

JOB No.
21-057

DRAFTING:



Brian Reilly
4949 West End Road
Arcata, CA 95521
(707) 826-9860
savagedrafting@gmail.com

JOB TITLE:

SFR

Einat Rozenblum
24131 Kittridge St
West Hills, CA 91307

PROJECT:

APN: 109-161-063
37 Redcrest Court
Shelter Cove, CA 95589

ENGINEERING:

REVISIONS	

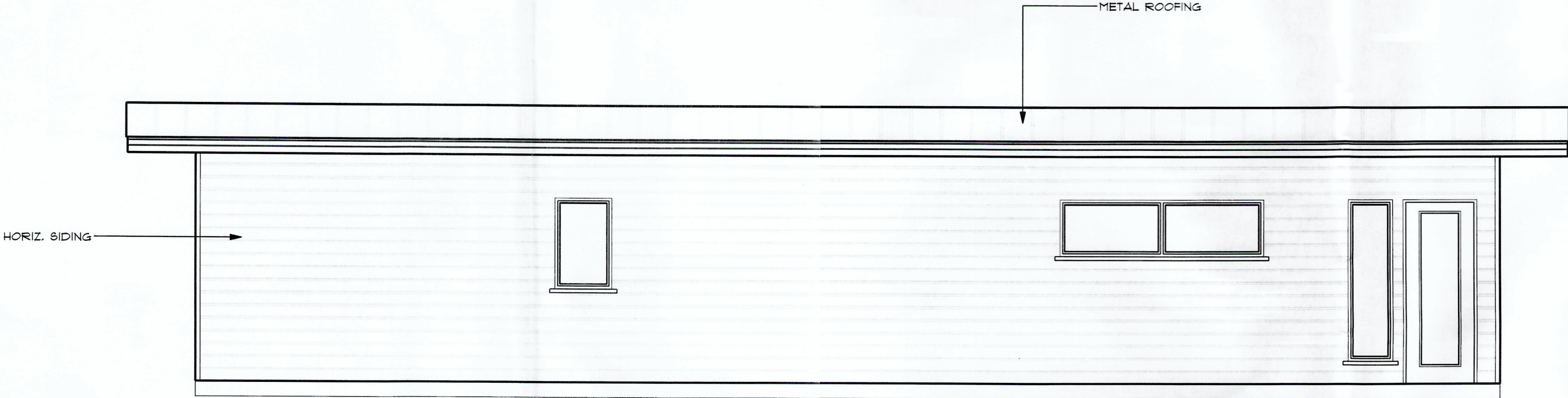
ALL WORK SHALL BE IN CONFORMANCE WITH THE 2019 EDITIONS OF THE CALIFORNIA BUILDING CODE, CALIFORNIA 2019 ELECTRICAL CODE, CALIFORNIA 2019 MECHANICAL CODE, CALIFORNIA 2019 PLUMBING CODE, CALIFORNIA ENERGY CODE, CALIFORNIA FIRE CODE, CALIFORNIA GREEN BUILDING CODE, & LOCAL ORDINANCES. THE CALIFORNIA BUILDING STANDARDS CODE IS BASED ON THE 2018-IBC.

12/27/2022

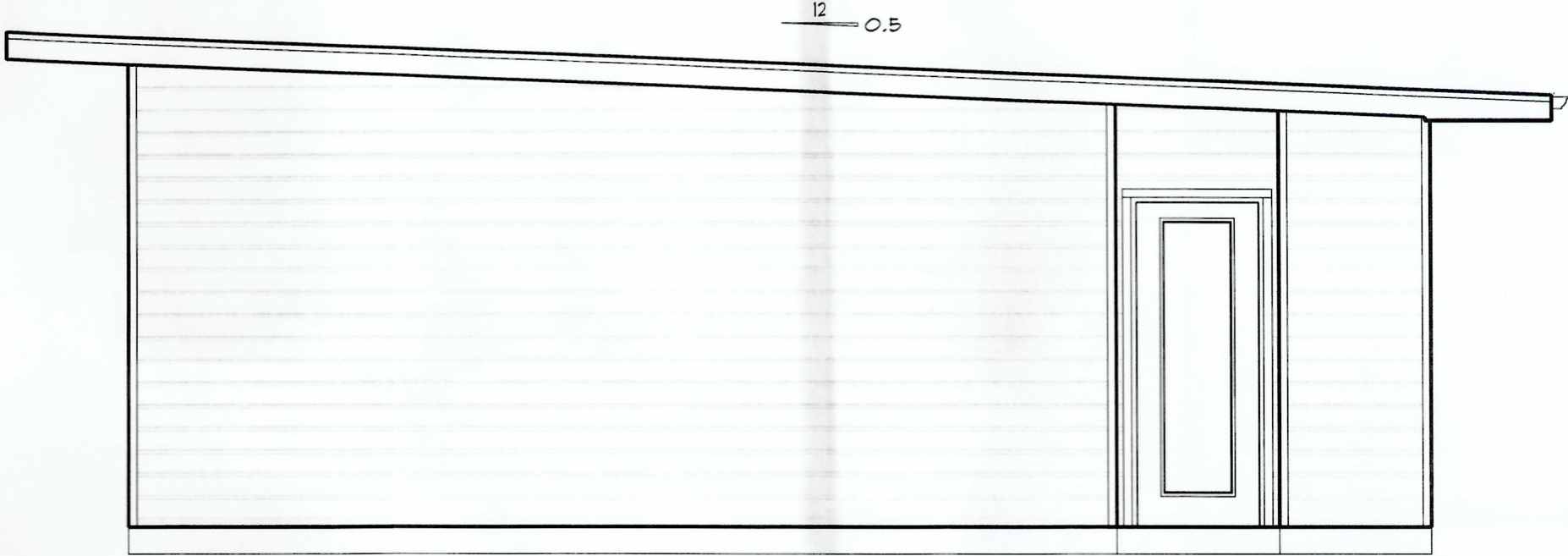
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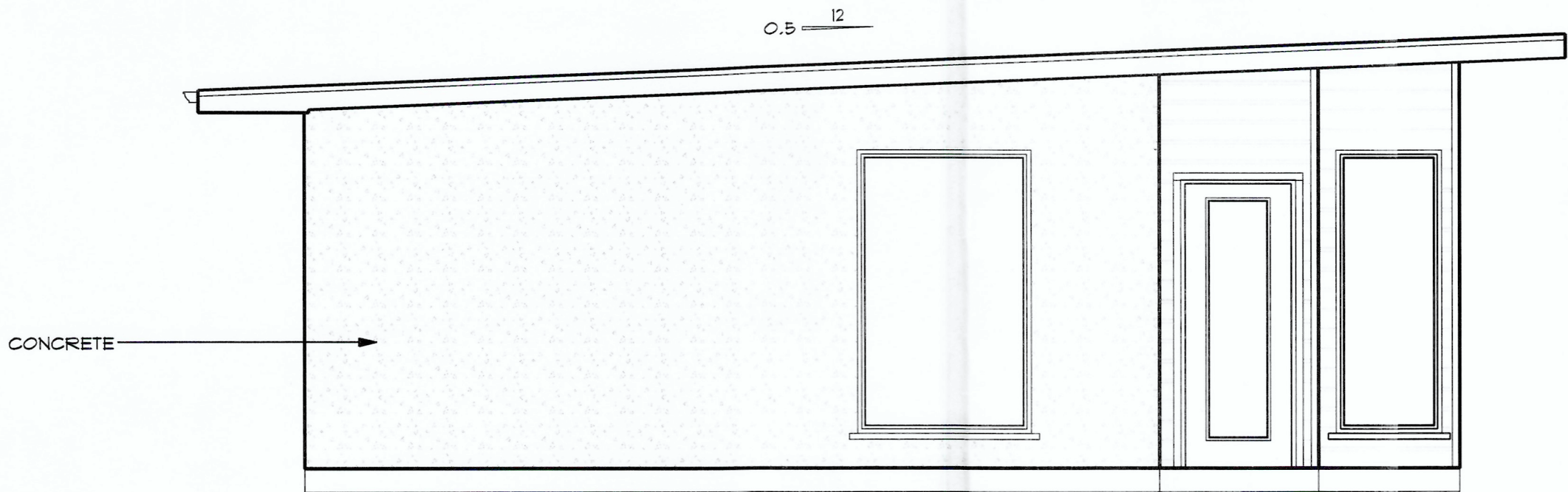
SHEET No.
2



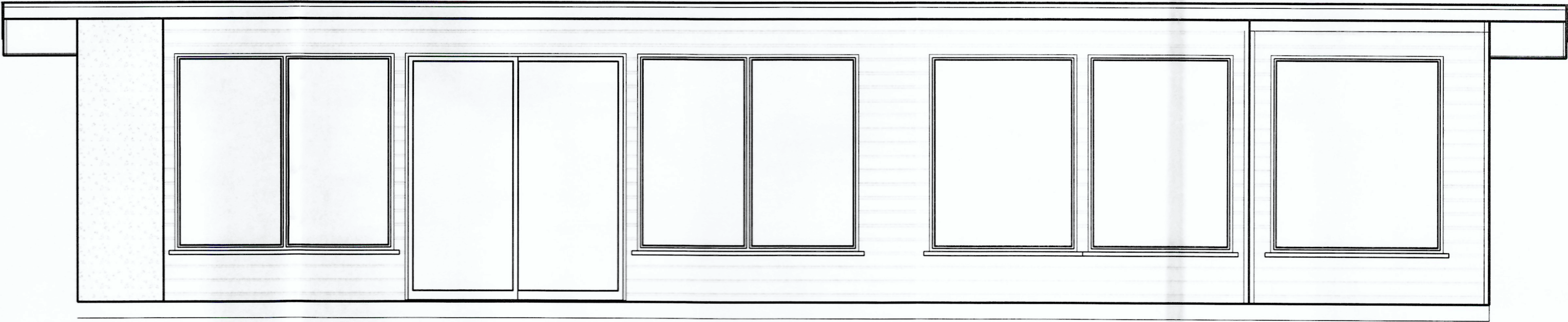
EAST ELEVATION
SCALE: 1/4" = 1'-0"



