,3
4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and shall comply with the following: 1. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building. 2. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control. a. Humidity controls shall be capable of adjustment between a relative humidity range of ≤ 50 percent to a maximum of 80 percent. A humidity control may utilize manual or automatic means of adjustment. b. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in). **Notes:** 1. For the purposes of this section, a bathroom is a room which contains a bathtub, shower, or tub/ shower combination. 2. Lighting integral to bathroom exhaust fans shall comply with the *California Energy Code*.	A4
4.507.2 Heating and air-conditioning system design. Heating and air-conditioning systems shall be sized, designed and have their equipment selected using the following methods: 1.The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J-2016 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods. 2.Duct systems are sized according to ANSI/ACCA 1 Manual D-2016 (Residential Duct Systems), ASHRAE handbooks or other equivalent design soft-ware or methods. 3.Select heating and cooling equipment according to ANSI/ACCA 3 Manual S-2014 (Residential Equipment Selection) or other equivalent design software or methods. Exception: Use of alternate design temperatures necessary to ensure the systems function are acceptable.	A2,3
4.106.4.3 New hotels and motels. All newly constructed hotels and motels shall provide EV spaces capable of supporting future installation of EVSE. The construction documents shall identify the location of the EV spaces.. **Notes:** 1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. 2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.	NA

Division 4.5 ENVIRONMENTAL QUALITY

Description	Sheet
4.501.1 Scope. The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating and/or harmful to the comfort and wellbeing of a building's installers, occupants and neighbors.	A2,3
4.503.1 General. Any installed gas fireplace shall be a direct vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.	A2,3
4.504.1 Covering of duct openings and protection of mechanical equipment during construction. 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 to the enforcing agency to reduce the amount of water, dust and debris, which may enter the system.	A2,3
4.504.2 Finish material pollutant control. Finish materials shall comply with this section.	A2,3

TABLE 4.504.1
ADHESIVE VOC LIMIT[1,2]
Less Water and Less Exempt Compounds in Grams per Liter

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesive	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesives not specifically listed	50
SPECIALTY APPLICATIONS	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
SUBSTRATE SPECIFIC APPLICATIONS	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

1. If an adhesive is used to bond dissimilar substrates together, the adhesive with the highest VOC content shall be allowed.
2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule

TABLE 4.504.5
FORMALDEHYDE LIMITS[1]
Maximum Formaldehyde Emissions in Parts per Million

PRODUCT	CURRENT LIMIT
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particleboard	0.09
Medium density fiberboard	0.11
Thin medium density fiberboard[2]	0.13

1. Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as tested in accordance with ASTM E1333. For additional information, see California Code of Regulations, Title 17, Sections 93120 through 93120.12.
2. Thin medium density fiberboard has a maximum thickness of 5/16 inch (8 mm).

TABLE 4.504.3
VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[2,3]

COATING CATEGORY	EFFECTIVE 1/1/2012
Flat coatings	50
Nonflat coatings	100
Nonflat-high gloss coatings	150
Aluminum roof coatings	400
Basement specialty coatings	400
Bituminous roof coatings	50
Bituminous roof primers	350
Bond breakers	350
Concrete curing compounds	350
Concrete/masonry sealers	100
Driveway sealers	50
Dry fog coatings	150
Faux finishing coatings	350
Fire resistive coatings	350
Floor coatings	100
Form-release compounds	250
Graphic arts coatings (sign paints)	500
High temperature coatings	420
Industrial maintenance coatings	250
Low solids coatings[1]	120
Magnesite cement coatings	450
Mastic texture coatings	100
Metallic pigmented coatings	500
Multicolor coatings	250
Pretreatment wash primers	420
Primers, sealers, and undercoaters	100
Reactive penetrating sealers	350
Recycled coatings	250
Roof coatings	50
Rust preventative coatings	250
Clear Shellacs	730
Opaque Shellacs	550
Specialty primers, sealers and undercoaters	100
Stains	250
Stone consolidants	450
Swimming pool coatings	340
Traffic marking coatings	100
Tub and tile refinish coatings	420
Waterproofing membranes	250
Wood coatings	275
Wood preservatives	350
Zinc-rich primers	340

1. Grams of VOC per liter of coating, including water and including exempt compounds.
2. The specified limits remain in effect unless revised limits are listed in subsequent columns in the table.
3. Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board.

TABLE 4.504.2
SEALANT VOC LIMIT

SEALANTS	CURRENT VOC LIMIT
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
SEALANT PRIMERS	
Architectural	
Nonporous	250
Porous	775
Modified bituminous	500
Marine deck	760
Other	750

Division 4.3 – WATER EFFICIENCY & CONSERVATION

Description	Sheet
4.301.1 Scope. The provisions of this chapter shall establish the means of conserving water used indoors, outdoors and in wastewater conveyance.	A2,3
4.303.1 Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with Sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.1.4.**Note:** All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.	A2,3
4.303.1.1 Water closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA Water Sense Specification for Tank-type Toilets. Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.	A2,3
4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.	NA
4.303.1.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA Water Sense Specification for Showerheads.	A2,3
4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time. **Note**: A hand-held shower shall be considered a showerhead.	A2,3
4.303.1.4.1 Residential lavatory faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.	A2,3
4.303.1.4.2 Lavatory faucets in common and public use areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.	A2,3
4.303.1.4.3 Metering faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.2 gallons per cycle.	NA
4.303.1.4.4 Kitchen faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi. **Note:** Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.	A2,3
4.303.2 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1701.1 of the California Plumbing Code.	A2,3
4.304.1 Outdoor potable water use in landscape areas. Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources` Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent. **Notes:** 1.The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code of Regulations, Title 23, Chapter 2.7, Division 2.MWELO and supporting documents, including a water budget calculator, are available at: https://www.water.ca.gov/	A1
4.305.1 Recycled water supply systems. Newly constructed residential developments, where disinfected tertiary recycled water is available from a municipal source to a construction site, may be required to have recycled water supply systems installed, allowing the use of recycled water for residential landscape irrigation systems. See Chapter 15 of the *California Plumbing Code*.	NA

Division 4.4 – MATERIAL CONSERVATION & RESOURCE EFFICIENCY

Description	Sheet
4.401.1 Scope. The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture; construction waste diversion; employment of techniques to reduce pollution through recycling of materials; and building commissioning or testing, adjusting and balancing.	GB.1
4.406.1 Rodent proofing. Annular spaces around pipes, electric 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 a similar method acceptable to the enforcing agency.	A1
4.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance. **Exceptions:** 1. Excavated soil and land-clearing debris. 2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite. 3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility	GB.1
4.408.2 Construction waste management plan. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency. 1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale. 2. Specify if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream). 3. Identify diversion facilities where the construction and demolition waste material will be taken. 4. Identify construction methods employed to reduce the amount of construction and demolition waste generated. 5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.	GB.1
4.408.3 Waste management company. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1. **Note:** The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.	GB.1
4.408.4 Waste stream reduction alternative [LR]. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 pounds per square foot of the building area shall meet the minimum 65 percent construction waste reduction requirement in Section 4.408.1	GB.1
4.408.4.1 Waste stream reduction alternative. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area, shall meet the minimum 65-percent construction waste reduction requirement in Section 4.408.1.	GB.1
4.408.5 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, Items 1 through 5, Section 4.408.3 or Section 4.408.4. **Notes:** 1.Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at http://www.hcd.ca.gov/building-stan-dards/calgreen/cal-green-form.shtml may be used to assist in documenting compliance with this section. 2.Mixed construction and demolition debris (C&D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).	GB.1
4.410.1 Operation and maintenance manual. At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building: 1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure. 2. Operation and maintenance instructions for the following: a. Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment. b. Roof and yard drainage, including gutters and downspouts. c. Space conditioning systems, including condensers and air filters. d. Landscape irrigation systems. e. Water reuse systems. 3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations. 4. Public transportation and/or carpool options available in the area. 5. Educational material on the positive impacts of an interior relative humidity between 30–60 percent and what methods an occupant may use to maintain the relative humidity level in that range. 6. Information about water-conserving landscape and irrigation design and controllers which conserve water. 7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation. 8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc. 9. Information about state solar energy and incentive programs available. 10. A copy of all special inspection verifications required by the enforcing agency or this code.	At Final
4.410.2 Recycling by occupants. Where 5 or more multifam-ily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the depositing, storage and collection of nonhazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are not required to comply with the organic waste portion of this section.	NA

Division 4.1 — Site & EV Charging

Description	Sheet
4.101.1 Scope. The provisions of this division outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.	A1
4.106.1 General. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.	A1
4.106.2 Storm water drainage and retention during construction. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site. 1.Retention basins of sufficient size shall be utilized to retain storm water on the site. 2.Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency. 3.Compliance with a lawfully enacted storm water management ordinance. Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil.(Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)	A1
4.106.3 Grading and paving. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following: 1. Swales 2. Water collection and disposal systems 3. French drains 4. Water retention gardens 5. Other water measures which keep surface water away from buildings and aid in groundwater recharge. **Exception:** Additions and alterations not altering the drainage path.	A1
4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Section 4.106.4.1, 4.106.4.2, or 4.106.4.3, to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625. **Exceptions:** 1.On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:1.1. Where there is no commercial power supply.1.2. Where there is evidence substantiating that meeting the requirements will alter the local utility infrastructure design requirements on the utility side of the meter so as to increase the utility side cost to the homeowner or the developer by more than $400.00 per dwelling unit. 2.Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.	NA
4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.	NA
4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".	NA
4.106.4.2 New multifamily dwellings. If residential parking is available, ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number. **Notes:** 1.Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. 2.There is no requirement for EV spaces to be con-structed or available until EV chargers are installed for use.	NA
4.106.4.2.1 Electric vehicle charging space (EV space) locations. Construction documents shall indicate the location of proposed EV spaces. Where common use parking is provided at least one EV space shall be located in the common use parking area and shall be available for use by all residents.	NA
4.106.4.2.1.1 Electric vehicle charging stations (EVCS). When EV chargers are installed, EV spaces required by Section 4.106.4.2.2, Item 3, shall comply with at least one of the following options: 1. The EV space shall be located adjacent to an accessible parking space meeting the requirements of the CBC, Chapter 11A, to allow use of the EV charger from the accessible parking space. 2. The EV space shall be located on an accessible route, as defined in the CBC, Chapter 2, to the building. Exception: Electric vehicle charging stations designed and constructed in compliance with the CBC, Chapter 11B, are not required to comply with Section 4.106.4.2.1.1 and Section 4.106.4.2.2, Item 3. Note: Electric vehicle charging stations serving public housing are required to comply with the CBC, Chapter 11 B.	NA
4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. The EV spaces shall be designed to comply with the following: 1. The min length of each EV space shall be 18 feet (5486 mm). 2. The minimum width of each EV space shall be 9 feet (2743 mm). 3. One in every 25 EV spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm). a. Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.	NA
4.106.4.2.3 Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EV space. Construction documents shall identify the raceway termination point. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit over current protective device.	NA
4.106.4.2.4 Multiple EV spaces required. Construction documents shall indicate the raceway termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide information on amperage of future EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at the full rated amperage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.	NA
4.106.4.2.5 Identification. The service panel or sub-panel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the *California Electrical Code*.	NA

INSTALLER AND SPECIAL INSPECTOR QUALIFICATIONS

702.1 Installer training. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following: 1. State certified apprenticeship programs. 2. Public utility training programs. 3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations. 4. Programs sponsored by manufacturing organizations. 5. Other programs acceptable to the enforcing agency.

702.2 Special inspection. [HCD] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector: 1. Certification by a national or regional green building program or standard publisher. 2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors. 3. Successful completion of a third party apprentice training program in the appropriate trade. 4. Other programs acceptable to the enforcing agency. Notes: 1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code. 2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

[BSC-CG] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency. Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

703.1 Documentation. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified in the application checklist.

Construction Waste Management Plan (CWMP)

Construction Waste Management Plan can be deferred submittal until such a time as a contractor is chosen

Project Whiting Remodel & Addition
20 Plover Cr
Watsonville, CA 95076

Building Permit #: ____________

Square Footage: 265 Addition sf

Owner: ______________________ **Phone**:______________

Project Manager / Contractor : ______________________

Phone:__________ **Cell:** __________ **email:** __________

Waste Hauling Company: ______________ **Phone**:__________

Disposal Service Company: ______________ **Phone**:__________

Sub Contractor : ______________________

Phone:__________ **Cell:** __________ **email:** __________

Sub Contractor : ______________________

Phone:__________ **Cell:** __________ **email:** __________

Sub Contractor : ______________________

Phone:__________ **Cell:** __________ **email:** __________

Responsible Designer's Declaration Statement I hereby certify that this project has been designed to meet the requirements of the 2019 California Green Building Standards Code.	**Contractor Declaration Statement** I hereby certify, as the builder or installer under the permit listed herein, that this project will be constructed to meet the requirements of the California Green Building Standards Code.
Name: Erin Loftin Serventi	Name:
Signature: Erin L Serventi	Signature:
Date: 8/4/21	Date:
Company: E L Designs	License:
Address: 65 Litchfield Ln	Address:
City: State: Zip: Watsonville CA 95076	City: State: Zip:

The purpose of this plan is to identify and outline the methods to be used as the minimum requirements for a construction waste management plan when the local jurisdiction does not have a construction and demolition waste management ordinance per Section 4.408.2.

