DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 110th Ave NE., P.O. BOX 90012
BELLEVUE, WA 98009-9012

OPTIONAL DETERMINATION OF NON-SIGNIFICANCE (DNS) NOTICE MATERIALS

The attached materials are being sent to you pursuant to the requirements for the Optional DNS Process (WAC 197-11-355). A DNS on the attached proposal is likely. This may be the only opportunity to comment on environmental impacts of the proposal. Mitigation measures from standard codes will apply. Project review may require mitigation regardless of whether an EIS is prepared. A copy of the subsequent threshold determination for this proposal may be obtained upon request.

File No. 16-137222-LO

Project Name/Address: Bernier/McCaw Critical Areas Land Use Permit/ 9627 Lake Washington Blvd NE

Planner: Drew Folsom

Phone Number: 425-452-4441

Minimum Comment Period: September 8, 2016

Materials included in this Notice:

- ☒ Blue Bulletin
- ☒ Checklist
- ☒ Vicinity Map
- ☒ Plans
- ☐ Other:

OTHERS TO RECEIVE THIS DOCUMENT:

- ☒ State Department of Fish and Wildlife / Sterwart.Reinbold@dfw.gov; Christa.Heller@dfw.wa.gov;
- ☒ State Department of Ecology, Shoreline Planner N.W. Region / Jobu461@ecy.wa.gov; sepaunit@ecy.wa.gov
- ☒ Army Corps of Engineers Susan.M.Powell@nws02.usace.army.mil
- ☒ Attorney General ecyolyef@atg.wa.gov
- ☒ Muckleshoot Indian Tribe Karen.Walter@muckleshoot.nsn.us; Fisheries.fileroom@muckleshoot.nsn.us

ENVIRONMENTAL CHECKLIST

10/9/2009

Thank you in advance for your cooperation and adherence to these procedures. If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call Development Services (425-452-6800) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Assistance for the hearing impaired: Dial 711 (Telecommunications Relay Service).

INTRODUCTION

Purpose of the Checklist:

The State Environmental Policy Act (SEPA), Chapter 43.21c RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the City of Bellevue identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the City decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Answer the questions briefly, with the most precise information known, or give the best description you can. You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer or if a question does not apply to your proposal, write "do not know" or "does not apply." Giving complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the Planner in the Permit Center can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. Include reference to any reports on studies that you are aware of which are relevant to the answers you provide. The City may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impacts.

Use of a Checklist for Nonproject Proposals: *A nonproject proposal includes plans, policies, and programs where actions are different or broader than a single site-specific proposal.*

For nonproject proposals, complete the Environmental Checklist even though you may answer "does not apply" to most questions. In addition, complete the Supplemental Sheet for Nonproject Actions available from Permit Processing.

For nonproject actions, the references in the checklist to the words *project*, *applicant*, and *property* or *site* should be read as *proposal*, *proposer*, and *affected geographic area*, respectively.

Attach an 8 ½" x 11 vicinity map which accurately locates the proposed site.

D-Ta 8/23/16

BACKGROUND INFORMATION

Property Owner: Yahn Bernier and Beth McCaw

Proponent: Demetriou Architects

Contact Person: Michelle D. Cozza of Demetriou Architects
(If different from the owner. All questions and correspondence will be directed to the individual listed.)

Address: 5555 Lakeview Dr., Ste. 200, Kirkland, WA 98033

Phone: 425-827-1700

Proposal Title: Critical Area Buffer and Structure Setback Modification for construction of Pool and Pool Cabana

Proposal Location: 9627 Lake Washington Blvd NE, legal description attached
(Street address and nearest cross street or intersection) Provide a legal description if available.

Please attach an 8 ½" x 11" vicinity map that accurately locates the proposal site.

Give an accurate, brief description of the proposal's scope and nature:

1. General description: Addition of pool house and pool accessory to existing single fam. residence at the base of steep slope, and tram connecting existing patio with top of proposed pool house.
2. Acreage of site: .828
3. Number of dwelling units/buildings to be demolished: 0
4. Number of dwelling units/buildings to be constructed: 0 dwelling units, 1 pool building
5. Square footage of buildings to be demolished: 0
6. Square footage of buildings to be constructed: 600
7. Quantity of earth movement (in cubic yards): 469
8. Proposed land use: existing to remain - Single Family Residential
9. Design features, including building height, number of stories and proposed exterior materials:
   Pool house will be one story 13'-3 1/2" high to top of railing, with exterior materials and detailing to match those on existing house (stone veneer and wood shingles).
10. Other

Estimated date of completion of the proposal or timing of phasing:
Project would commence as soon as CALUP and building permit approval are received. Completion date will depend on season and associated site conditions.

Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.
No.

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List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

1. Geotechnical Report prepared by Terra Associates
2. Existing conditions habitat assessment memorandum prepared by Cedarock Consultants
3. Critical Areas Report and Narrative, and Restoration/Mitigation plan prepared by Brooks Kolb

Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. List dates applied for and file numbers, if known.

No.

List any government approvals or permits that will be needed for your proposal, if known. If permits have been applied for, list application date and file numbers, if known.

Critical Areas Land Use Permit - this application
Single Family Addition construction permit - under separate application

Please provide one or more of the following exhibits, if applicable to your proposal.
(Please check appropriate box(es) for exhibits submitted with your proposal):

☐ Land Use Reclassification (rezone) Map of existing and proposed zoning

☐ Preliminary Plat or Planned Unit Development
Preliminary plat map

☐ Clearing & Grading Permit
Plan of existing and proposed grading
Development plans

☒ Building Permit (or Design Review)
Site plan
Clearing & grading plan

☐ Shoreline Management Permit
Site plan

A. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site: ☐ Flat ☐ Rolling ☐ Hilly ☒ Steep slopes ☐ Mountains ☐ Other

b. What is the steepest slope on the site (approximate percent slope)?

>40%

c. What general types of soil are found on the site (for example, clay, sand, gravel, peat, and muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Soils generally consist of 1-3 ft. of dense inorganic fill overlaying dense sand with gravel.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

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e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Proposed grading and filling is the minimum necessary to construct the pool house and retaining wall. Fill will be either clean granular fill or native soils depending on moisture content and weather conditions at time of construction per the geotechnical report.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Unlikely per the geotechnical report.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

35.5%

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Geotechnical Report recommendations, and BMP's C233 Silt Fence, C235 Straw Wattles, T101 Tree Protection Fencing per Sheet L1.1.

2. AIR

a. What types of emissions to the air would result from the proposal (i.e. dust, automobile odors, and industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

None

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

None

c. Proposed measures to reduce or control emissions or other impacts to the air, if any:

None

3. WATER

a. Surface

(1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The site borders on Lake Washington.

(2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If Yes, please describe and attach available plans.

Yes, the proposed work occurs within 200' of Lake Washington. See attached architectural, structural and landscape plans.

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(3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None.

(4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

(5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No.

(6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

b. Ground

(1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description.

No.

(2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.) Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None.

c. Water Runoff (Including storm water)

(1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Storm water will be the sole source of runoff, and will be collected/disposed by expansion of existing water quality systems including gutters, and foundation/footing drains, and discharged to Lake Washington. Final exterior grades adjacent to a building will slope away at least 2%.

(2) Could waste materials enter ground or surface waters? If so, generally describe.

No.

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d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

Expansion of existing water quality systems.