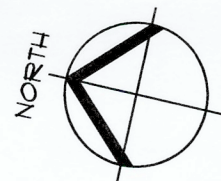
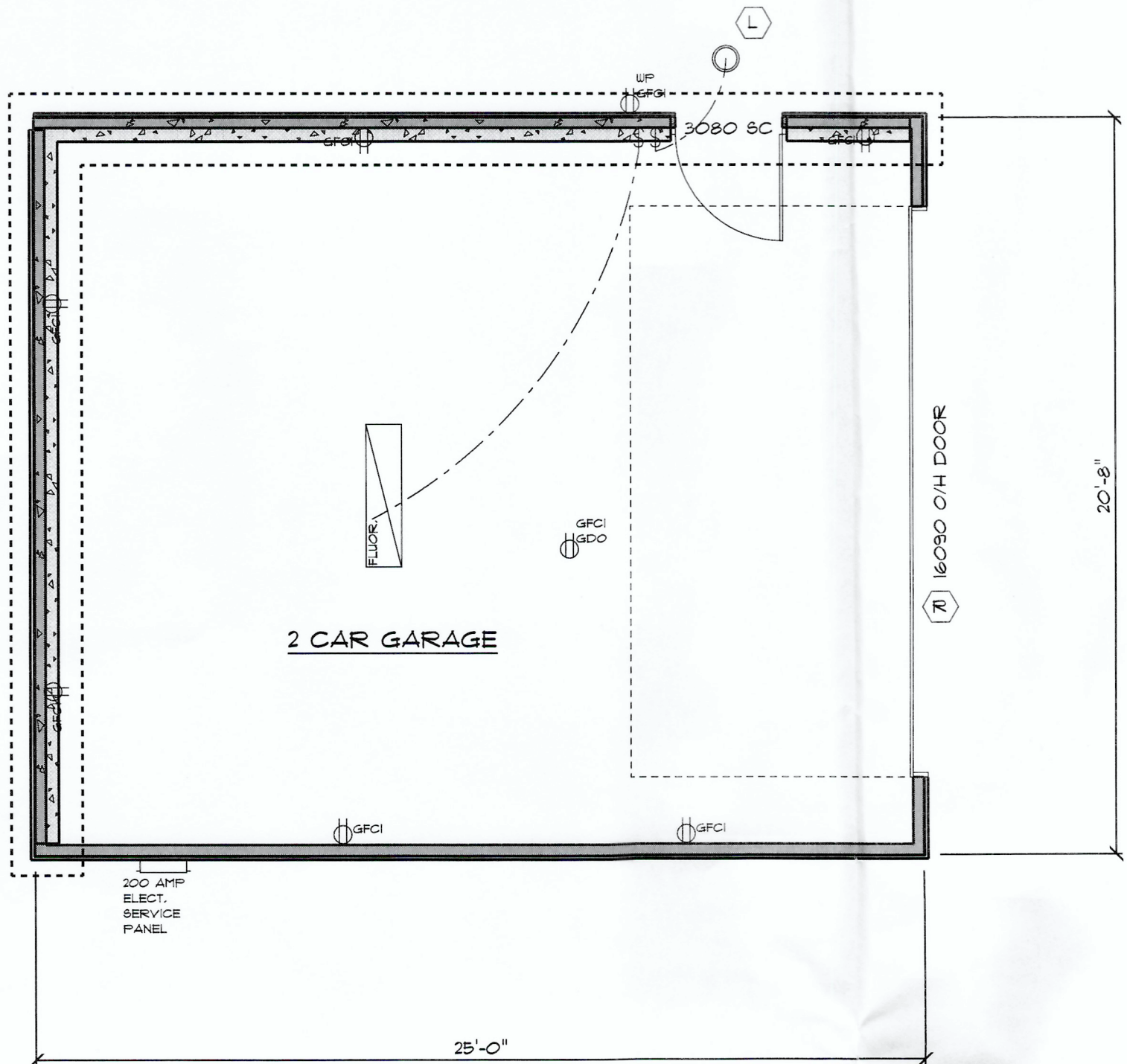
SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



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

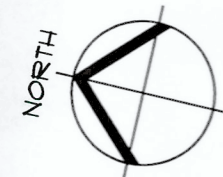
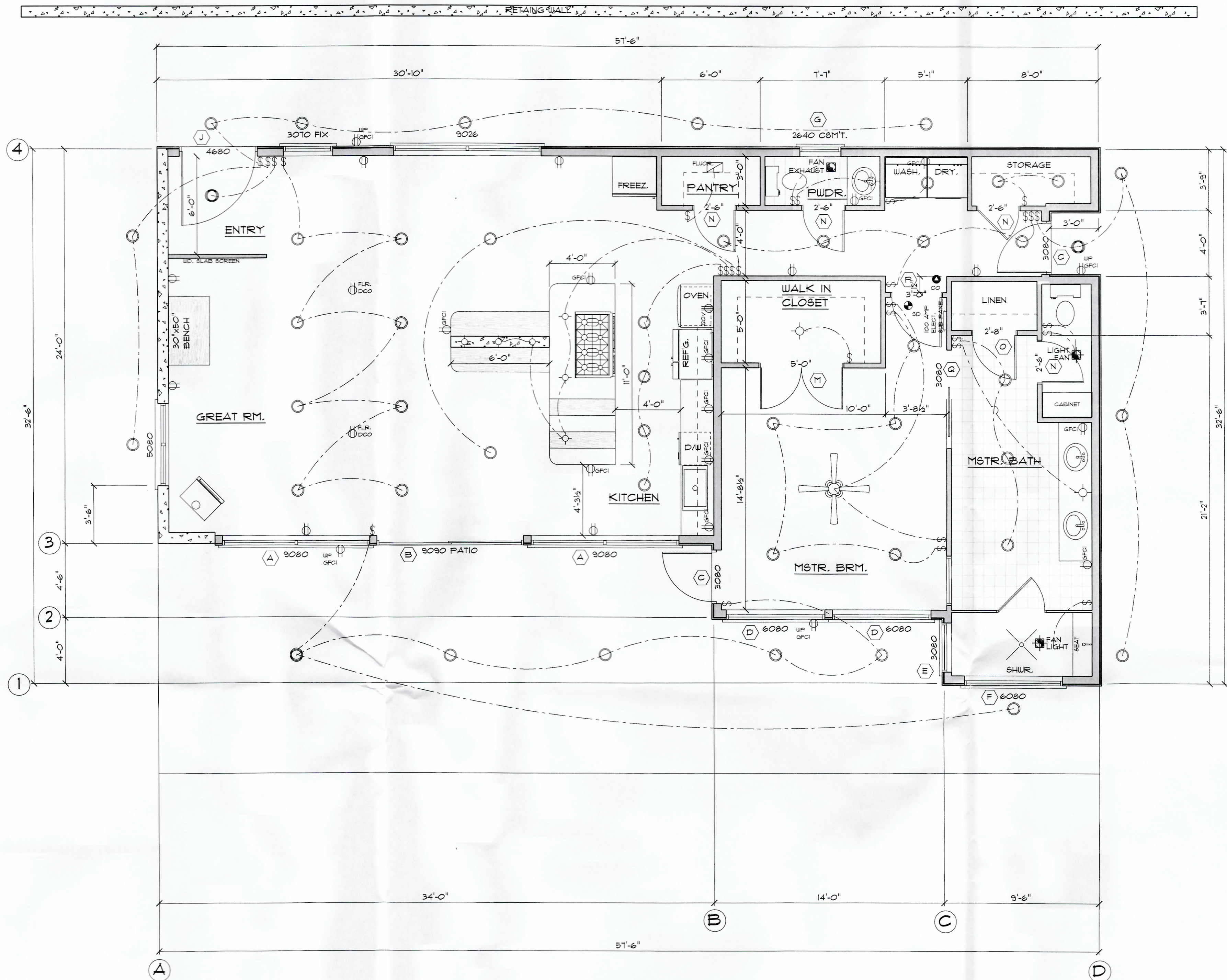


WEST ELEVATION
SCALE: 1/4" = 1'-0"



GARAGE FLOOR PLAN

SCALE: 1/4" = 1'-0"
5/17 SF 9' PLATE HT.



FLOOR PLAN

SCALE: 1/4" = 1'-0"
1932 SF

DOOR & WINDOW SCHEDULE				
MARK	SIZE	TYPE	REMARKS	QTY.
(A)	9'-0" x 8'-0"	FIXED	TEMPERED GLAZING	2
(B)	9'-0" x 9'-0" PATIO	SOLID CORE	TEMPERED GLAZING	1
(C)	3'-0" x 9'-0" x 1-3/4"	FULL LITE DOOR	EXTERIOR - TEMPERED GLAZING	2
(D)	6'-0" x 8'-0"	FIXED	TEMPERED GLAZING	2
(E)	3'-0" x 8'-0"	FIXED	TEMPERED GLAZING	2
(F)	1'-0" x 8'-0"	FIXED	TEMPERED GLAZING	1
(G)	2'-6" x 4'-0"	CASEMENT	TEMPERED GLAZING	1
(H)	9'-0" x 2'-6"	FIXED	TEMPERED GLAZING	1
(I)	3'-0" x 1'-0"	FIXED	TEMPERED GLAZING	1
(J)	4'-6" x 8'-0" x 1-3/4"	SOLID CORE	EXTERIOR	1
(K)	5'-0" x 8'-0"	FIXED	TEMPERED GLAZING	1
(L)	3'-0" x 8'-0" x 1-3/4"	SOLID CORE	EXTERIOR	1
(M)	FR. 2'-6" x 8'-0" x 1-3/4"	SOLID CORE	INTERIOR	1
(N)	2'-6" x 8'-0" x 1-3/4"	SOLID CORE	INTERIOR	4
(O)	2'-8" x 8'-0" x 1-3/4"	SOLID CORE	INTERIOR	1
(P)	3'-0" x 8'-0" x 1-3/4"	SOLID CORE	INTERIOR	1
(Q)	3'-0" x 8'-0" x 1-3/4"	SOLID CORE	INTERIOR - POCKET	1
(R)	16'-0" x 9'-0"	OVERHEAD DOOR	EXTERIOR	1