1. The method of waste tracking to be used on this project will be: (Check one box)

   ☐ **Volume** ☐ **Weight** ☐ **4 Lbs. per Sq. Ft.** ☐ **Recycling Facility**

2. Construction waste generated on this project for transport to a recycling facility will be: (Check appropriate box)

   ☐ **Sorted on-site (Source-separated)** ☐ **Bulk mixed (Single stream)**

3. The facility (or facilities) where the construction waste material will be taken is:

   Name of Facility:______________________
   Address:______________________
   Telephone:______________________
   (Attach separate sheet for additional facilities)

4. The following construction methods will be used to reduce the amount of waste generated: (Check all that apply)

   ☒ Efficient design (dimensions of building components are designed to available material sizes or standard sizes).
   ☒ Careful and accurate material ordering.
   ☒ Careful material handling and storage.
   ☐ Panelized or prefabricated construction.
   ☐ Other ______________________
   ☐ Other ______________________

5. Waste reduction and recycling strategies shall be discussed at periodic project meetings. Each new Contractor that comes onto the site shall be provided with a copy of the CWMP, which shall also be posted in the project office. The Project Manager shall also instruct all Subcontractors as to the location and proper use of debris boxes for disposal of construction waste materials.

6. Every effort shall be made to use recycling and/or reuse (diversion) measures to reduce the amount of construction waste and other materials sent to landfills. Whenever possible, site sorted debris boxes shall be used to segregate construction waste materials to maximize the diversion rate.
7. The Contractor shall provide debris boxes for materials sorted on-site (source-separated) and/or bulk mixed (single stream) waste for all construction related waste generated on this project. Mixed construction waste shall be taken to a recycling facility that has a diversion rate of at least 65 percent. In the event that a Subcontractor provides their own debris box, they shall be responsible for providing the Contractor with a monthly report of the total Recycled and Reused (Diverted) and the total Non-Recycled (Disposed) materials to be included in the project's overall waste management/waste reduction program.
8. Any Supplier hauling away packaging or waste materials shall notify the Contractor of the amount of these materials and how they will be disposed of (reused, recycled, salvaged, or taken to landfill).
9. Identified below are the construction waste materials that will be reused and/or recycled during the course of this project and how they will be diverted:

Material	Diversion Method: (Recycle/Reuse)
CONCRETE / ASPHALT	
LUMBER	
CARPET / PAD	
INSULATION	
METAL	
SHEETROCK	
CARDBOARD	
TRASH	

(See Construction Waste Management Worksheets for examples of common materials.)

10. The Waste Hauler shall track the total amount of construction waste leaving the project by weight or by volume and supply the Contractor with copies of tickets or detailed receipts from all loads of construction waste removed from the jobsite.
11 . The Contractor shall monitor the process of waste management, recycling, and reuse of construction waste materials to ensure compliance with the CWMP during the course of the project.
12. The Contractor shall ensure that all supporting documentation which demonstrates compliance with the waste management plan is provided to the local enforcement agency upon completion of the project.

Exhibit D

www.apges.com

A Plus Green Energy Services
831.728.7717
408.310.0081

Federally Approved Contractor

Licensed California Contractor
A & B 665195

ICC Building Inspector
B1 & B2 8023419

CHEERS HERS Rater CCN81086842

CBPCA HERS Rater 1095717

CABEC
Certified Energy Plans Examiner

Build it Green
Certified Green Building Professional
Rater / Advisor

A Plus Green Energy Services
41C Hangar Way ▪ Watsonville, CA 95076 ▪ 408-310-0081 ▪ www.apges.com

CERTIFIED HERS RATER / ENERGY ANALYSTS
In tomorrow's California, the sustainability of our environment and the preservation of our beautiful resources will be aided by responsible and professional analysis of our energy needs and uses.

JAMES BLOMQUIST
CEA R16-15-20145

CERTIFIED GreenPoint RATER™

Title 24 Part 11
CalGreen Code

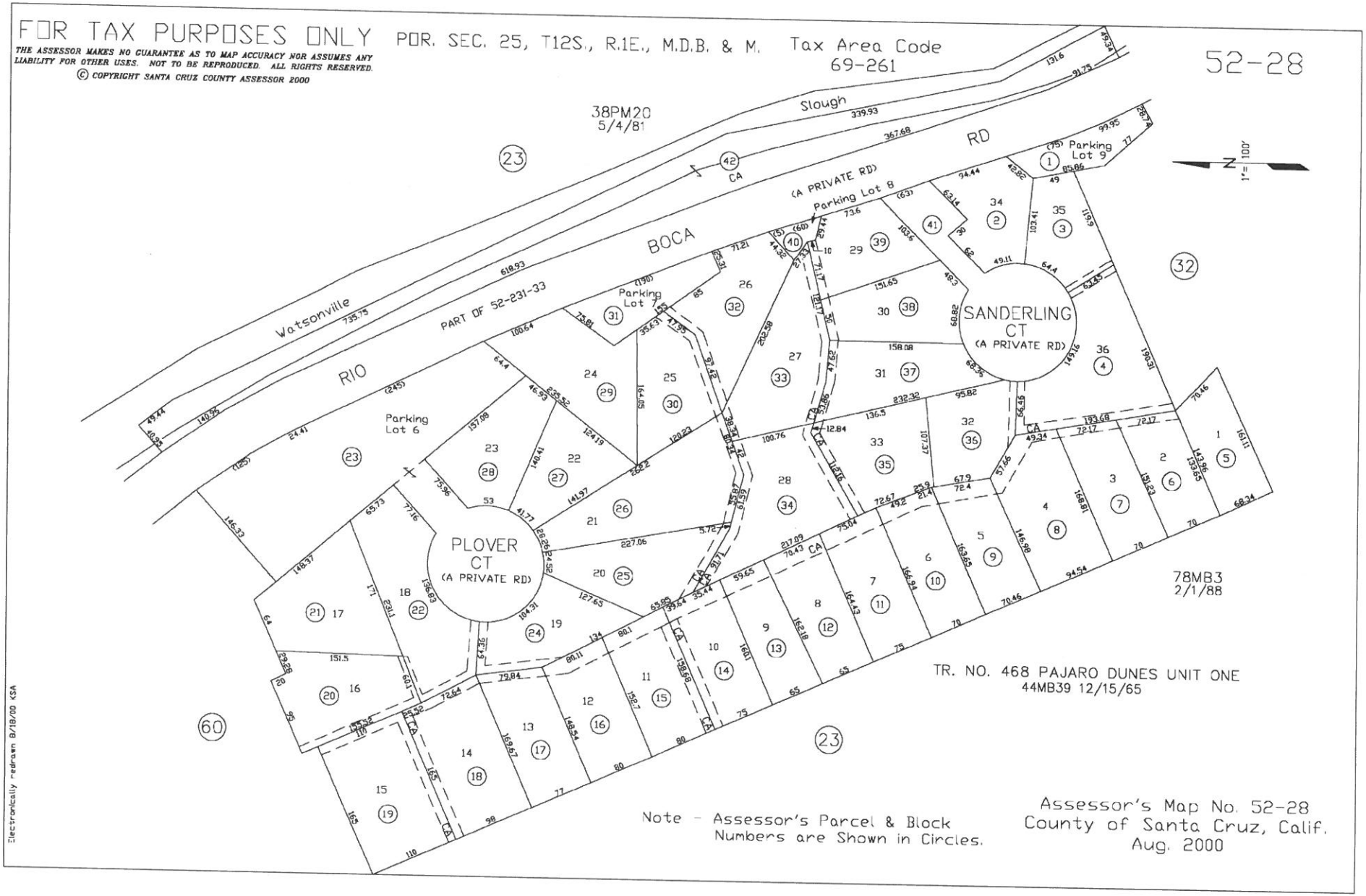
CalGreen Mandatory

Whiting Remodel & Addition
20 Plover Cr
Watsonville, CA 95076

Project id 6275

GB.1

8/4/2021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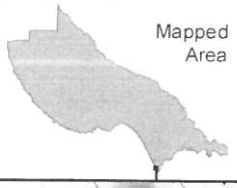
POR. SEC. 25, T12S., R.1E., M.D.B. & M.
Tax Area Code 69-261
52-28
38PM20 5/4/81
78MB3 2/1/88
TR. NO. 468 PAJARO DUNES UNIT ONE
44MB39 12/15/65
Slough
Watsonville
RIO
BOCA
RD
(A PRIVATE RD)
Parking Lot 6
Parking Lot 7
Parking Lot 8
Parking Lot 9
PART OF 52-231-33
SANDERLING CT (A PRIVATE RD)
PLOVER CT (A PRIVATE RD)
1" = 100'
Note - Assessor's Parcel & Block Numbers are Shown in Circles.
Assessor's Map No. 52-28
County of Santa Cruz, Calif.
Aug. 2000
Electronically redrawn 8/18/00 KSA

SANTA CRUZ COUNTY PLANNING DEPARTMENT

Parcel Location Map



Parcel: 05228125

- Study Parcel
- Assessor Parcel Boundary
- Existing Park

Map printed: 9 Nov. 2022

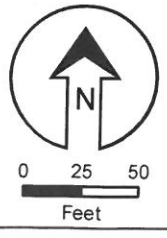
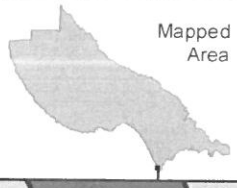


EXHIBIT E

SANTA CRUZ COUNTY PLANNING DEPARTMENT

Parcel Zoning Map



CA

PR

SU

052-281-25
(SU)

PR

CA *Commercial Agriculture*
PR *Parks, Recreation, & Open Space*
SU *Special Use*

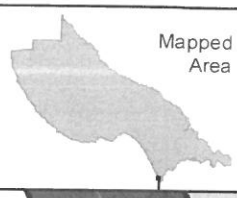
N

0 25 50
Feet

EXHIBIT E

SANTA CRUZ COUNTY PLANNING DEPARTMENT

Parcel General Plan Map



AG

O-R

R-UL

052-281-25
(R-UL)

O-R

AG *Agricultural*
O-R *Parks, Recreation & Open Space*
R-UL *Res. Urban Low Density*

N

0 25 50
Feet

EXHIBIT E

Parcel Information

Services Information

Urban/Rural Services Line:	_X_ Inside __ Outside
Water Supply:	Watsonville Water District
Sewage Disposal:	Sanitation District
Fire District:	Pajaro Fire Protection District
Drainage District:	Flood Control District 7

Parcel Information

Parcel Size:	13,983 square feet
Existing Land Use - Parcel:	Residential
Existing Land Use - Surrounding:	Residential/Parks and Recreation
Project Access:	Plover Circle
Planning Area:	San Andreas
Land Use Designation:	R-UL (Urban Low Density Residential)
Zone District:	SU (Special Use)
Coastal Zone:	_X_ Inside __ Outside
Appealable to Calif. Coastal Comm.	_X_ Yes __ No

Technical Reviews: REV221106 (Geotechnical Review), REV221107 (Biotic Review)

Environmental Information

Geologic Hazards:	Beach dune
Fire Hazard:	Not a mapped constraint
Slopes:	Gentle slopes
Env. Sen. Habitat:	Mapped resource, see REV221107
Grading:	Grading for foundation only
Tree Removal:	No trees proposed to be removed
Scenic:	Mapped scenic resource
Archeology:	Not mapped

County of Santa Cruz

DEPARTMENT OF COMMUNITY DEVELOPMENT AND INFRASTRUCTURE

701 OCEAN STREET, FOURTH FLOOR, SANTA CRUZ, CA 95060-4070
Planning (831) 454-2580 Public Works (831) 454-2160

Matt Machado, Deputy CAO, Director of Community Development and Infrastructure

Carolyn Burke	Stephanie Hansen	Kent Edler	Steve Wiesner	Travis Cary	Kim Moore
Assistant Director	*Assistant Director*	*Assistant Director*	*Assistant Director*	*Director*	*Assistant Director*
Unified Permit Center	*Housing & Policy*	*Special Services*	*Transportation*	*Capital Projects*	*Administration*

September 22, 2022

Erin L. Serventi
65 Litchfield Lane
Watsonville, CA 95076
erin@eldesignsco.com

Subject: 20 Plover Circle Remodel and Addition - Biotic Report Review and Conditioned Biotic Approval
APN: 052-281-25
Application #: REV221107; 221079; B-214819

Attachment 1. Biotic Report

Dear Ms. Serventi,

The Planning Department received and reviewed a Biotic Report dated December 3, 2021 prepared by Biotic Resources Group and Bryan Mori Biological Consulting Services for 20 Plover Circle (Attachment 1). The Biotic Report Review was required because of the potential for sensitive habitats and protected species on this parcel where remodeling and adding an addition to an existing single-family residence is proposed. The project is located in the Pajaro Dunes gated community within the Coastal Zone and is accessed from a pedestrian walkway via Plover Circle or Rio Boca Road. There is no vehicular access directly to the house.

The proposed project includes construction of an approximately 266 square foot addition to an existing three-story single-family dwelling, an enclosed storage area, construction of new deck/patio and concrete walking areas, at the first, second, and third levels, and replacement of all windows, exterior siding, and roofing materials.

The existing development footprint on the parcel is approximately 1,882 square feet including existing pathways, decks, and the residence. The project would result in an increase in the developed footprint on the parcel by 1,246 square feet including the building additions, new patio/walkway areas, and new upper level decking with added footings/piers at ground level. An additional 1,500 square feet of temporary impacts are expected to result from construction activities in an estimated construction zone around the proposed development, and additional temporary impacts may result from construction access.