4. Plants

a. Check or circle types of vegetation found on the site:

- [X] deciduous tree: alder, maple, aspen, other
- [X] evergreen tree: fir, cedar, pine, other
- [X] shrubs
- [X] grass
- [ ] pasture
- [ ] crop or grain
- [ ] wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
- [ ] water plants: water lily, eelgrass, milfoil, other
- [X] other types of vegetation
  English Ivy

b. What kind and amount of vegetation will be removed or altered?

Invasive, non-native vegetation will be removed.

c. List threatened or endangered species known to be on or near the site.

None on site. Eagle nest is known to be 1 mile south of site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Vegetation will be mitigated and restored per Sheet L1.0 and L2. Area of mitigation/restoration exceeds area of disturbance.

5. ANIMALS

a. Check or circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

- [X] Birds: hawk, heron, eagle, songbirds, other:
- [ ] Mammals: deer, bear, elk, beaver, other:
- [X] Fish: bass, salmon, trout, herring, shellfish, other:

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b. List any threatened or endangered species known to be on or near the site.

None.

c. Is the site part of a migration route? If so, explain.

Pacific flyway.

d. Proposed measures to preserve or enhance wildlife, if any:

Removal of invasive vegetation and planting of native species per Sheets L1.0 and L2.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy need? Describe whether it will be used for heating, manufacturing, etc.

Electricity and natural gas will be used for heating and lighting.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of the proposal? List other proposed measures to reduce or control energy impacts, if any:

Requirements of applicable Building Code and State Energy Code will be incorporated into the construction of the pool house.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

None known.

(1) Describe special emergency services that might be required.

None known.

(2) Proposed measures to reduce or control environmental health hazards, if any.

None.

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b. Noise

(1) What types of noise exist in the area which may affect your project (for example, traffic, equipment, operation, other)?

Typical residential and lake-use related noise.

(2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example, traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Minor construction and landscaping noise would come from the site during hours prescribed by the City of Bellevue noise ordinance.

(3) Proposed measures to reduce or control noise impacts, if any:

Work will be done only during hours prescribed by City of Bellevue, muffler devices on equipment as feasible, and minimize idling time of equipment.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

Current use of site and adjacent properties is single family residential . Adjacent properties have accessory structures and/or pool within shoreline/steep slope critical area buffers, similar to proposed work.

b. Has the site been used for agriculture? If so, describe.

No.

c. Describe any structures on the site.

Existing single family residence.

d. Will any structures be demolished? If so, what?

No.

e. What is the current zoning classification of the site?

R-1.8

f. What is the current comprehensive plan designation of the site?

Single family low

g. If applicable, what is the current shoreline master program designation of the site?

Shoreline residential.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

Yes, Steep Slope, Shoreline.

I. Approximately how many people would reside or work in the completed project?

None.

j. Approximately how many people would the completed project displace?

None.

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k. Proposed measures to avoid or reduce displacement impacts, if any:

None.

i. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

None. Proposal is consistent with existing land uses.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

c. Proposed measures to reduce or control housing impacts, if any:

None.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The pool house height is 13'-3 1/2" to top of guardrail posts. The exterior building materials are to be a combination of wood shingles and thin stone veneer.

b. What views in the immediate vicinity would be altered or obstructed?

None, the proposed work is significantly downhill of the existing residence, and will not interfere with views in the immediate vicinity.

c. Proposed measures to reduce or control aesthetic impacts, if any:

The proposed pool house nestles into the existing rockery at the base of the hill, and the finished roof elevation is close to existing grade.

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11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
None, other than the reflection off of the pool water.

b. Could light or glare from the finished project be a safety hazard or interfere with views?
No, there is already the reflection of light off of Lake Washington.

c. What existing off-site sources of light or glare may affect your proposal?
None.

d. Proposed measures to reduce or control light or glare impacts, if any:
None.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?
Meydenbauer Park east of property, Lake Washington.

b. Would the proposed project displace any existing recreational uses? If so, describe.
No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
None.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.
No.

b. Generally describe any landmarks or evidence of historic, archeological, scientific, or cultural importance known to be on or next to the site.
None known.

c. Proposed measures to reduce or control impacts, if any:
None.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.
Lake Washington Boulevard serves the site. Access will be via existing driveway.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?
No, the closest transit stop is on Bellevue Way.

c. How many parking spaces would be completed project have? How many would the project eliminate?
There will be no change to the existing number of parking spaces.

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d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

No.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

None. Site is already developed with a single-family residence.

g. Proposed measures to reduce or control transportation impacts, if any:

None.

15. Public Services

a. Would the project result in an increased need for the public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any:

None.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

All except septic system.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

No additional utilities will be required. The proposed project will use existing available utilities. Electricity provided by PSE, sanitary sewer and storm water connection by City of Bellevue.

Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature..... Date Submitted 6/16/16

8/23/16

LEGAL DESCRIPTION

THAT PORTION OF LOT 18 IN BLOCK 15 OF LOCHLEVEN, ACCORDING TO PLAT RECORDED IN VOLUME 16 OF PLATS AT PAGE(S) 46, IN KING COUNTY, WASHINGTON, LYING SOUTHWESTERLY OF NORTHEAST LAKE WASHINGTON BOULEVARD RIGHT-OF-WAY;

TOGETHER WITH SECOND CLASS SHORELANDS AS CONVEYED BY THE STATE OF WASHINTON SITUATE IN FRONT OF, ADJACENT TO OR ABUTTING THEREON;

SITUATE IN THE CITY OF BELLEVUE, COUNTY OF KING, STATE OF WASHINGTON.

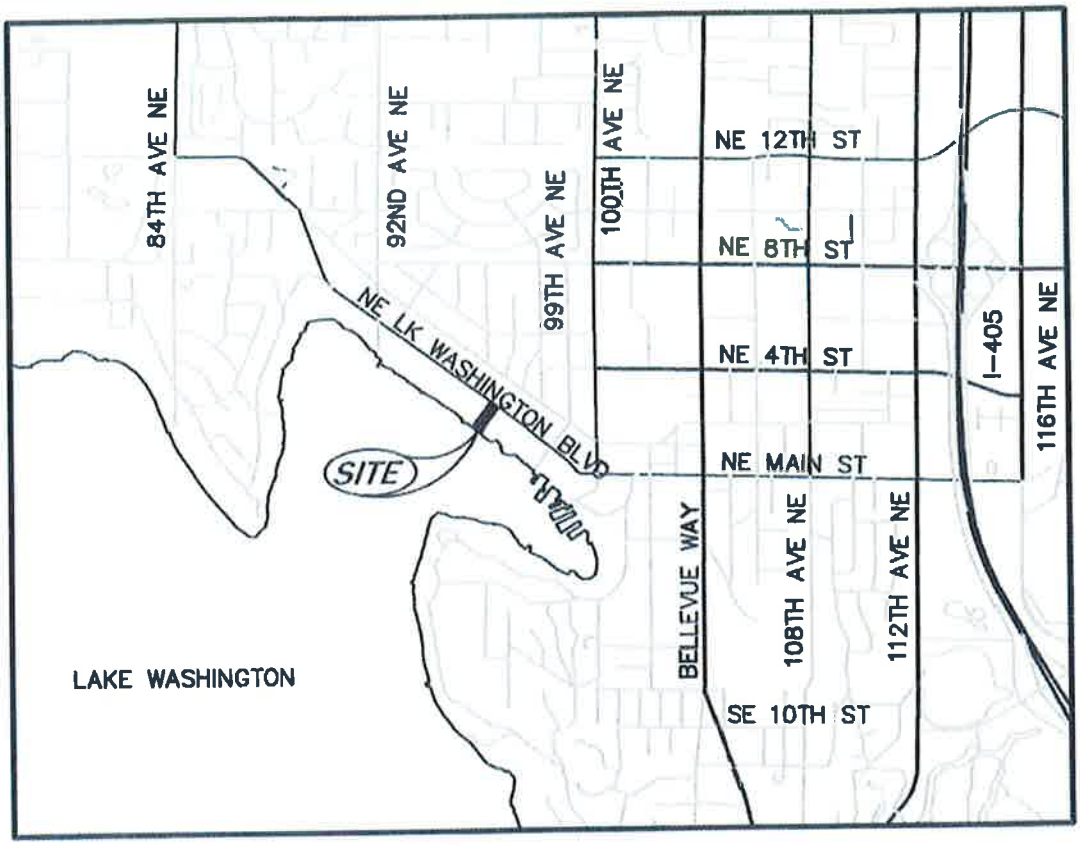
TOGETHER WITH THAT PORTION OF LOT 19 IN SAID BLOCK 15 OF LOCHLEVEN DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE NORTHWESTERLY LINE OF SAID LOT 19 IN SAID BLOCK 15 AND THE SOUTHWESTERLY RIGHT-OF-WAY OF NORTHEAST LAKE WASHINGTON BOULEVARD AS NOW LOCATED AND ESTABLISHED;