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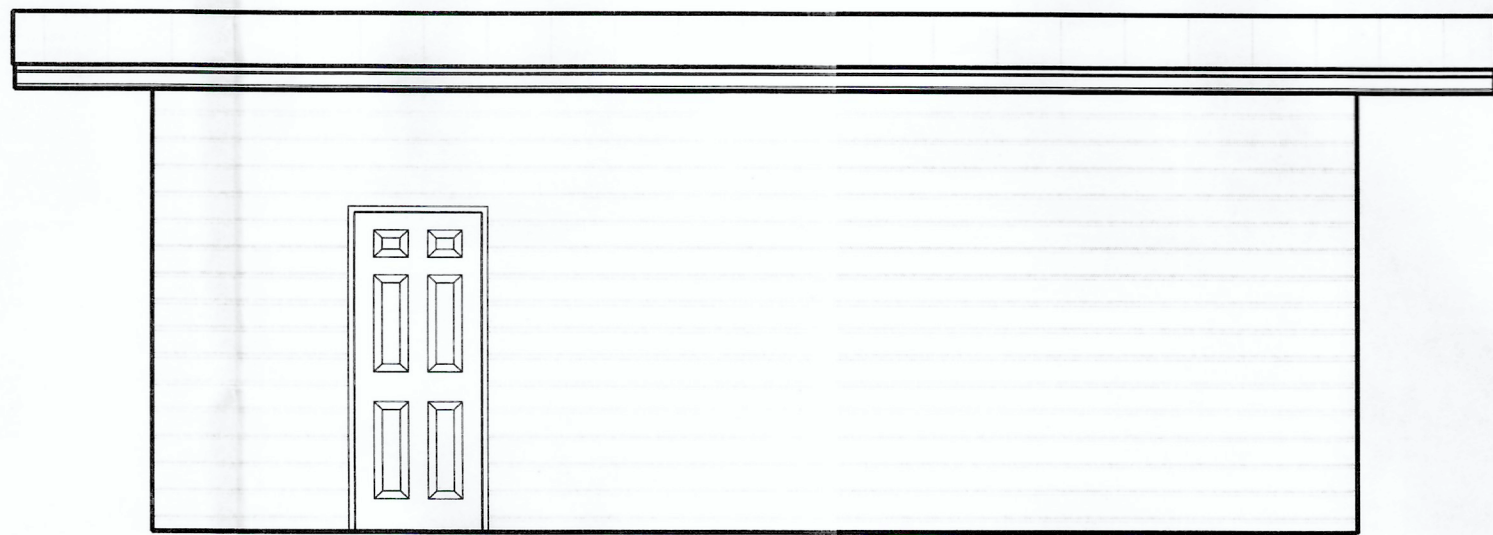
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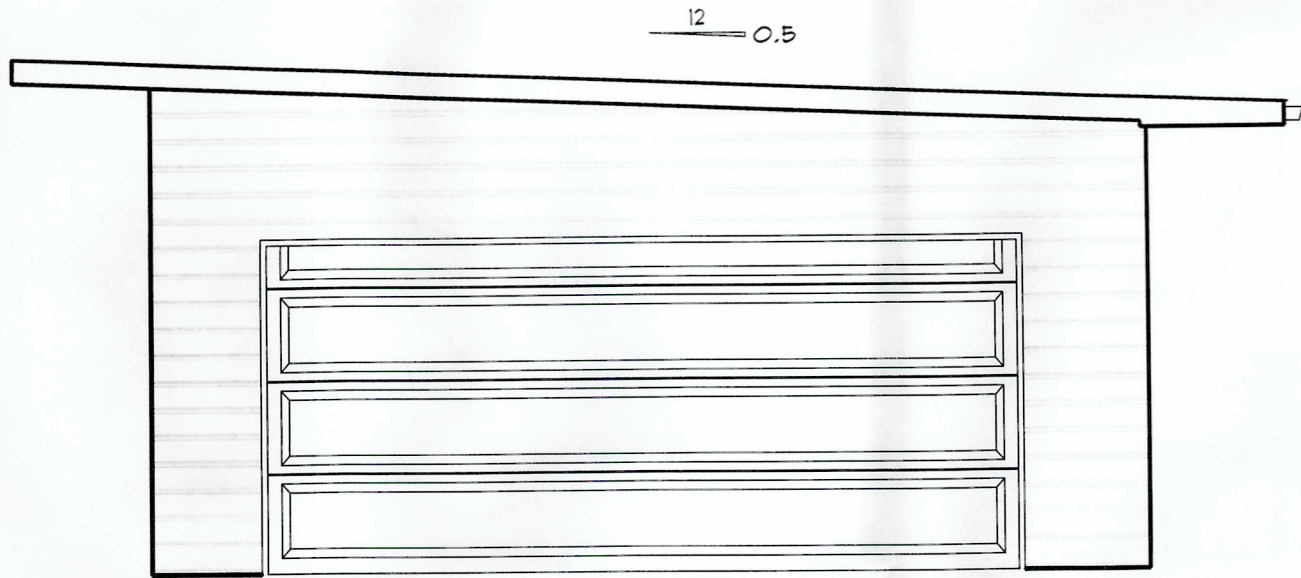
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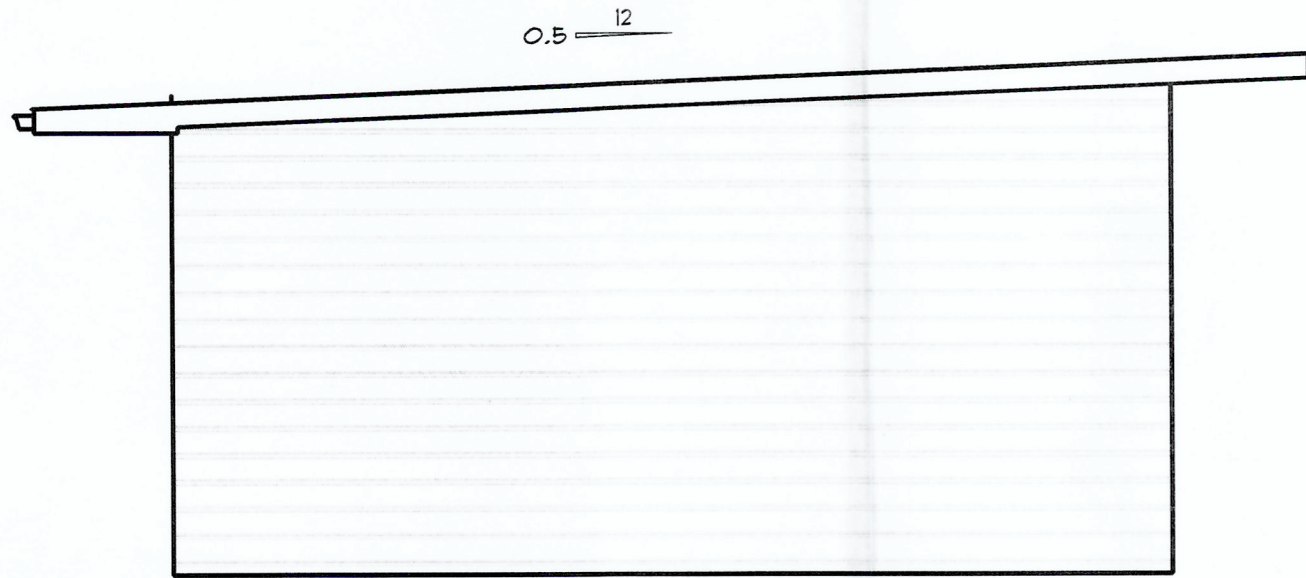
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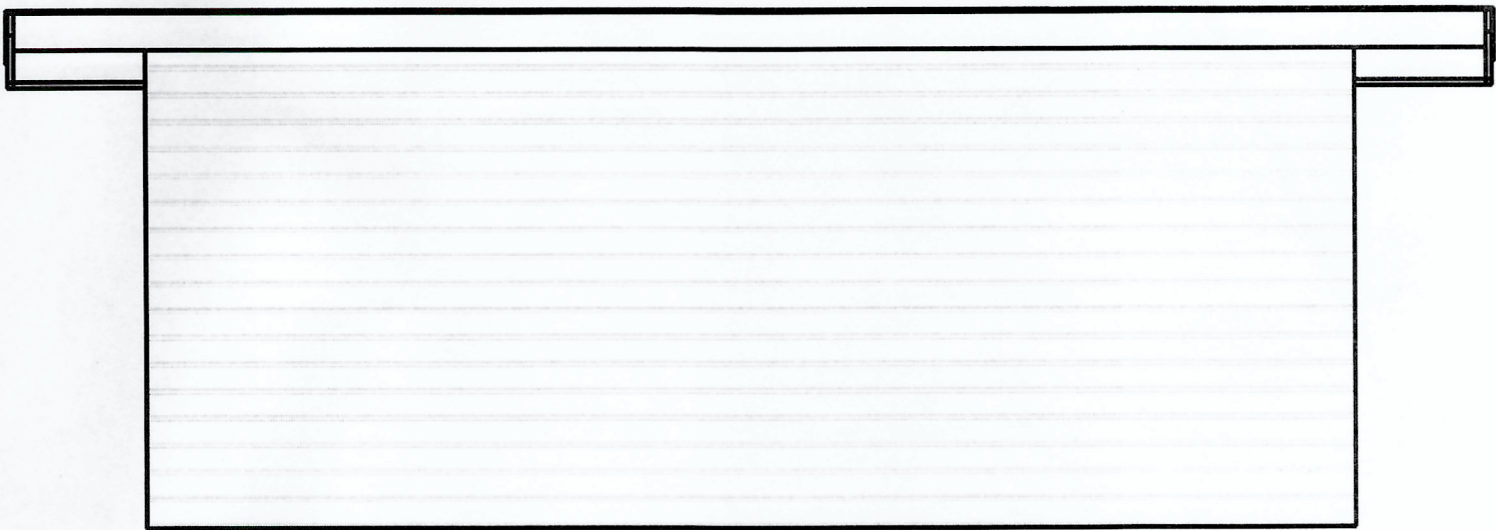
EAST ELEVATION
SCALE: 1/4" = 1'-0"



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



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



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

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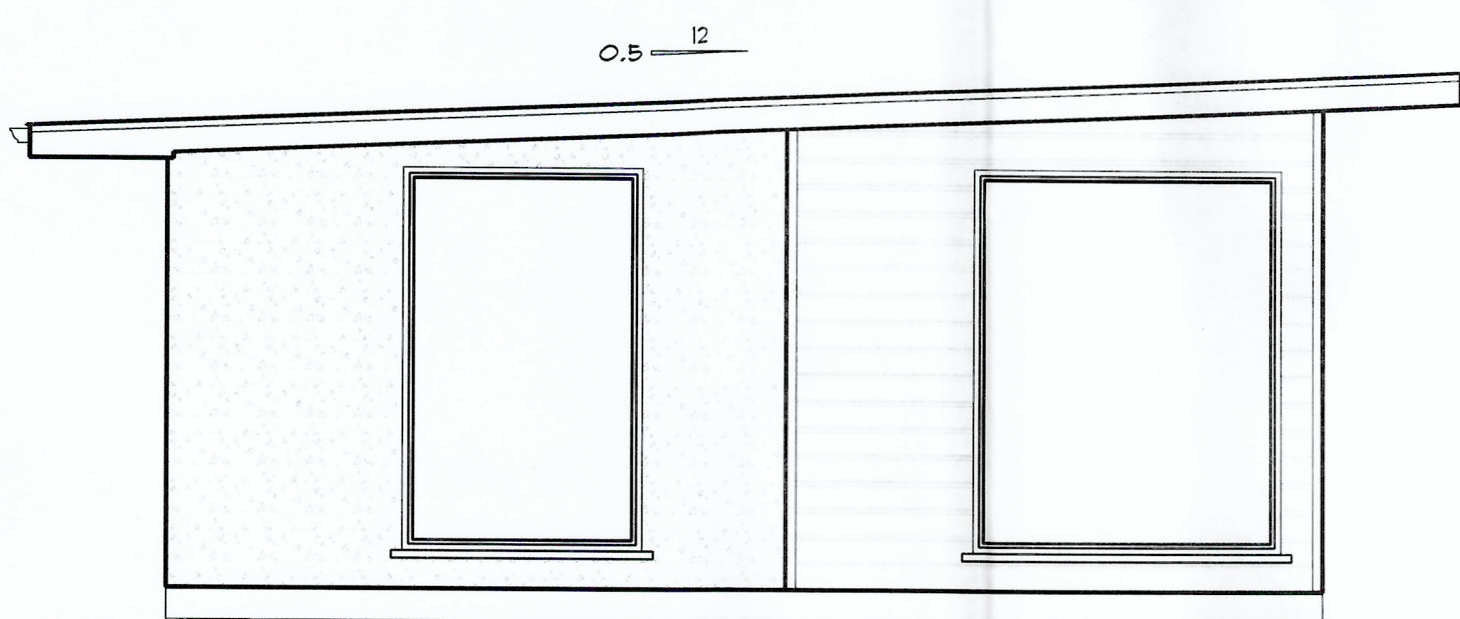
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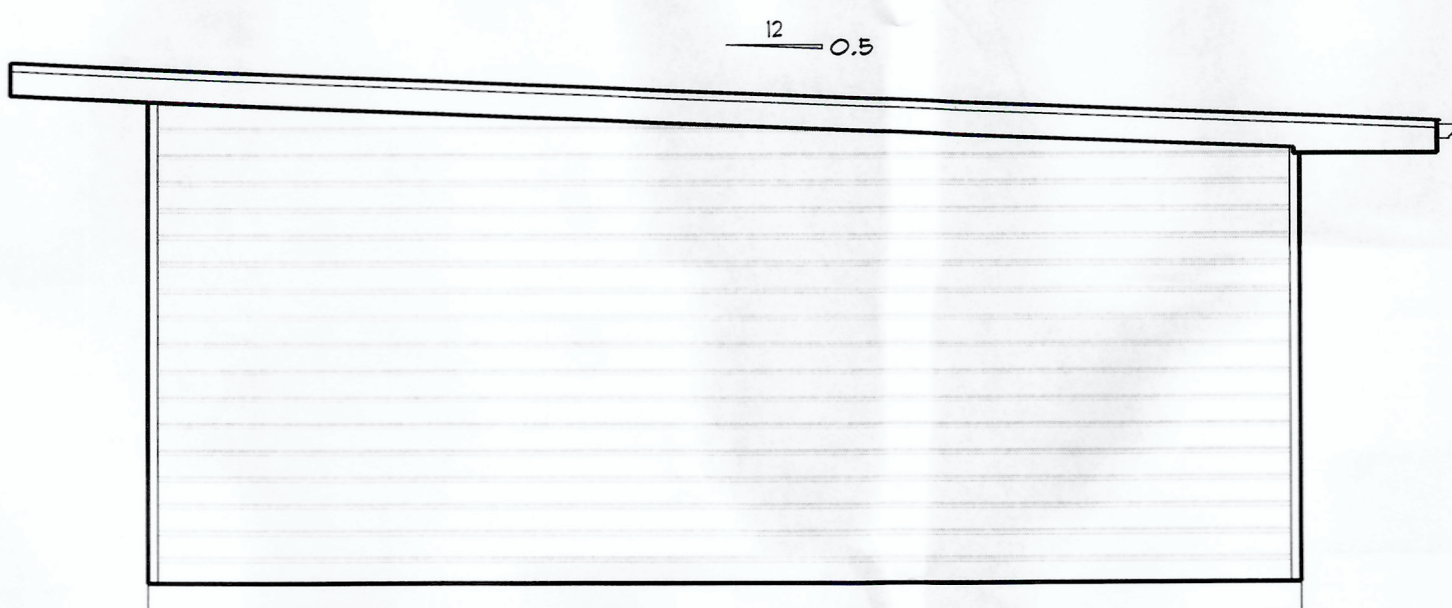
SHEET No.