Baseline Environmental Conditions

The Study Area covered in the biotic reports includes the entire approximately 0.32-acre parcel 052-281-25. The parcel is currently developed with one single family dwelling and two raised walkways. The Biotic Report identifies three community types in the study area: coastal dune scrub, ice plant mats, and barren dune.

EXHIBIT G

Coastal dune scrub on the property consists of both native dune habitat dominated by silver bush lupine and mock heather, and degraded dune habitat which supports dense stands of non-native European dune grass and ice plant. Intact coastal dune scrub dominated by native species occurs in one area west of the residence outside of the proposed impact areas. The majority of the parcel contains degraded coastal dune scrub dominated by non-native iceplant and European dune grass. A small percentage of native species are present in these areas. The area immediately surrounding existing development is barren sand where only scattered herbaceous species are present. Habitat types identified on the parcel and the location of special-status plant species are depicted in Figure 2 of the attached Biotic Report.

Analysis

Coastal Dune Scrub, Dune Plant Habitat, and habitat for special-status species are considered sensitive under Santa Cruz County's Sensitive Habitat Protection ordinance (Chapter 16.32). The purpose of Chapter 16.32 is to minimize the disturbance of biotic communities which are rare or especially valuable because of their special nature or role in an ecosystem. The project site is located on a coastal dune and the entire parcel is considered sensitive habitat.

Biological Resources including special-status species and their habitats and other sensitive natural communities as identified by local policies, CDFW, or USFWS are also protected under the California Environmental Quality Act (CEQA). Additionally, Coastal Dune Scrub, Dune Plant Habitat, and habitat for special-status species are offered special protections under the California Coastal Act as Environmentally Sensitive Habitat Areas (ESHA). Santa Cruz County Code Section 13.20.130(B)(2) includes requirements for minimizing site disturbance associated with grading, earth moving, and removal of major vegetation in the Coastal Zone.

The project site contains potential habitat for several special-status plant species including Monterey paintbrush, Federally endangered robust spineflower, and Federally threatened Monterey spineflower. Table 2 in the attached Biotic Report gives an overview of the plant species that were evaluated. Monterey paintbrush was not observed in the project Study Area during surveys conducted within the evident and identifiable period for this species. Focused rare plant surveys for robust spineflower and Monterey spineflower were not completed as part of this Biotic Report.

The project site contains suitable habitat for Northern California legless lizard (*Anniella pulchra*), a State Species of Special Concern. Table 3 gives an overview of the wildlife species that were evaluated.

The property and surrounding areas also contain potential habitat for nesting birds. Birds of prey and migratory birds are protected under the California Fish and Game Code, as well as the Federal Migratory Bird Treaty Act (MBTA). Under the MBTA, it is unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill" a migratory bird unless and except as permitted by regulations.

The proposed project will result in 1,246 square feet of permanent impacts and approximately 1,500 square feet of temporary impacts to coastal dune. Additional temporary impacts may occur due to construction access.

Conditions have been included below to protect special-status species, and to compensate for temporary and permanent impacts to sensitive dune habitat.

Conclusion

Dune habitat occurs throughout the property and cannot be avoided by an alternative project design. This project involves expansion of the building footprint and decking immediately adjacent to the existing house footprint and would permanently impact approximately 1,246 square feet. The anticipated impacts were minimized during project design by concentrating development within and directly adjacent to the existing developed areas where primarily barren sand occurs. This area is largely shaded by the existing structure.

EXHIBIT G

Areas of in-tact native dune habitat on the property will be avoided during construction. Conditions are included below to ensure avoidance and/or minimization of impacts to special-status species, their habitats, and other sensitive habitats to the maximum extent possible. All areas of temporary disturbance must be re-vegetated with native dune plant species, and permanent impacts will be compensated for by restoring degraded dune scrub habitat on the parcel at a 3:1 ratio following a restoration plan prepared and implemented by a qualified restoration professional.

There are sensitive habitat constraints on the project site associated with coastal dune scrub habitat, and special-status species that must be considered prior to and during project implementation. Conditions have been included below to ensure that project activities are consistent with County policies for protection of sensitive species and habitats.

The Conditions of Approval below shall be incorporated into all phases of development for this project and shall also apply to all future development activities engaged in on the property.

If you have any questions regarding this letter, please feel free to contact me by email or telephone at Juliette.Robinson@santacruzcounty.us or 831-454-3156.

Sincerely,

Juliette Robinson
Resource Planner IV, Biologist

CC: Ian and Helen Whiting, Property Owners
Matt Johnston, Environmental Coordinator
Leah MacCarter, Area Resource Planner

EXHIBIT G

Conditions of Approval

In order to conduct development activities on APN 052-281-25, the following conditions shall be adhered to. The Conditions of Approval below shall be incorporated into all phases of development for this project (221079; B-214819) and shall also apply to all future development activities proposed on the property.

1. Prior to any site disturbance, a pre-construction meeting shall be conducted. The purpose of the meeting will be to ensure that the conditions set forth in the proposed project description and Conditions of Approval are communicated to the various parties responsible for constructing the project. The meeting shall involve all relevant parties including the project proponent, construction supervisor, Environmental Planning Staff, and the project biologist.
2. Recommended Avoidance and Minimization measures BIO-1, BIO-2, BIO-3, BIO-4, BIO-5 of the attached Biotic Report dated December 3, 2021 prepared by Biotic Resources Group and Bryan Mori Biological Consulting Services shall be adhered to.
3. Focused rare plant surveys (as outlined in BIO-1) shall be conducted during the evident and identifiable period for special-status species with potential to occur. The results shall be submitted with the building permit application for review by Environmental Planning Staff.
    a. If protected plant species are found in the proposed project impact area, these species shall be avoided and incorporated into the Habitat Restoration Plan outlined below.
    b. If these species cannot be avoided during construction, additional impact analysis shall be completed. Additional biotic review and Conditions of Approval may apply.
    c. Within 30 days prior to commencement of construction, the location and boundaries of any existing special-status plant species identified on the property shall be re-confirmed by a qualified biologist. High visibility construction fencing and silt fencing shall be installed around these plants as indicated in Condition 6 below.
4. If a special-status animal is identified at any time prior to or during construction, work shall cease immediately in the vicinity of the individual. The animal shall either be allowed to move out of harm's way on its own or a qualified biologist shall move the animal out of harm's way to a safe relocation site.
5. Every individual working on the Project must attend biological awareness training prior to working on the job site. The training shall be delivered by a qualified biologist and shall include information regarding the location and identification of sensitive habitats and all special-status species with potential to occur in the project area, the importance of avoiding impacts to special-status species and sensitive habitats, and the steps necessary if any special-status species is encountered at any time.
6. Heavy equipment access to the construction site shall be avoided as much as possible. If hand excavation is determined infeasible, the access path for a small skid-steer or mini excavator shall be kept to the minimum disturbance needed to access the site. Intact native dune scrub habitat and any rare plant species identified on site shall be avoided, and all areas temporarily disturbed for equipment access shall be included in the final impact calculations and re-vegetated with native dune plant species as specified in the project specific Restoration Plan outlined below.
7. Prior to commencement of construction, high visibility fencing and/or flagging shall be installed with the assistance of a qualified biologist to indicate the limits of work and prevent inadvertent grading equipment staging, vehicular access, or other disturbance within the adjacent sensitive habitat areas.
    a. Intact native dune plant habitat on the parcel shall be protected as sensitive habitat and avoided during construction.

b. No work-related activity including equipment staging, vehicular access, grading and/or vegetation removal shall be allowed outside the designated limits of work.

c. Special-status plants located near or within the project impact area shall be identified, protected with high visibility fencing, and avoided during construction. Silt fencing shall also be installed around protected plant colonies.

d. The fencing/flagging shall be inspected and maintained daily until project completion.

8. To compensate for impacts to Coastal Dune habitat, and habitat for special-status species, and to comply with the Santa Cruz County General Plan Policy 5.1.12, restoration of degraded sensitive habitat on site is required. All restoration activities shall follow the project-specific Habitat Restoration Plan outlined below.

   a. All areas temporarily disturbed as a result of the project shall be re-vegetated with native dune plant species with the purpose of restoring the native plant structure and species composition of local Coastal Dune habitat.

   b. Permanent impacts to Coastal Dune habitat shall be compensated for by restoring degraded Coastal Dune habitat at a minimum 3:1 ratio (minimum 3,738 square feet) in suitable areas on site as recommended in Figure 14 of the attached Biotic Report and the project specific Habitat Restoration Plan.

9. A project-specific Habitat Restoration Plan shall be prepared by a qualified biologist or restoration professional as outlined in BIO-3 of the attached Biotic Report. Restoration activities shall be focused on restoring the native plant structure and species composition of local Coastal Dune habitat on the subject parcel. The Habitat Restoration Plan must include the following minimum elements:

   a. A table with the final post-construction permanent and temporary impact calculations.

   b. A map of all designated restoration areas including:

      i. Identification of areas on site where temporary disturbance and re-establishment of native habitat shall occur.
      ii. Identification of additional restoration areas intended to compensate for permanently impacted dune habitat at 3:1 ratio.
      iii. The location of existing special-status plant colonies on the property to be protected during and after construction and monitored for success.

   c. Plan for removal of non-native species and a management strategy to control re-establishment of invasive non-native species on the remainder of the parcel to help prevent the spread and continued encroachment of invasive species into restored areas.

   d. A planting plan with species, size, and locations of all restoration plantings. These plantings shall occur at sizes and ratios determined by the restoration specialist to adequately restore native habitat while maximizing plant health and survivability of individual plants.

   e. Information regarding the methods of irrigation for restoration plantings.

   f. The Habitat Restoration Plan shall include a 5-year Management Plan for maintenance and monitoring of restored areas, including a proposed mechanism for evaluating success. Annual reports outlining the progress and success of the restoration and monitoring shall be submitted to the County Environmental Coordinator by December 31 of each monitoring year.

   g. In addition to the required 5-year annual monitoring and reporting, a 10-year monitoring report shall be prepared and submitted to the County Environmental Coordinator outlining the

continued implementation and results of annual Coastal Dune Scrub Management over the 10-year period.

10. The Habitat Restoration Plan shall be submitted to Environmental Planning staff for approval prior to implementation and shall be implemented prior to final building inspection.
11. Any seed mix used for erosion control purposes on exposed soils shall be limited to seeds of native species common to the surrounding habitat and/or sterile seeds.

A copy of this biotic approval, including all attachments, should be submitted with any future permit applications.

20 Plover Circle, Watsonville, CA
(APN 052-281-25)
Residential Remodel and Addition

Biotic Report

December 3, 2021

Biotic Resources Group

Biotic Assessments ◆ Resource Management ◆ Permitting

Biotic Resources Group

Biotic Assessments ◆ Resource Management ◆ Permitting

20 Plover Circle, Watsonville, CA (APN 052-281-25) Residential Remodel and Addition

Biotic Report

Prepared for
Ian Whiting

Prepared by

Kathleen Lyons
Biotic Resources Group

And

Bryan Mori
Bryan Mori Biological Consulting Services

December 3, 2021

2551 S. Rodeo Gulch Road #12 ◆ Soquel California ◆ (831) 476-4803 ◆ brg@cruzio.com

EXHIBIT G

EXECUTIVE SUMMARY

A remodel and addition are proposed for an existing single-family residence on the parcel at 20 Plover Circle. The parcel is located within the Pajaro Dunes development and is accessed from Beach Road and Rio Boca Road. The property is located within the Santa Cruz County coastal zone.

A biotic assessment was conducted in fall 2021 to document plant and wildlife resources on the property, with a focus given to areas proposed for residential development (addition to structure). The parcel was found to support coastal dune scrub, including degraded scrub dominated by ice plant mat and European dune grass. Bare ground is also present around the edge of the existing dwelling. Coastal dune scrub and dunes are considered to be sensitive habitats under County Code. No rare or locally unique plant species was found to occur on site; however, some areas of dune scrub and bare sand provide suitable habitat. The fall season survey could not determine presence or absence of annual plant species of concern. The project site and/or the immediate surrounding area support potential habitat for California legless lizard (*Anniella pulchra*), a state species of special concern. Additionally, depending on the period of construction, the project area also could support nesting birds protected under the Migratory Bird Treaty Act.

The 0.32-acre parcel currently supports a single-family residence, with a development footprint of approximately 1,882 square feet (existing pathways, decks, and residence). The post-project ground surface footprint will be increased by 1,246 square feet, comprised of 265 square feet for building additions, 432 square feet for slab patio/walkway, and 549 square feet for new middle level decking (with new deck footings at ground level) (Foundation Plan and Main Floor Framing Plan, Andrew Radovan, Civil Engineering, Inc., 6/28/21). The areas affected are currently bare sand or support degraded scrub or ice plant mat. A 10-foot construction zone outward of the final structure will temporarily disturb approximately 1,500 square foot of degraded dune scrub, ice plant mat or bare sand. All construction material staging will occur off-site within the Plover Circle parking lot.

This report contains recommendations for a spring plant survey, pre-construction surveys for nesting birds and construction-period monitoring for California legless lizard. As compensation for project impacts, the report recommends areas temporarily affected by construction be restored/enhanced at a 1:1 ratio (1,500 square feet). The report recommends permanent impacts be compensated by restoring/enhancing degraded dune scrub on the parcel at a 3:1 ratio (3,738 square feet). Successful implementation of these measures will reduce impacts to sensitive biological resources to a less than significant level.

