



NOTICE OF LAND USE DECISION

You may have received this because you are an adjacent property owner, and this notice is required to be provided pursuant to ORS 215.416. The proposal is identified in this decision and will be located on the subject property.

Coos County Planning
60 E. Second
Coquille, OR 97423
<http://www.co.coos.or.us/>
Phone: 541-396-7770
planning@co.coos.or.us

This decision notice is required to be sent to the property owner(s), applicant(s), adjacent property owners (distance of notice is determined by zone area – Urban 100 feet, Rural 250 feet, and Resource 750 feet), special taxing districts, agencies with interest, or person that has requested notice. Please read all information carefully as this decision. (See attached vicinity map for the location of the subject property).

Date of Notice: **Wednesday, July 17, 2024**
File No: ACU-24-015

Proposal: The proposal is for replacement of a Single Family Dwelling. The property is located within the Natural Hazard Liquefaction area.

Applicant(s): ST. CLAIR, AMY

Staff Planner: Crystal Orr, Associate Planner

Decision: **Approved with Conditions.** All decisions are based on the record. This decision is final and effective at close of the appeal period unless a complete application with the fee is submitted by the Planning Department at 5 p.m. on **Thursday, August 01, 2024**. Appeals are based on the applicable land use criteria. *Coos County Zoning and Land Development Ordinance (CCZLDO) General Compliance with Sections 1.1.300 Compliance with Comprehensive Plan and Ordinance Provisions and Article 6.1 Lawfully Created Lots or Parcels. The Single Family Dwelling is subject to Section 4.3.200 Use # 28 Dwelling-Replacement subject to a Compliance Determination and review standards 8 and 30. The property is within the Natural Hazard Very High Liquefaction overlay, subject to Section 4.11.132. All structures are subject to the General Siting Standards found in Section 4.3.225, and development within Exclusive Farm Use is subject to Section 4.6.210. Civil matters including property disputes outside of the criteria listed in this notice will not be considered. For more information, please contact the staff planner listed in this notice.*

Subject Property Information

Account Number: 730700
Map Number: 27S1336A0-01700

Property Owner: ST. CLAIR, AMY
1501 N COLLIER ST
COQUILLE, OR 97423-1346

Situs Address: 1501 N COLLIER ST COQUILLE, OR 97423

Acreage: 0.17 Acres

Zoning: EXCLUSIVE FARM USE (EFU)
PORTION WITHIN CITY LIMITS (CITY)

Special Development
Considerations and
Overlays: COQUILLE MUTUAL INTEREST AREA (CMI)
NH LIQUEFACTION (NHEQL)

The purpose of this notice is to inform you about the proposal and decision, where you may receive more information, and the requirements if you wish to appeal the decision by the Director to the Coos County

This notice shall be posted from July 17, 2024 to August 1, 2024

Hearings Body. Any person who is adversely affected or aggrieved or who is entitled to written notice may appeal the decision by filing a written appeal in the manner and within the time period as provided below pursuant to Coos County Zoning and Land Development Ordinance (CCZLDO) Article 5.8. If you are mailing any documents to the Coos County Planning Department the address is 225 N. Adams, Coquille OR 97423. Mailing of this notice to you precludes an appeal directly to the Land Use Board of Appeals.

Mailed notices to owners of real property required by ORS 215 shall be deemed given to those owners named in an affidavit of mailing executed by the person designated by the governing body of a county to mail the notices. The failure of the governing body of a county to cause a notice to be mailed to an owner of a lot or parcel of property created or that has changed ownership since the last complete tax assessment roll was prepared shall not invalidate an ordinance. **NOTICE TO MORTGAGEE, LIENHOLDER, VENDOR OR SELLER: ORS CHAPTER 215 (ORS 215.513) REQUIRES THAT IF YOU RECEIVE THIS NOTICE, IT MUST PROMPTLY BE FORWARDED TO THE PURCHASER.**

The application, staff report and any conditions can be found at the following link: <https://www.co.coos.or.us/community-dev>. The application and all documents and evidence contained in the record, including the staff report and the applicable criteria, are available for inspection, at no cost, in the Planning Department located at 60 E. Second, Coquille, Oregon. Copies may be purchased at a cost of 50 cents per page. The decision is based on the application submittal and information on record. The name of the Coos County Planning Department representative to contact is Crystal Orr, Associate Planner and the telephone number where more information can be obtained is (541) 396-7770.

Failure of an issue to be raised in a hearing, in person or in writing, or failure to provide statements of evidence sufficient to afford the Approval Authority an opportunity to respond to the issue precludes raising the issue in an appeal to the Land Use Board of Appeals.

Reviewed by:

Crystal Orr, Associate Planner

Date: Wednesday, July 17, 2024

This decision is authorized by the Coos County Planning Director, Jill Rolfe based on the staff's analysis of the Findings of Fact, Conclusions, Conditions of approval, application and all evidenced associated as listed in the exhibits.

EXHIBITS

Exhibit A: Conditions of Approval

Exhibit B: Vicinity Map & Template Map

The following exhibits are on file at the Coos County Planning Department and may be accessed by contacting the department. All noticeable decisions are posted on the website for viewing when possible.

Exhibit C: Staff Report -Findings of Fact and Conclusions

Exhibit D: Comments Received

Exhibit E: Geological Report

EXHIBIT "A"

The applicant shall comply with the following conditions of approval, with the understanding that all costs associated with complying with the conditions are the responsibility of the applicant(s), and that the applicant(s) are not acting as an agent of the county. If the applicant fails to comply or maintain compliance with the conditions of approval, the permit may be revoked as allowed by the Coos County Zoning and Land Development Ordinance. Please read the following conditions of approval, and if you have any questions, contact planning staff.

CONDITIONS OF APPROVAL

1. All applicable federal, state, and local permits shall be obtained prior to the commencement of any development activity. If comments from any other agency were provided as part of this review, it is the responsibility of the property owner to comply.
2. Pursuant to CCZLDO § 5.9.100, a Zoning Compliance Letter shall be required prior to commencement of construction of the Single Family Dwelling. This authorization is based on conditions of approval and the conditions that are required to be completed prior obtaining the ZCL are defined in this section. To show compliance with this section the applicant shall submit a letter with the following items to request that staff find the following conditions have been satisfied:
 - a. The property owner is responsible for ensuring compliance, and land use authorization shall remain recorded in the chain of title. The statement needs to include language that the purchaser of the property has been provided a copy of the land use approval containing all conditions or restrictions understands the obligation and agrees to fulfill the conditions unless a modification is approved as provided in this ordinance. The property owner is responsible for ensuring compliance, and land use authorization. The recorded deed convent shall be recorded with the County Clerk and a copy shall be provided to the Planning Department.
 - b. Section 5.2.700 Development Transferability - Unless otherwise provided in the approval, a land use approval that was obtained through a conditional use process shall be transferable provided the transferor files a statement with the Planning Director signed by the transferee. This document shall be recorded in the chain of title of the property, indicating that the transferee has been provided a copy of the land use approval containing all conditions or restrictions understands the obligation and agrees to fulfill the conditions, unless a modification is approved as provided in this ordinance. The property owner is responsible for ensuring compliance, and land use authorization shall remain recorded in the chain of title to alert a purchaser that development was approved subject to conditions and possible restrictions.
3. Prior to the issuance of a Certificate of Occupancy permit by the Coos County Building Official, the following conditions shall be confirmed by the County Plans Examiner during the building review:
 - a. Adherence to Report Recommendations: All recommendations outlined in the Geological Hazard Report must be strictly followed.
4. Driveway/Access/Parking Verification Permit application (DR-24-035) must be signed off prior to receiving a certificate of occupancy from County Building Codes.
5. A deed restriction must be recorded prohibiting the siting of a dwelling within the portion of property that is within the City Limits of Coquille.
6. The landowner must record in the deed records for the county a document binding the landowner, and the landowner's successors in interest, prohibiting them from pursuing a claim for relief or cause of action alleging injury from farming or forest practices for which no action or claim is allowed under 30.936 or 30.937

EXHIBIT "B"
Vicinity Map & Plot Plan

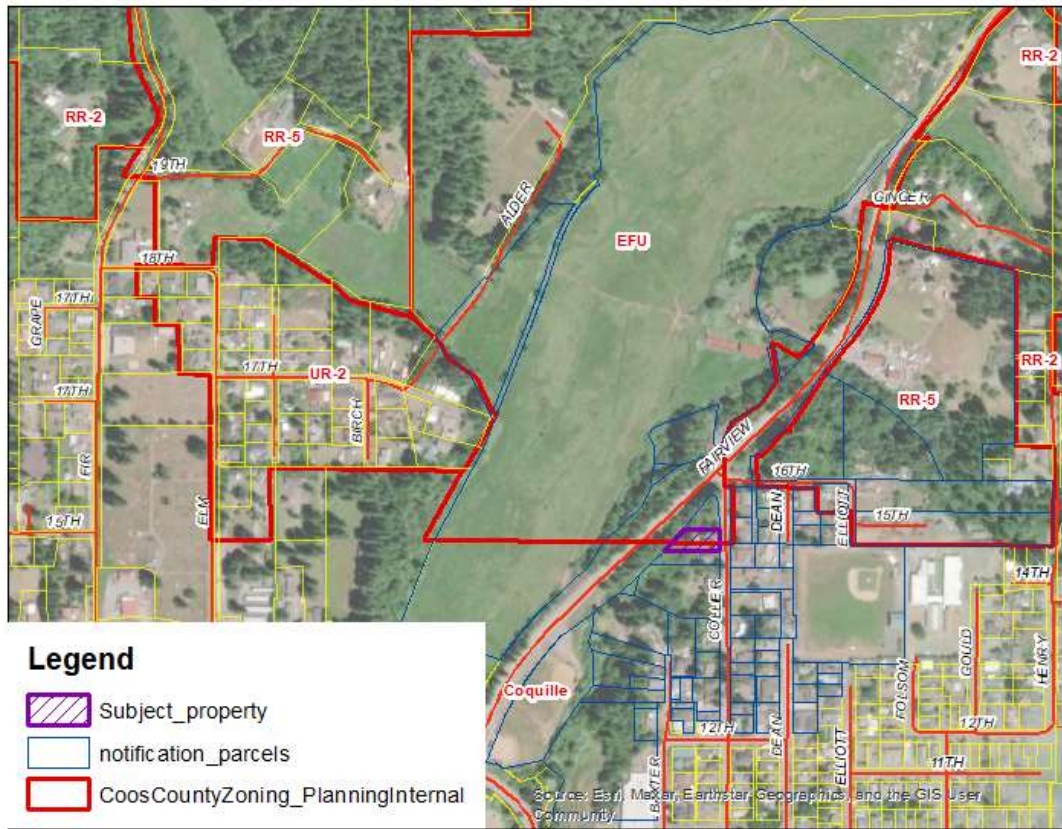


COOS COUNTY PLANNING DEPARTMENT

Mailing Address: 250 N. Baxter, Coquille, Oregon 97423
 Physical Address: 60 E. Second, Coquille Oregon
 Phone: (541) 396-7770
 TDD (800) 735-2900



File: ACU-24-015
 Applicant/ Owner: ST. CLAIR, AMY
 Date: July 15, 2024
 Location: Township 27S Range 13W
 Section 36A TL 1700
 Proposal: Liquefaction Hazard



1501 N Collier Street Updated Plot Plan



**EXHIBIT “C”
STAFF REPORT
FINDINGS OF FACT AND CONCLUSIONS**

I. PROPOSAL AND BACKGROUND/PROPERTY HISTORY INFORMATION AND PRIOR COMPLIANCE:

- A. PROPOSAL:** According to the application the proposal consists of replacing a fire damaged dwelling with a new Single Family Dwelling. The property is located within an area mapped as having Very High Liquefaction Potential, which requires a conditional use application to review the geohazard assessment. A portion of this property is within the City of Coquille. The City of Coquille has no restrictions on development and a dwelling is permitted.
- B. BACKGROUND/PROPERTY HISTORY:** This property has a Single Family Dwelling that was built in 1925 according to assessment records.
- C. LOCATION:** The subject property is located north of the City of Coquille off of N Collier Street. south of the City of Bandon off of Venus Drive.
- D. ZONING:** - This property is zoned Exclusive Farm Use (EFU). A portion of the property is within the City of Coquille jurisdiction as well.