THENCE SOUTH 52°57'19" EAST ALONG SAID SOUTHWESTERLY RIGHT-OF-WAY LINE 22.92 FEET,

THENCE SOUTH 40°38'46" WEST 158.88 FEET; THENCE SOUTH 37°02'41" WEST PARALLEL WITH THE WEST LINE OF LOT 18 IN SAID BLOCK 15 FOR A DISTANCE OF 144.17 FEET; THENCE SOUTH 48°52'40" WEST 63.13 FEET, MORE OR LESS, TO A POINT ON THE SHORE OF LAKE WASHINGTON WHICH BEARS SOUTH 37°02'41" WEST 364.53 FEET, MORE OF LESS, FROM THE POINT OF BEGINNING; THENCE NORTH 37°02'41" EAST 364.53 FEET TO THE POINT OF BEGINNING.

(ALSO KNOWN AS PARCEL B OF CITY OF BELLEVUE BOUNDARY LINE ADJUSTMENT NO. 01-116901 LW, RECORDED ON DECEMBER 04, 2001 UNDER RECORDING NO. 20011204900020, SITUATE IN THE CITY OF BELLEVUE, COUNTY OF KING, STATE OF WASHINGTON.)



VICINITY MAP

SCALE: 1" = 2400'

9627 Lake Washington Blvd. NE: Prepared by Brooks Kolb, ASLA, Landscape Architect
Subject to Review and Approval by Carolyn Decker, Terra Associates Geotechnical Engineers

Following is a summary of how the proposed disturbance for this proposed single family residence project meets or exceeds all of the following design criteria per 20.25H.255:

***Requirement #1**: (Demonstrate that) the proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in overall critical area or critical area buffer functions:*

The following areas will be restored with native plantings: steep slope critical area; 25′ shoreline setback area; 25′ structure setback area; toe of steep slope buffer; and a portion of the top of slope buffer. The total proposed vegetation mitigation area of 7190 square feet exceeds the proposed clearing and grading area of 5300 square feet. These factors represent a net gain in critical area and buffer function.

***Requirement #2**: (Demonstrate that) the proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in the most important critical area or critical area buffer functions to the ecosystem in which they exist:*

As described under Requirement #1 above, the shoreline buffer will be restored with native plantings, which result in a net gain in wildlife habitat. The native plantings will also filter runoff sediment, reducing toxic discharges into the Meydenbauer Bay.

***Requirement #3:** (Demonstrate that) the proposal includes a net gain in stormwater quality function by the critical area buffer or by elements of the development proposal outside of the reduced regulated critical area buffer.*

Proposed native plantings will filter runoff sediment, reducing toxic discharges into the Meydenbauer Bay. The proposal also will improve soil porosity and aeration within the mitigation planting zone by loosening and tilling the existing topsoil, and amending it with organic compost.

***Requirement #4**: (Demonstrate that there will be) adequate resources to ensure completion of any required restoration, mitigation and monitoring efforts:*

100% completion of the native planting restoration and storm drainage improvements installation will be verified by City inspectors. Following completion, the native plants will grow, resulting in higher levels of critical area and

buffer mitigation value with every passing year. In order to verify the continued health and growth of the plants, with replacement of any dead or diseased plants, the homeowner will monitor the improvements annually and will submit a required annual report with photographs to the Department of Community Development and Planning for a period of 4 to 5 calendar years following completion.

Requirement #5: *(Demonstrate that) the modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site:*

The proposed modifications to restore native vegetation and to control stormwater runoff will result in a net gain to wildlife habitat area and function and improved water quality on site. These improvements will in turn improve functions and values of critical areas and critical area buffers located on adjacent neighboring properties. Water quality within the Meydenbauer Bay watershed will thereby improve. Any runoff discharging from the project site onto critical areas and critical area buffers on the adjoining single-family residential properties will be filtered by the on-site native plantings and will actually improve their functions and values. Critical areas and buffer areas located upslope of the project site will not be impacted or adversely affected by this proposal.

Requirement #6: *(Demonstrate that) the resulting development is compatible with other uses and development in the same land use district:*

Since the proposed development is merely for one cabana or pool house constructed as an accessory structure to an existing residence, it will not result in any significant change to the existing land use and development in the project land use district. By definition, there is no change to the existing land use. The proposed development is substantially similar to the existing uses and development in the same land use district because all of the surrounding properties are similar single-family residences with similar accessory development within shoreline and steep slope structure setbacks.

Vegetation Management Plan

In return for the approval of this critical areas permit application, the Owners, Beth McCaw and Yahn Berneir, affirm their agreement to the following actions within the

designated planting areas indicated on Sheet L1.0, the Vegetation Mitigation Plan.

<u>These actions constitute the Vegetation Management Plan:</u>

1. Clear all invasives prior to preparing the soil.
2. Loosen the existing soils to a depth of at least 10 inches where slopes within the mitigation area are 3:1 (33%) or less; loosen the existing soils to a depth of at least 10 inches within planting pits exclusively where slopes within the mitigation area are greater than 3:1 (33%.)
3. Blend in a 3 inch lift of an organic soil amendment, such as Sawdust Supply Beauti-Gro or an approved equal to be specified and reviewed by the Landscape Architect.
4. Install a temporary (or alternately a permanent) drip irrigation system, to be specified and reviewed by the Landscape Architect.
5. Install the plantings indicated on the Vegetation Mitigation Plan.
6. Continue to control for invasives for a period of 5 years following plant installation (i.e. continually remove invasives and weeds that emerge within the designated planting area at regular intervals.)
7. Control of invasives will be considered a success if any remaining invasives are smaller than the size of the intended plantings and/or if invasives cover no more than 15% of the designated planting areas.
8. Water the plantings regularly with the irrigation system and monitor the irrigation system regularly to verify that it is performing as intended, with no clogged emitters, etc.
9. Replace plantings that die, as needed, for a period of 5 years following plant installation. (An acceptable mortality rate should be no more than 5% of the total plantings.)
10. Photograph the plantings once per year for a period of 5 years, and submit the photographs to the Department of Development Services. Photographs should document the designated planting areas from four positions, corresponding to north, south, east and west.