Intended Use of this Report

The findings presented in this biological report are intended for the sole use of the current property owner (Ian Whiting) and Santa Cruz County in evaluating the proposed residential project. The findings presented by the Biotic Resources Group in this report are for information purposes only; they are not intended to represent the interpretation of any State, Federal or County law or ordinance pertaining to permitting actions within sensitive habitat or endangered species. The interpretation of such laws and/or ordinances is the responsibility of the applicable governing body.

INTRODUCTION

The Biotic Resources Group and Bryan Mori Biological Consulting Services assessed the biotic resources of the parcel in fall 2021. The focus of the assessment was to identify sensitive biological resources on the parcel and evaluate potential impacts to such resources from the proposed development. Measures to avoid, reduce or compensate for significant impacts were also identified. The findings of this evaluation are presented in this report.

Proposed Project

The project site is located along the southwest side of Plover Circle within the Pajaro Dunes residential development. The 13,982 square-foot parcel is accessed from a pedestrian walkway from Plover Circle; there is no vehicular access to the parcel.

The parcel currently supports a single-family residence, with a development footprint of 1,882 square feet (existing pathway and residence, including decks). The proposed project is a remodel of the interior and additions to the exterior. On the ground level, the additions total 2665 square feet consisting of 97 square feet to bedroom 1, 40 square feet to bedroom 2, 43 square feet to the dining room, and 85 square feet to the master bedroom. The project also includes 432 square feet of slab on-grade patio and walkway and a new 549 square foot deck on the middle level (with new deck footing at ground level). The project also includes 237 square feet of non-habitable areas under existing porches and in the entry area. Other work includes a new 30 square foot deck to the upper level. The post-project ground surface footprint will be increased by 1,246 square feet (Foundation Plan and Main Floor Framing Plan, Andrew Radovan, Civil Engineering, Inc., 6/28/21).

The project will result in permanent impacts to 1,246 square feet of ground. The areas affected are currently bare sand, degraded scrub, or ice plant mat. A 10-foot construction zone outward of the final structure will temporarily disturb approximately 1,500 square foot of degraded dune scrub; these areas currently support degraded dune scrub, ice plant mat, or are bare sand. All construction material staging will occur off-site within the Plover Circle parking lot.

The project site and/or the immediate surrounding area support potential habitat for California legless lizard (*Anniella pulchra*), a state species of special concern. Additionally, depending on the period of construction, the project area also could support nesting birds protected under the Migratory Bird Treaty Act. Recommendations to avoid/minimize impacts to special-status species and nesting birds are included in this report.

No special status plant species were found on the project site; however, there is the potential for Monterey spineflower to be present. In addition, the coastal dune scrub is a sensitive habitat under County Code. Recommendations to avoid/minimize impacts to special-status plant species and sensitive habitat are included in this report. As compensation for project impacts, areas temporarily affected by construction will be restored/enhanced at a 1:1 ratio (1,500 square feet). Permanent impacts will be compensated by enhancing degraded dune scrub on the parcel at a 3:1 ratio (3,738 square feet).

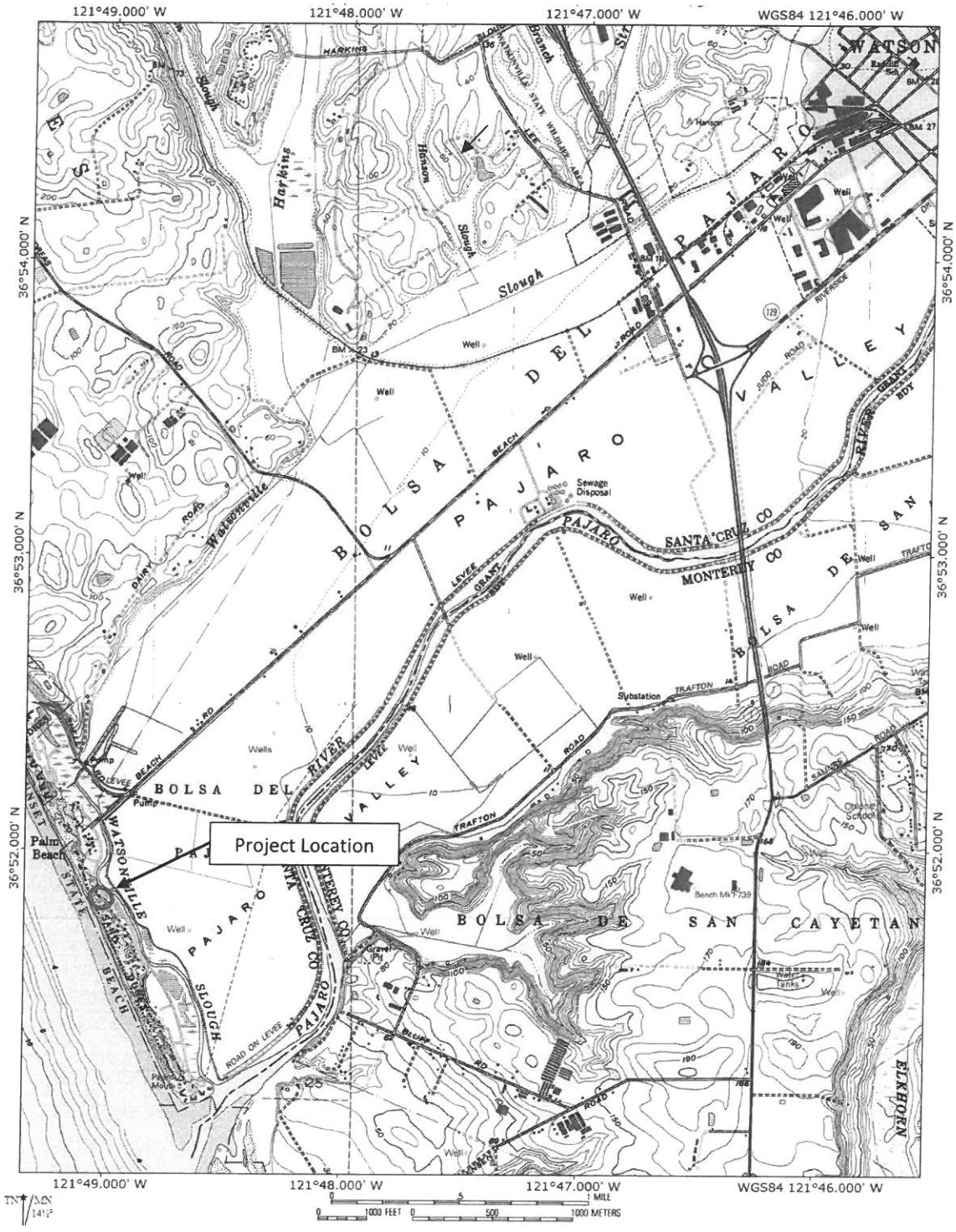


Figure 1. Location of 20 Plover Circle (USGS Watsonville West Topographic Map)

EXHIBIT G

METHODOLOGY

Vegetation Resources

The botanical resources on the parcel were assessed through literature review and field observations. A site survey was conducted by Kathleen Lyons (plant ecologist) on November 17, 2021 to assess the proposed development area and surrounding areas of the parcel for sensitive habitat and/or potential rare species/habitat. The proposed development area outward of the footprint of the existing dwelling and surrounding portions of the property were traversed on foot to identify biological resources and habitat conditions. Site features were recorded in a notebook.

Vegetation was documented during the field surveys. The major plant communities on the parcel, based on the classification system in California Natural Communities List (CaCode) (California Department of Fish and Game, 2020) and *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995) and as amended to reflect site conditions, were identified during the field survey. Modifications to the classification system's nomenclature were made, as necessary, to accurately describe the site's resources. The *Jepson Manual – Vascular Plants of California* (Baldwin, etal, 2012) and *An Annotated Checklist of the Vascular Plants of Santa Cruz County, California* (CNPS, 2013) were the principal taxonomic references used for the botanical work.

To assess the potential occurrence of special status botanical resources, two electronic databases were accessed to determine recorded occurrences of sensitive plant communities and sensitive species. Information was obtained from the California Native Plant Society's (CNPS) Electronic Inventory (2021), and California Department of Fish & Wildlife (CDFW) RareFind database (CDFW, 2021) for the Watsonville West USGS quadrangle and surrounding quadrangles. The September 2021 field survey was conducted outside the blooming/identification period for several special status plant species; however, the suitability of the site to support such species was determined based on a review of soil conditions, compaction, and condition of existing vegetation and the plant ecologist's knowledge of the field conditions required for the species.

Wildlife Resources

Prior to conducting the field visit, Bryan Mori conducted a background literature search to identify special-status species that have the potential to inhabit the project site vicinity, based on documented occurrences, species' range distributions, and on-site habitat conditions. The primary sources for this search included: California Natural Diversity Data Base (CNDDB) (CDFG 2021); Santa Cruz County Breeding Birds Atlas Project: Atlasser's Assistant (Suddjian 1990), California Amphibian and Reptile Species of Special Concern (Thomson *et al* 2016); California Bird Species of Special Concern (Shuford and Gardali 2008); *Draft* Mammalian Species of Special Concern in California (Bolster 1998); eBird (https://ebird.org) and personal observations.

A reconnaissance-level survey to evaluate existing conditions at the project site was performed on November 10, 2021. The project parcel was traversed on foot, focusing on the areas of anticipated ground disturbances and the immediate adjacent habitats. Wildlife species and habitat characteristics observed were recorded in a field notebook and the project area photographed.

RESULTS

The project site supports three vegetation types: coastal dune scrub, ice plant mats, and barren dunes. As portrayed in Table 1 below, areas of intact coastal dune scrub, comprised of silver bush lupine and mock heather, occur on site. Degraded dune scrub areas are also present; these areas support native plant species; however, these areas support significant cover by non-native European dune grass and ice plant. The distribution of these vegetation types is presented on Figure 2.

Table 1. Plant Community Types, 30 Plover Circle

General Plant Community Type	CDFW Alliance	Alliance Code	Sensitive?
Coastal Dune Scrub	Silver bush lupine – mock heather scrub	32.160.00	Y (CNDDB) Y (County)
	European beach grass swards	42.010.00	N (CNDDB) Y (County)
	Ice Plant Mat	None	N (CNDDB) Y (County)
Stabilized Dune	Bare	None	N (CNDDB) Y (County)

Coastal Dune Scrub

The dune scrub on the parcel is a mosaic of native and non-native plant species, all of which are growing on a stabilized sand dune that occurs around the existing dwelling.

Intact coastal dune scrub (CDS) is comprised of a dense growth of native plant species and occurs in one area west of the dwelling (see Figure 2). This area is co-dominated by silver bush lupine (*Lupinus chamissonis)* and mock heather (*Ericameria ericoides)*, with lesser amounts of beach sagewort (*Artemisia pycnocephalus)*, yellow bush lupine (*Lupinus arboreus)*, seacliff wild buckwheat (*Eriogonum parvifolium),* beach primrose (*Camissoniopsis cheiranthifolia)* and sea lettuce (*Dudleya ceaspitosa)*. There is low cover (10%) by non-native, invasive plant species, such as European dune grass (*Ammophila arenaria)* and ice plant (*Carpobrotus edulis)*. These areas could be considered to be silver bush lupine – mock heather scrub, as per CDFW CaCode 32.160.00.

The majority of the parcel supports degraded coastal dune scrub (DCDS), occurring west, east, and south of the existing dwelling. This scrub supports native shrubs; however, the percentage of non-native plant species (primarily ice plant and European dune grass is higher) exceeds 40% cover in some areas. The scrub north of the dwelling has an even higher cover by European dune grass. Native plant species are limited to mock heather (7% cover), beach sagewort (2%), bush lupines (7% cover), coffee berry (*Frangula californica)* (1%), and coyote brush (*Baccharis pilularis)* (1%). These areas could be considered the European beach grass sward community, as per CDFW CaCode 42.010.00.
Where there are open, sandy areas, herbaceous species were observed, such beach strawberry (*Fragaria chiloensis)*, beach primrose, and sea lettuce. Non-native forbs observed include Bermuda grass (*Oxalis pes-caprae)*, sheep sorrel (*Rumex acetosella)*, and dandelion (*Taraxacum officinale)*.

Other dune areas are degraded by the dominance of ice plant. Mapped as ice plant mats (IPM), these areas are comprised of non-native ice plant (90% cover), with lesser amounts of beach primrose. Most of the areas immediately adjacent to the existing dwelling are bare sand. The character of these dune communities is depicted in Figures 4 -9.