ARTICLE 4.2 – ZONING PURPOSE AND INTENT

SECTION 4.2.500 Resource Zones

Exclusive Farm Use (EFU)

These include all inventoried "agricultural lands" not otherwise found to be needed (excepted) for other uses.

The purpose of the EFU district is to preserve the integrity and encourage the conservation of agricultural lands within Coos County and thereby comply with the provisions of ORS 215 and OAR 660. Division 33 to minimize conflicts between agricultural practices and non-farm uses by limiting any development to uses distinguished as dependent upon or accessory to supporting agricultural or forestry production and which qualify such farm lands for special tax relief pursuant to the provisions of Oregon Revised Statutes. This zone is also for the cultivation and marketing of specialty crops, horticultural crops and other intensive farm uses.

According to the Coos County Comprehensive Plan Exclusive Farm Use lands are inventoried as Agricultural Lands. The Main criterion for establishing the “Agricultural Lands Inventory” was land identified on the agricultural lands based on soils, Class I-IV soils or "other lands" suitable for agricultural use, with the following exceptions:

- 1. Committed rural residential areas and urban growth areas.*
- 2. Proposed rural residential areas as per the Exception to Goals #3 and #4.*
- 3. Proposed industrial/commercial sites.*
- 4. Existing recreation areas (e.g., golf courses) [Recreation designation]*
- 5. Isolated parcels of Class I-IV soils in upland areas, which are under, forest cover. (Forestlands designation).*
- 6. Narrow valley bottomlands where no agricultural activity is occurring anywhere in the vicinity [Forestlands designation].*

The secondary criterion for establishing the “Agricultural Lands Inventory” was the use of aerial photos used to identify additional areas without Class I-IV soils in current agricultural use which were not initially identified in the agricultural lands inventory from Assessor's Data. This situation typically occurs on benches, immediately above agricultural valleys, where grazing often takes place on non-class I-IV soils. However, if lands were zoned predominately forest it may have resulted in a Mixed Use Overlay.

- E. SITE DESCRIPTION AND SURROUNDING USES:** The subject property is located partially within Coos County and partially within the City Limits of Coquille. The property abuts N Collier Street to the east, and Fairview Road to the west. The surrounding properties are within the City of Coquille zoning designation other than the parcel to the north. The properties within the vicinity are being used for residential and farm uses.

II. GENERAL PROPERTY COMPLIANCE:

A. COMPLIANCE PURSUANT TO SECTION 1.1.300:

It shall be unlawful for any person, firm, or corporation to cause, develop, permit, erect, construct, alter or use any building, structure or parcel of land contrary to the provisions of the district in which it is located. No permit for construction or alteration of any structure shall be issued unless the plans, specifications, and intended use of any structure or land conform in all respects with the provisions of this Ordinance, unless approval has been granted by the Hearings Body.

FINDING: Staff has reviewed the property history and the county finds at the time of this report; the property is compliant with the Coos County Zoning and Land Development Ordinance. This does not mean that there is not additional information that was unavailable during this review that would make the properties non-complaint.

B. SECTION 6.1.125 LAWFULLY CREATED LOTS OR PARCELS:

“Lawfully established unit of land” means:

1. The unit of land was created:

- a. Through an approved or pre-ordinance plat;*
- b. Through a prior land use decision including a final decision from a higher court. A higher court includes the Land Use Board of Appeals;*
- c. In compliance with all applicable planning, zoning and subdivision or partition ordinances and regulations at the time it was created.*
- d. By a public dedicated road that was held in fee simple creating an interviewing ownership prior to January 1, 1986;*
- e. By deed or land sales contract, if there were no applicable planning, zoning or subdivision or partition ordinances or regulations that prohibited the creation.*
- f. By the claim of intervening state or federal ownership of navigable streams, meandered lakes or tidewaters. “Navigable-for-title” or “title-navigable” means that ownership of the waterway, including its bed, was passed from the federal government to the state at statehood. If a waterway is navigable-for-title, then it also is generally open to public use for navigation, commerce, recreation, and fisheries.*

FINDING: The unit of land was created pursuant to Section 6.1.125.1.e, by deed prior to applicable ordinances that would have prohibited the creation (deed document 79-64146).

III. STAFF FINDINGS AND CONCLUSIONS:

A. SUMMARY OF PROPOSAL AND APPLICABLE REVIEW CRITERIA:

The proposal includes Planning Director approval of a Single Family Dwelling in the Exclusive Farm Use (EFU) zone within the Natural Hazard Very High Liquefaction Potential.

The applicable review criteria can be found in Coos County Zoning and Land Development (CCZLDO) 4.6.200 Use # 21.a “alteration restoration, or replacement of a lawfully established dwelling, subject to a Compliance Determination and review standard (8) and (30). The property is within the Natural Hazard Very High Liquefaction Suitability, which requires a Conditional Use and is subject to Section 4.11.129. All structures are subject to the General Siting Standards found in Section 4.3.225 and development within Exclusive Farm Use is subject to Section 4.6.210.

B. SINGLE FAMILY DWELLING

SECTION 4.6.200 EXCLUSIVE FARM USE- USE TABLES

The table indicates the type of review process that is required. Remember that CU is an conditional use review and the letter prior explain what level of conditional use is required (A = administrative and H=Hearing)

As used in the zoning tables the following abbreviations are defined as:

- *“P” permitted and requires no review from the Planning Department. No review is required but other agencies may have requirements.*
- *“CD” compliance determination review (permitted with standards) with clear and objective standards (Staff review usually referred to as Type I process or ministerial action). These uses are subject to development standards in sections 4.3.22, 4.3.230 and notices requesting comments may be provided to other agencies as result. The process takes a minimum of 30 days to complete. Industrial zones may require additional review. All structures and uses shall meet the applicable Development and Siting Criteria or Special Development Considerations and Overlays for the zoning district in which the structure will be sited.*
- *“ACU” Administrative Conditional Use (Planning Director’s Decision usually referred to as a Type II Process)*
- *“HBCU” Hearing Body Conditional Use (Planning Commission, Board of Commissioner or Hearings Officer Decision usually referred to as a Type III Process)*
- *“PLA” Property Line Adjustments subject to standards found in Chapter 6.*
- *“P”, “SUB”, “PUD” = Partition, Subdivision, Planned Unit Development that require Land Division Applications subject to standards found in Chapter 6.*
- *The “Subject To” column identifies any specific provisions of Section 4.3.210 to which the use is subject.*
- *“N” means the use is not allowed.*

Table II identifies the uses and activities in the Exclusive Farm Use (EFU) zone. The tables describe the use, type of review, applicable review standards and Section 4.6.210 Development and Siting Standards. Properties that are located in a Special Development Consideration and/or overlays shall comply with the applicable review process identified by that Special Development Consideration and/or overlay located in Article 4.11.

	Residential	HV	All Other
21.	a. Alteration, restoration, or replacement of a lawfully established dwelling. (replaced within a year)	CD (8) (30)	CD (8) (30)
	b. Alteration, restoration, or replacement of a lawfully established dwelling. (DEFERRED REPLACEMENT)	ACU (8) (30)	ACU (8) (30)

**MINIMUM STANDARDS APPLICABLE TO THE SCHEDULE OF PERMITTED AND
CONDITIONAL USES**

The following requirements apply to uses specified, and as listed in the table adopted by OAR 660-033-0120. For each section of this rule, the corresponding section number is shown in the table. Where no numerical reference is indicated on the table, this rule does not specify any minimum review or approval criteria. Counties may include procedures and conditions in addition to those listed in the table, as authorized by law.

(8) **REPLACEMENT DWELLING** - Dwelling that no longer meets replacement criteria as described in subsection (8)(a)(A)(i) through (iv) of this section. This determination meets the requirements for a land use decision and shall reviewed as an Administrative Conditional Use (ACU).

(a) A lawfully established dwelling may be altered, restored or replaced under 215.283(1)(p) if, when an application for a permit is submitted, the permitting authority finds to its satisfaction, based on substantial evidence that:

(A) The dwelling to be altered, restored or replaced has:

- (i) Intact exterior walls and roof structure;
- (ii) Indoor plumbing consisting of a kitchen sink, toilet and bathing facilities connected to a sanitary waste disposal system;
- (iii) Interior wiring for interior lights; and
- (iv) A heating system; and
- (v) The dwelling's tax lot does not have a lien for delinquent ad valorem taxes; and
- (vi) Any removal, destruction or demolition occurred on or after January 1, 1973;

(B) If the dwelling is currently in such a state of disrepair that the dwelling is unsafe for occupancy or constitutes an attractive nuisance, the dwelling's tax lot does not have a lien for delinquent ad valorem taxes; or

(C) A dwelling not described in subsection (A) or (B) of this section was assessed as a dwelling for purposes of ad valorem taxation:

- (i) For the previous five property tax years; or
- (ii) From the time when the dwelling was erected upon or affixed to the land and became subject to assessment as described in ORS 307.010.

(b) For replacement of a lawfully established dwelling under this section:

(A) or replaced under ORS 215.283 if the county determines that:

(i) The dwelling to be altered, restored or replaced has, or formerly had:

- (1) Intact exterior walls and roof structure;
- (2) Indoor plumbing consisting of a kitchen sink, toilet and bathing facilities connected to a sanitary waste disposal system;
- (3) Interior wiring for interior lights; and
- (4) A heating system; and

(ii)(1) If the dwelling was removed, destroyed or demolished:

- (a) The dwelling's tax lot does not have a lien for delinquent ad valorem taxes; and
- (b) Any removal, destruction or demolition occurred on or after January 1, 1973;

- (2) *If the dwelling is currently in such a state of disrepair that the dwelling is unsafe for occupancy or constitutes an attractive nuisance, the dwelling's tax lot does not have a lien for delinquent ad valorem taxes; or*
 - (3) *A dwelling not described in subparagraph (A)(i)(1) or (A)(i)(2) of this subsection was assessed as a dwelling for purposes of ad valorem taxation:*
 - (i) *For the previous five property tax years; or*
 - (ii) *From the time when the dwelling was erected upon or affixed to the land and became subject to assessment as described in ORS 307.010.*
- (B) *For deferred replacement of a lawfully established dwelling under this section:*
- (i) *The dwelling to be replaced must be removed, demolished or converted to an allowable nonresidential use:*
 - (a) *Within one year after the date the replacement dwelling is certified for occupancy pursuant to ORS 455.055; or*
 - (b) *If the dwelling to be replaced is, in the discretion of the county, in such a state of disrepair that the structure is unsafe for occupancy or constitutes an attractive nuisance, on or before a date set by the county that is not less than 90 days after the replacement permit is issued.*
 - (ii) *The replacement dwelling:*
 - (a) *May be sited on any part of the same lot or parcel.*
 - (b) *Must comply with applicable siting standards. However, the standards may not be applied in a manner that prohibits the siting of the replacement dwelling.*
 - (iii) *As a condition of approval, if the dwelling to be replaced is located on a portion of the lot or parcel that is not zoned for exclusive farm use, the applicant shall execute and cause to be recorded in the deed records of the county in which the property is located a deed restriction prohibiting the siting of another dwelling on that portion of the lot or parcel. The restriction imposed is irrevocable unless the county planning director, or the director's designee, places a statement of release in the deed records of the county to the effect that the provisions of this section and either ORS 215.283 regarding replacement dwellings have changed to allow the lawful siting of another dwelling.*
 - (iv) *Notwithstanding subsection (B)(ii)(a) of this section, a replacement dwelling:*
 - (a) *Using all or part of the footprint of the replaced dwelling or near a road, ditch, river, property line, forest boundary or another natural boundary of the lot or parcel; and*
 - (b) *If possible, for the purpose of minimizing the adverse impacts on resource use of land in the area, within a concentration or cluster of structures or within 500 yards of another structure.*
 - (v) *The county planning director, or the director's designee, shall maintain a record of the lots and parcels that do not qualify for the siting of a new dwelling under subsection (B) of this section, including a copy of the deed restrictions filed under subsection (B)(iii) of this section.*
 - (vi) *If an applicant is granted a deferred replacement permit under this section:*
 - (a) *The deferred replacement permit:*
 - 1. *Does not expire but, notwithstanding subsection (B)(i)(1) of this section, the permit becomes void unless the dwelling to be replaced is removed or demolished within three months after the deferred replacement permit is issued; and*
 - 2. *May not be transferred, by sale or otherwise, except by the applicant to the spouse or a child of the applicant.*

(b) The replacement dwelling must comply with applicable building codes, plumbing codes, sanitation codes and other requirements relating to health and safety or to siting at the time of construction. However, the standards may not be applied in a manner that prohibits the siting of the replacement dwelling.