4

CONTRACTOR SHALL VERIFY ALL ELEVATIONS AND DIMENSIONS OF EXISTING CONDITIONS OR NEW WORK
PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS SHALL BE VERIFIED AND RECORDED FOR ALL LOCATIONS OF THE
JOB. A CALIFORNIA LICENSED CONTRACTOR & AN ARCHITECT OR ENGINEER SHOULD BE ACQUIRED FOR
THIS PROJECT.



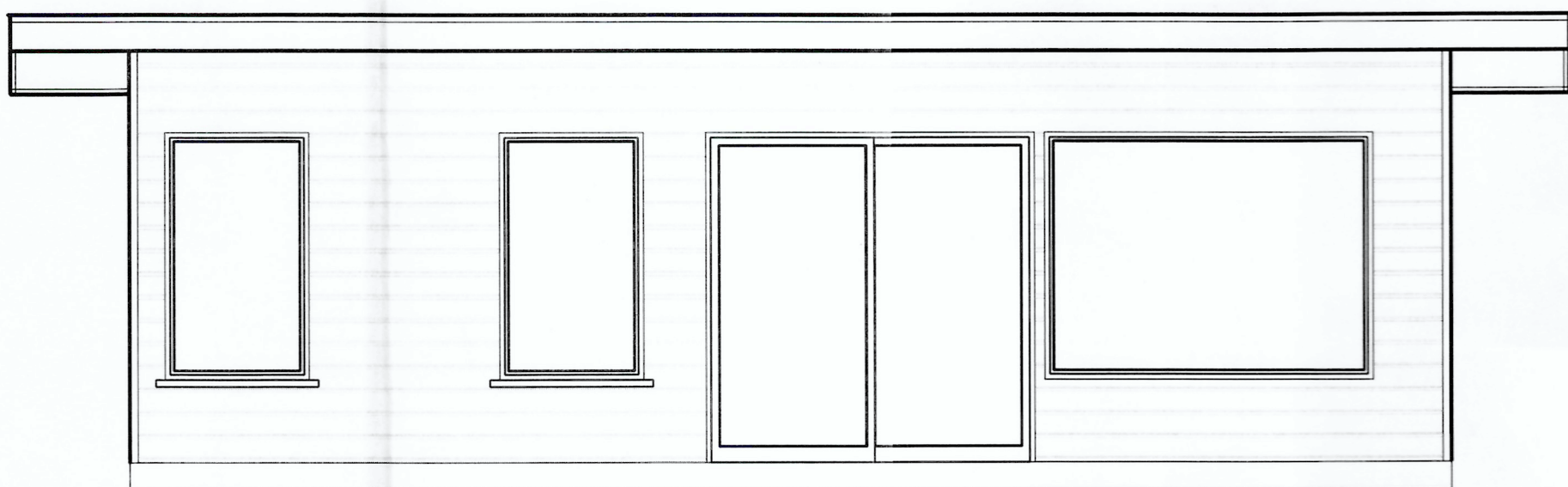
NORTHWEST ELEVATION
SCALE: 1/4" = 1'-0"



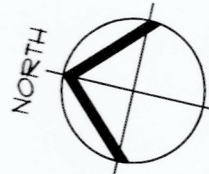
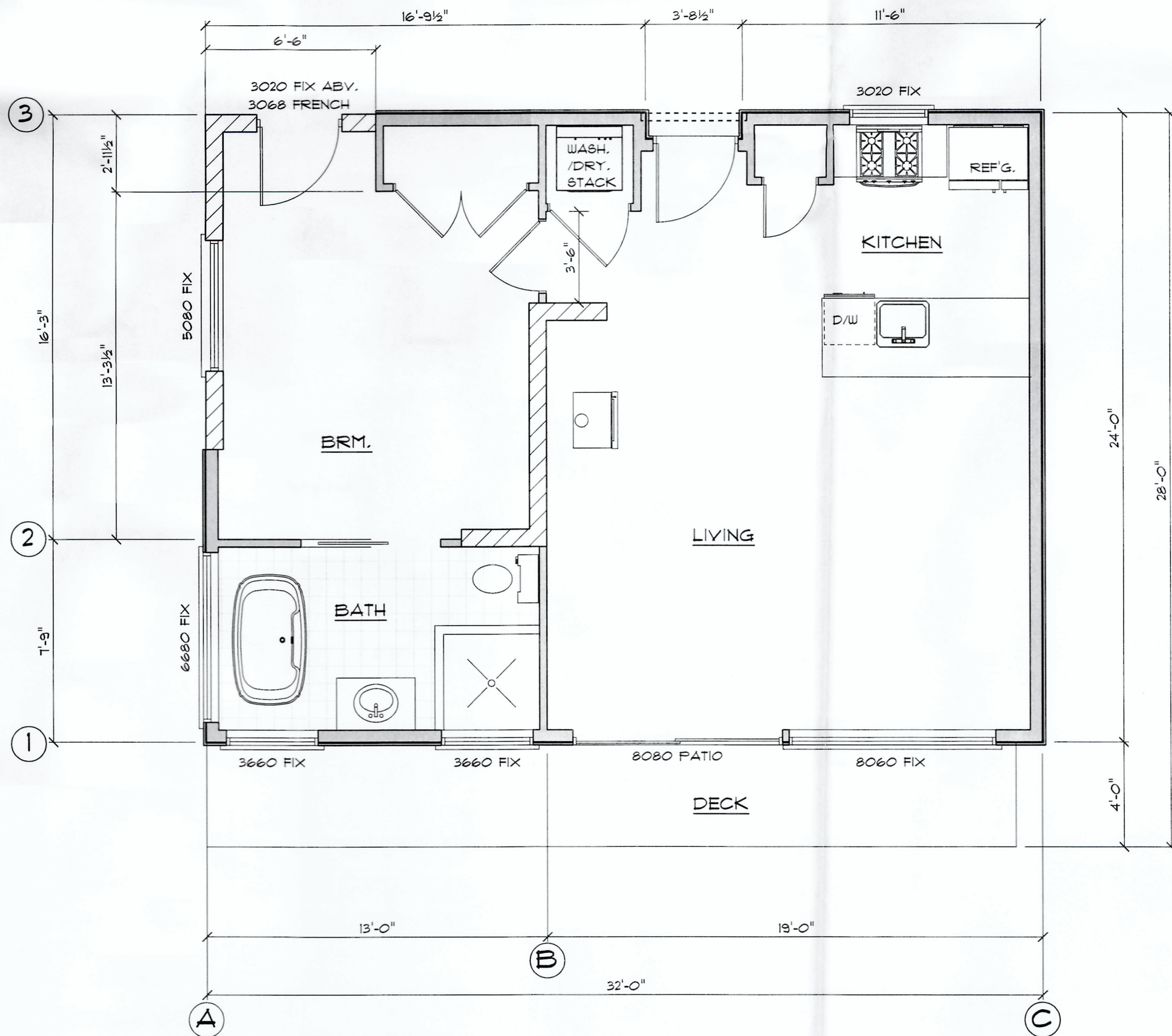
SOUTHEAST ELEVATION
SCALE: 1/4" = 1'-0"



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



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



ADU FLOOR PLAN
SCALE: 1/4" = 1'-0"
168 SF

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SHEET No.

5

NEIGHBORHOOD DESIGN SURVEY



Your project is being reviewed for compatibility with neighborhood design. A finding required for approval of your secondary dwelling unit is that the new development is compatible with the character of the neighborhood.

To assist the Planning Department in our review of your project, please complete the following Survey for representative samples of existing development within a two or three block radius of your property. Please include the developed parcels nearest your project site in your neighborhood survey.

1. Assessor Parcel No. or Address of survey site: 13 REDCREST COURT SHELTER COVE
Use of Building¹: SFR Number of Stories: 2 Approx. Height: 26' 30'
Exterior Building Material: Siding: HORIZ Roofing: COMP
Architectural Style²: A FRAME
2. Assessor Parcel No. or Address of survey site: 11 REDCREST COURT SHELTER COVE
Use of Building: SFR Number of Stories: 2 Approx. Height: 24'
Exterior Building Material: Siding: HORIZ Roofing: COMP
Architectural Style: COASTAL
3. Assessor Parcel No. or Address of survey site: 865 BEACH ROAD
Use of Building: SFR Number of Stories: 2 Approx. Height: 25'
Exterior Building Material: Siding: VERTICAL Roofing: COMP
Architectural Style: CONTEMPORARY
4. Assessor Parcel No. or Address of survey site: 1049 SPRING ROAD
Use of Building: SFR Number of Stories: 2 Approx. Height: 28'
Exterior Building Material: Siding: HORIZ Roofing: COMP
Architectural Style: BUNGALOW
5. Assessor Parcel No. or Address of survey site: 1038 SPRING ROAD
Use of Building: SFR Number of Stories: 2 Approx. Height: 32'
Exterior Building Material: Siding: HORIZ Roofing: COMP
Architectural Style: MEDITERRANEAN

Note: Photographs of the above developments will be accepted, but are **not** a substitute for this survey.

¹ Project Use Codes: (R) = residential; (C) = commercial; (I) = industrial; (O) = other _____

² What is the architectural impression of the building, for example: Cape Cod, Spanish, bungalow, cabin, Victorian, contemporary, etc.

6. Assessor Parcel No. or Address of survey site: 416 WHALE POINT
 Use of Building³: SFR Number of Stories: 1 1/2 Approx. Height: 18'
 Exterior Building Material: Siding: HORIZ Roofing: COMP
 Architectural Style⁴: CONTEMPORARY
7. Assessor Parcel No. or Address of survey site: 575 RIDGE ROAD
 Use of Building: SFR Number of Stories: 1 Approx. Height: 17'
 Exterior Building Material: Siding: HORIZ W/SHINGLES Roofing: TILE
 Architectural Style: COTTAGE
8. Assessor Parcel No. or Address of survey site: 645 RIDGE ROAD
 Use of Building: SFR Number of Stories: 2 Approx. Height: 28-30'
 Exterior Building Material: Siding: VERTICAL Roofing: COMP
 Architectural Style: COASTAL
9. Assessor Parcel No. or Address of survey site: 634 RIDGE ROAD
 Use of Building: SFR Number of Stories: 2 1/2 Approx. Height: 30
 Exterior Building Material: Siding: VERTICAL Roofing: COMP
 Architectural Style: FRENCH COUNTRY
10. Assessor Parcel No. or Address of survey site: 362 RIDGE ROAD
 Use of Building: SFR Number of Stories: 1 Approx. Height: 16'
 Exterior Building Material: Siding: VERTICAL Roofing: COMP
 Architectural Style: BUNGALOW

Note: Photographs of the above developments will be accepted, but are **not** a substitute for this survey.