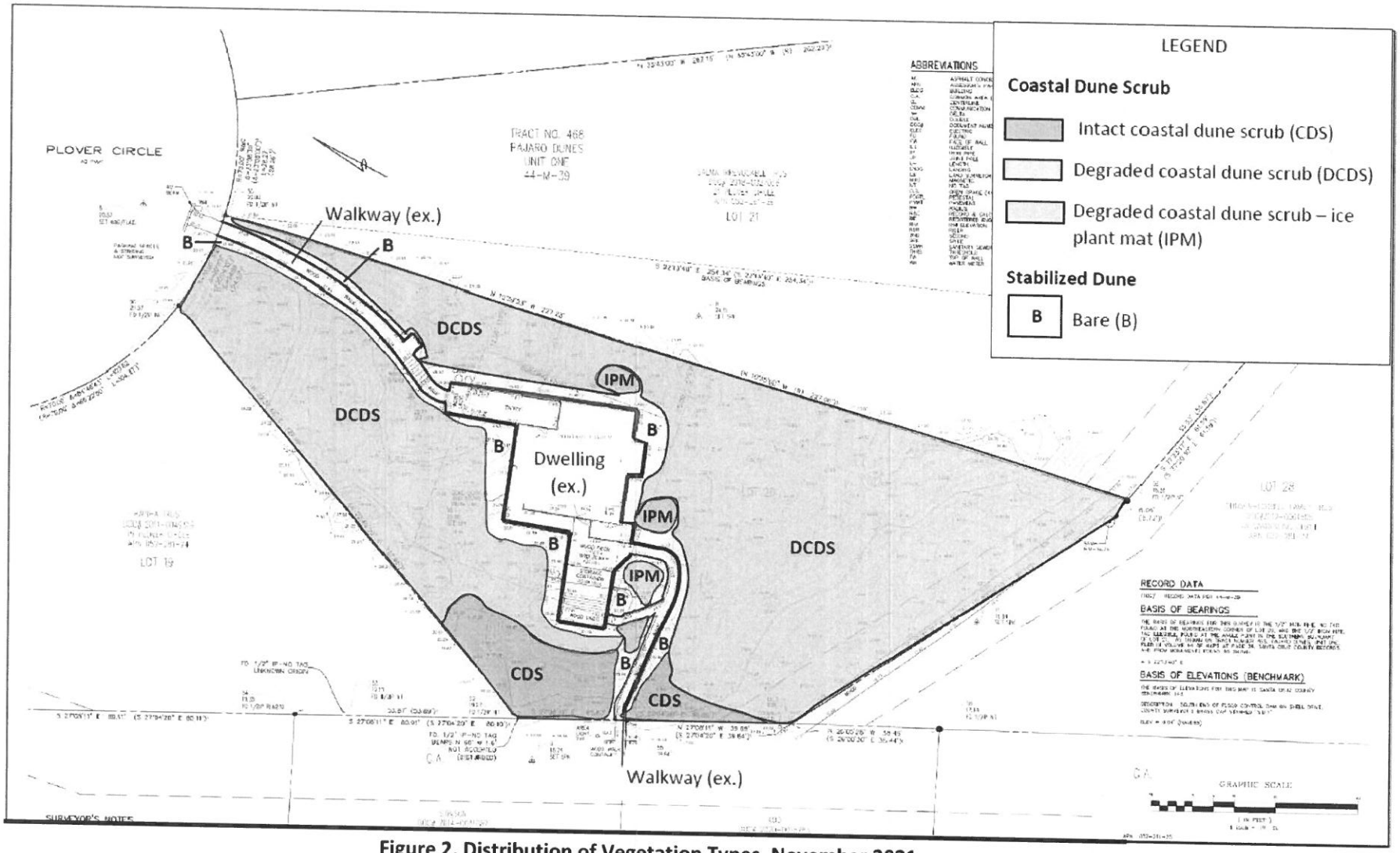


Figure 2. Distribution of Vegetation Types, November 2021

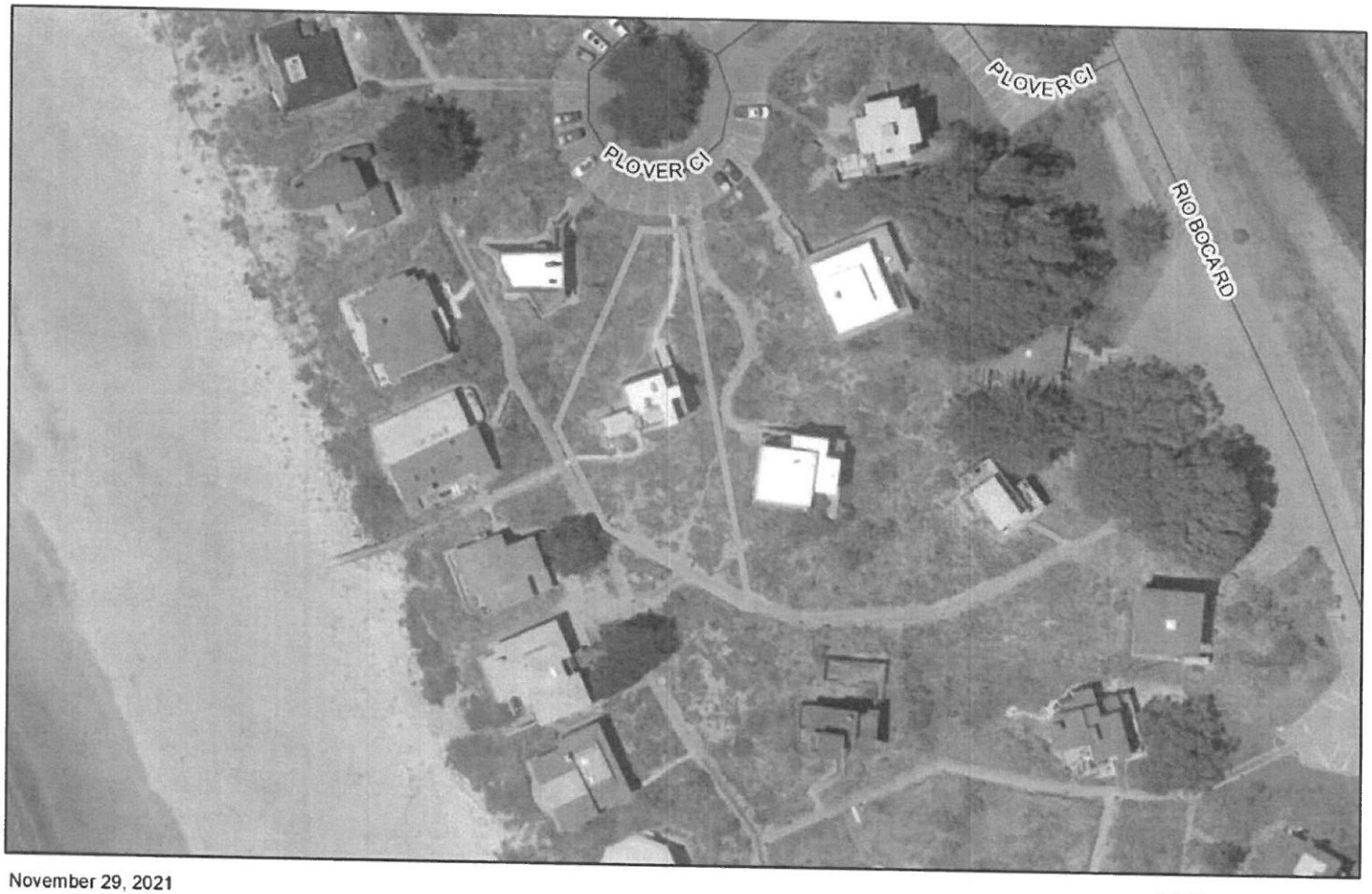


Figure 3. Location of Parcel on Aerial Photo (Source: Santa Cruz County GIS)

Figure 4. Character of dune scrub along western edge of property, showing native shrubs, with some non-native ice plant and European dune grass in foreground, November 2021

Figure 5. Character of degraded dune scrub in south portion of parcel, showing European dune grass and ice plant amid native shrubs, November 2021

Figure 6. Character of degraded dune scrub – ice plant mat- along south side of existing dwelling, November 2021

Figure 7. Character of bare dunes on east side of existing dwelling, November 2021

Figure 8. Character of bare dunes on south side of existing dwelling, November 2021

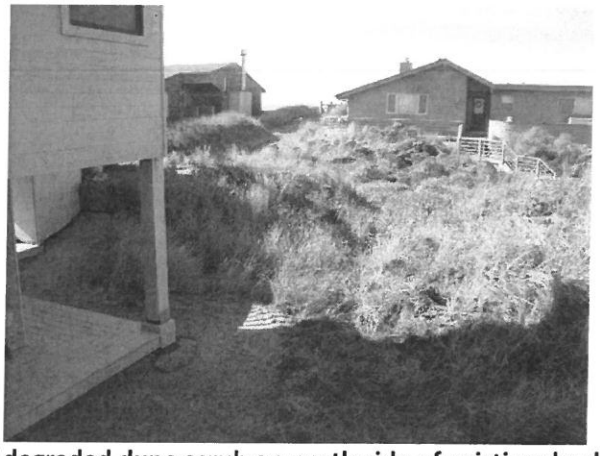


Figure 9. Character of degraded dune scrub on north side of existing dwelling, November 2021

Sensitive Resources

Sensitive habitats are defined by local, State, or Federal agencies as those habitats that support special status species, provide important habitat values for wildlife, represent areas of unusual or regionally restricted habitat types, and/or provide high biological diversity.

The project area is located within an unincorporated area of Santa Cruz County, within the Coastal Zone. County Code (Sensitive Habitat Protection, Section 16.32) recognizes dune plant habitats as sensitive habitat. Under County Code only resource dependent uses are allowed in sensitive habitat. For dune areas, permitted uses include scientific research and education and wooden boardwalks for trails are required. In granting approval for development, County Code requires the development to mitigate significant impacts, protect undisturbed area, and restore degraded areas commensurate with the scale of the development. The coastal dune scrub and bare dunes on the parcel meets the requirement of sensitive habitat as defined in County Code. This is due to the general presence of the dune plant community (albeit some areas are degraded due to the presence of invasive, non-native plant species), but also the presence of one locally unique plant species (Monterey paintbrush).

The USACE regulates activities within waters of the United States pursuant to congressional acts: Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (1977, as amended). Section 10 of the Rivers and Harbors Act requires a permit for any work in, over, or under navigable waters of the United States. Navigable waters are defined as those waters subject to the ebb and flow of the tide to the Mean High-Water mark (tidal areas) or below the Ordinary High-Water mark (OHWM) (freshwater areas). Areas with a significant hydrological connection to navigable waters are also regulated by the USACE. The parcel is located outside of USACE jurisdiction.

Water quality in California is governed by the Porter-Cologne Water Quality Control Act and certification authority under Section 401 of the Clean Water Act, as administered by the Regional Water Quality Control Board (RWQCB). The Section 401 water quality certification program allows the State to ensure that activities requiring a Federal permit or license comply with State water quality standards. Water quality certification must be based on a finding that the proposed discharge will comply with water quality standards which are in the regional board's basin plans. The Porter-Cologne Act requires any person discharging waste or proposing to discharge waste in any region that could affect the quality of the waters of the state to file a report of waste discharge. The RWQCB issues a permit or waiver that includes implementing water quality control plans that take into account the beneficial uses to be protected. Waters of the State subject to RWQCB regulation extend to the top of bank, as well as isolated water/wetland features and saline waters. Should there be no Section 404 nexus (i.e., isolated feature not subject to USACE jurisdiction), a report of waste discharge (ROWD) is filed with the RWQCB. The RWQCB interprets waste to include fill placed into water bodies. The parcel is located outside of RWQCB jurisdiction.

California Department of Fish and Wildlife (CDFW) is a trustee agency that has jurisdiction under Section 1600 et seq. of the Sections 1600-1603 of the California Fish and Game Code. CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream or lake which supports fish or wildlife. CDFW also regulates the deposit of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. CDFW defines a "stream" as a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation. The parcel is located outside

EXHIBIT G

CDFW jurisdiction under Section 1600. CDFW also identifies sensitive natural communities. The silver bush lupine – mock heather scrub (CaCode 32.160.00) is considered sensitive (CDFW, 2020).

Special Status Plant Species

Species of concern include those listed by either the Federal or State resource agencies as well as those identified as rare by CNPS (List 1B). Based on a search of the CNPS and CNDDB inventories, there are several species of concern within the greater project area, as listed in Table 2. Two species have been recorded from the greater Pajaro Dunes region: Monterey spineflower (federally listed as endangered) and Monterey paintbrush, a locally unique species (CNPS List 4, Watch list).

The November 2021 survey was conducted outside the blooming period for many annual species, such as Monterey spineflower. No perennial special status plant species were observed on-site during the November survey, although a colony of Monterey paintbrush was observed in a nearby area.

Monterey spineflower (*Chorizanthe pungens* var. *pungens*). This species is federally listed as threatened under the Federal Endangered Species Act (FESA). This species is also listed as rare (List 1B.1) by the California Native Plant Society and is considered rare by the County of Santa Cruz. The species is not listed under the California Endangered Species Act (CESA). The Monterey spineflower is an annual species that grows in sandy soils within portions of Santa Cruz County; there are several known occurrences from dune scrub habitat in the Pajaro Dunes development and from nearby Sunset State Beach. The spineflower is characterized by its whitish to pinkish flowers, low-growing habit and spiny bracts surrounding the flowers.

No individuals of Monterey spineflower were observed on the parcel during the November field survey; however, the survey was conducted outside the identification period. Suitable habitat is present on site within the coastal dune scrub and in some of the loose, bare sandy areas in the degraded dune scrub. Areas with a dense growth of European dune grass area and/or ice plant are not suitable habitat for this species, nor are some of the compacted bare sand areas immediately adjacent to the existing dwelling.

Robust spineflower (*Chorizanthe robusta* var. *robusta*). The robust spineflower (*Chorizanthe robusta* var. *robusta)* is known to occur at Manresa State Beach. Other occurrences include properties along Freedom Boulevard, Aptos. Robust spineflower is listed as endangered under the Federal Endangered Species Act. It occupies open areas with loose, sandy soil in oak woodlands, maritime chaparral, and grassland. The sandy soil within the project site provides potential habitat for this species. The species blooms and is identifiable in the months of May and June; therefore, presence/absence of these species could not be determined during the November 2021 site survey.