(30) The County governing body or its designate shall require as a condition of approval of a single-family dwelling under 215.283 or 215.284 or otherwise in a farm or forest zone, that the landowner for the dwelling sign and record in the deed records for the county a document binding the landowner, and the landowner's successors in interest, prohibiting them from pursuing a claim for relief or cause of action alleging injury from farming or forest practices for which no action or claim is allowed under 30.936 or 30.937.

FINDING: The dwelling has been removed from the property, and does not meet replacement criteria as described in subsection (8)(a)(A)(i) through(iv). This means that Subsection (8)(b) must be addressed.

According to the assessment records the dwelling to be replaced had all of the items listed within (b)(A)(i). The dwelling was partially destroyed by fire, and rather than fix the fire damaged portion the applicant is choosing to replace the entire dwelling. The Assessor's Office improvement summary is below:

Improvement Summary

COOS County

For Assessment Year 2024

Account ID	730700		
Map	27S1336-A0-01700	Situs	1501 N COLLIER ST COQUILLE OR 97423
Mailing	ST. CLAIR, AMY 1501 N COLLIER ST COQUILLE OR 97423-1346		

Bldg	Code Area	Stat Class	Year Built	Comp %	Description	Sqft
	0800	131	1925	100	131 - One story-Class 3	1,456
Rooms: 2 - BD, 1 - FB, 1 - LR, 2 - OTH, 1 - KT						

Floors

Description	Class	Comp %	OR %	Sqft
First Floor	3	100		896
Basement	3	100		896

Improvement Inventory

Description	Qty/Size	Description	Qty/Size
1001 Fndtn - Conc/Block	1	8001 Plumb'g - Full Bath	1
2205 ExtDbl - Bevel Alum	1	8011 Plumb'g - Kitchen Sink	1
3101 Roof - Gable - Light Comp	0	8012 Plumb'g - Water Heater	1
4001 Floor - 1stFlr - Carpet/Vinyl	1	9001 Heat'g - EBB/Wall/Ceal	896
5001 Partitions - Drywall	1	9009 Heat'g - Woodstove in Class	1
6002 IntComp - Fair Built-Ins	1		

Accessories

Description	Size	Qty
0103 Deck - Redwood/Fir	280	
0102 Deck - Treated or Cedar	112	
0301 Patio Roof - Aluminum	112	
9301 Covered Porch	160	

Total RMV \$90,000

The dwelling does not have a lien for delinquent taxes, and the dwelling was demolished after January 1, 1973 pursuant to the tax rolls. The replacement dwelling is being sited on the same lot or parcel, and must comply with siting standards. A condition has been added to require that the landowner record a deed restriction prohibiting the siting of another dwelling on the parcel.

The replacement dwelling is being sited at the same location as the demolished dwelling. This approval (deferred replacement) does not expire but may not be transferred by sale or otherwise, except by the applicant to the applicant's spouse or child. The replacement dwelling must comply with applicable building codes, plumbing codes, sanitation codes, and other requirements related to health, safety, or siting at the time of construction. However, these standards may not be applied in a manner that prohibits the siting of the replacement dwelling.

The landowner must record in the deed records for the county a document binding the landowner and the landowner's successors in interest, prohibiting them from pursuing a claim for relief or cause of action alleging injury from farming or forest practices for which no action or claim is allowed under 30.936 or 30.937. This condition has been made a part of the approval.

SECTION 4.6.210 DEVELOPMENT AND USE STANDARDS FOR THE EXCLUSIVE FARM USE ZONE DEVELOPMENT STANDARDS

All dwellings and structures approved shall be sited in accordance with this section.

1. *Minimum Lot Size: The minimum parcel size shall be at least 80 acres. Land divisions involving a house that existed prior to June 1, 1995 see § 4.6.210(5)(a). For land divisions where all resulting parcels are at least 80 acres, a conditional use is not required. However, the applicable standards in Chapter VI must be met. [OR96-06-007PL 9/4/96]*

New lots or parcels for dwellings not in conjunction with farm use may be allowed when the requirements of § 4.6.210(3), § 4.6.210(4)(a or b) and § 4.6.210(5) are met. In addition, the creation of new parcels for nonfarm uses may be allowed only when such new parcel is the minimum size needed to accommodate the use in a manner consistent with other provisions of the Ordinance.

The size of the parcel will not prohibit development as long as it was lawfully created or otherwise required to be a certain size in order to qualify for a use.

2. Setbacks

- a. *Road: All buildings or structures with the exception of fences shall be setback a minimum of thirty five (35) feet from any road right-of-way centerline or five (5) feet from any right-of-way line, whichever is greater.*
- b. *Firebreak: New or replacement dwellings on lots, parcels, or tracts abutting the "Forest" zone shall establish and maintain a firebreak for a distance of at least 30 in all directions. Vegetation within this firebreak may include mowed grasses, low shrubs (less than ground floor window height), and trees that are spaced with more than 15 feet between the crowns and pruned to remove dead and low (less than 8 feet from the ground) branches. Accumulated needles, limbs, and other dead vegetation should be removed from beneath trees.*

3. *Structure Height: Farm-related structures are exempt from height limits unless subject to Airport Overlay zone or Urban Growth Boundary requirements.*
4. *Lot Coverage: No requirements.*
5. *Fences, Hedges and Walls: No requirement except for vision clearance provisions of § 7.1.525 apply.*
6. *Off-street parking and Loading: See Chapter VII.*
7. *Minimum Road Frontage/Lot Width unless waived by the Planning Director in consultation with the County Surveyor due to creating an unsafe or irregular configuration:*
 - a. *Within UGB's – 50 feet*
 - b. *Outside UGB's – 20 feet*
8. *Access: Access to new dwellings shall meet road design standards in Chapter VII.*
9. *Minimizing Impacts: in order to minimize the impacts of dwellings in agricultural lands, all applicants requesting a nonfarm dwelling shall acknowledge and file in the deed records of Coos County, a Farm Practices Management Easement. The Farm Practices Easement shall be recorded in the deed records of the county prior to any final county approval for a single family dwelling. [OR96-06-007PL 9/4/96]*
10. *Riparian Vegetation Protection within 50 feet of a wetland, stream, lake or river, as identified on the Coastal Shoreland and Fish and Wildlife Habitat Inventory maps shall be maintained except that:*
 - a. *Trees certified as posing an erosion or safety hazard. Property owner is responsible for ensuring compliance with all local, state and federal agencies for the removal of the tree.*
 - b. *Riparian vegetation may be removed to provide direct access for a water-dependent use if it is a listed permitted within the zoning district;*
 - c. *Riparian vegetation may be removed in order to allow establishment of authorized structural shoreline stabilization measures;*
 - d. *Riparian vegetation may be removed to facilitate stream or stream bank clearance projects under a port district, ODFW, BLM, Soil & Water Conservation District, or USFS stream enhancement plan;*
 - e. *Riparian vegetation may be removed in order to site or properly maintain public utilities and road right-of-ways;*
 - f. *Riparian vegetation may be removed in conjunction with existing agricultural operations (e.g., to site or maintain irrigation pumps, to limit encroaching brush, to allow harvesting farm crops customarily grown within riparian corridors, etc.) provided that such vegetation removal does not encroach further into the vegetation buffer except as needed to provide an access to the water to site or maintain irrigation pumps; or*
 - g. *The 50 foot riparian vegetation setback shall not apply in any instance where an existing structure was lawfully established and an addition or alteration to said structure is to be sited not*

closer to the estuarine wetland, stream, lake, or river than the existing structure and said addition or alteration represents not more than 100% of the size of the existing structure's "footprint".

- h. Riparian removal within the Coastal Shoreland Boundary will require a conditional use. See Special Development Considerations Coastal Shoreland Boundary.*
- i. The 50' measurement shall be taken from the closest point of the ordinary high water mark to the structure using a right angle from the ordinary high water mark.*

FINDING: (1) The proposal does not include dividing the property; therefore, this portion of the criteria does not apply. The property was lawfully created. (2) The replacement dwelling meets the required setbacks of 35 feet from the centerline of the road right of way, or 5 feet from the property line, the plot plan has identified that the dwelling will be 30 feet from the property line on N Collier Street. (3) There is no height restriction for this development. (4) Not applicable to this development. (5) The proposal does not contain any fences, hedges or walls. (6) Off-street parking will be reviewed by the Coos County Road Department. (7) Does not apply as the proposal does not include a land division. (8) Access is reviewed by the Coos County Road Department. (9) This property does not contain any riparian vegetation. Therefore, all relevant development standards have been complied addressed.

○ *SECTION 4.11.132 Natural Hazards (Policy 5.11)*
Coos County has inventoried the following hazards:

- *Flood Hazard*
 - *Riverine flooding*
 - *Coastal flooding*
- *Landslides and Earthquakes*
 - *Landslide Susceptibility*
 - *Liquefaction potential*
- *Tsunamis*
- *Erosion*
 - *Riverine streambank erosion*
 - *Coastal*
 - *Shoreline and headlands*
 - *Wind*
- *Wildfire*

Purpose Statements:

Coos County shall regulate development in known areas potentially subject to natural disasters and hazards, so as to minimize possible risks to life and property. Coos County considers natural disasters and hazards to include river and coastal flooding, landslides, liquefaction potential due to earthquakes, fault lines, tsunamis, river bank erosion, coastal erosion along shorelines and headlands, coastal erosion due to wind, and wildfires, including those areas affected by gorse.

This strategy shall be implemented by enacting special protective measures through zoning and other implementing devices, designed to minimize risks to life and property associated with new development and substantial improvements. The determination of whether a property is located in one of the above referenced potentially hazardous areas shall be made by the reviewing body (Planning Director, Planning Commission, Board of Commissioners, or any designee based upon adopted inventory mapping). A specific site may not include the characteristics for which it is mapped. In these circumstances staff shall apply § 4.11.132.ii.2m.

b. Landslides and Earthquakest

Landslides: Coos County shall promote protection to life and property in areas potentially subject to landslides. New development or substantial improvements proposed in such areas shall be subject to geologic assessment review in accordance with section 4.11.150. Potential landslide areas subject to geologic assessment review shall include all lands partially or completely within “very high” landslide susceptibility areas as mapped in DOGAMI Open File Report O-16-02, “Landslide susceptibility map of Oregon.”