CEDAROCK CONSULTANTS, INC.

MEMORANDUM

Date: May 3, 2016
To: Michelle D. Cozza - Demetriou Architects

From: Carl Hadley
Subject: Existing Conditions Report
9627 Lake Washington Boulevard NE, Bellevue

This report was completed pursuant to the requirements under LUC20.25H.165.A.1-2 to conduct a habitat assessment of existing conditions on the subject site. The evaluation and report were completed by Carl Hadley, a qualified professional biologist with over 25 years of experience in western Washington. A site visit was conducted on May 3, 2016.

This report provides a description of existing shoreline habitat and critical areas on the affected site (Figure 1). Critical areas on the site and within 100-feet include Lake Washington, the lake's riparian buffer, a steep slope, and habitat associated with species of local importance. Adjoining properties also include similar critical areas and conditions.

Local (City of Bellevue critical area maps, King County, NW Maps), state (WDFW SalmonScape and Priority Habitat and Species, WDOE), and federal databases along with additional literature from various NGOs and private reports were consulted for information on sensitive habitat and species that may be found in the area.

Lake Washington and Riparian Setback

Lake Washington is considered a shoreline of the state and therefore classified as a Type S water under the Bellevue land use code (LUC 20.25H.075.B.1). Ordinary high water (OHW) defined as el. 18.6 (NAVD) falls mostly on a rockery wall fronting the Lake Washington shoreline. The rockery extends across the property and ranges from two to three feet in height above the beach. One exception exists for a small manmade beach which extends a few feet horizontally above OHW. OHW on the beach lies on the gravel.

The property is located on Meydenbauer Bay, a small inlet of Lake Washington. The Lake consists of open water that continues uninterrupted offshore for up to four miles. The lake bed extending out from the bulkhead is dominated by gravel and cobble dominated substrate that drops off fairly steeply to about 10 feet within 15 feet from shore. No aquatic vegetation was noted during the site visit.

The first 25 feet upland (shoreward) of the bulkhead (shoreline setback) is relatively flat and dominated by lawn and landscaping plants. Some of the landscaping consists of native plants

but most are ornamental. Two large native trees are found on either side of the property near the lake and provide functional benefits to aquatic and avian habitat.

The area between 25 feet and 50 feet from OHW (building setback) is also dominated by lawn and similar landscaping plants. The slope begins to increase and the toe of a steep slope encroaches into the area on the northwest corner. The toe is supported by a rockery. This area which consists mostly of lawn with no large trees has little habitat value.

The rest of the shoreline back to the house is relatively steep with some areas over 40 percent in grade. With the exception of a trail, most of the slope is vegetated with a mix of groundcovers (English ivy), low shrubs (sallal), and various larger bushes (native and ornamental). The area provides some value as avian, small mammal, reptile, and amphibian habitat.

Lake Washington has documented fall Chinook, coho, sockeye, winter steelhead, and bull trout presence. Resident cutthroat trout and various warmwater fish species are also known to use Lake Washington year-round. Sockeye spawning has been reported historically in Meydenbauer Bay but no other salmonid spawning is known to occur within or near the project site. Adult salmon migrate through Lake Washington to spawning habitat in the Sammamish and Cedar River basins, along with tributaries feeding the lake. Juvenile salmon migrate past the site on their journey to Puget Sound. Chinook, steelhead, and bull trout are protected under the federal Endangered Species Act.

Streams

No watercourses are present on or near the property. The nearest stream is Meydenbauer Creek (WRIA# 08-0258) located approximately 2,800 feet (0.5 miles) southeast of the property. Meydenbauer Creek has documented use by sockeye and resident trout (Bellevue Fish Distribution and Storm Drainage Basins map).

Wetlands

A cursory examination of the property and a review of public records found no evidence of wetlands on the site. No seeps or wetland plants were noted.

Geologic Hazard Areas

A slope in excess of 40 percent is located starting about 50 feet back from OHW.

Species of Local Importance

The wildlife habitat review consisted of a site-specific survey and consultation with the Washington Department of Fish and Wildlife database[1]. The site and surrounding lands have been developed mostly as moderate-density single-unit residential housing. Although some suitable wildlife habitat for terrestrial and avian species is found in the area, it has all been

[1] Washington Department of Fish and Wildlife. 2016. Priority habitat and species map for King County.

significantly modified by past clearing, fragmentation, and introduction of non-native landscaping species (e.g. turf grasses and English ivy). Fences along both property lines likely inhibit movement of many terrestrial species. Species that may be expected to be found intermittently on this site are coyote, Douglas and eastern grey squirrels, other assorted rodent species, raptors, woodpeckers, and song birds. There are several large conifers and deciduous trees suitable for larger birds on and near the property. No nesting activity by sensitive species is known to have occurred in the recent past. Larger trees in the area may provide short-term perching sites for bald eagles, but none of these are known to be critical nesting or roosting habitat sites. No snags were noted. No terrestrial wildlife species listed by the U.S. Fish and Wildlife Service, Washington Department of Fish and Wildlife, King County, or City of Bellevue as threatened, endangered, sensitive, critical, or candidate are expected to make any more than incidental use of habitats found on this property.

Salmon and steelhead are found in Lake Washington. Additional description of aquatic species and habitat is provided above under Lake Washington.

Flood Hazard Areas

There is no land subject to a one-hundred-year flood present on the property (FEMA).

Figure 1. Shoreline conditions in May 2016.

McCaw-Bernier Residence Critical Areas Narrative Description
Prepared by Brooks Kolb, Brooks Kolb LLC Landscape Architecture
Date: December 15, 2015

Description of Project Site, including landscape features, existing development and site history as applicable:

This is a single-family residence on a .828 acre sloping waterfront lot. The project area consists of approximately half of the lot and is located entirely on the waterfront side of the existing residence, which occupies the upland (northeast) half of the lot. A steep slope critical area occupies the central portion of the project area. The toe of the steep slope is defined by a continuous and terraced rock retaining wall of varying heights.

The shoreline edge consists mainly of a rockery bulkhead wall with an existing dock. However, a sandy beach cove occupies approximately 26 feet of the shoreline frontage and is indented into the landward side of the bulkhead wall. This cove provides some salmon habitat function. The shoreline is mostly flat within the 25′ shoreline buffer and 50′ structure setback. There are no existing structures within the shoreline setback, structure setback, steep slope critical area, top of steep slope buffer and toe of steep slope buffer.

A number of tall native and ornamental conifers exist within the project area, mostly along the northwest and southeast property lines. Sparse plantings of mostly ornamental shrubs, grasses and ground covers occupy the slopes as well as the shoreline edge. Some native shrubs are inter-planted with the ornamentals and a large patch of English Ivy covers much of the steep slope critical area.

Description of how the design constitutes the minimum necessary impact to the critical area:

The design goal is to construct a pool house or cabana beyond or behind the 50′ structure setback and to construct a swimming pool, hot tub and waterfall beyond or behind the 25′ shoreline setback. This new construction will have little adverse impact on the shoreline and steep slope critical areas because the area has already been degraded by human use to date, which includes past removal of native plants. New shoring walls at the cabana and waterfall will replace the existing rockery retaining wall at the toe of slope. These shoring walls will be higher in places than the existing wall but they will minimize impact by being engineered walls replacing non-engineered retaining rock.