Monterey paintbrush (*Castilleja latifolia*). Individuals of Monterey paintbrush, a locally unique species, were observed in dune scrub near the project site; however, no individuals were observed on the subject parcel during the November field survey. This hemiparasitic perennial plant is typically found in dune scrub.

Table 2. List of Special Status Plant Species Evaluated for 20 Plover Circle

Species	CNPS Ranking	State Status	Federal Status	Habitat Preference; closest Known Occurrences
Watsonville West Quadrangle				
Hooker's manzanita *(Arctostaphylos hookeri ssp. hookeri)*	List 1B.2	None	None	Sandy slopes, often intermixed with oak woodland; known from Buena Vista area; not observed
Pajaro manzanita *(Arctostaphylos pajaroensis)*	List 1B.1	None	None	Sandy slopes, often intermixed with oak woodland; recorded from NW of Watsonville/ Prunedale area; not observed
Congdon's tarplant *(Centromadia parryi ssp. congdonii)*	List 1B.2	None	None	Mesic grassland, heavy clay, alkaline; recorded from Ellicott Slough NWR; no suitable habitat
Monterey spineflower *(Chorizanthe pungens var. pungens)*	List 1B.2	None	Threatened	Sandy slopes, can be intermixed with oak woodland/maritime chaparral, dune scrub; recorded from Fiesta Way area, Manresa and Sunset State beaches; Day Valley area; Pajaro Dunes; not observed; suitable habitat on site
Robust spineflower *(Chorizanthe robusta var. robusta)*	List 1B.1	None	Endangered	Sandy slopes, often intermixed with oak woodland/maritime chaparral; recorded from Manresa State Beach; NE of Ellicott Pond, Aptos HS area; not observed; marginal habitat site
Sand-loving wallflower *(Erysimum ammophilium)*	List 1B.2	None	None	Coastal dunes; recorded from Sunset State Beach, along Shell Road; not observed
Sand gilia *(Gilia tenuiflora ssp. arenaria)*	List 1B.2	Threatened	Endangered	Coastal dunes; recorded from Sunset State Beach; not observed; marginal habitat on site
Santa Cruz tarplant *(Holocarpha macradenia)*	List 1B.1	Endangered	Threatened	Grasslands, often on coastal terrace deposits; recorded from Harkins Slough area and Watsonville area; no suitable habitat.
Kellogg's horkelia *(Horkelia cuneata ssp. sericea)*	List 1B.1	None	None	Oak woodland and edges of grasslands; recorded from NW of Watsonville at Ellicott NWR; no suitable habitat
Woodland woollythreads *(Monolopia gracilens)*	List 1B.2	None	None	Chaparral; serpentine grassland; sandy/rocky areas; recorded from Corralitos area (1958); no suitable habitat
Dudley's lousewort *(Pedicularis dudleyi)*	List 1B.2	None	None	Woodlands; historic (1884) occurrence from Aptos; no suitable habitat
Choris's popcorn flower *(Plagiobothrys chorisianus var. chorisianus)*	List 1B.2	None	None	Mesic grasslands, often on coastal terrace deposits; recorded from north end of Watsonville Airport; no suitable habitat

Table 2. List of Special Status Plant Species Evaluated for 20 Plover Circle

Species	CNPS Ranking	State Status	Federal Status	Habitat Preference; closest Known Occurrences
Surrounding Quadrangles (Laurel, Loma Prieta, Watsonville East, Prunedale, Mt. Madonna, Soquel and Moss Landing)				
Bent-flowered fiddleneck *(Amsinckia lunaris)*	List 1B.2	None	None	Grassland; recorded from Scotts Valley and Davenport; no suitable habitat
Anderson's manzanita *(Arctostaphylos andersonii)*	List 1B.2	None	None	Chaparral and forests; recorded from UCSC area and Bonny Doon; not observed
King's Mountain manzanita *(Arctostaphylos regismontana)*	List 1B.2	None	None	Chaparral and forests; recorded from Skyline area; not observed
Santa Cruz Mtns. pussypaws *(Calyptridium parryi var. hesseae)*	List 1B.1	None	None	Ponderosa pine and chaparral in Zayante sands; known from Felton and Ben Lomond area; not observed
Deceiving sedge *(Carex saliniformis)*	List 1B.2	None	None	Mesic areas, marshes; historic record from Scotts Valley; no suitable habitat
Coyote ceanothus *(Ceanothus ferrisae)*	List 1B.1	None	Endangered	Chaparral, on serpentine; recorded from Anderson Reservoir and Uvas Canyon area; not observed
Ben Lomond spineflower *(Chorizanthe pungens var. hartwegiana)*	List 1B.1	None	Endangered	Ponderosa pine and chaparral in Zayante sands; recorded from Bonny Doon and Felton areas; not observed; not suitable habitat
Scotts Valley spineflower *(Chorizanthe robusta var. hartwegii)*	List 1B.1	None	Endangered	Grassland on sandstone outcrops; known only from Scotts Valley area; no suitable habitat
Seaside birds-beak *(Cordylanthus rigidus ssp. littoralis)*	List 1B.1	Endangered	None	Maritime chaparral and closed cone forests; recorded from Monterey Co.; not observed; not suitable habitat
Santa Clara Valley dudleya *(Dudleya abramsii ssp. setchellii)*	List 1B.1	None	Endangered	Serpentine chaparral and rock outcrops; no suitable habitat
Eastwood's goldenbush *(Ericameria fasciculata)*	List 1B.1	None	None	Chaparral and coastal scrub; recorded from Monterey Co.; not observed; not suitable habitat
Hoover's button-celery *(Eryngium aristulatum var. hooveri)*	List 1B.1	None	None	Mesic areas, vernal pools in grassland; recorded from San Benito Co.; no suitable habitat
Ben Lomond wallflower *(Erysimum teretifolium)*	List 1B.1	Endangered	Endangered	Ponderosa pine and chaparral in Zayante sands; known from Felton and Ben Lomond area; no suitable habitat
Minute pocket moss *(Fissidens pauperculus)*	List 1B.2	None	None	Sandstone outcrops in grassland and oak woodland; recorded from Scotts Valley region; no suitable habitat
Fragrant fritillary *(Fritillaria liliacea)*	List 1B.2	None	None	Moist serpentine areas in grassland; recorded from Santa Clara Co; no suitable habitat

Table 2. List of Special Status Plant Species Evaluated for 20 Plover Circle

Species	CNPS Ranking	State Status	Federal Status	Habitat Preference; closest Known Occurrences
Loma Prieta hoita *(Hoita strobilina)*	List 1B.1	None	None	Talus in chaparral and woodlands; 1936 herbarium record from Santa Cruz; no suitable habitat
Smooth lessingia *(Lessingia micradenia var. glabrata)*	List 1B.2	None	None	Serpentine soils in chaparral and grasslands; recorded from Santa Clara Co; no suitable habitat
Arcuate bush-mallow *(Malacothamnus arcuatus)*	List 1B.2	None	None	Chaparral and cismontane woodland; not observed; not suitable habitat
Hall's bush-mallow *(Malacothamnus hallii)*	List 1B.2	None	None	Chaparral and coastal scrub; not observed; not suitable habitat
Santa Cruz Mtns. beards tongue *(Penstemon rattanii var. kleei)*	List 1B.2	None	None	Woodland and chaparral; herbarium collections from Ben Lomond Mtn.; no suitable habitat
White-rayed pentachaeta *(Pentachaeta bellidiflora)*	List 1B.1	None	None	Cismontane woodland, valley and foothill grassland (often serpentinite); no suitable habitat
Monterey pine *(Pinus radiata)*	List 1B.1	None	None	Native stands limited to Ano Nuevo and Monterey peninsula; not observed
Yadon's piperia *(Piperia yadonii)*	List 1B.1	None	Endangered	Coastal scrub and oak woodland, often on talus/rocky areas; not observed; no suitable habitat
San Francisco popcorn flower *(Plagiobothrys diffusus)*	List 1B.2	Endangered	None	Mesic grasslands, often on coastal terrace deposits; no suitable habitat
Scotts Valley polygonum *(Polygonum hickmanii)*	List 1B.1	None	Endangered	Grasslands, on coastal terrace deposits; no suitable habitat
Pine rose *(Rosa pinetorum)*	List 1B.2	None	None	Closed cone pine forests; no suitable habitat
Most-beautiful jewel-flower *(Streptanthus albidus ssp. peramoenus)*	List 1B.2	None	None	Serpentine grassland; no suitable habitat
Santa Cruz Clover *(Trifolium buckwestiorum)*	List 1B.1	None	None	Mesic grasslands; no suitable habitat
Saline clover *(Trifolium depauperatum var. hydrophilum)*	List 1B.2	None	None	Mesic grasslands, alkaline; no suitable habitat

CNPS Status: List 1B: These plants (predominately endemic) are rare through their range and are currently vulnerable or have a high potential for vulnerability due to limited or threatened habitat, few individuals per population, or a limited number of populations. List 1B plants meet the definitions of Section 1901, Chapter 10 of the CDFG Code.

Special Status Wildlife

For the purposes of this report, special-status wildlife species are defined as species with state or federal endangered/threatened status, California species of special concern, or locally significant species which may be protected under CEQA Section 15380(d).

Based on a review of the CNDDB Watsonville West and Moss Landing quadrangles, personal knowledge of species regional patterns of occurrence and habitat affinities, and habitat conditions observed at the project site, only the California legless lizard (CLL) was considered a potential inhabitant of the project site or in the surrounding area. Twenty other special-status species are either known from or may occur in the project region, but are not considered further in this assessment for one or more of the following reasons: 1) the species is expected to occur in the study area only briefly as a transient (e.g., during migration, occasional foraging); 2) the study area does not support suitable habitat (e.g., breeding ponds, trees with bat roost potential, etc.); and 3) the study area appears to be outside of the species' local distributional range. A summary of the legal status, natural history and local patterns of occurrence for these species are presented on Table 3. A detailed discussion of the CLL is presented, below.

California Legless Lizard. The California legless lizard is a State species of special concern (CDFW 2021; Thompson *et al* 2016). The legless lizard is nearly endemic to California, distributed along the coastal ranges from Contra Costa County to Baja California, as well as portions of the San Joaquin Valley (Thompson *et* al 2016; Jennings and Hayes 1994). Within the range of the species, a melanistic form, the black legless lizard, is largely restricted to the immediate coastal region of the Monterey Bay (Hunt 1983; Bury 1985; USFWS 1998) and scattered localities from Morro Bay south to Guadalupe (Thompson *et al* 2016). Black legless lizards inhabit well-drained sand or sandy loam soils of coastal dune scrub, but also occur in chaparral, scrub, oak woodland and Monterey pine forest (Miller 1944; Jennings and Hayes 1994; USFWS 1998; Kuhnz 2001). Non-native grasslands and exotic plantings, such as ice plant (*Carpobrotus edulis*), are considered low-quality habitats and tend to support lower numbers of legless lizards (Kuhnz 2001). Soil moisture and the presence of perennial shrubs appear to be key characteristics of optimal habitat (Kuhnz 2001). Adequate soil moisture helps to moderate high temperature extremes and facilitate shedding (Jennings and Hayes 1994), while perennial shrubs produce leaf litter, which support primary prey items, such as beetle and lepidopteran (moths and butterflies) larvae (Jennings and Hayes 1994), help to moderate moisture loss and temperature change (Kuhnz 2001) and provide cover. Legless lizards are largely fossorial in nature and can be found at depths down to 46 cm, creating elaborate burrow systems (Kuhnz 2001).

Legless lizards also occupy the ecotone between the soil surface and leaf litter during foraging and, perhaps, mating and can occur on the surface during the early morning and evening periods (Jennings and Hayes 1994; Kuhnz 2001). During the mating season, legless lizards often can be found beneath surface objects such as rocks, logs and boards (Jennings and Hayes 1994; Kuhnz 2001). Largely sedentary, this species has been tracked moving an average of 11.4 cm/day (Kuhnz 2001). The breeding period is presumed to extend from early spring to July with live young born from September through November (Jennings and Hayes 1994). Primary threats to this species include habitat loss and degradation, due to coastal development, ORV use, trampling of habitat by pedestrians, and the establishment and spread of extensive stands of introduced invasive plant species, such as ice plant (*Mesembryanthem*_sp. and *Carpobrotus* sp.) and beach grass.

Local Occurrences: The CNDDB was accessed to search for CLL records within 2.5 miles of the project site. Several CLL observations were found between Sunset State Beach and Moss Landing Harbor, the most recent of which is from 2017 (Figure 10).

Site Assessment: The status of this species at the project site is uncertain, as no focused surveys were performed as part of this assessment. Much of the dune scrub habitat on the property has been compromised by dune grass and ice plant and appears marginal as CLL habitat. CLL habitat values improve in a small patch of dune scrub along the western section of the property, where native plants such as lupine and mock heather are dominant. As far as the project site is concerned, CLL habitat within most of the proposed areas of ground disturbance is either lacking, due to the absence of vegetation or marginal due to the prevalence of non-native vegetation. Examples of the latter include the proposed concrete slab along the south side of the unit, where a patch of ice plant is present, and in the location of the proposed northwest deck footing directly diagonal from the northwestern corner of existing unit, where dune grass, lupine and mock heather are present (Figures 11 and 12). Although much of the habitat on the parcel is considered marginal, because of the close proximity of potential habitat in the surrounding landscape, marginal conditions do not eliminate the potential for CLL occurrence, as demonstrated by studies performed by Kuhnz (2001) at nearby Moss Landing, and a pre-construction survey at Pebble Beach (Bryan Mori Biological Consulting Services 2016).