Earthquakes: Coos County shall promote protection of life and property in areas potentially subject to earthquake hazards. New development or substantial improvements in mapped areas identified as potentially subject to earthquake induced liquefaction shall be subject to a geologic assessment review as set out in this section. Such areas shall include lands subject to “very high” and “high” liquefaction identified in DOGAMI Open File Report O-13-06, “Ground motion, ground deformation, tsunami inundation, co-seismic subsidence, and damage potential maps for the 2012 Oregon Resilience Plan for Cascadia Subduction Zone Earthquakes.”

Coos County shall continue to support Oregon State Building Codes to enforce any structural requirements related to landslide and earthquakes. Staff will notify Oregon State Building Codes by providing a copy of the geologic assessment report with the Zoning Compliance Letter.

FINDING: The property is within the high liquefaction mapped area. The applicant submitted a geological hazards evaluation from The Galli Group, Engineering Consulting dated May 16, 2024. The proposed dwelling must be sited to meet all recommendations within the report, which can be found in Exhibit “E”.

IV. DECISION

In conclusion, staff finds that the applicant has addressed the relevant criteria, and the ones that cannot be completed until after approval has been obtained have been made conditions of approval. Therefore, the proposed Private Campground meets the requirements of the Coos County Zoning and Land Development Ordinance, with conditions listed in Exhibit “A” of this report.

V. EXPIRATION:

The applicant has been granted a deferred replacement permit. The deferred replacement permit does not expire but, the permit becomes void unless the dwelling to be replaced is removed or demolished within three months after the deferred replacement permit is issued; and may not be transferred, by sale or otherwise, except by the applicant to the spouse or a child of the applicant.

The geological report is valid for five (5) years from the date of preparation.

VII. NOTICE REQUIREMENTS:

A notice of decision will be provided to property owners within 750 feet of the subject properties and the following agencies, special districts, or parties: Coquille Rural Fire Protection District, and the City of Coquille. A Notice of Decision and Staff Report will be provided to the following: Applicants/Owners, Department of Land Conservation and Development, Coos County Assessor’s Office and the Planning Commission and Board of Commissioners.

Adjacent property owners will receive a Notice of Decision and maps, but all other attachments can be found by contacting the Planning Department or visiting the website. If not found on the website the public may contact the department to view the official record.

**Exhibit E
Geological Report**



02-6407-01
May 16, 2024

Amy Walton
1501 N Collier St.
Coquille, OR 97423

Subject: **GEOLOGIC HAZARD EVALUATION LETTER
NEW RESIDENTIAL STRUCTURE
1501 N COLLIER STREET
COQUILLE, OREGON**

Ms. Walton,

This letter presents results of our geotechnical investigation and geologic hazards evaluation of the subject site, and provides our geotechnical design recommendations for the proposed new residential structure construction project at 1501 North Collier Street in Coquille, Oregon. Our evaluation, conclusions, and the design and construction recommendations provided herein, are based on our site observations and sampling of a geotechnical boring at the home site location, laboratory testing, discussions with the owner, review of site geology maps and our experience on nearby projects with similar geotechnical and geologic conditions.

We understand the project consists of constructing a new residential structure on the site to replace the existing, fire damaged residence. The Coos County Interactive Mapping (on-line application, All Hazard Viewer) shows the property mapped as having moderate to high susceptibility to landslide, and having very high susceptibility to liquefaction. Therefore, the County requires a geologic hazard investigation of the project site, and mitigation recommendations, if hazard susceptibility is established, prior to issuing permits. The geohazard investigation and report must be prepared by a licensed and experienced geo professional. This evaluation and letter have been accomplished to meet this requirement, and may be included as a part of the application submittals to Coos County, for the purpose of obtaining permits for this construction project. The on-site investigation, office/lab work, and this letter were carried out by and/or under the direct supervision of Dennis Duru, PE, CEG, RG, who is a registered professional engineer in the state of Oregon and licensed as a certified engineering geologist by the Oregon State Board of Geologist Examiners (OSBGE).

SITE AND PROJECT DESCRIPTION

The project site is a 0.34-acre rectangular shaped lot in Coos County, located on the west side of North Collier Street, approximately 350 feet south of its intersection with Fairview Road. Please see *Figure 1, Vicinity Map*, for a more precise site location. The property is located between similar residential lots to the north and south. The property and surrounding area are situated on

612 NW Third Street, Grants Pass, Oregon 97526 • Phone (541) 955-1611 • Fax (541) 955-8150

a west-northwest facing hillside. The currently developed eastern portion of the property (residence and old septic area) consist of moderately steep slopes (20 to 25%) with a mildly sloping (10% or less) yard area west of the existing structure, near the middle of the site, before the steep natural slope break. These descending slopes on the undeveloped west half of the lot consist of moderately steep (22%) to steep (65%) slopes down toward the west-northwest. These appear to be natural slopes and are heavily vegetated with trees and underbrush.

We understand the existing, original, damaged residence was built in 1925. The residence is set back approximately 25-feet from North Collier Street with an existing gravel access/approach area which extends from the edge of the roadway and along the north side of the residence. The building footprint of the existing, damaged residence is approximately 30-feet (North-South) by 45-feet (East-West), and has a basement level that daylights on the western/downslope side of the structure and property.

The proposed new residence will be situated in generally the same location as the existing south perimeter. The new structure will consist of standard wood-frame construction with continuous and spread footing foundation support and raised floor diaphragms over crawlspace and a partially embedded daylight basement with slab-on-grade floor.

SITE INVESTIGATION

On May 3, 2024, our Staff Associate, Kristen S. Pierce, E.I.T., visited the site with our drilling crew to conduct the surface and subsurface investigation. One exploratory boring was drilled on-site at the location shown on *Figure 2, Site Plan*. The drilling was accomplished with our ATV-mounted, solid-stem auger drill rig.

The boring was advanced with sample collection and testing being accomplished at various depths. Standard Penetration Testing (SPT) was accomplished in each boring. This entails driving a 1½ inch I.D., 2-inch O.D., steel split spoon sampler by dropping a 140-pound weight for a 30-inch drop. The total number of blows it takes to drive the sampler the last 12 inches of an 18-inch drive is called the SPT N-value. The results are an indication of the relative density or consistency of the soil and can be correlated with soil strength and density parameters from testing on thousands of other projects.

Beneath the surficial gravel, vegetation, and root zone, the boring encountered silty Clay soil with some sand and gravel to a depth of 2.5 feet below the ground surface. The underlying layer of stiff, clayey Silt extended to a depth of 20.0 feet. The clayey Silt then transitioned to a hard condition. No free groundwater was encountered in the boring.

Our representative identified the exploration location away from marked and known utilities and overhead power lines, logged subsurface soils and water conditions, and obtained soil samples for transport to our laboratory. Visual classifications of the soils were made in the field and are presented in *Appendix A, Boring Log*, at the end of this report. The N-values shown in the log are raw data from the field and have not been adjusted for sampling equipment type, sampler size, or overburden pressure.

At the time of our site investigation, we also observed that a small test pit had been excavated in the back yard area (see *Figure 2*), likely for new septic system evaluation purposes. The test pit had approximate dimensions of 2ft x 4ft x 4ft (WxLxD). This test pit had similar soil conditions in the upper subsurface as encountered in the boring. The side walls of the pit stood well without support, with minimal sloughing and no evidence of caving.

Laboratory Testing. The soil samples collected during our investigation were tested for natural moisture content (ASTM D2216), the results of which are plotted on the *Boring Logs in Appendix A*. In addition, one (2) Washed Sieve Analysis (ASTM D1140; WSA), one Expansion Index test (ASTM D4829, EI), and two (2) Atterberg Limits tests (ASTM D4318; AL) were conducted on samples taken at various locations and depths. Individual lab test results are attached in *Appendix B, Laboratory Test Results*.

SITE GEOLOGY AND RELATED GEOLOGIC HAZARDS

Site Geology. The project site is within the Coquille 7.5-minute USGS topographic quadrangle and located towards the southern terminus of western Oregon's Coast Range Physiographic Province. In geologic history, the Oregon Coast Range is considered an ancient volcanic island chain that collided with North America 50 million years ago. In the southern part of the range, the bedrock is overlaid by Eocene age turbidite sediments and river sediment. The entire Oregon Coast Range overlies a convergent tectonic margin that interacts with the Juan de Fuca Plate that is being subducted beneath the North America tectonic plate. This is the Cascadia Subduction Zone that has experienced uplift for several million years. The active tectonic forces have created many faults and folds in the range. Additionally, erosion is a major landscape-shaping force for the range. The combined and common occurrence of heavy rainfall and the resulting landslides have worked to erode and shape the mountains. Much of the landscape is dominated by steep slopes and drainages that are deeply cut into the hillsides from the erosion (Kobor & Roering, 2004). The elevation at the project site ranges from approximately 55 to 80 feet. It is situated at the base of a mountain with an elevation above 400 feet and along the eastern edge of a valley with an approximate basal elevation of 20 feet. This valley contains multiple creeks that drain southwest into the Coquille River. The mountain is formed of Tertiary-aged deltaic sandstone of the Coaledo Formation and the valley is composed of Quaternary-aged alluvium sediments. The project site sits on a Quaternary-aged fluvial terrace deposit.

Flood Hazards. The project site is located over 300 feet laterally from, and approximately 40 feet above, the eastern edge of the FEMA designated 100-year floodplain. Flooding is not a hazard for this project site.

Expansive Soils. The site's surficial soils are composed of silty Clay that overlie native clayey Silt. An expansion Index (EI) test was performed on the clayey Silt soil, sampled at a depth of between 4.0 and 5.0 ft below ground surface. The test results indicated that the soil sample has an EI_{50} value of 23, which indicates these soils have low expansion potential.

Landslides/Slope Instability. The project site is located near the downslope edge of a terrace; (set back approximately 30 ft to 50 ft). The slopes descending to the valley below range from

moderate (20%) to steep (65%). The proposed area of development is located on mild to moderate slopes (10% to 20).

The entire property is mapped as an area of susceptibility to landslides, according to the State Landslide Information Database for Oregon (SLIDO). Areas of the property along the descending terrace slopes are mapped with high susceptibility and areas of existing and planned development, are mapped as having moderate susceptibility to landslides. The project site is not within an existing Quaternary landslide (Qls) area, according to the air photos (Google Earth, 2021), SLIDO, and Lidar imagery (bare earth and highest hit imagery) and geologic mapping of the Trail Quadrangle (DOGAMI). Based on the site subsurface condition, historic performance of the site slopes, and our review of topographic data, the global stability of the slopes at the property and proposed homesite location appear to be stable.

However, in our professional opinion, planned cut slopes at the project site have the potential to cause slope instability. Therefore, we have provided cut and fill slope, as well as retaining wall recommendations, later in this report. These recommendations must be followed to mitigate any potential slope instability.

Tsunami/Seiche Hazard. The project is located approximately almost 11 miles inland and between 60 feet to 80 feet above sea level. The project site is mapped as not being in a tsunami evacuation zone and outside the hazard; various tsunami prediction models indicate the most run-up would not come within 2,000 feet of the project site (HazVu, 2018). The project site is not subject to tsunami hazard. The project site is not located adjacent to, or downhill from, any large lakes or bodies of water. Therefore, no seismically induced seiche hazard exists for the project. No large reservoirs are located in a drainage area upslope from the project site. Therefore, the project site is not subject to hazard from seismically induced reservoir failure.

Seismic Ground Amplification or Resonance. No unusually hazardous amplification or resonance effects on seismic waves have been associated with the soil/bedrock subsurface conditions in the project area. The site modified peak horizontal acceleration (PGA_M) is 0.86g. This is based on the Site Class D designation, determined for the project from subsurface drilling and evaluation of SPT data. This site class designation is a more conservative classification and does not correlate with the mapped National Earthquake Hazard Reduction Program (NEHRP) classification (DOGAMI; 2023b).