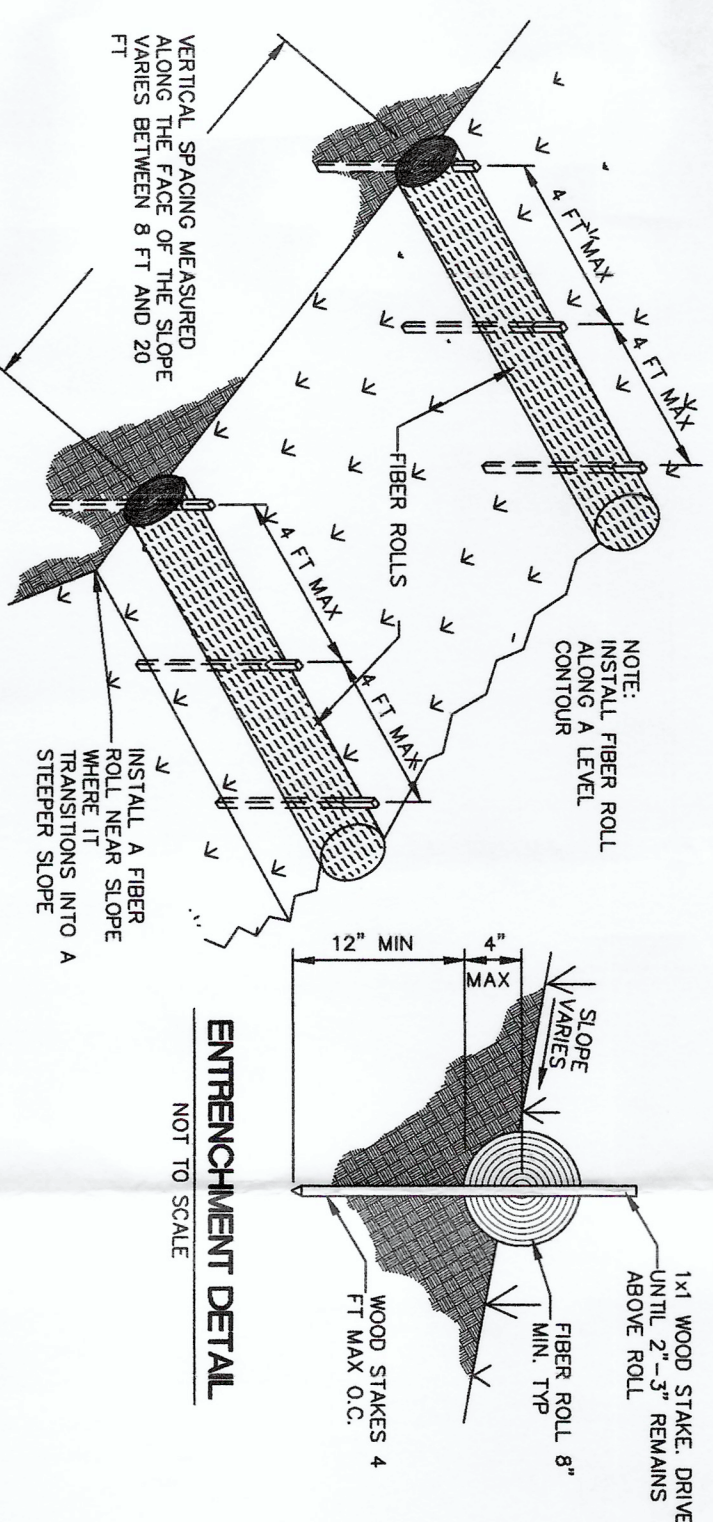
Attach additional sheets if necessary.

³ Project Use Codes: (R) = residential; (C) = commercial; (I) = industrial; (O) = other _____

⁴ What is the architectural impression of the building, for example: Cape Cod, Spanish, bungalow, cabin, Victorian, contemporary, etc.

EROSION CONTROL NOTES

1. ALL SURFACE WATER DRAINAGE SHOULD BE CONTROLLED TO FLOW AWAY FROM THE ADJACENT PROPERTIES. ALL EROSION CONTROL METHODS SHALL BE IN COMPLIANCE WITH HUMBOLDT COUNTY DEPARTMENT OF PUBLIC WORKS REQUIREMENTS.
2. ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET AREAS UPON STARTING OPERATIONS AND PERIODICALLY THEREAFTER AS DIRECTED BY THE INSPECTOR. ALL ENTRANCES SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY.
3. AFTER SOWER AND UTILITY TRENCHES ARE BACKFILLED AND COMPACTED, THE SURFACES OVER SUCH TRENCHES SHALL BE MOUNDING SLIGHTLY TO PREVENT CHANNELING OF WATER IN THE TRENCH AREA.
4. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BY THE ENGINEER OF RECORD. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING ALL EROSION AND SEDIMENT CONTROL MEASURES. THE CONTRACTOR SHALL PROVIDE A FINAL REPORT TO THE HUMBOLDT COUNTY BUILDING DEPARTMENT PRIOR TO OCCUPANCY.
5. APPLY VEGETATIVE STABILIZATION (I.E. MULCH AND/OR TEMPORARY SEEDING AS APPROVED BY ENGINEER) WITHIN 7 DAYS OF LAND CLEARING OR GRADING TO ANY PORTION OF THE SITE THAT IS PLANNED TO BE IDLE FOR MORE THAN 45 DAYS.
6. THE EROSION AND SEDIMENT CONTROL MEASURES WILL BE OPERABLE DURING THE RAINY SEASON (OCTOBER 15-APRIL 15).
7. DURING THE RAINY SEASON, ALL PAVED AREAS WILL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE WILL BE MAINTAINED SO THAT SEDIMENT-LOADED RUNOFF DOESN'T ENTER THE STORM DRAINAGE SYSTEM.
8. CONTRACTOR SHALL HAVE TOOLS, EQUIPMENT, AND MATERIALS TO PROVIDE EROSION CONTROL MEASURES MADE NECESSARY BY A CONSTRUCTION OPERATION, ON THE JOB SITE BEFORE BEGINNING THAT OPERATION.
9. ADJACENT PROPERTIES SHALL BE PROTECTED FROM STORM WATERS, MUD, SILT, ETC. ON A DAILY BASIS.
10. EXCESSIVE DUST SHALL BE CONTROLLED AT ALL TIMES DURING CONSTRUCTION AND UNTIL FINAL COMPLETION. THE CONTRACTOR, WHEN HE/SHE OR HIS/HERS SUBCONTRACTOR ARE OPERATING EQUIPMENT ON SITE, SHALL PREVENT FORMATION OF EXCESSIVE AIRBORNE NUISANCES BY WATERING AND/OR MISTING THE SITE OF THE WORK IN SUCH A MANNER THAT WHILE SOILING DUST PARTICLES ARE KEPT FROM THE WORK SURFACES OF THE ADJACENT PROPERTIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING DUST FROM HIS OWN ACTIVITIES OR HIS SUBCONTRACTORS ACTIVITIES IN PERFORMING THE WORK UNDER THIS CONTRACT AND SHALL BE RESPONSIBLE FOR ANY CITATIONS, FINES, OR CHARGES RESULTING FROM DUST NUISANCES. DUST CONTROL WILL BE DONE ON A DAILY BASIS.

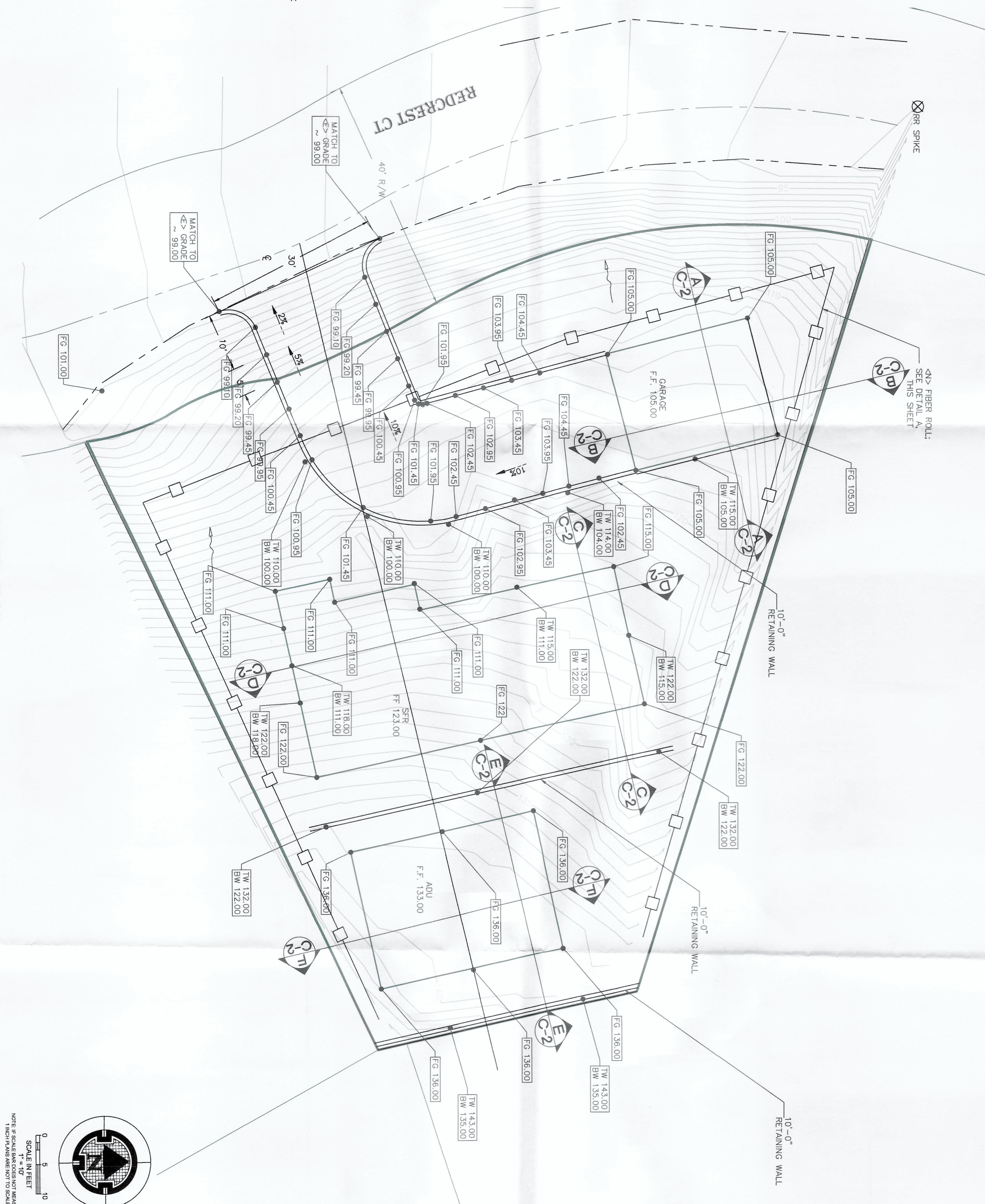


TYPICAL FIBER ROLL INSTALLATION

NOT TO SCALE

GRADING PLAN

SCALE: 1"=10'

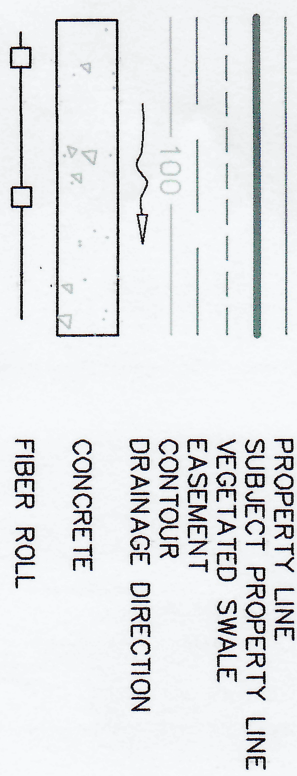


PROJECT INFORMATION

OWNER: ENAT ROZENBLUM
DRAFTSPERSON: TANNER BELL
ENGINEER: PACIFIC AFFILIATES, TRAVIS SCHNEIDER
PROJECT ADDRESS: 37 REDCREST COURT
SHELTER COVE, CA 91307
APN # 109-161-063
ZONING: RESIDENTIAL
COASTAL ZONE: YES
ACQUIST-PROLO: YES
100-YR FLOOD ZONE: NO
SRA: YES