A description of why there is no feasible alternative with less impact to the critical area, critical area buffer, or critical area structure setback:

Since the owner's intent is to build a swimming pool and pool cabana structure, these structures are proposed on the flattest portion of the site, where they will require the least re-grading and have the least impact on the steep slope critical area and its buffers. The only alternative with less impact would be the no-build alternative.

A description of alternatives considered and why the alternative selected is preferred:

Site analysis ruled out an alternative to build the pool and cabana at the top of the slope, outside the 50' top of steep slope buffer, because the site continues to slope up almost to the southeast edge of the existing residence. Not only is there insufficient flat topography in this location to build a pool, but adding the weight of its volume of water above the slope would cause greater adverse impact to the steep slope critical area than the impact of the pool in its proposed location. The only other alternative would be a no-build alternative, and a no-build alternative would not satisfy the owner's goal to add a swimming pool and cabana.

A summary of how the proposal meets each of the decision criteria contained in Land Use Code Section 20.30P:

20.30P.140 Decision Criteria:

A. The property owner is applying for a Critical Areas Land Use Permit. The property owner is applying for all other permits required by the Land Use Code.
B. The proposed cabana, pool, waterfall and hot tub utilize the best available construction and design techniques to result in the least possible impact to the critical area buffer. Existing grades are maintained wherever possible and are shored with engineered retaining walls where not possible. The proposed residence incorporates the performance standards of Part 20.25H: See explanation below.
C. The proposed residence is adequately served by existing public facilities, including streets, fire protection and utilities.
D. A vegetation mitigation plan is included in the proposal.

20.30P.170 Hold harmless: The property owner will execute a hold harmless agreement releasing the City from liability for any damage arising from the location of improvements within the critical area buffer.

A summary of how the proposal meets each of the criteria and performance standards contained in Land Use Code Section 20.25H associated with the critical area you are modifying:

The critical areas in consideration are Shoreline as defined in Section 20.25E.017 and Geologic Hazard (Steep Slope) as defined in Section 20.25H.120. The proposed pool house and swimming pool involve expansion into the critical area and its buffers because location and construction of these structures outside of the critical area buffer and setbacks is not feasible.

Applicable performance standards (20.25H.125) are summarized as follows:

A. The proposed pool cabana and swimming pool will minimize alterations to the natural contour of the slope. The cabana is situated in the crook of the existing rockery, and the rockery will be replaced with a more stable retaining wall.
B. The proposed pool cabana and swimming pool do not remove existing native vegetation and they preserve the most critical portion of the site and its natural landforms.
C. The proposed pool cabana and swimming pool do not result in greater risk or a need for increased buffers on neighboring properties.
D. The proposed structures allow maintenance of approximately 80% of the existing slopes. The cabana and waterfall will be retained with shoring walls, minimizing disturbance to the existing contours above the walls (above elevation 36 and 38 respectively.)
E. The proposed cabana and pool add impervious surfaces within the critical area structure setback but the total resulting existing and proposed site-wide impervious surfaces are 35.6% (less than 50%) of the total property area. The swimming pool terrace will consist of permeable ipe decking, thereby not contributing to the impervious surfaces within the critical area buffers.
F. Regrading minimizes topographic modification. The swimming pool and cabana structures are proposed to be constructed almost entirely on relatively flat grades within the toe of slope buffer. Only a very small fraction of the cabana structure is proposed within the steep slope critical area. The cabana is entirely outside (ie upslope) of the 50′ structure setback. The pool is entirely outside (ie upslope) of the 25′ shoreline setback. Although the waterfall encroaches into the steep slope critical area, it is proposed as a stepped series of shotcrete walls with soil anchors to minimize changes to the existing topography.
G. The cabana foundation wall will be utilized as a retaining wall. The waterfall will be retained by a shotcrete and soil anchor shoring wall system. This

shoring system will be concealed by artificial or actual rocks, but the rocks will not serve as retaining structures.

H. This standard is not applicable. The cabana structure will be built almost entirely outside of the steep slope critical area. The only portion of the structure inside the steep slope critical area is the back wall/retaining and shoring wall of the structure.

I. This standard is not applicable to this project. Piled deck support structures will not be necessary because no parking or garage structures are proposed.

J. Areas of temporary disturbance shall be mitigated per the erosion and sediment control plan and BMP's included on the site plan. Areas of new permanent disturbance are mitigated by a vegetation mitigation plan included with this submittal.

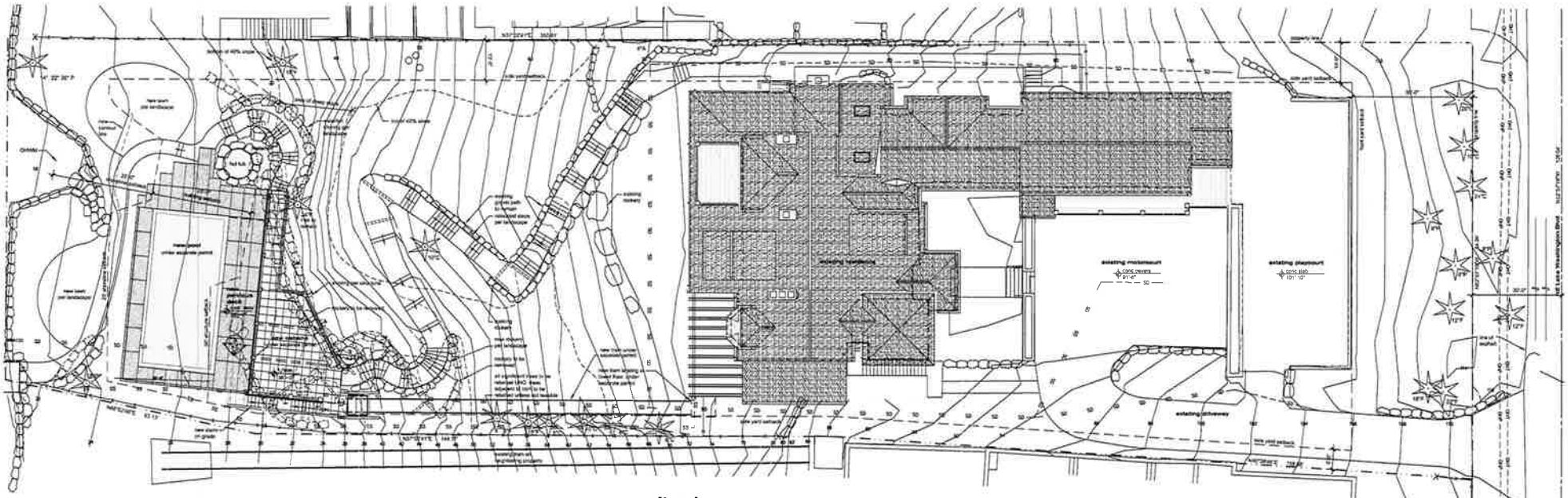
Section 20.25H.135: An erosion and sediment control plan is included on the site plan. A drainage plan is also included on the site plan.

A summary of how the proposal meets each of the criteria contained in Land Use Code Section 20.25H.230 as required for applications proposing a modification through the use of the Critical Area Report process:

A critical areas report is submitted with this project.