Surface Rupture. No active fault traces or local faults are mapped within the project site (USGS; 2018). The risk of surface rupture or displacement due to a seismic event is not considered to be a potential hazard at this site.

Liquefaction and Lateral Spread. The project subsurface consists of clayey Silt with sand to the depth of 20 feet explored. The plasticity index of the soils is 13 and 21 as measured in the laboratory. Additionally, free groundwater was not encountered in the boring during the site subsurface investigation. Unsaturated soils with stiffness and consistencies as observed during the subsurface investigation are not known to be susceptible to liquefaction. Therefore, liquefaction and lateral spread are not considered to be a potential hazard at the site.

Conclusions. The risks of liquefaction, expansive soils, landslide hazards or fault rupture to the project are very low. Due to the proximity to the Cascadia Subduction Zone, the project must be designed for Seismic Design Category, SDC of D₂ (SDS = 1.052) per Oregon Residential Specialty Code. Conventional foundation support of crushed rock over densified native subgrade soil will be adequate for this project. The following recommendations are provided to ensure adequate support for the proposed structure foundations and reduce the amount of differential settlement. In our professional opinion, based on our field investigation and office review, the soils conditions at the site are suitable for the proposed development, provided the recommendations in this letter report are incorporated in the design and construction of the project.

GEOTECHNICAL RECOMMENDATIONS

Manmade Fill & Debris Considerations. The site has previous development that must be demolished. Therefore, all construction debris, old fill and debris encountered during construction must be removed. Native soils that are clear of debris may be used in landscape berms. All other organic material, debris or organic/debris laden soil must be wasted off site. The full extent of any waste fill removal (if any) will be determined during site stripping and excavation operations.

Foundations. Based on our observations and laboratory testing, the site soils will provide adequate support for the construction of the proposed residence. A conventional foundation support system consisting of 6 inches of crushed rock over a redensified native subgrade will provide a 1500 psf allowable bearing capacity for design of the project. All new foundations shall be designed and constructed based on the following recommendations.

1. The entire proposed footprint area of the residential structure and basement retaining walls shall first be over-excavated with a smooth bucket to a depth of at least 6 inches below base of footings. Base of excavation must be level and must consist of the stiff, native clayey Silt. The subgrade should be free of disturbed and loose soil prior to placing fabric and structural fill. The over-excavation must extend at least 1 foot beyond the outside edges of all exterior footings (including thickened edge and retaining wall foundations).
2. Redensify the exposed subgrade after excavation to achieve a dense native subgrade.
3. Cover the base of the footing excavations with a woven geotextile support fabric (ACF 180, ACF S200 or equivalent).
4. Place and compact crushed rock structural fill (6 inches minimum) up to the bottom of footing and slab elevation. Compact the fill to at least 95% of a standard proctor (ASTM D-698). The structural fill should be ¾" or 1" minus crushed rock.
5. Footings placed on the over-excavated and redensified subgrade with at least 6 inches compacted structural fill, as listed above, may be designed for an allowable bearing pressure of 1500 pounds per square foot. A 1/3 increase in allowable bearing pressure may be used when considering short-term, transitory wind and seismic loads.
6. Footings shall be buried a minimum of 12 inches below finish grade in order to provide lateral support and frost protection.

7. We recommend minimum lateral dimensions of 12 inches for continuous load bearing footings (including thickened edge foundations) and 24 inches for isolated piers (if any) constructed in this manner.
8. We typically recommend all perimeter footings be installed with a footing drain to intercept surface water infiltration and groundwater seepage. This is shown on *Figure 3, Typical Foundation Drain, Slab on Grade Floor*, and is addressed more fully later in this report

Anticipated Settlements. For properly constructed foundations, we anticipate maximum total and differential settlement to be less than 3/4-inch and 3/8-inch, respectively.

Standard Slab Section. The properly prepared site subgrade with a minimum 6-inch layer of structural fill, discussed earlier in this report, will provide good support for concrete slab-on-grade floors, as follows:

1. Backfill around and above footings with compacted crushed rock structural fill up to slab section. Compact to at least 98% of ASTM D-698 (Standard Proctor). **Note:** If site grades indicate surface water may infiltrate into the rock below the slab; a non-woven geotextile filter fabric must be placed at 6 inches below the bottom of the slab over the compacted subgrade/pad and the top 6 inches of crushed rock directly beneath the slab shall be replaced with a layer of clean (less than 2% passing the no. 200 sieve and less than 5% passing the No. 10 sieve) crushed rock (1/2" to 3/4" clean crushed rock works well) to provide a positive capillary moisture break and uniform slab support.
2. A tough impermeable membrane, such as Stego Industries 10 mil or 15-mil Stego Wrap vapor barrier (or an equivalent product) shall be placed over the rock layer to further retard upward migration of moisture vapor into and through the concrete slab. Seal all seams, punctures, penetrations, and tears per the manufacturer's recommended method.

Note: If it appears water may pond in the rock below the slab, a series of slab subdrains should be installed. These shall be constructed as shown on *Figure 4, Interior Floor Slab Subdrain Detail*, and as described later in this report

Site Excavations

We anticipate additional excavations will be required to complete preparations for construction of the residence, extension of the basement wall, and for construction/extension of drainage and utility installations. Excavators of moderate size and larger should be able to excavate the surficial native clayey Silt soils to depths of up to 15 feet. Excavations during dry weather should stand for moderate periods of time in shallow trenches (less than 4 feet), in soils which are not subjected to emerging groundwater seepages or surface water/runoff. However, minor sidewall sloughing may occur. Seepage or wet weather can cause the soils to cave and slough into the trench. Any additional excavations deeper than 4 feet could require the use of temporary shoring, trench boxes and/or temporary cut slopes to protect workmen and to effectively and safely install and backfill the utilities at these deeper locations.

- These equivalent fluid pressures are to be used for the soil through which the anticipated failure plane will develop (assume envelope beginning 3 feet behind base of wall and rising and away from wall at 60 degrees off the horizon).
- A wet soil unit weight of 135 pcf should be used for design of retaining walls which are backfilled with crushed rock or jaw-run "shale".
- These values are for properly compacted, free draining walls. The onsite topsoil or very silty soils shall not be used for wall backfill materials. Imported crushed rock or clean jaw-run "shale" works well for wall backfill materials.
- These design values assume the wall or structure is fully drained, has a flat backfill and has no surcharge loads from traffic or other structures. The structural designer shall include and/or verify surcharge loading from traffic, building loads and/or sloped backfill.
- We recommend designing retaining walls to resist seismic loading. A horizontal acceleration component of at least 0.86g should be applied to the mass of an enlarged active wedge of soil behind the walls and utilized in a pseudo-static analysis. The wedge length back from the wall along the ground surface may be taken to be 0.8H, where H is the height of the wall.
- The backfill shall be placed in lifts at near the optimum moisture content and compacted to between 93 and 95 percent of the maximum dry density as determined by laboratory procedure ASTM D-698 (Standard Proctor). Loosely placed backfill will exert greater pressures on the wall than the pressures provided above and must be avoided.
- To prevent damage to the wall, backfill and compaction against walls or embedded structures shall be accomplished with lighter hand-operated equipment within a distance of 1/2 h to 1/3 h (h being the vertical distance from the level being compacted down to the surface on the opposite side of the wall). Outside this distance, normal compaction equipment may be used.

While proper compaction of wall backfill is critical to the proper performance of the walls, care shall be taken to not over-compact the backfill materials. Over-compaction can induce greater lateral loads on the wall or structure than the design pressures given above.

Fill Placement Observation and Testing Methods. The required construction monitoring of the structural fill utilizing standard nuclear density gauge testing and standard laboratory compaction curves (ASTM D-698 specified) is applicable to materials 2-inch size and smaller. Larger (2½" or above) jaw-run "shale", crushed rock or larger, broken decomposed granite (DG) do not yield consistent results with this type of testing. The high percentage of rock particles greater than ¾'s of an inch in these materials causes laboratory and field density test results to be erratic and does not provide an adequate representation of the density achieved. Therefore, construction specifications for this type of material typically specify method of placement and compaction coupled with visual observation during the placement and compaction operations of lifts, instead of nuclear density testing.

Nuclear Density Testing of Fill. Field density testing by nuclear density gauge will be adequate for verifying compaction of 2-inch to ¾-inch minus crushed base rock, sand/gravel soils, Decomposed Granite, and other materials 2 inches or smaller in size. Therefore, typical % compaction specifications will suffice. Testing must be accomplished in a systematic manner on all lifts as they are placed. Testing only the upper lift is not adequate.

Footing Drains. Drainage must consist of a rigid, smooth interior, perforated drain pipe (capable of being cleaned by a roto-rooter type apparatus), typically resting adjacent to the footing near the base of the footing, provided this level is at least 8 inches below the drain rock layer under any floor slabs. The perforated pipe shall be surrounded above and on one side by a minimum of 8 inches of clean drain rock or pea gravel. The drain rock envelope must be wrapped in a non-woven geotextile designed as a filter fabric (Mirafi 140N or equivalent). We recommend the fabric be covered with a 2-inch layer of sand, to protect it against damage during backfilling operations and potential partial plugging from soil fines, prior to backfilling. Please see *Figures 3 and 4* for typical foundation drain details.

Retaining Wall Drainage. In addition to the footing drainage section (see above) located at the base of the retaining wall footing, all retaining walls should also have a minimum 12-inch-wide drainage zone of drain rock wrapped in non-woven filter fabric, immediately behind the wall, extending up from the drainage section to within 12 to 18 inches of the surface. A preformed, fabric-wrapped, polymer sheet drain, such as Amerdrain, Linq Drain or Enkamat must be placed against the wall. Exterior wall drains, which will not be sealed on top by asphalt or concrete, shall have the upper 12 inches backfilled with compacted onsite silt soils to minimize intrusion of surface waters into the wall drain system. *Please see Figure 5.*

Walls that shall not pass water vapor must be fully sealed (with a bitumen-based sealer that will not harden or crack) before the sheet drain is attached. Wall seal such as MasterBlend HLM5000 or equivalent, should be used and applied per the manufacturer's recommendations.

Floor Subdrains. Where the drain rock layer below slabs will be lower than the adjacent exterior grades (such as basements), water will tend to accumulate in this low area. To remove the water, include a series of subdrains at the bottom of the drain rock layer beneath the slab. The subdrain lines typically consist of 3-inch diameter, smooth interior, solid wall, perforated pipe at spacing of 10 feet (or less) across the structure (and around the interior perimeter). The perforated pipe is placed in a deepened zone of the drain layer as shown on *Figure 4*. The pipes are sloped to drain and collected by a tightline which leads to the stormwater disposal system. We recommend we be allowed to review the subdrain system design prior to final plan submittal or construction bidding.

All drains shall be tightlined and positively sloped to an approved stormwater disposal location. **Note:** In no case shall water be collected and/or directed or discharged close to the foundations. Such improper water discharge can cause added water related problems. We strongly recommend against connecting roof drains or surface area drains to foundation, wall or floor subdrains unless to a common discharge line far away from the structure. The rigid smooth-wall pipe can be cleaned out by means of a "roto-rooter" type system should it become plugged with

sediment or fine roots. We recommend cleanouts be placed periodically by the designer to facilitate cleaning and maintenance of the drains.

Site Drainage. Surface runoff should be controlled during construction and with final site grading. All areas adjacent to the structures should have a permanent slope away from the foundations at an inclination of at least 6 inches in eight (8) feet.

If surface or shallow subsurface water moves onto the site, this water should be collected and channeled into landscape area drains or catch basins, or should be conveyed around the structure or site via lined ditches and to the infiltration areas or disposal locations. Where items such as landscape areas and walkways block the flow of surface water, small area drains should be installed to collect the surface runoff. Good site design accommodates all site runoff and conveys it away from the structures and off the site to an acceptable disposal location. This would include drainage of surface water along toe of the existing flat-graded pad area cut slopes.