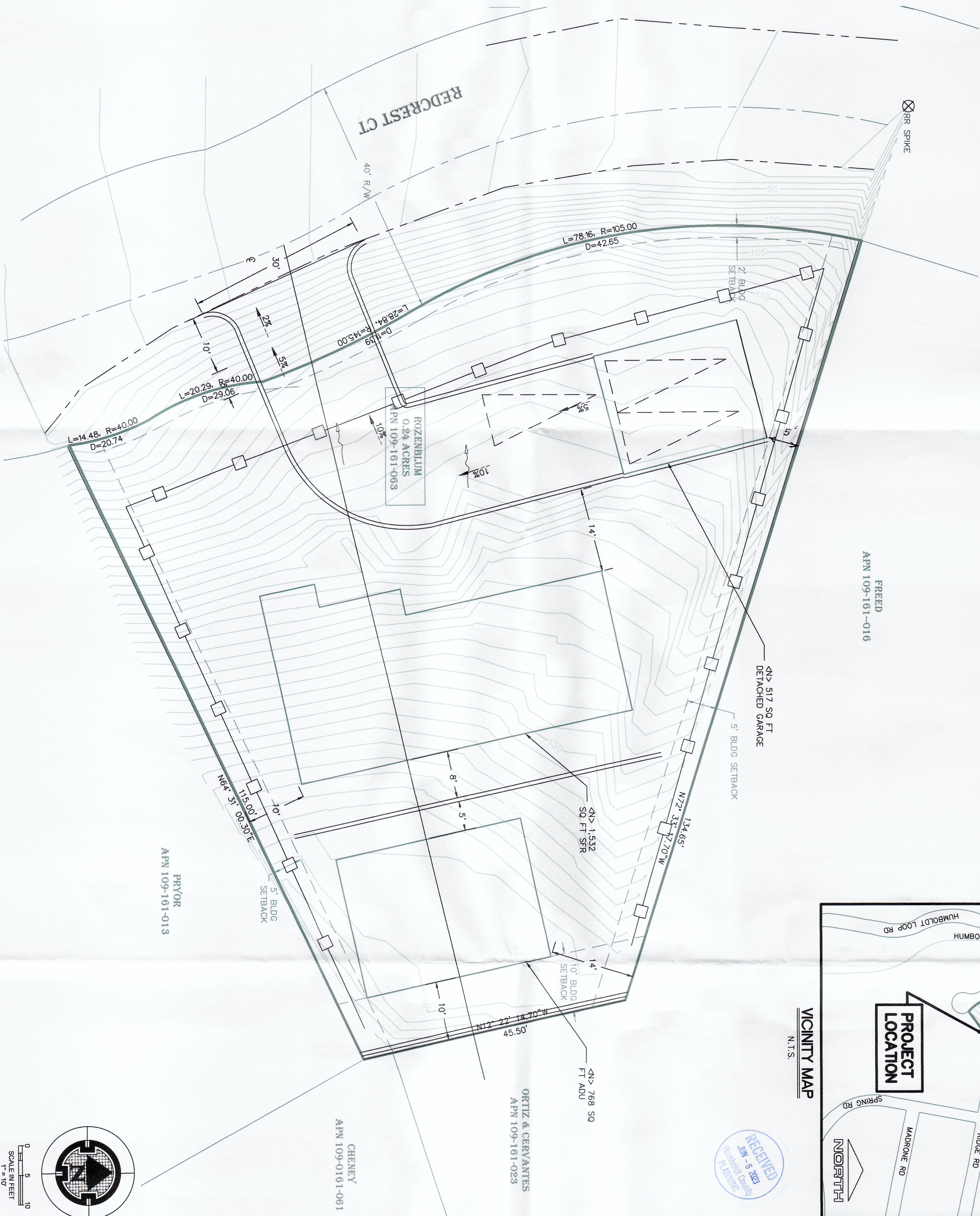
TREES TO BE REMOVED: 0
CUT/FILL: 1,615 CY CUT/1,615 CY FILL
NO KNOWN HISTORICAL BUILDINGS LOCATED ON SITE
NO KNOWN HAZARDOUS AREAS LOCATED WITHIN 400 FT. OF SUBJECT SITE

LEGEND



ABBREVIATIONS

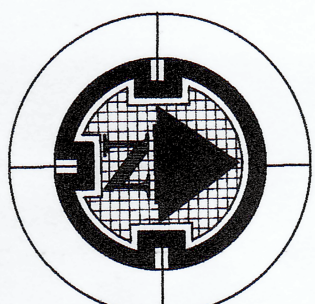
APN ASSESSORS PARCEL NUMBER
<N> NEW
<E> EXISTING
<C> CONCRETE
<D> DRIVEWAY
<S> SQUARE FOOT
SFR SINGLE-FAMILY RESIDENCE



GRADING PLAN

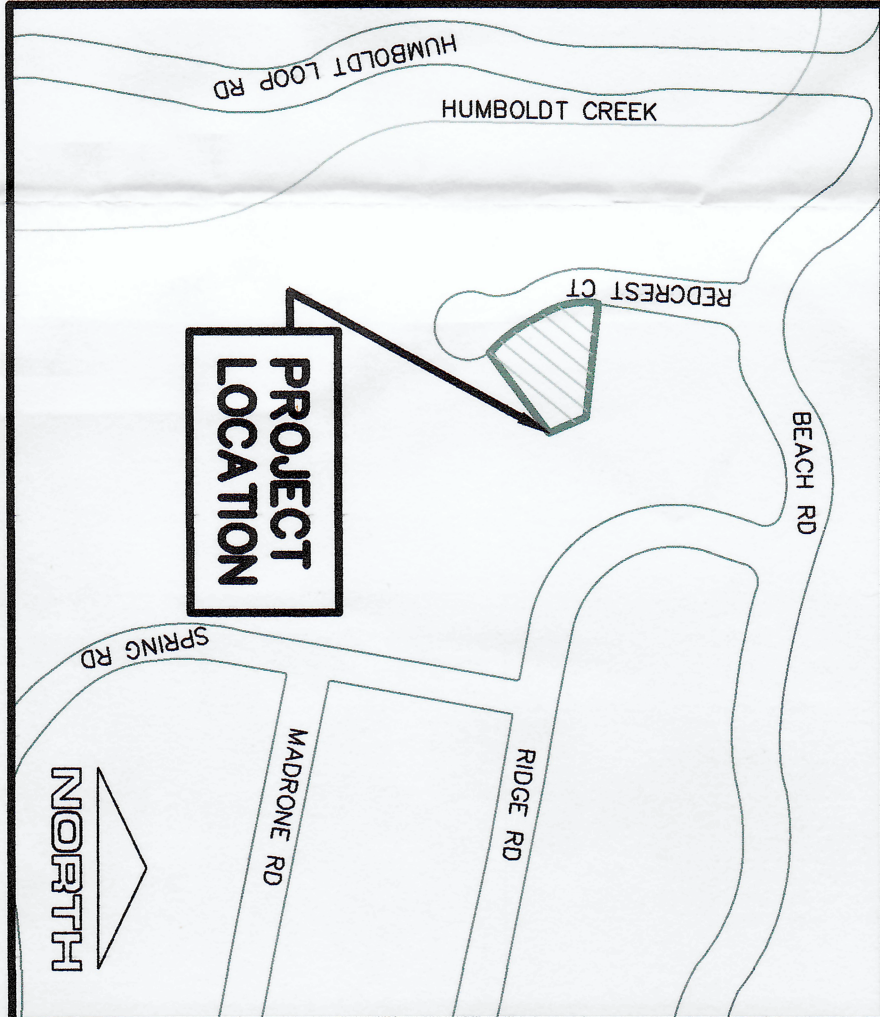
SCALE: 1"=10'

NOTE: SCALE BAR DOES NOT MEASURE
THICKNESS AND NOT TO SCALE



VICINITY MAP

N.T.S.



REVISIONS

BY	REVISIONS

PACIFIC AFFILIATES
CONSULTING ENGINEERS
205 'I' STREET, EUREKA, CA 95501
TEL (707) 445-3001 • FAX (707) 445-3003



SITE PLAN

PACIFIC AFFILIATES, INC. HEREBY EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS AND DRAWINGS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN PERMISSION OF PACIFIC AFFILIATES, INC. NOR ARE THEY ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING WRITTEN PERMISSION AND CONSENT.

ROZENBLUM
37 REDCREST COURT
SHELTER COVE, CA 95589
APN: 109-161-063

Date: FEBRUARY 15, 2023
Scale: AS NOTED
Drawn by: TB
SHEET NUMBER
C-1
JOB NUMBER
22-2970

R-2 SOILS REPORT



AP No. 109-161-063

REDCREST COURT

SHELTER COVE, CA 95589



PREPARED BY:



PACIFIC AFFILIATES, INC.

A CONSULTING ENGINEERING GROUP

990 WEST WATERFRONT DRIVE

EUREKA, CA 95501

(707) 445-3001



APRIL 6, 2022



06/05/2023

TRAVIS SCHNEIDER, R.C.E. #67393



TABLE OF CONTENTS

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APPENDIX I – SITE PLAN**APPENDIX II – SEISMIC DESIGN PROVISIONS****APPENDIX III – BORING LOG AND HISTORICAL SOILS AND GEOLOGIC REPORTS**

1. INTRODUCTION

The following Soils Report is provided in regard to specific site conditions at the subject property, AP No. 109-161-063, located at Redcrest Court, Shelter Cove, in Humboldt County. Proposed development on the property includes a single family residence.

This assessment is based on data gathered from the site by this office on March 24, 2022 and is supplemented by a review of additional resources. Our database consists of data from a review of aerial photographs, and information from pertinent literature and geologic maps. This report addresses the suitability of the subject parcel for development as described in Section 4 below. An analysis of the site conditions and recommendations for the proposed development are provided in this report.

2. SITE DESCRIPTION

The subject property is an irregular shaped parcel (± 0.23 acres) located in a cul-de-sac in north-western Shelter Cove, CA. The property is in a residential area with many parcels currently undeveloped. The adjacent lot to the north is developed with a single-family residence.

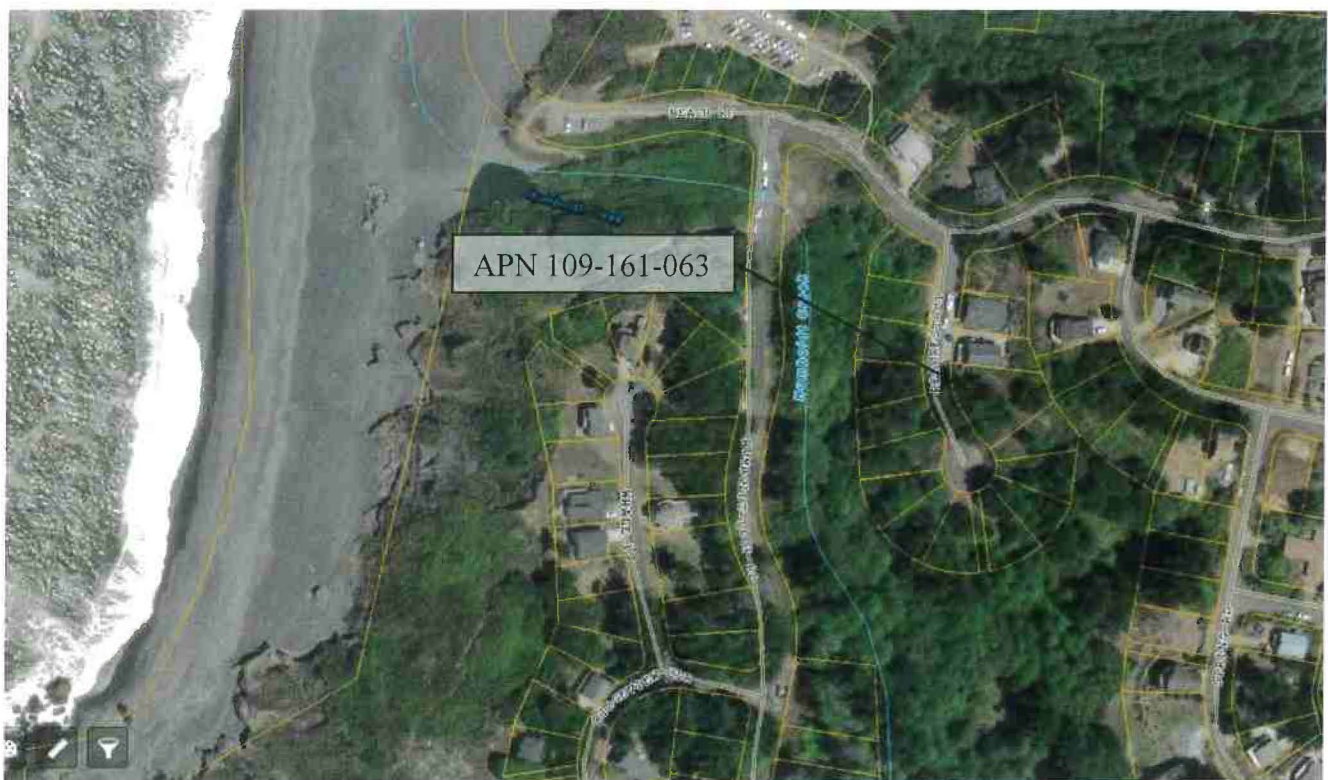


Figure 1 - Aerial view of subject property (photo courtesy of Humboldt GIS, 2022)

3. SITE TOPOGRAPHY

Elevation at the site ranges from 110 feet above mean sea level to the west, along Redcrest Court, to 144 feet above mean sea level along the east property lines. Sloping on the site ranges from 12-35%, decreasing to the west. (See Topographic Map by this office, Appendix I)

4. SITE DEVELOPMENT

The site is currently undeveloped with evidence of recent tree removal (Figures 2-4).