Bernier-McCaw Shoreline

Bellevue, Washington



1 **site plan**
scale: 1 = 10' - 0"

Project Data:

Post Building Height Calculations from Proposed Grade

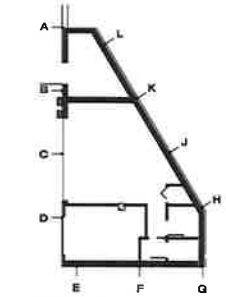
A	25.0'	Ft.	L	27.25'	Ft.	J	34.0'	Ft.
B	25.0'	Ft.	K	32.0'	Ft.	H	36.0'	Ft.
C	25.0'	Ft.	E	34.0'	Ft.	G	35.5'	Ft.
D	26.0'	Ft.	F	36.0'	Ft.			

sum of building corner elevations		342.75'
sum divided by number of measured corners=base elevation	Elev.	31.2'
allowable building height (15' + base elev) for detached accessory structures	Elev.	46.2'
proposed building height	Elev.	28.2'

Post Building Height Calculations from Existing Grade

A	29.5'	Ft.	L	29.75'	Ft.	J	35.75'	Ft.
B	29.0'	Ft.	K	33.0'	Ft.	H	36.25'	Ft.
C	29.0'	Ft.	E	35.75'	Ft.	G	33.0'	Ft.
D	30.25'	Ft.	F	37.0'	Ft.			

sum of building corner elevations		307.25' Ft
sum divided by number of measured corners=base elevation	Elev.	32.5'
allowable building height (15' + base elev) for detached accessory structures	Elev.	47.5'
proposed building height	Elev.	28.2'



3 **ABE diagram**
scale: 1 = 10' - 0"

Project Data:

Project Address:	9627 Lake Washington Blvd. NE Bellevue, Washington 98004
Tax Parcel Numbers:	4368200945
Legal Description:	LOCKLEVEN PCL. G BELLEVUE BLA #01-11690 LW REC#20011204900230 TOW SH L35 ADJ Plat Block: 15 Plat Lot: 18-19
Zoning:	R-1.8
Occupancy:	R-3 Single Family Dwelling; U-1 Private Garage
Occupancy Separation:	1-hour separation of R-3 to U-1
Construction Type:	Type V-N Hour
Gross Lot Area:	36073.8 sq. ft.
Setback requirements: Front yard (N): Side yards (E/W) Rear yard (S):	 30'-0" from front property line sum to equal 10'-0" min 5'-0" from south lot line 10'-0" from north lot line 25'-0" from rear property line

Allowed Lot Coverage:	35.00%
Gross Lot Area	36073.8 SF
- Protected Areas/Setbacks	10503.8 SF
Net Lot Area	25570.2 SF
35% of 25570.2 SF	8949.6 SF

Lot Coverage by Structures

Existing House & Garage	4565.5 SF
Existing Covered Porch	1439.9 SF
Proposed Pool House:	600.0 SF
Total Lot Coverage	6605.5 SF
Proposed Lot Coverage	25.44%

Allowed Impervious Surface	50.00%
50% of 36073.8 SF:	18037.0 SF

Impervious Surface Calculations

Existing House and Garage Area	4565.6 SF
Existing Covered Porch Area	1439.9 SF
Existing Driveway, sportscourt, Paths and Steps	5451.21 SF
Proposed Pool House	599.5 SF
Proposed Pool Vessel	750.5 SF
Proposed Sauna Vessel	44.2 SF
Total Impervious Surface Area	12850.9 SF
Proposed Impervious Surface:	35.6%

Significant Tree Calculation

Inches of significant trees on site	338 in
30% min. inches required to be retained	101.4 in
Inches proposed to remain (if 8'T easement to trees cannot remain)	330 in
% inches proposed to remain	97.6%

Project Contacts:

Owner: John Bernier & Beth McCaw
9627 Lake Washington Blvd. NE
Bellevue, WA 98004

Architect: Demetriou Architects
5355 Lakeview Drive, Suite 200
Kirkland, WA 98033
Project Manager: Michele D Cozzo
(425) 827-1700

Structural Engineer: Dabis Engineers, Inc
1029 Market Street
Kirkland Wa. 98033
Project Contact: Brian Loehbaugh
(425) 828-4200

Surveyor: Trad Associates
12112 - 115th Avenue NE
Kirkland, WA 98034
(425) 821-8448

Geotechnical Engineer: Terra Associates
9627 NE Lake Washington Boulevard
Bellevue, WA 98004
Project Contact: - Carolyn Becker
(425) 821-7777

Landscape Architect: Brooks Kolb, LLC Landscape Architect
1101 East Pike Street
Seattle Wa. 98122
(206) 324-0858

Sheet Index:

Architectural

A2.0	survey and slope categories
A2.1	site plan
A3.0	pool and cabana

Structural

S-1	general structural notes, foundation & framing plan
S-2	structural sections and details
SH-1	shoring structural plan; elevation, sections & details