All roof downspouts should be connected to a sealed tightline system, which discharges to an acceptable disposal location. In no case shall water be collected and/or directed or discharged close to the foundations. Such improper water discharge can cause added water related problems. The rigid smooth-wall pipe can be cleaned out by means of a "roto-rooter" type system should it become plugged with sediment or fine roots. We recommend cleanouts be placed periodically by the designer to facilitate cleaning and maintenance of the drains.

LIMITATIONS

The analyses, conclusions and limited recommendations contained in this letter are based on site conditions as they existed at the time of the study and assume soils and groundwater conditions exposed and observed at the site during our visit are representative of soils and groundwater conditions throughout the site. If surface development, subsurface conditions or assumed information is found to be different, we must be advised at once so that we can review this report and reconsider our recommendations considering the changed conditions. If there is a significant lapse of time (5 years) between submission of this report and the completion of construction, or if conditions have changed due to acts of God or construction, at or adjacent to the site, it is recommended that this report be reviewed considering the changed conditions and/or time lapse.

This report was prepared for use of the owner and design team for design and construction of the proposed residential structure at the specified location on the project site. It shall be made available to others for information and factual data only. This report shall not be used for contractual purposes as a warranty of site surface or subsurface conditions or water conditions. It shall also not be used at other sites or for projects other than the one intended.

We have performed these services in accordance with generally accepted geotechnical engineering and geologic practices in the state of Oregon, at the time the study was accomplished. No other warranties, either expressed or implied are provided.


We hope this meets your needs currently. Please contact us if you have any questions.

Respectfully Submitted,

THE GALLI GROUP
GEOTECHNICAL CONSULTING



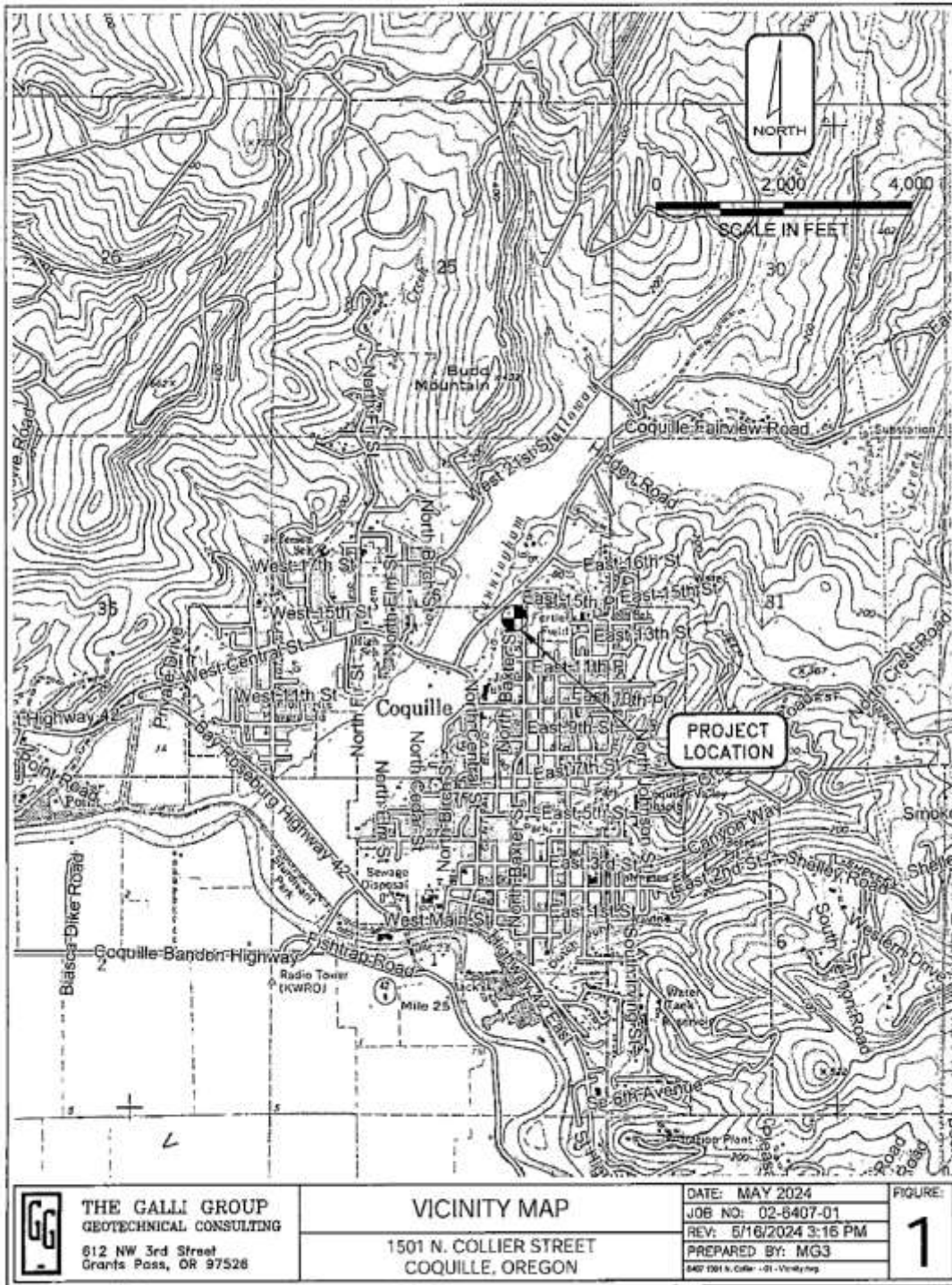
Kristen S. Pierce, EIT
Engineering Associate

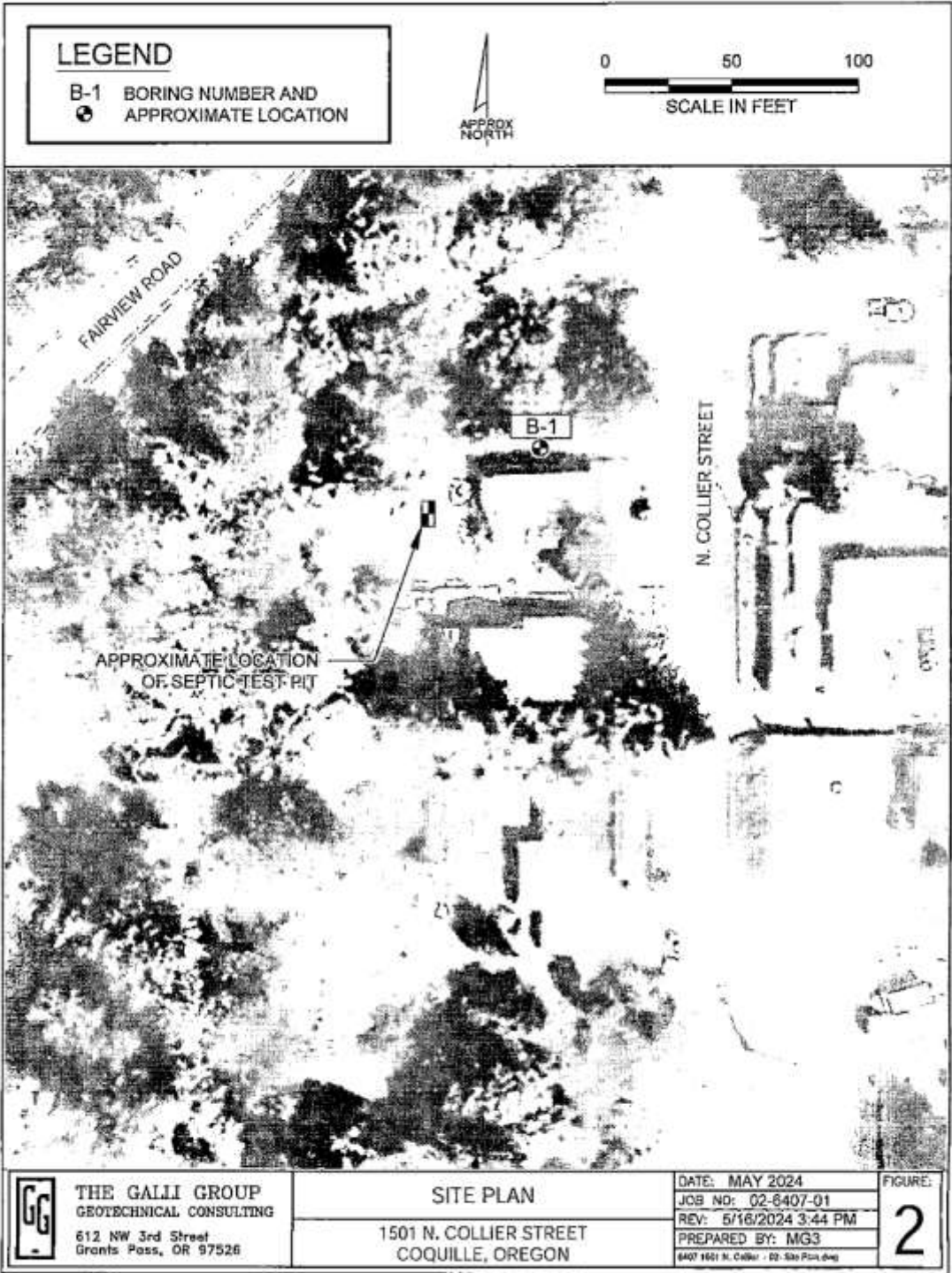


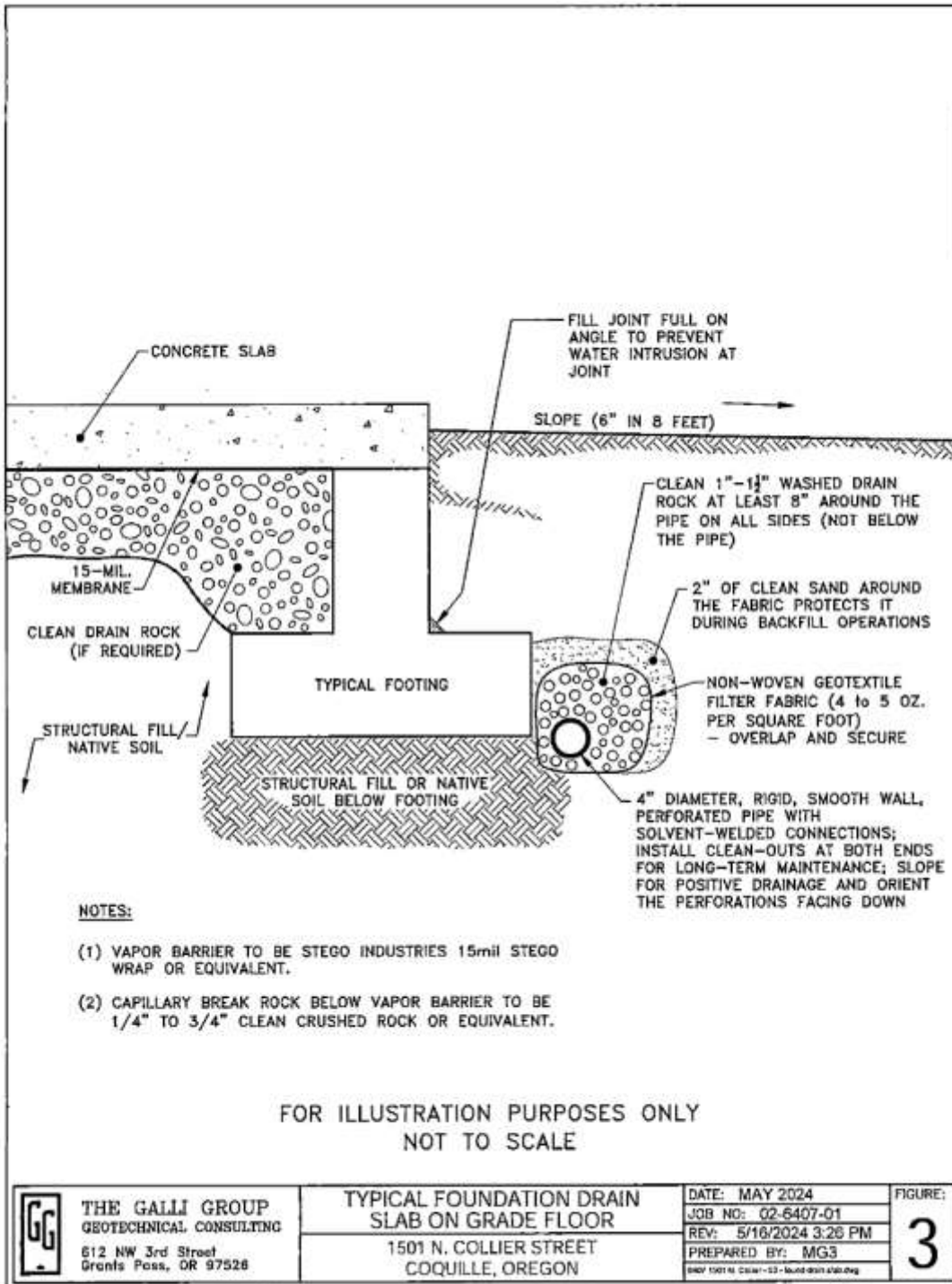
Dennis Duru, MSc, PE, RG, CEG.
Senior Engineering Geologist