Figure 10. CNDDB California legless lizard records within 2.5 miles of the project site.

Figure 11. A small patch of ice plant is present alongside the south face of the unit, where a concrete slab is proposed. The ice plant is considered marginal CLL habitat.

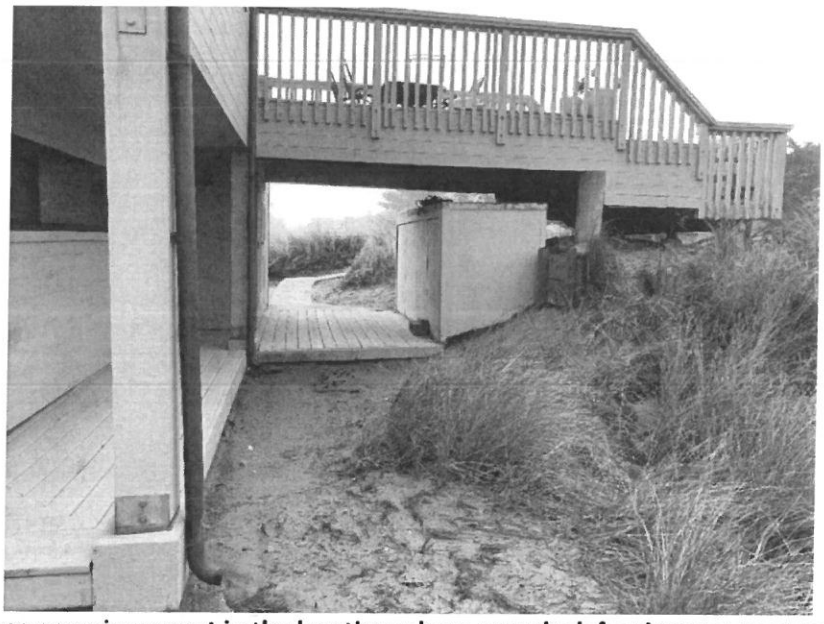


Figure 12. Dune grass is present in the location where new deck footings are proposed off of the northwest corner of the existing unit. Dune grass is considered marginal CLL habitat.

Table 3. Other Special-Status Wildlife Species Potentially Occurring or Known to Occur in the Project Region

SPECIES	STATUS	HABITAT	STATUS AT THE PROJECT SITE
California Red-legged Frog (*Rana draytonii*)	FT, SSC	Ponds, freshwater marshes, quiet stream pools for breeding or year-round. Various mesic habitats during dispersal.	**Not expected to occur at the project site**. Species is known to occur throughout the Pajaro Valley and along the lower Pajaro River. No aquatic habitat is present on or adjacent to the project site.
Western Pond Turtle (*Emys marmorata*)	SSC	Inhabits rivers, ponds, reservoirs and lakes. Nests in grasslands and other open vegetation in soils with clay content.	**Not expected to occur at the project site**. Species known to occur along the lower Pajaro River corridor and Watsonville Slough. No aquatic habitat is present on or adjacent to the project site and the uplands are unsuitable as nesting habitat.
California Horned Lizard (*Phrynosoma blainsvillii*)	SSC	Inhabits a variety of open habitats with sandy or loose loam soils.	**Not expected to occur at the project site**. Potential habitat is present in alluvial deposits along the Pajaro River and in dune scrub at the rivermouth, but no records of this species are in the CNDDB, and the species is thought to be extirpated from the project region.
Brandt (*Branta bernicla*)	SSC (Wintering)	Offshore and in coastal estuaries with eel-grass beds.	**Not expected to occur at the project site**. Perhaps a rare migrant and winter resident at the rivermouth.
Redhead (*Aythya americana*)	SSC (Nesting)	Nests in freshwater marshes with dense emergent vegetation.	**Does not nest in the project region.** Occurs along the coast as a rare winter visitor. Has been recorded at the rivermouth.
Barrow's Goldeneye (*Bucephala islandica*)	SSC (Nesting)	Nests at inland lakes and rivers of forests.	**Does not nest in the project region.** Occurs along the coast as a very rare winter visitor. Has been recorded at the rivermouth.
American White Pelican (*Pelecanus erythrorhynchos*)	SSC (Nesting)	Nests on the ground at lakes, marshes and bays.	**Does not nest in the project region.** Occurs all seasons in the Pajaro Valley as a non-breeding visitor. Large flocks have been recorded at the rivermouth.
Brown Pelican (*Pelecanus occidentalis*)	SSC (Nesting)	Nests on ground or cliff ledges of coastal islands.	**Does not nest in the project region.** A non-breeding visitor along the central coast, most abundant in summer, but present year-round. Uses the lagoon for foraging, bathing and roosting.
White-tailed Kite (*Elanus leucurus*)	FP	Nests in trees of open landscapes.	**Not expected to nest at the project site**. Individuals have been observed during the nesting season along the Pajaro River and may be seen as a non-breeding aerial transient in the project area. Nesting habitat (i.e., trees) is absent on the project site.

Table 3. Other Special-Status Wildlife Species Potentially Occurring or Known to Occur in the Project Region

SPECIES	STATUS	HABITAT	STATUS AT THE PROJECT SITE
Bald Eagle (*Haliaeetus leucocephalus*)	FP	Nests along coastal cliffs and in trees near lakes and rivers.	**Not expected to nest at the project site**. One pair nests at Harkins Slough and individuals are expected to occur in the project area as a rare, year-round transient.
Northern Harrier (*Circus cyaneus*)	SSC	Nests in secluded coastal scrub, tall grasslands and marshes.	**Not expected to nest at the project site**. Occurs in the project area as a non-breeding visitor in fall and winter. The project area lacks seclusion for this sensitive nesting species.
Merlin (*Falco columbarius*)	SSC (Wintering)	Along the coast and in open habitats.	**Does not nest in the project region.** Occurs in the project area, as an uncommon winter resident.
American Peregrine Falcon (*Falco peregrinus*)	FP	Nests on secluded cliff faces and bluffs, or cliff ledge analogue.	**Does not nest in the project region.** Expected to occur uncommonly, but year-round, in the project area as a transient or during foraging forays.
Western Snowy Plover (*Charadrius alexandrinus nivosus*)	FT	Nests on wide, sandy beaches.	**Not expected to occur at the project site**. Species is known to nest along the dunes of the Pajaro Rivermouth and patchily along the dunes west of the southern end of Pajaro Dunes Resort.
Black Tern (*Chlidonias niger*)	SSC (Nesting)	Nests in marshes on ground or on mats of emergent vegetation.	**Does not nest in the project region.** Occurs as a rare spring and summer migrant along the coast.
Black Skimmer (*Rynchops niger*)	SSC (Nesting)	Nests on ground on open sandy beaches.	**Does not nest in the project region.** Occurs as a rare spring and summer migrant along the coast and has been recorded at the Pajaro Rivermouth.
Burrowing Owl (*Athene cunicularia*)	SSC (Nesting and Wintering)	Grasslands, fallow fields with sparse vegetation, dune scrub (winter). Uses ground squirrel burrows or burrow equivalents.	**Not expected to occur at the project site**. Occasional non-breeding visitor from October through February. Not considered a nesting species in Santa Cruz County. The project site does not support wintering habitat due to the absence of ground squirrel burrows and regular disturbances by residents.
Loggerhead Shrike (*Lanius ludovicianus*)	SSC (Nesting)	Nests in scattered shrubs and trees with dense branching, of open habitats.	**Not expected to nest at the project site**. Considered a rare, non-breeding visitor in the project area. Individuals have been recorded at the Pajaro Rivermouth. The project site lacks suitable shrubs and trees for nesting, and is subjected to regular disturbances from residents.

Table 3. Other Special-Status Wildlife Species Potentially Occurring or Known to Occur in the Project Region

SPECIES	STATUS	HABITAT	STATUS AT THE PROJECT SITE
Bank Swallow (*Riparia riparia*)	ST	Nests on steep-faced escarpments and bluffs with friable soils.	**Not expected to nest at the project site**. Former nesting colony on the Monterey County side of the Pajaro Rivermouth, but believed extirpated since 1987.
Tricolored Blackbird (*Agelaius tricolor*)	ST/SSC	Nests in secluded emergent wetlands and dense thickets near wetlands.	**Not expected to nest in the project area.** Occurrence in the project area expected as a non-breeding visitor. Nesting habitat is absent at the project site.

Key: FE = Federal endangered species; FT = Federal threatened species; SE = State endangered species; ST = State threatened; FP = State fully protected species; SSC = State species of special concern.

Note: Occurrence evaluations are based on observations of habitat conditions and literature review. No focused surveys were performed as part of this study.

Migratory Bird Treaty Act (MBTA) Species. Birds and active nests of all native species are protected under the Migratory Bird Treaty Act (MBTA), regardless of their lack of regulatory status as state or federally threatened/ endangered, or California species of special concern. The MBTA does exclude protection for migratory birds that have been introduced to North America, such as rock pigeon (*Columba livia*), Eurasian collared dove (*Streptopelia decaocto*), house sparrow (*Passer domesticus*) and European starling *(Sturnus vulgaris*). The MBTA is administered by the US Fish and Wildlife Service.

Fifteen bird species were observed in the project area during the reconnaissance survey and are listed in **Appendix A**. Nine species have the potential to nest in the project area, of which six are protected by the MBTA. The species observed during the 10 November site visit represent a limited sample of the potential nesting birds, as a focused bird survey was not conducted in the appropriate season, as part of this study. Other potential nesting species may occur in the project area during the nesting season, which generally spans 1 February – 1 September.

IMPACT ASSESSMENT AND RECOMMENDATIONS

Impact Criteria

The thresholds of significance presented in the CEQA Guidelines were used to evaluate project impacts and to determine if implementation of the proposed Project would pose significant impacts to botanical resources. For this analysis, significant impacts are those that substantially affect, either directly or through habitat modifications:

a) A species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
b) Riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;
c) State or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
f) Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation plan, or other approved local, regional, or state habitat conservation plan.

Impact Analysis

a) **Special Status Plant Species.** The Monterey spineflower are known to occur in close proximity to the proposed project and the project site supports suitable habitat. The project site contains marginally suitable habitat for robust spineflower. Portions of the parcel provide open areas, with loose, sandy soil that is suitable for growth of spineflower, including areas within the footprint of the proposed development. Presence or absence could not be determined during the November 2021 field visit, as this was outside the blooming period for these annual plant species.

Recommended Measure BIO-1: Because surveys were not conducted during the blooming season for Monterey and robust spineflower, prior to ground disturbing activities, applicant should

conduct surveys during the blooming season (April-June) to confirm absence of robust or Monterey spineflower. If the species are not found to be present, no additional measures are required. If either species is found within the project area, the applicant will evaluate if the development can be revised to avoid impacting the species. If impacts to the species cannot be avoided, the applicant will confer with USFWS, CDFW, and the County on a habitat mitigation plan. A mitigation plan shall be prepared that outlines measures to collect seed and re-establish spineflower colonies in a nearby protected area. The plan shall be reviewed and approved by USFWS, CDFW and the County prior to any site construction. Implementation of the plan shall be subject to monitoring and reporting for a minimum of 5 years, with remedial actions identified if species re-establishment is not successful within 5 years.

California Legless Lizard (CCL). The proposed project has the potential to negatively impact CLL by direct disturbances to dune habitat through excavation activities and/or removal of vegetation. Although the quality of dune habitat in the work areas appears marginal, at best, the project is surrounded by potential CLL habitat and individuals may move across the landscape and enter into less suitable habitats on occasion. Therefore, the following measures are recommended.

Recommended Measure BIO-2: The following measures shall be implemented to avoid and minimize impacts to CCL:

- Prior to the start of the project, a qualified biologist shall rake potential habitat within the construction envelope to survey for CLL, using a depletion method. If a legless lizard is found on the first day, another survey should be performed after 24 hours. This procedure will continue for three days or until no legless lizards are captured. If legless lizards are found on the third day, the California Department of Fish and Wildlife (CDFW) should be consulted for further direction. Additional surveys may be necessary, until depletion can be determined. All legless lizards captured shall be photographed, measured and aged, then placed into adjacent suitable habitat out of harm's way. The relocation site should be photographed and its GPS coordinates recorded. CDFW notification to perform legless lizard surveys and relocation should be obtained, prior to the start of the project.
- *If CLL are found during the pre-construction survey, or at any time during construction*, an exclusion fence shall be installed around the margins of the construction envelope to prevent additional CLL from entering work areas. A standard silt fence buried 8 – 12 inches will be adequate to serve as an exclusion fence.
- Prior to the start of construction activities, an environmental awareness training should be provided to the work crew, summarizing the species' legal status and natural history and the protection measures to be implemented, as part of the project.
- A qualified biologist shall be present to monitor vegetation removal and initial grading, trenching and pot-holing. Where vegetation removal is necessary, the vegetation shall be removed by hand and with hand tools only.
- All pot-hole work should be completed (i.e., backfilled) or covered daily with a plywood coverboard or similar object to prevent wildlife from falling in.
- Vertical-walled trenches shall have wood planks installed at both ends of the trench to allow for entrapped wildlife to escape.
- Orange construction fencing (or flagging along the exclusion fence) shall be erected around the perimeter of the construction envelope to signify environmentally sensitive areas that are off-limits for staging of materials and equipment, and habitat disturbances.
- A final biological monitoring report shall be submitted to CDFW and the County.

b) **Sensitive Habitat**. The site supports coastal dune scrub, a sensitive habitat under County Code. The dune scrub supporting bush lupine and mock heather is ranked S3 (sensitive/imperiled) by CDFW. The project will result in 1,246 square feet of permanent disturbance and 1,500 square feet of temporary disturbance. The permanent and temporary impact areas will occur in areas currently bare or supporting degraded coastal dune scrub (ice plant mat and European dune grass). Impacts by resource type are presented in Table 3. Figure 13 depicts the temporary and permanently impacted areas and plant community types.