2 **vicinity map**
NTS

Bernier-McCaw Shoreline
9627 Lake Wa Blvd
Bellevue, Wa

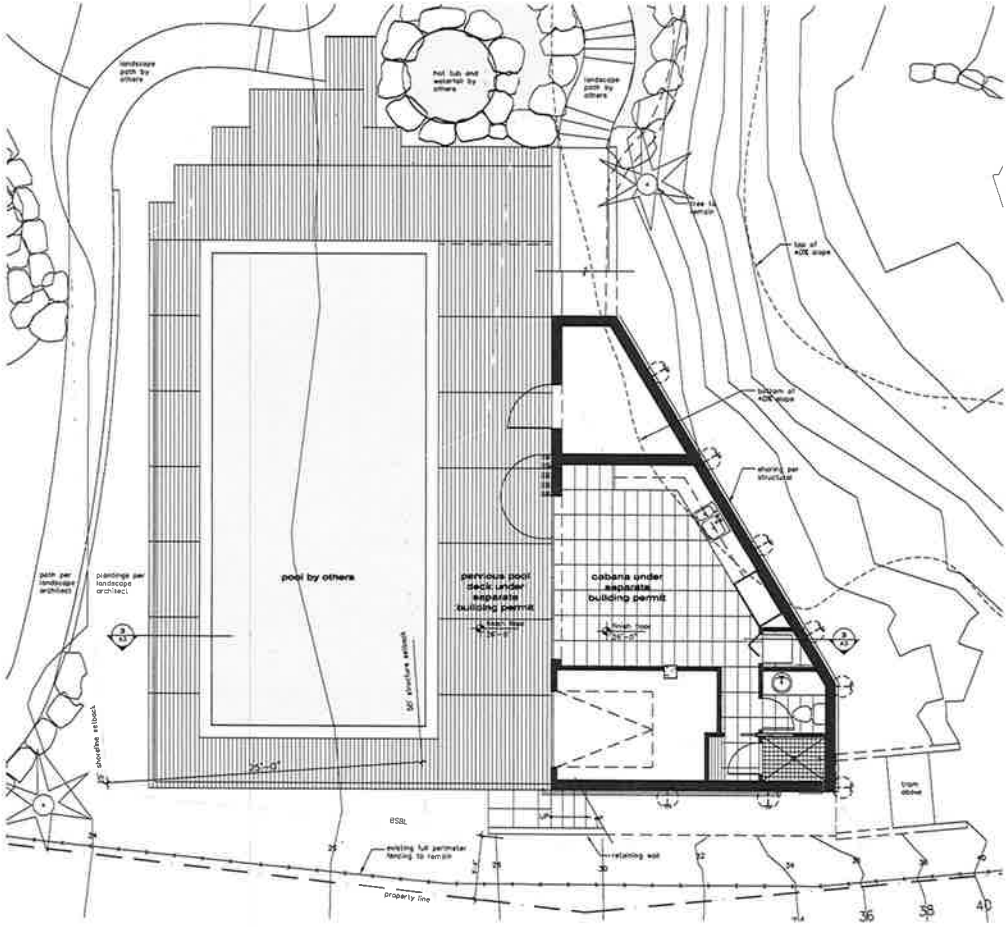
Project 1

Sheet Title: site plan

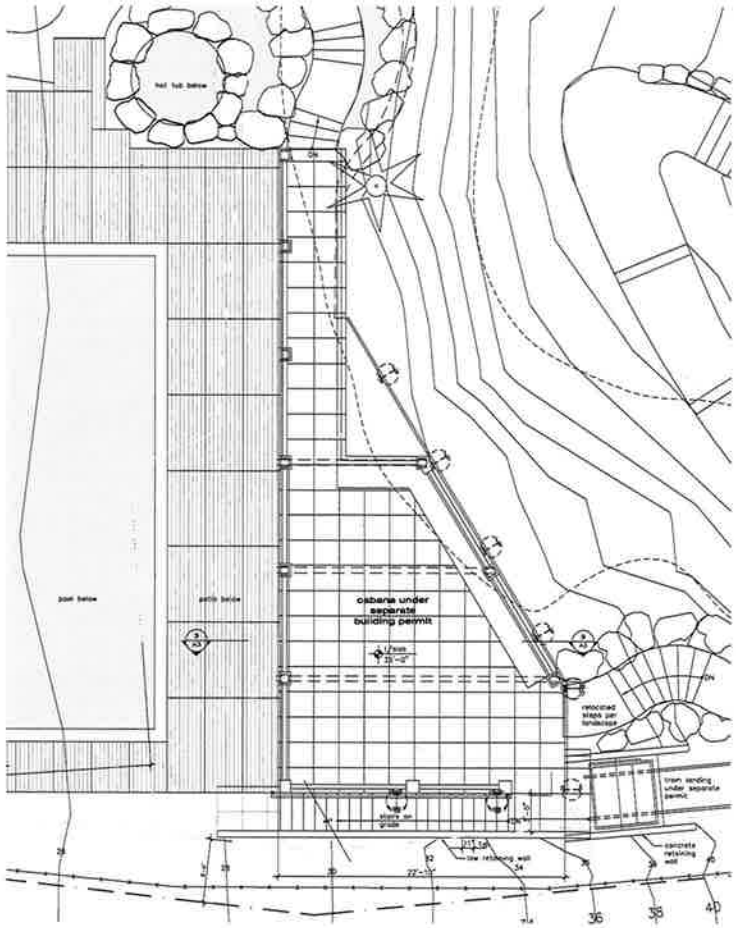
Project No. 484.01

Sheet No. A2

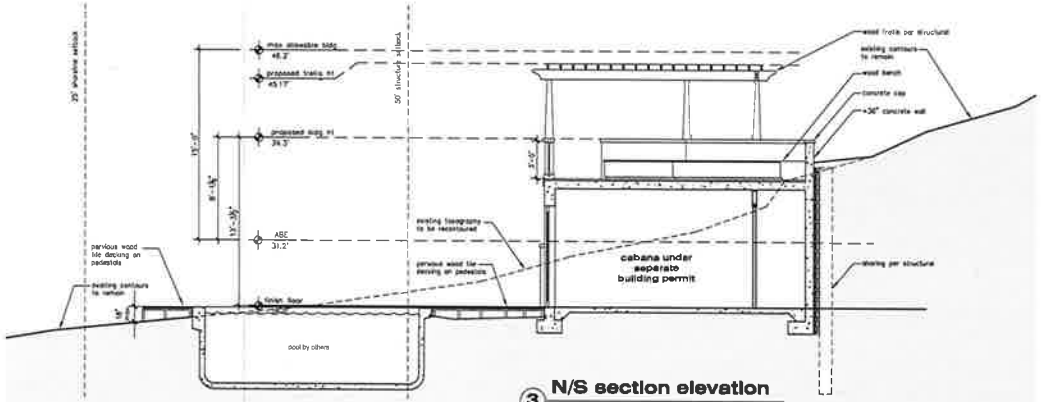
07/13/2016 A02_1 site.dwg



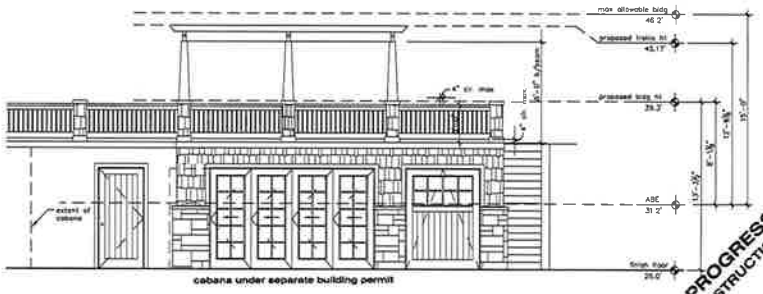
1 floor plan
scale: 1/4" = 1' - 0"



2 roof plan
scale: 1/4" = 1' - 0"



3 N/S section elevation
scale: 1/4" = 1' - 0"



4 west elevation
scale: 1/4" = 1' - 0"

WORK IN PROGRESS
NOT FOR CONSTRUCTION

Bernier-McCaw Residence
Bellevue, WA

pool and cabana

Project No.: 484.01

Sheet No.: A3.3

07/12/2016 A03_3 pool building_main floor.dwg

STRUCTURAL NOTES

GENERAL REQUIREMENTS

BUILDING CODE & REFERENCE STANDARDS: The International Building Code® (IBC) 2012 Edition, as adopted and modified by the City of Bellevue, governs the design and construction of this project. Reference to a specific section in the Code does not relieve the contractor from compliance with the entire materials reference standards noted below. The latest edition of the materials reference standards shall be used.

SCOPE OF STRUCTURAL WORK: [Structural design of pool house and associated shoring.]

DEFINITIONS: The following definitions apply to these general notes:

- "Structural Engineer of Record" (SOR): The Structural Engineer who is legally responsible for stamping & signing the structural documents for the project. This SOR is responsible for the design of the Primary Structural System.
- "Specialty Structural Engineer" (SSE): A licensed professional Engineer, not the SOR, who performs specialty structural engineering services necessary to complete the structure who has expertise and training in the specific specialty. The General Contractor subcontracts or supplies who is responsible for the design, fabrication and installation of specialty-engineered elements shall retain the SSE. Submittals shall be stamped and signed by the SSE. Drawings stamped and signed by the SSE shall be coordinated by or under the direct supervision of the SSE with a PE or SE license issued by the State of Washington.
- "Delegated Submittals - Delegated Submittals is engineering work, to be designed-by-others or better-designed.

NOTE PRIORITIES: Notes on the individual drawings shall govern over these general notes.

REFERENCE NOTES: Refer to the general notes/sections for information in addition to that contained in these notes and the structural drawings.

STRUCTURAL DETAILS: The structural drawings are intended to show the general characteristics and extent of the project and are not intended to show all details in the work.

ARCHITECTURAL DRAWINGS: Refer to the Architectural drawings for information including, but not limited to dimensions, dimensions, sloped floor and window openings, non-bearing walls, curtain walls, stairs, elevators, suite doors, dimensions, ceilings, waterproofing, finishes and other nonstructural items.