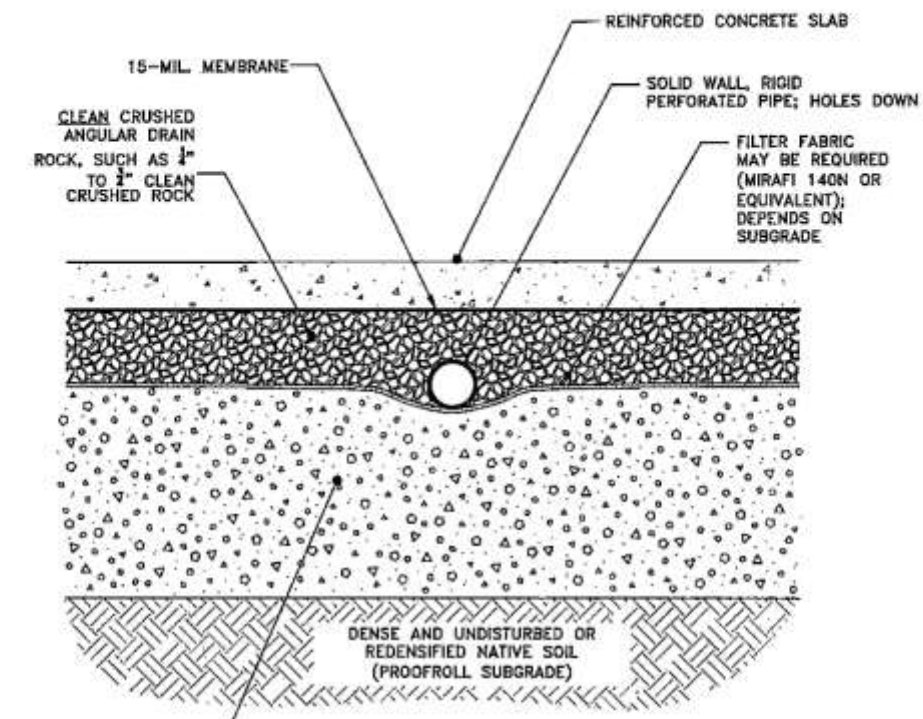


- Attachments:
- | | |
|------------|---|
| Figure 1 | Vicinity Map |
| Figure 2 | Site Plan with Boring Location |
| Figure 3 | Typical Foundation Drain, Slab on Grade Floor |
| Figure 4 | Interior Floor Slab Subdrain Detail |
| Figure 5 | Basement Retaining Wall, Drainage Cross-Section |
| Appendix A | Boring Log |
| Appendix B | Laboratory Test Results |









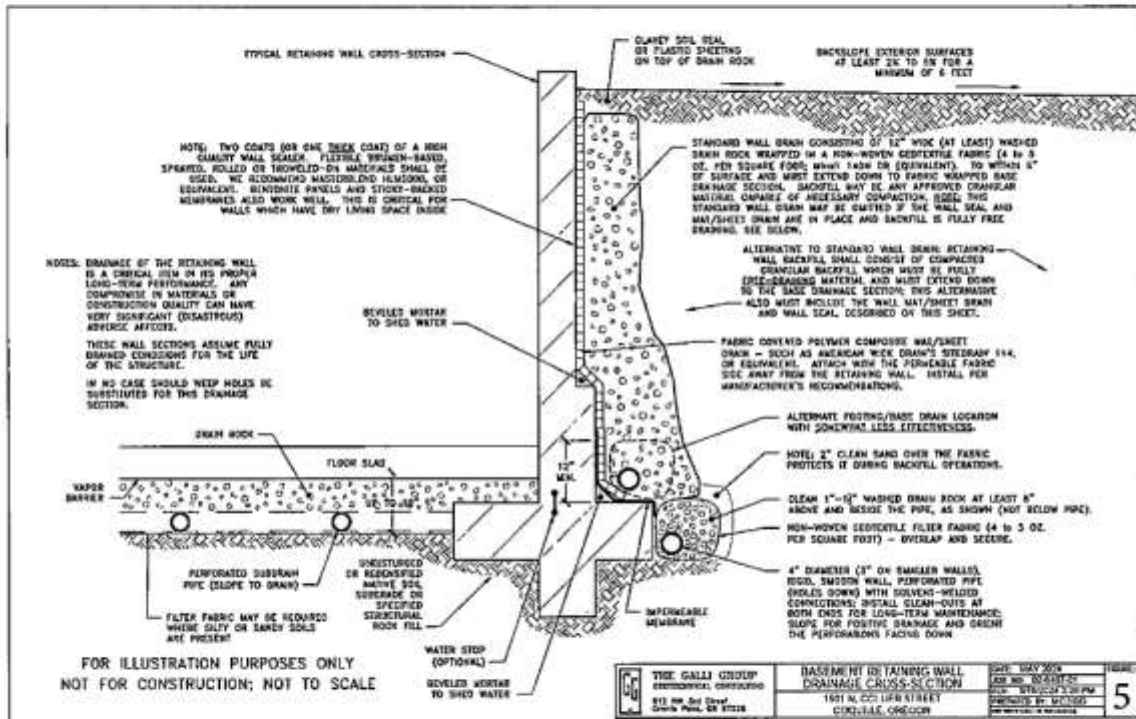
POSSIBLE
STRUCTURAL FILL
(THICKNESS VARIES)
- OR NATIVE SOIL
COMPACTED TO AT
LEAST 98% OF ASTM
D-698

NOTES:

- (1) MAXIMUM SPACING IS 10 TO 15 FEET.
- (2) ORIENT PIPE PERFORATIONS TO BOTTOM.
- (3) ASSEMBLE PIPE USING SOLVENT-WELDED CONNECTIONS.
- (4) DO NOT DRIVE OVER DRAIN LINES.
- (5) DRAIN ROCK AND STRUCTURAL FILL TO MEET SPECS. IN REPORT BODY - SLOPE PIPE TO DRAIN.
- (6) MAY REQUIRE FILTER FABRIC ON NATIVE SUBGRADE OR IF STRUCTURAL FILL IS VERY SILTY OR SANDY.
- (7) BEST VAPOR BARRIER IS STEGO INDUSTRIES 15mil STEGO WRAP (OR EQUIVALENT).

FOR ILLUSTRATION PURPOSES ONLY
NOT TO SCALE

 THE GALLI GROUP GEOTECHNICAL CONSULTING 612 NW 3rd Street Grants Pass, OR 97526	INTERIOR FLOOR SLAB SUBDRAIN DETAIL	DATE: MAY 2024 JOB NO: 02-8407-01 REV: 5/18/2024 3:30 PM PREPARED BY: MG3 <small>8407 1501 N. Collier - 04 - subdrain.dwg</small>	FIGURE: <div style="font-size: 2em; font-weight: bold; text-align: center;">4</div>
	1501 N. COLLIER STREET COQUILLE, OREGON		



APPENDIX A

BORING LOG

BORING LOG B1

Project: 1501 N Collier Street
 Client: Amy Walton
 Location: North side of drive way, see Figure 2 Site Plan
 Driller: TGG (Ken, Nate C.)
 Drill Rig: ATV mounted 4" diameter SSA
 Depth To Water: Initial $\frac{1}{2}$: N/A

Project No.: 02-6407-01
 Date: 05/03/2024
 Elevation:
 Logged By: Kristen S. Pierce

At Completion ∇ :

Graphic Log	USCS	Description	Depth	Sample No. and Type	NMC	Standard Penetration Test	
						N	CURVE
	FILL	Loose, gray and dark brown, clayey Gravel; with some sand and silt, organics, moist.	0 - 1.0				
	CH-MH	Stiff, dark brown, clayey Silt; with some sand and gravel, damp to moist.	1.0 - 2.5	S1	18%	9	
	MH	Stiff, brown mottled with orange and gray, clayey Silt; moist.	2.5 - 3.5	S2	35%	10	
	MH	Stiff, brown mottled with orange and gray, clayey Silt; moist.	3.5 - 4.5	Bulk	44%		
	MH	Very stiff, gray mottled with orange and red, clayey Silt; moist.	4.5 - 7.0	S3	36%	20	
	MH	Stiff, gray mottled with orange, red, and light brown, clayey Silt; moist.	7.0 - 10.5	S4	38%	14	
	MH	Stiff, light brown mottled with orange, red and gray, clayey Silt; moist	10.5 - 14.0	S5	38%	14	
	MH	Stiff, orange mottled with gray, clayey Silt; with sand, moist.	14.0 - 17.5	S6	54%	11	
	MH	Stiff, orange mottled with gray, clayey Silt; with sand, moist.	17.5 - 21.5	Bulk	49%		
	MH	Hard, light brown marbled with orange, red and gray, clayey Silt; with sand, damp.	21.5 - 24.5	S7	45%	22	
		Bottom of boring at 21.5 ft. No free groundwater was encountered.	21.5				

Legend of Samplers: Grab sample SPT sample Shelby tube sample

This information pertains only to this boring and should not be interpreted as being indicative of the site.