Table 3. Impacts to Plant Community Types (approximate)

Habitat	Existing Resources (sq. ft.)	Residential Development Permanent Impact (Sq. ft.)	Residential Development Temporary Impact (Sq. ft.)	Total Impact by Resource (Sq. ft.)
Intact Coastal Dune Scrub	12,101	0	0	0
Degraded Dune Scrub – Ice Plant Mat		14	175	189
Degraded Dune Scrub- European Dune Grass and Ice Plant		450	1,100	1,550
Degraded Dune (bare sand and gravel)		782	225	1,007
Existing Dwelling	1,882	0	0	0
Total	**13,983**	**1, 246**	**1,500**	**2,746**

Recommended Measure BIO-3. Coastal Dune Scrub Restoration and Revegetation. The project will affect degraded dune scrub areas; these are areas currently dominated by non-native ice plant and European dune grass. Although degraded, these areas are still considered to be sensitive habitat under County Code (pending confirmation from the County). To compensate for these impacts, the landowner shall implement a dune restoration/enhancement plan that provides a 1:1 restoration or enhancement to impact ratio for temporary impacts (1,500 sq. ft.) and a 3:1 dune restoration/enhancement to impact ratio for permanent impacts (3,738 sq. ft.) to this habitat. These ratios will provide suitable mitigation by restoring areas temporarily impacted by construction and enhancing a portion of the existing degraded scrub. The plan shall specify restoration/enhancement of a minimum of 5,238 square feet of dune scrub on site.

A preliminary layout of areas suitable for restoration/enhancement actions is depicted on Figure 14. This layout shows the area most appropriate for restoration and enhancement. The primary action is the removal of non-native ice plant from degraded dune scrub (DCDS) and areas mapped as ice plant mat (IPM). In addition. areas temporarily disturbed by construction would be revegetated with native coastal dune scrub plant species by direct seeding and/or outplanting of container stock plants. Restoration/enhancement areas should be maintained and monitored for 5 years, with annual monitoring results submitted to the County each year, or as so indicated by County Conditions of Approval.

Recommended Measure BIO-4. Protection during Construction. Prior to construction, install orange construction fencing at the limit of work. This fence will be located 10-feet outward of the structural additions. If during fence layout, the 10-foot zone enters areas supporting intact coastal dune scrub, the fence location will be modified to exclude these areas from the temporary construction zone. The temporary construction area will be in areas identified as bare, ice plant

mat and European dune grass. Retain a qualified botanist to field check the placement of the fencing prior to any other site work.

c) **Wetlands.** No impact, none on site.

d) **Wildlife.** The project may impact nesting birds, if present on site.

Nesting Birds

Depending on the start of the project, construction activities could result in the failure of bird nests, which would be in violation of the MBTA and CDFW regulations protecting native birds. If construction activities are scheduled between 1 February and 1 September, the protection measures, below, are recommended. If the project is scheduled outside of the nesting season, no bird protection measures are needed.

Recommended Measure BIO-5. Nesting Birds.

- Perform pre-construction nesting birds surveys no earlier than one week before the scheduled start of the project.
- In the event active nests are observed, the nest site shall be flagged and a buffer shall be established, in an effort to prevent nest failure. The buffer widths shall be determined by the monitoring biologist.
- Active nests should be monitored at a frequency determined by the monitoring biologist, but at a minimum of once per week, until the nestlings have fledged.
- In the event that construction activities appear to be interfering with nest maintenance (e.g., feedings and incubation), then construction activities should be postponed until the young have fledged, as determined by the biological monitor.

e) **Local Policies**. Section 16.32 Sensitive Habitat Protection in County Code regulates activities within the dune scrub and areas that support special status species. Provision within this code are applicable to the proposed project. Recommended measures BIO-1 -4 provide avoidance and compensatory mitigation as allowed in the code.

f) **Conflict with HCP or NCCP**. The site is not located within an area covered by an HCP or NCCP.

EXHIBIT G

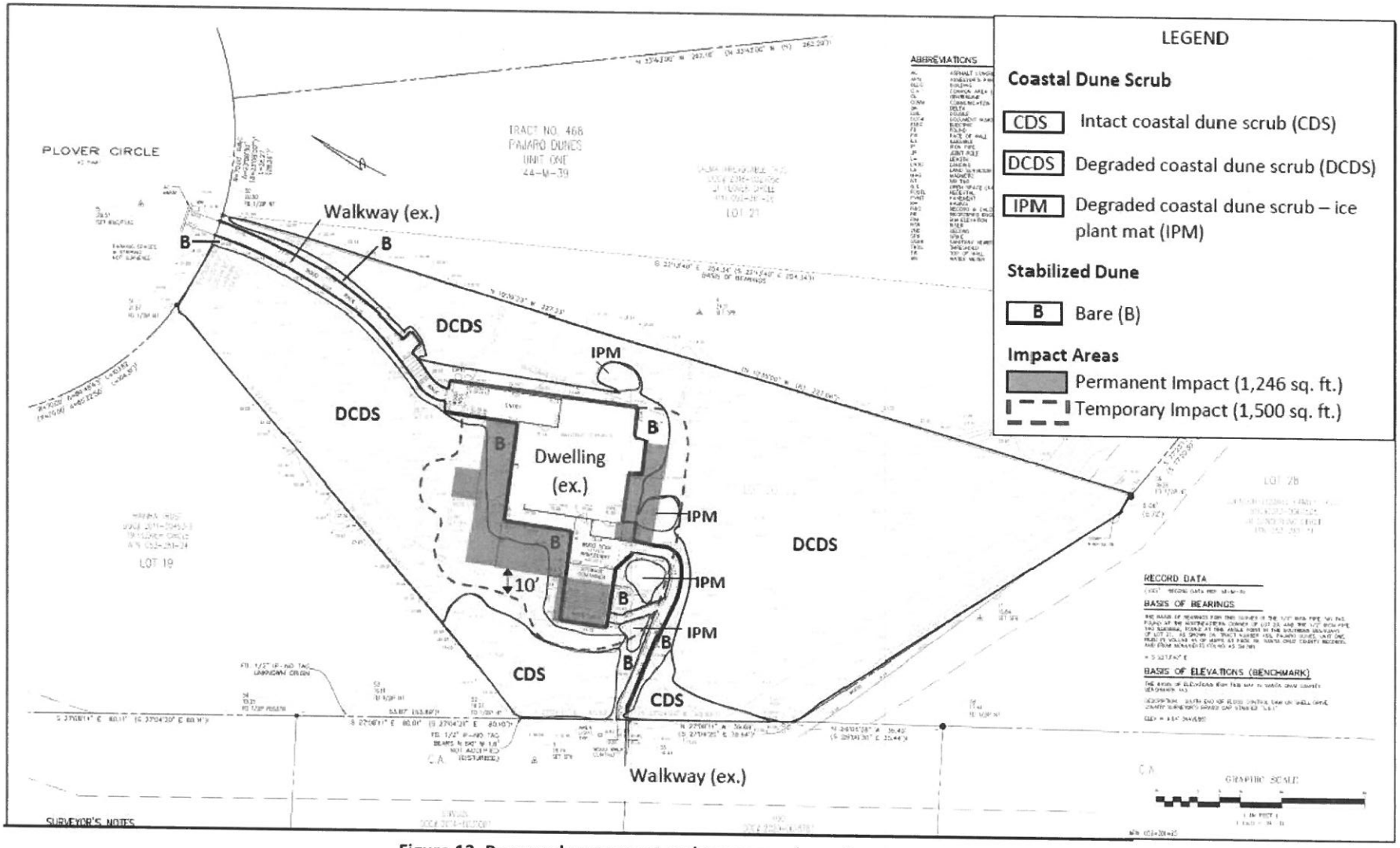


Figure 13. Proposed permanent and temporary impact areas

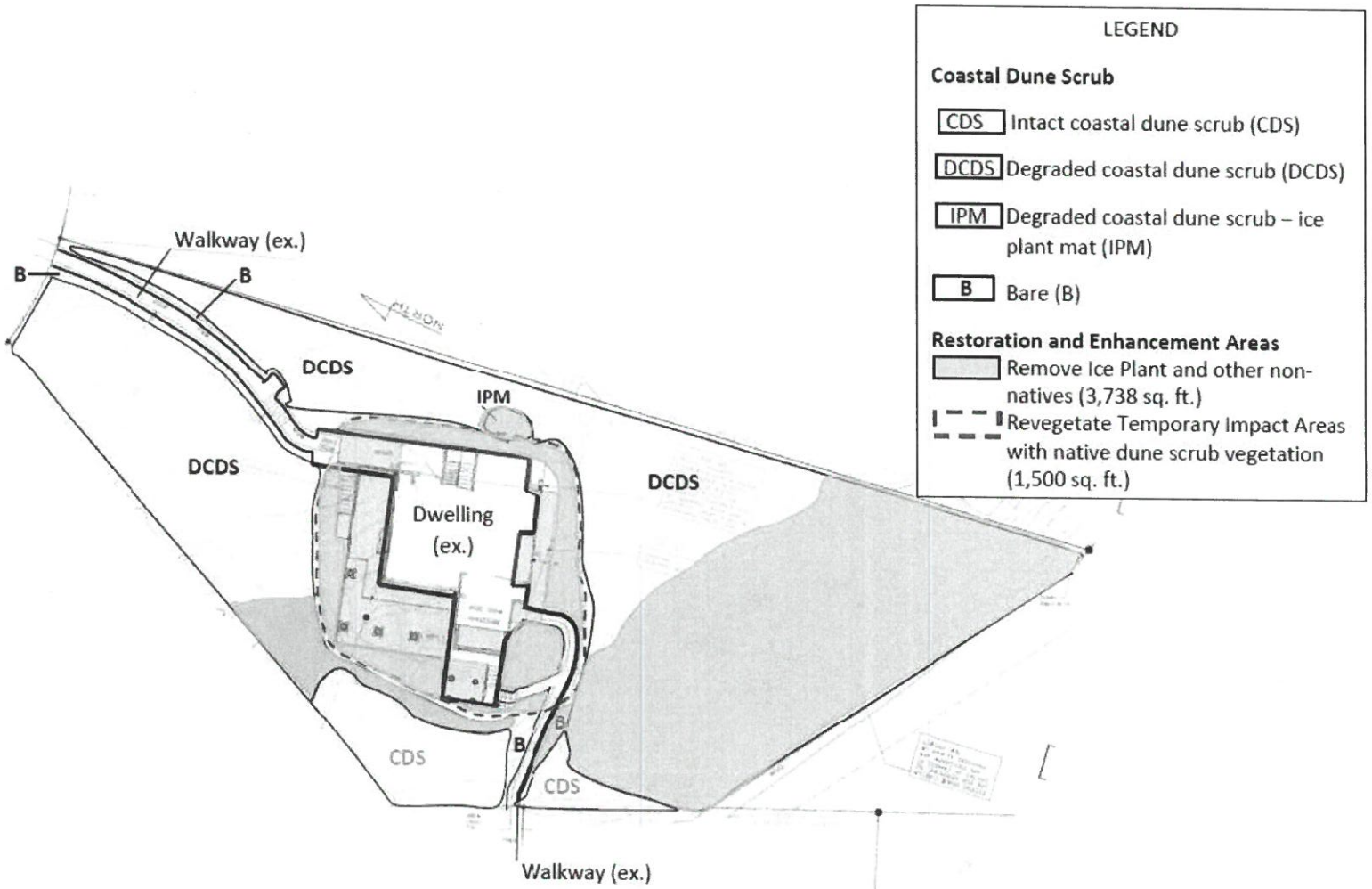


Figure 14. Conceptual dune restoration areas

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Appendix A

Bird species observed on or adjacent to 20 Plover Circle on 10 November 2021.

Key: **a** = Observed as an aerial transient; **n**= Observed and expected to nest in the project vicinity; **m** = migrant non-breeder.

Family: Phalacrocoracidae	
Double-crested Cormorant (*Phalacrocorax auritus*)	a
Family: Accipitridae	
American Kestrel (*Falco sparverius*)	n
Family: Laridae	
Gull species (*Larus spp.*)	a
Family: Columbidae	
Eurasian Collared Dove (*Streptopelia decaocto*)	n
Family Tyrannidae	
Black Phoebe (*Sayornis nigricans*)	n
Family: Aegithalidae	
Bushtit (*Psaltriparus minimus*)	n
Family: Troglodytidae	
House Wren (*Troglodytes aedon*)	m
Family: Regulidae	
Ruby-crowned Kinglet (*Regulus calendula*)	m
Family: Sturnidae	
European Starling (*Sturnus vulgaris*)	n
Family: Parulidae	
Townsend's Warbler (*Setophaga townsendii*)	m
Family: Emberizidae	
California Towhee (*Melozone crissalis*)	n
White-crowned Sparrow (*Zonotrichia leucophrys*)	n
Golden-crowned Sparrow (*Zonotrichia atricapilla*)	m
Family: Fringillidae	
House Finch (*Carpodacus mexicanus*)	n
Family: Passeridae	
House Sparrow (*Passer domesticus*)	n