Figure 2 - Subject property, photo taken facing east (photo date: March 24, 2022)



Figure 3 - Subject property, photo taken facing west (photo date: March 24, 2022)



Figure 4 - Subject property, photo taken facing east (photo date: March 24, 2022)

5. SUBSURFACE CONDITIONS

Exposed ground from natural terracing at the site and recent logging activity were inspected during the site visit on March 24, 2022. No evidence of groundwater was observed during the time of the site visit. Site soils consisted of clayey sandy gravel overlain with one and a half feet of topsoil.



Figure 5 -site soils (photo date: March 24, 2022)



Figure 6 - Subject property, photo taken facing south (photo date: March 24, 2022)
)



Figure 7 – Site soils (photo date: March 24, 2022)

6. SEISMIC HAZARDS

Based on the criteria established in the 2019 California Building Code, the proposed development falls under Occupancy Category II and has an Importance Factor, $I = 1.0$. Due to the stiff soil profile, the site soil is classified as Site Class D. As a result, the site coefficients for the mapped acceleration parameters are: $F_a = 1.0$ (short period, SS), and $F_v = 1.5$ (one-second period, S1). Spectral Response Acceleration Parameters (SRAP) for the site are based on the property location of approximately latitude: 40.044097° , and longitude: -124.076308° , and are as follows:

Mapped SRAP	$S_s = 3.28g$ (0.2-second spectral response)
	$S_1 = 1g$ (1-second spectral response)
Maximum SRAP	$S_{MS} = 2.73g$ (0.2-second period)

$$S_{M1} = 2.48g \text{ (1-second period)}$$

$$\text{Design SRAP} \quad S_{DS} = 1.82g \text{ (0.2-second period)}$$

$$S_{D1} = 1.65g \text{ (1-second period)}$$

$$\text{Peak Ground Acceleration} \quad PGA_m = 0.98 \text{ per ASCE7-10, Equation 11.8-1}$$

Per §11.6 of ASCE 7-10, the project site is assigned to Seismic Design Category E because $S_1 > 0.75g$.

According to local geologic maps, the parcel falls within the Alquist Priolo Fault Hazard Zone with a branch of the Alquist Priolo Fault running northwest-southeast through the eastern side of the property. An additional branch of the Alquist Priolo Fault runs south-north approximately one half mile to the east. Based on the regional geology and history of the area, strong ground motion generated by moderate to large earthquakes is likely to occur at the site within the economic lifespan of the proposed development (50 years). Suitable building design in accordance with current codes will reduce the potential for property damage and injury.

Large earthquakes are possible but less likely to occur than are small earthquakes. The probability that a seismic event will cause a ground motion intensity of MM VIII (Modified Mercalli Intensity scale) at the site is high. Shaking of MM VIII is likely to cause damage to a low-rise, wooden-frame, standard-construction structure; damage is likely to be “light” (defined as “significant localized damage of some structural components generally not requiring repair”) to moderate (localized damage of many components warranting repair). Physical damage resulting from smaller earthquakes (MM VII or less) is likely to be “light” to “none”. Although seismic shaking cannot be avoided, the effects of seismic shaking can be minimized by selecting an appropriate home style, upgrading its structural design, using high quality materials and workmanship, and building to the appropriate Seismic Design Category standards. In addition, the interior of the structure can be designed and maintained to minimize the falling and/or toppling of heavy objects.

There is a high likelihood of seismically induced surface rupture at the site in the event of a moderate to severe seismic event along the mapped branch of the Alquist Priolo Fault line that runs through the eastern portion of the property. Damage sustained by a wood framed structure during a seismic event can be minimized by building in conformance with the appropriate codes and providing a well founded, conventional spread footing into compacted subgrade.

7. SLOPE STABILITY

The site has 15-30% sloping and is within an area identified as, “High Instability”, according to Humboldt County Hazard Mitigation Mapping. Areas of sloping greater than 50% are west of the parcel, on the west side of Ridgcrest Court. (County of Humboldt, 2022).

8. LIQUEFACTION HAZARD

Liquefaction of sediment occurs when its shear strength is lost as a result of an increase in pore water pressure in response to cyclic loading. As such, liquefaction is a potentially damaging response to seismic shaking. Ground settlement, lateral spreading and/or sand boils may result from liquefaction. Structures supported on liquefied soils could suffer foundation settlement or lateral movement that could be severely damaging to the structure. Poorly consolidated, clean to moderately silty sands beneath the groundwater level are prone to undergo liquefaction during strong earthquakes. Dense soils or soils that exhibit cohesion are less likely to be susceptible to liquefaction.

Native soil at the site is a clayey sandy gravel. The soil appeared to be well consolidated and groundwater did not appear to be near the surface, though this will vary with the seasons. Taking into consideration the nature of the native soils, there is a low to moderate probability of liquefaction occurring on this site during a significant seismic shaking event in the future. According to the County of Humboldt GIS, the property is not located in an area of potential liquefaction.

9. SETTLEMENT

The foundation of the proposed structures shall bear on the underlying sandy soils. Given the nature of the native soils, and the proposed construction, differential settlement is expected to be very minimal. Differential settlement is expected to be no more than one half inch over any fifty foot length of foundation. Total settlement of the structure is expected to be no more than one inch. These settlement values assume adequately sized footings that are well constructed and placed on well consolidated, undisturbed native soils. Settlement will occur in a short time frame as the bearing materials are sandy in nature. Settlement can be minimized by adequate compaction of the subgrade prior to foundation placement.

10. FOUNDATION

A conventional reinforced perimeter foundation with post and pier supports shall be provided for the new structures. Enlarged spread footings for concentrated loads shall be designed by a California Registered Civil Engineer. All load bearing foundation elements shall be embedded a minimum of 12 inches into the native bearing soil. All topsoil and fill shall be removed to allow foundation members to bear on the native clayey/sandy soils. In the event loose material, fill, debris or organic material (roots, stumps, etc.) is encountered during excavations, the area shall be over-excavated to the native material described herein and filled in accordance with Section 12 of this report.

Bearing pressures shall not exceed 1,500 pounds per square foot (psf), except for short-term loading due to wind or seismic activity where the bearing pressure may be increased by one-third. Footing excavations are to be inspected by a Registered Civil Engineer prior to the placement of foundation concrete. On site soils shall not be used as backfill material unless approved by a Registered Civil Engineer. Structural fill materials must be approved by a Registered Civil Engineer prior to placement, except as noted in Section 12 below. Where fill is placed beneath foundation elements, compaction tests

must be completed to ensure the material has been compacted to a minimum of 95% of the relative compaction test value.

11. GRADING

All site grading shall be completed so as to control and direct water away from the buildings to minimize erosion adjacent to the foundation. It is recommended that a minimum slope of 5% be provided for a horizontal distance of ten feet from each structure. Impervious surfaces within ten feet of a structure shall maintain a minimum slope of 2% away from the building. Beyond ten feet, it is recommended that a minimum slope of 1% be maintained away from the structure. All cut slopes shall be as flat as possible, but shall maintain a maximum slope of 2:1 (H:V) in well consolidated, tight clay soils and 3:1 in sandy or gravelly soils. Best Management Practices (i.e. silt fence, straw wattles, straw bales, etc.) shall be employed at the site during the rainy season or as required by the governing agency to minimize the transfer of sediment away from the site. Impacted areas shall be reseeded prior to the first winter using a Caltrans erosion control mix or equal.

12. PLACEMENT OF FILL

Where fill is required beneath load bearing, structural components, engineered fill compacted to 95% relative compaction per ASTM Test Method D6938 shall be used. Fill samples should be tested for dry density prior to placement using ASTM Test Method D1557. All topsoil, deleterious and/or organic material shall be removed prior to placement of fill and the subgrade shall be compacted to a minimum of 95% relative compaction. Fill material should be Class 2 aggregate base meeting Caltrans Standard Specification 26-1.02B, unless otherwise approved by a Registered Civil Engineer. All fill shall be free of organic and deleterious material and clasts larger than three inches (3") in diameter. Fill shall be placed in loose lifts not greater than eight inches thick at uniform moisture content (at or near optimum) and mechanically compacted.

13. CONCLUSIONS

Based upon the results of the site investigation, no geotechnical conditions were encountered which would preclude the proposed development, provided the following recommendations are adhered to:

- All construction shall be in accordance with the most recently approved California Building Code, County of Humboldt Municipal Code and meet current criteria for the appropriate Seismic Design Category.
- Maximum allowable soil bearing pressure shall be 1,500 psf for live and dead loads.
- All topsoil shall be removed from footing and slab locations prior to construction. All fill beneath footings must meet a minimum 95% relative compaction test.

- Footing trenches and pads shall be excavated to a minimum depth of 12 inches into the native bearing material as specified in this report. Footings are to be inspected by a Registered Civil Engineer prior to the placement of concrete.
- Foundations shall be set back from slopes in accordance with the most recently approved California Building Code. Structures should be set back a distance equal to the minimum of $H/2$ or 15 feet from the toe of a slope and $H/3$ or 40 feet from the top of a slope, where H = height of slope.
- Areas of concrete slab construction shall be proof rolled prior to placing base material. Contractors are encouraged to have compaction tests completed on fill placed under slabs, although it is not required.
- Concrete slabs shall have structural separations (i.e. footings) at a maximum of 25 foot intervals. Slabs shall be designed for a bearing pressure of no more than 1,000 psf unless a proper engineered design is provided.
- No fill shall be allowed on site unless engineered by a Registered Civil Engineer, with the exception of material that meets Caltrans Standard Specification 26-1.02B for Class 2 aggregate base. Fill shall be free of organic and deleterious material and clasts larger than three inches (3") in diameter.
- If any fill material, including areas with organic debris or uncompacted materials, or areas of low density, noncohesive material is encountered during excavations, construction is to be discontinued until the excavations and materials are inspected by a Registered Civil Engineer or Certified Engineering Geologist.
- Cut slopes shall be as flat as possible, but not exceed 2:1 for well consolidated, tight clay soils; cut slopes shall not exceed 3:1 in sandy or gravelly deposits.
- Excavations into the native soils may encounter caving soils and possibly perched water, depending on the final depth of excavation. Individual contractors should be made responsible for designing and constructing stable, temporary excavations as required to maintain stability of the excavation sides and bottom and to provide human safety.
- All site drainage shall be controlled and directed away from the buildings to minimize erosion. Best Management Practices shall be employed during the rainy season to minimize sediment transfer off the site.
- Impacted areas shall be reseeded prior to the first winter using a Caltrans erosion control mix or equal.

Any changes in site location or building configuration should be evaluated for compliance with this report. The Engineer shall be notified immediately of any conditions noted during excavation and grading that differ from those noted in this report. The findings of this report are valid only for the development described herein. Future development on the property shall be evaluated on a case specific basis.

14. REFERENCES

ASCE (American Society of Civil Engineer) 7-10, Minimum Design Loads for Buildings and Other Structures, 2006, Structural Engineering Institute.

ATC Hazards by Location. <https://hazards.atcouncil.org/>, 2019

CBC (California Building Code) 2019 California Code of Regulations, Title 24, Part 2, Volume 2 California Building Standards Commission.