APPENDIX B
LABORATORY TEST RESULTS



**Atterberg Limits Testing
ASTM D4318**

Client: Amy Walton
 Project: 1501 N. Collier St.
 Job No. 02-6407-01
 Date Sampled: 5/3/2024
 Sample Location B - 1 S - 2
 Depth of Sample: 2.5' - 5.0'
 Description of Soil: **brown, clayey Silt**
 Date Tested: 5/7/2024

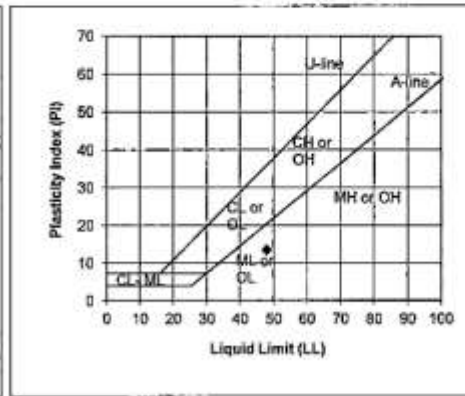
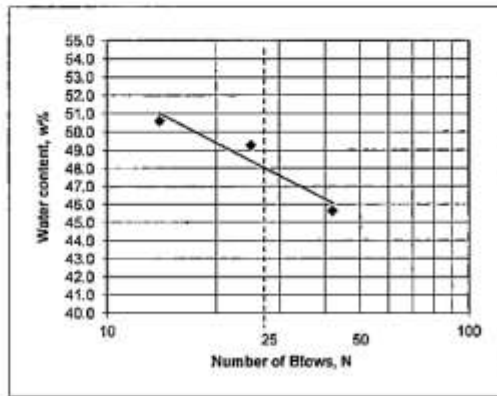
Liquid Limit Determination

Can No.	A8	Z	A8
Wt. of wet soil + can (g)	21.08	21.34	21.03
Wt. of dry soil + can (g)	18.09	18.05	17.94
Wt. of can (g)	11.54	11.55	11.67
Wt. of dry soil (g)	6.55	6.50	6.27
Wt. of Moisture (g)	2.99	3.29	3.09
Water content, w%	45.6	50.6	49.3
No. of blows, N	42	14	25

Plastic Limit Determination

Can No.	A3	3	5
Wt. of wet soil + can (g)	22.09	16.54	18.04
Wt. of dry soil + can (g)	20.75	15.36	16.36
Wt. of can (g)	16.92	11.61	11.59
Wt. of dry soil (g)	3.83	3.75	4.77
Wt. of Moisture (g)	1.34	1.28	1.68
Water content, w%	35.0	34.1	35.2

LIQUID LIMIT (LL)= 48
PLASTIC LIMIT (PL)= 35
PLASTICITY INDEX (PI)= 13



Tested by: Ken Perry



**Atterberg Limits Testing
ASTM D4318**

Client: Amy Walton
 Project: 1501 N. Collier St.
 Job No. 02-6407-01
 Date Sampled: 5/3/2024
 Sample Location B - 1 S - 5
 Depth of Sample: 10.0' -11.5'
 Description of Soil: **light brown, clayey Silt**
 Date Tested: 5/6/2024

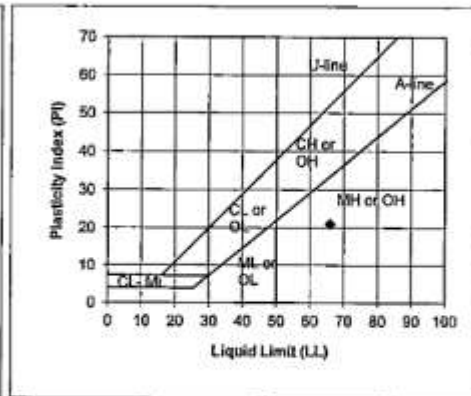
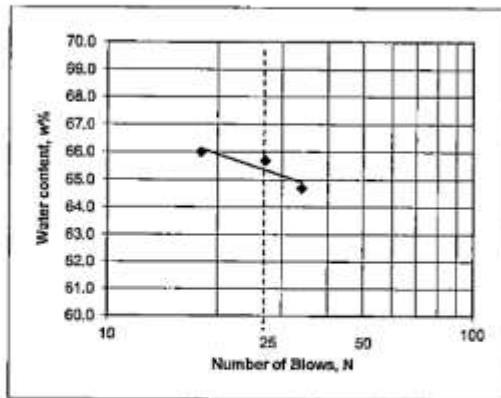
Liquid Limit Determination

	Can No. 202	4	1
Wt. of wet soil + can (g)	19.73	18.21	20.54
Wt. of dry soil + can (g)	16.66	15.57	16.94
Wt. of can (g)	11.66	11.57	11.46
Wt. of dry soil (g)	4.90	4.00	5.48
Wt. of Moisture (g)	3.17	2.64	3.60
Water content, w%	64.7	66.0	65.7
No. of blows, N	34	18	27

Plastic Limit Determination

	Can No. X	N
Wt. of wet soil + can (g)	15.94	15.57
Wt. of dry soil + can (g)	14.66	14.39
Wt. of can (g)	11.78	11.80
Wt. of dry soil (g)	2.88	2.59
Wt. of Moisture (g)	1.28	1.18
Water content, w%	44.4	45.6

LIQUID LIMIT (LL)= 66
PLASTIC LIMIT (PL)= 45
PLASTICITY INDEX (PI)= 21



Tested by: Ken Perry



THE GALLI GROUP
Geotechnical Consulting

Expansion Index Worksheet
(ASTM D4829)

Client: Amy Walton
Project: 1501 N Collier St.
Job No: 02-6407-01
Test Date: 5/6/2024
Sample Location: Test Pit Bulk
Sample Date: 5/3/2024
Description of Soil: brown, clayey Silt

Expansion Index measured (EI_m):

$EI_m = \Delta H / H_{orig} * 1000$

begin dial : 0.0298
end dial : 0.0615
EI_m : 32

Weight of ring (g): 365.1
Wt. Wet sample in ring(g): 640.9
Sample Wet Weight (g): 275.81
Sample Length (in.): 1
Sample Diameter (in.): 4.01
Volume of sample (ft³): 0.007309
Sample Unit Wt. (PCF): **83.1**
Sample Dry Unit Wt. (PCF): **71.5**

Saturation (S):

$S = (SG)(w) / (\gamma_d) / ((SG) * 62.4) - \gamma_d$

SG: 2.7
 γ_d : 71.5
%w : 16.3
S = 32

As prepared for testing:

can no. G9
wet weight of soil + can (g) 565.85
dry weight of soil + can (g) 513.45

weight of can (g) 191.60
weight of dry soil (g) 321.85
weight of water (g) 52.40
moisture content (% of dry weight) 16.3

EI₅₀ Calculation:

$EI_{50} = EI_m - (50 - S) * [(65 + EI_m) / (220 - S)]$
EI_m 32
S 32
EI₅₀ = 23

After testing:

can no. G4
wet weight of soil + can (g) 531.70
dry weight of soil + can (g) 426.31
weight of can (g) 190.64
weight of dry soil (g) 235.67
weight of water (g) 105.39
moisture content (% of dry weight) 44.7

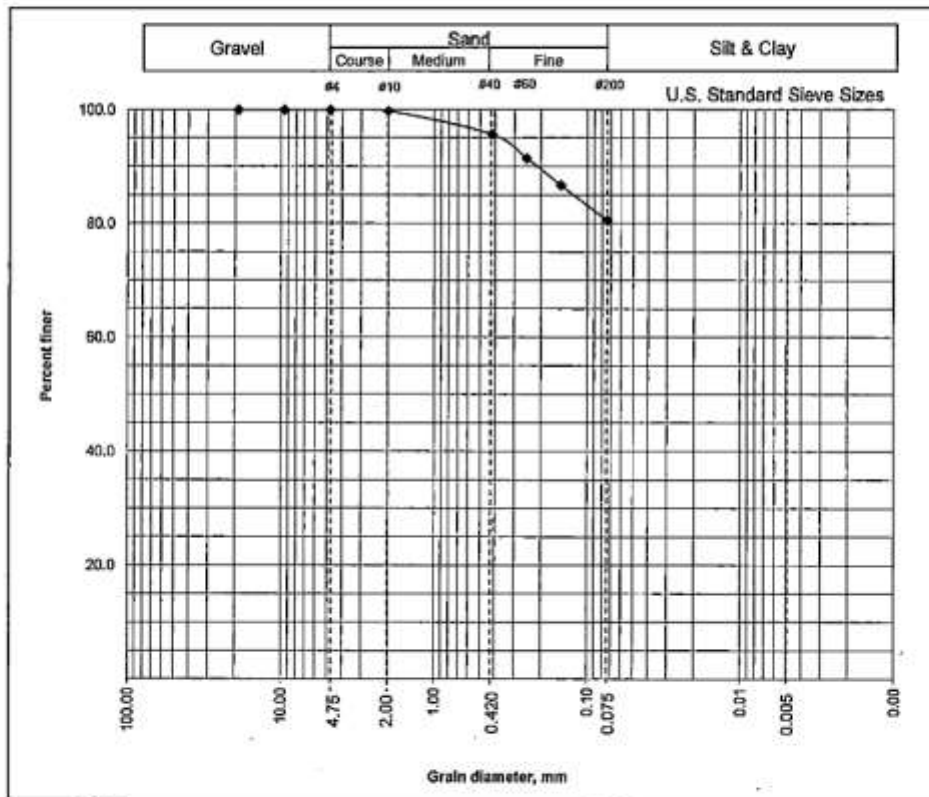
#4 + (dry wt.) 0
#4 - (dry wt.) 738.7
% Passing #4 Sieve = 100.0

Tested By: Ken Perry



Washed Sieve Analysis (ASTM-D1140)

Client: Amy Walton
 Project: 1501 N Collier Street
 Job No: 02-6407-01
 Date Tested: 5/6/2024
 Date Sampled: 5/3/2024
 Description of Soil: Silt/Clay with sand
 Sample Location: B - 1, S - 3
 Depth of Sample: 5.0' - 6.5'

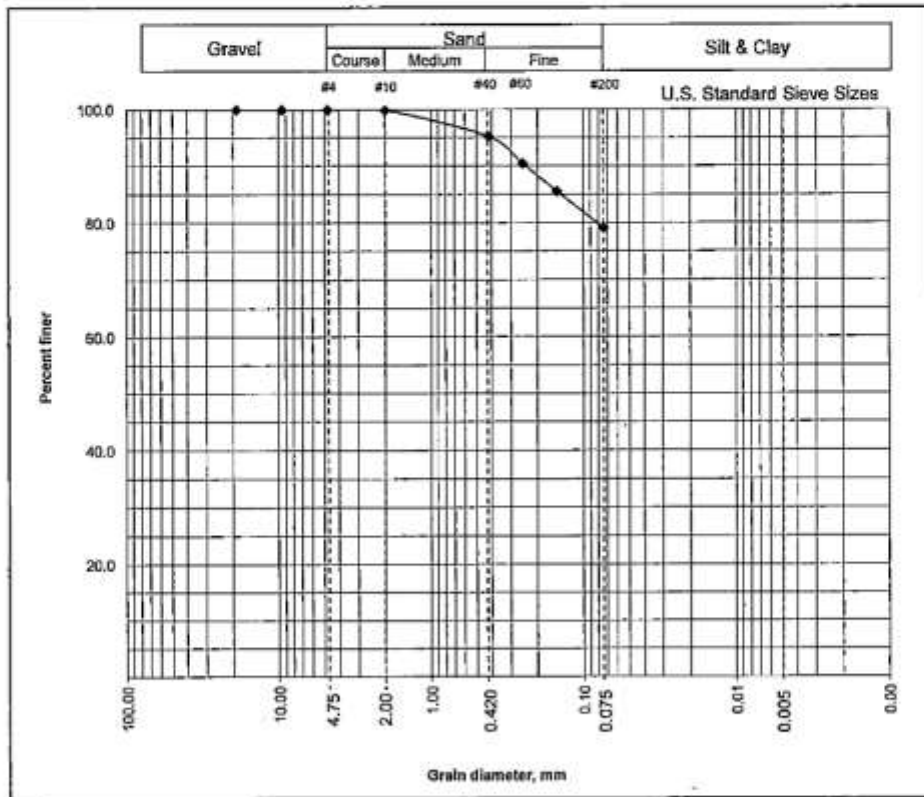


Tested by: Ken Perry



Washed Sieve Analysis (ASTM-D1140)

Client: Amy Walton
 Project: 1501 N Collier Street
 Job No: 6407
 Date Tested: 5/6/2024
 Date Sampled: 5/3/2024
 Description of Soil: sandy Silt/Clay
 Sample Location: Test Pit Bulk
 Depth of Sample: 1.0'-2.0'



Tested by: Ken Perry