California Geologic Survey, 1999, *North Coast Watersheds Mapping* DMG CD 99-002

California Geologic Survey, 2000, *Digital Images of Official Maps of Alquist-Priolo Earthquake Fault Zones of California, Northern and Eastern Region*, Fortuna Quadrangle, DMG CD 2000-05.

County of Humboldt, (1984) *General Plan Maps*

County of Humboldt, Planning Department, *Humboldt County Geographic Information Systems (GIS) Web Mapping*, 2022

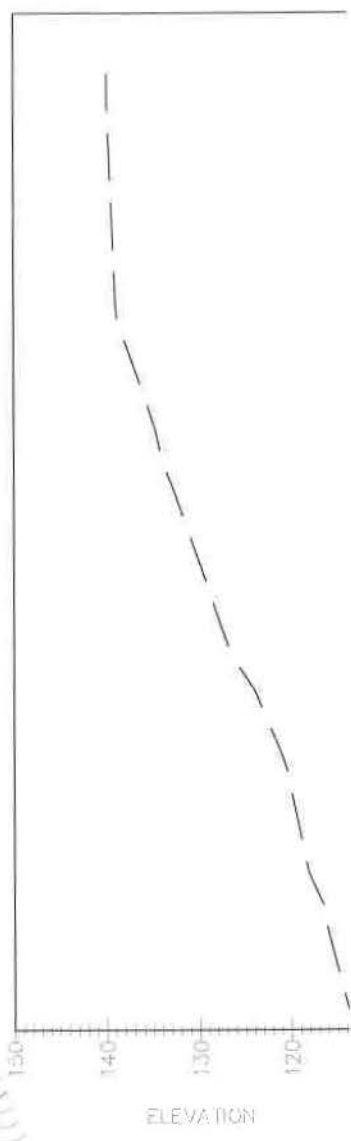
County of Humboldt, Humboldt County Community Development Services, 2002, *Central Humboldt County Bedrock and Faults*.

Craig, R. F. *Craig's Soil Mechanics*, seventh edition. New York: Spon Press, 2004.

Day, Robert W. *Foundation Engineering Handbook: Design and Construction with the 2006 International Building Code*. New York: McGraw-Hill, 2006.

Maptech, Terrain Navigator, California – North Coast Eureka. Maptech, Inc., 1998

APPENDIX I – TOPOGRAPHIC MAP



OSMR
MON CAP

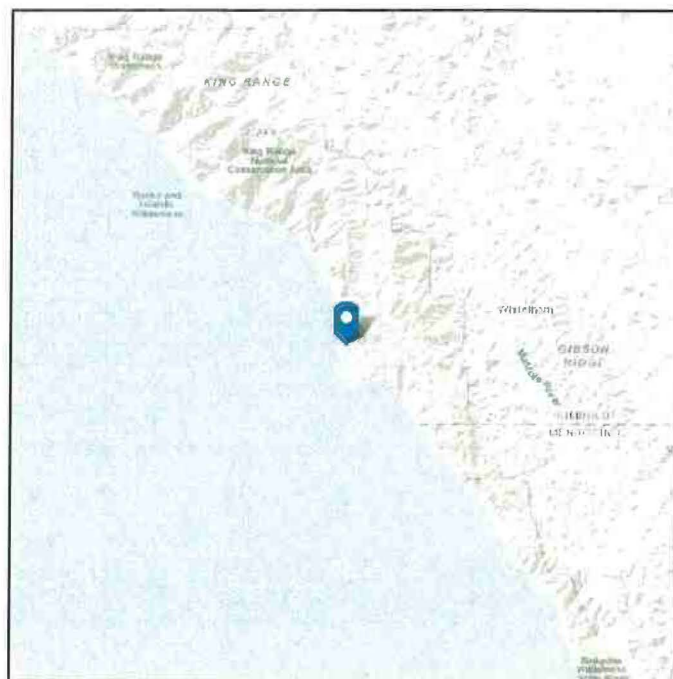
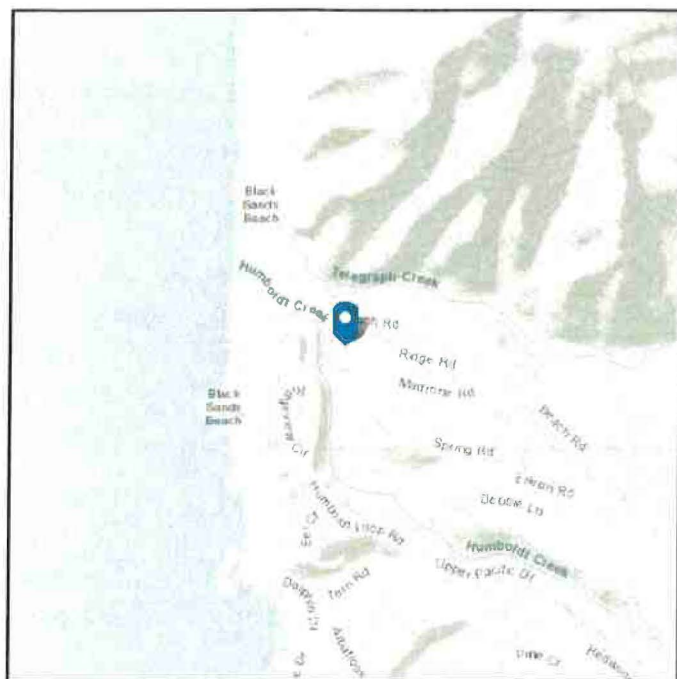
APPENDIX II – SEISMIC DESIGN PROVISIONS

ASCE 7 Hazards Report

Address:
No Address at This
Location

Standard: ASCE/SEI 7-22
Risk Category: III
Soil Class: D - Stiff Soil

Elevation: 172.62 ft (NAVD 88)
Latitude: 40.044097
Longitude: -124.076308



Wind

Results:

Wind Speed	99 Vmph
10-year MRI	63 Vmph
25-year MRI	70 Vmph
50-year MRI	74 Vmph
100-year MRI	78 Vmph
10,000-year MRI	112 Vmph
100,000-year MRI	128 Vmph
1,000,000-year MRI	147 Vmph

Data Source: ASCE/SEI 7-22, Fig. 26.5-1C and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Fri Apr 08 2022

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-22 Standard. Wind speeds correspond to approximately a 3% probability of exceedance in 50 years (annual exceedance probability = 0.000588, MRI = 1,700 years). Values for 10-year MRI, 25-year MRI, 50-year MRI and 100-year MRI are Service Level wind speeds, all other wind speeds are Ultimate wind speeds.

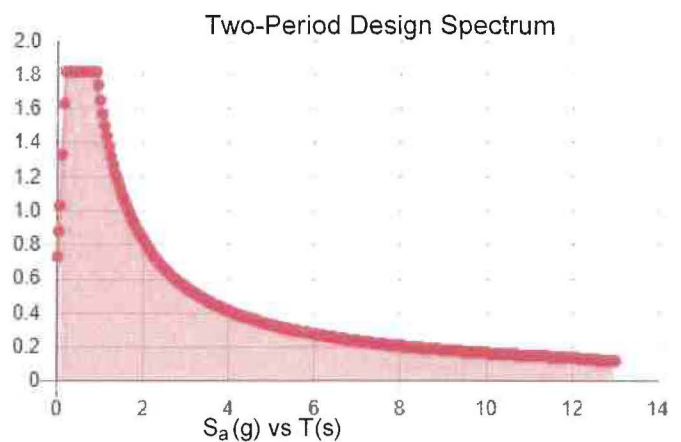
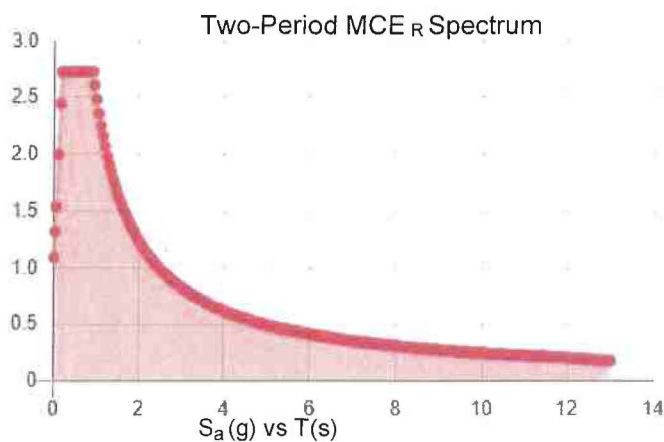
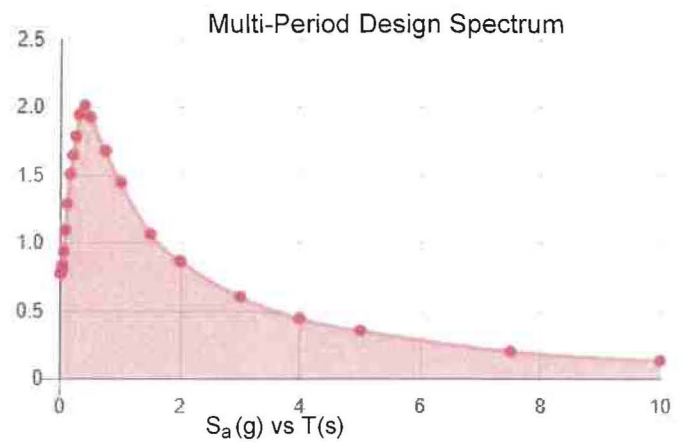
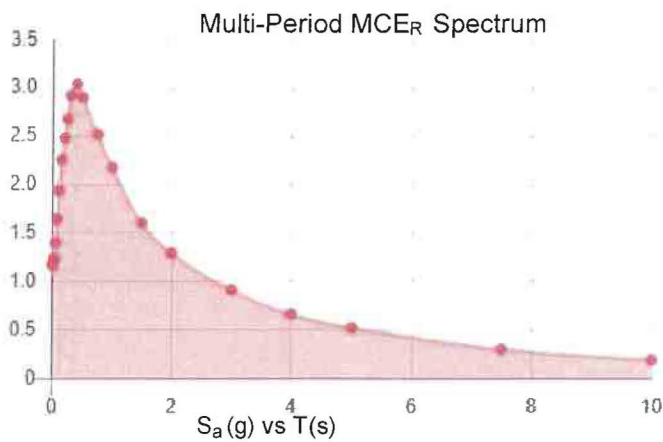
Site is not in a hurricane-prone region as defined in ASCE/SEI 7-22 Section 26.2.

<https://asce7hazardtool.online/>

Site Soil Class:

Results:

PGA _M :	0.98	T _L :	12
S _{MS} :	2.73	S _S :	3.28
S _{M1} :	2.48	S ₁ :	1
S _{DS} :	1.82	S _{DC} :	
S _{D1} :	1.65	V _{S30} :	260



MCE_R Vertical Response Spectrum

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

Design Vertical Response Spectrum

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

Data Accessed: Fri Apr 08 2022

Date Source:

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

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APN 109-161-063

Soils Report
Job No. 22-2970

APPENDIX III – Boring Log

EXPLORATION BORING LOG

PROJECT NAME ROZENBLUM PROJECT NO. 22-2970 DATE MAR 24, 2022

HOLE NO. TH-1 HOLE DIAMETER N/A DRILL RIG N/A APN: 109-161-063

HOLE ELEV. N/A GROUNDWATER ELEV. N/A LOGGED BY BA

SOIL DESCRIPTION				SOIL TYPE	DEPTH (FT.)	SAMPLES			BLOWS/FOOT
DESCRIPTION AND REMARKS	COLOR	MOISTURE	CONSIST.			JARS	SACKS		
TOPSOIL	DK BRN	DRY	MED. STIFF	OL	1				
CLAYEY SANDY GRAVEL	LT BRN	DRY	MED STIFF	SC-GC	2				
					3				
					4				
					5				
					6				
BOTTOM OF TEST PIT @ 6.0 FT, NO GROUNDWATER					7				
					8				
					9				
					10				
					11				
					12				



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