STRUCTURAL RESPONSIBILITIES: The SOR is responsible for the strength and stability of the Primary Structure as completed safe.

CONTRACTOR RESPONSIBILITIES: The contractor is responsible for the means and methods of construction and all job related safety standards such as OSHA and WISHA. The contractor is responsible for the strength and stability of the structure during construction and shall provide temporary shoring, bracing and other elements required to maintain stability until the structure is completed. It is the contractor's responsibility to be familiar with the work required in the construction documents and the requirements for executing it properly.

DISCREPANCIES: In case of discrepancies between these general notes, the contract drawings and specifications, and/or reference standards, the Engineer shall determine which shall govern. Discrepancies shall be brought to the attention of the Engineer before proceeding with the work. Accordingly, and certified in a between the Contract Documents shall not be a basis for adjustment in the Contract Price.

SITE VERIFICATION: The contractor shall verify all dimensions and conditions at the site prior to fabrication and/or construction. Conflicts between the drawings and actual site conditions must be brought to the attention of the Engineer before proceeding with the work. All underground utilities shall be determined by the Contractor prior to excavation or shoring.

ADJACENT UTILITIES: The contractor shall determine the locations of all adjacent underground utilities prior to excavation or pile placement. Any utility information shown on the drawings are details is approximate and not necessarily complete.

DESIGN CRITERIA

CONSTRUCTION LOADS: Loads on the structure during construction shall not exceed the design loads or the capacity of the partially completed construction.

SNOW LOAD: The roof snow load is determined by using Chapter 7 of ASCE 7-10 in accordance with IBC Section 1608 and with the following factors:

Minimum roof design load (ps) without drift	
Ground Snow Load, P_g = 20 psf	
Importance Factor, I_s = 1.0	
Thermal Factor, C_t = 1.0	

SEISMIC DESIGN: Earthquake design is determined using Chapter 12 ASCE 07-10 in accordance with IBC Chapter 16 with the following factors:

Importance Factor, I_e = 1.0	
Site Classification: E	
S_S = 1.332 g	S_{DS} = 1.062 g
S_1 = 0.589 g	S_{D1} = 1.325 g
Site Class = D	Seismic Design Category = D

DEFLECTIONS:

Total Load Deflection Limit	L/180
Live load Deflection Limit	L/360

LIVE LOADS:

Roof (Low)	20 PSF
Roof (Shed)	25 PSF
Roof (used for promenade)	50 PSF

TESTS & INSPECTIONS

INSPECTIONS: All construction is subject to inspection by the Building Official in accordance with IBC Sec 110. The contractor shall coordinate all required inspections with the Building Official. Submit copies of all inspection reports to the Architect/Engineer for review. The Building Official may accept inspections of and reports by approved inspection agencies in lieu of Building Official's inspections. The contractor shall obtain approval of Building Official to use the third-party inspection agency and code letter shall alert the Architect/Engineer as such.

SPECIAL INSPECTIONS: Special inspections per IBC Chapter 17 shall be performed by an approved testing agency as outlined in the Special Inspection Schedule and the project specifications. Inspections plans for the Special Inspection Schedule for the project outlining all inspection, special inspection, and structural observation requirements.

STATEMENT OF SPECIAL INSPECTIONS: In addition to the inspections required by IBC Sec 110, Special Inspections shall, in accordance with IBC Sec 1704, "the responsible design engineer shall prepare a statement of special inspections in accordance with Section 1704.2.1 for submittal in accordance with Sec 1704.2.2 The Special Inspector shall be hired by the Owner as an independent third party inspector to perform the inspections listed herein. The contractor is responsible for scheduling the inspections, per the approved Building Official requirements.

Concrete:

- Periodic inspection of reinforcing steel and weld in place anchors.
- Periodic verification of the required assemblies.
- Continuous inspection during the placement of fresh concrete and during shorts, on content and temperature determinations.
- Continuous inspection during the placing of reinforced concrete.
- Continuous inspection during the grouting operation of bolts or other dowels.

Soils & Foundations:

- During excavation and backfill of sites.
- Periodic verification that materials below shallow foundations are adequate to achieve the design bearing capacities.
- Periodic verification that excavations are extended to the proper depth and have reached proper material.
- Periodic compaction and testing of compacted fill material.
- Continuous verification of proper moisture, densities and lift thicknesses during placement and compaction of fill.
- Periodic verify that spread footings have been prepared properly, prior to placement of compacted fill.

Special Cases:

- Continuous inspection of post-installed anchors during pressing of anchors and reinforcing bars.

PRE-CONSTRUCTION INSPECTION: All preliminary construction shall conform to the inspection requirements of the same material or construction type used for this project.

BOLTS AND FOUNDATIONS

REFERENCE STANDARDS: Conform to IBC Chapter 18 "Soils and Foundations."

GEOTECHNICAL REPORT: Recommendations contained in the Geotechnical Report by [name, date, July 24, 2015], are made used for design.

GEOTECHNICAL INSPECTION: The Geotechnical Engineer or third-party inspector shall inspect all prepared and bearing surfaces prior to placement of concrete or reinforcing steel and provide a letter to the Owner stating that soils are adequate to support the "Allowable Foundation Pressure" shown below. The inspection shall be supplemented by an approved testing agency or Geotechnical Engineer. Site visit conditions, fill placement and load-bearing requirements shall be as required by Sections 1705.6 and Table 1705.6. Assumed values shall be field verified by the Building Official or the Geotechnical Engineer prior to placing concrete. The Building Official shall be permitted to waive the requirement for a geotechnical investigation where satisfactory data from adjacent areas is available that demonstrates an investigation is not necessary for any of the conditions in Sections 1803.1.1 - 1803.5.6 and Sections 1803.5.10 - 1803.5.11.

DESIGN SOIL VALUES: [Assumed]

Allowable Soil Bearing Pressure	
1500 PSF DL + LL	
Passive Lateral Pressure	
Active Lateral Pressure (unsaturated)	150 PCF (weight) for Z (equivalent)
Active Lateral Pressure (saturated)	100 PSF + Active Pressure
Uniform Seismic	SH
Coefficient of Sliding Friction	0.24

SLABS ON-GRADE & FOUNDATIONS: All foundations shall bear on structure consistent fill or competent native soil per the Geotechnical report. All slabs-on-grade shall be founded on appropriate subgrade preparation as noted in the Geotechnical report. External perimeter footings shall bear not less than 18 inches below finish grade, or by the Geotechnical Engineer and the Building Official. Interior footings shall bear not less than 12 inches below finish floor.

SITE SHORING

SUBMITTALS: Shoring drawings shall be submitted to the EOR prior to any installation or construction for all structural items including, this following: structural steel, cast-in-place concrete, anchors, reinforcing steel, grout, and concrete. Proposed demolition and shoring sequence shall also be submitted to the Engineer for approval.

SOILS INSPECTION: Inspection by the Geotechnical Engineer shall be performed for pile placement and statics piling and sleeving. All completed shoring surfaces shall be inspected by the Geotechnical Engineer prior to the placement of piles. Soils compaction shall be supervised by a Geotechnical Special Inspector.

UTILITY LOCATIONS: The contractor shall determine the location of all adjacent underground utilities prior to drilling pile holes, setback anchors, or cutting or digging trenches or ditches. Any utility information shown on the plans may not be complete.

SITE CONDITIONS: The contractor shall verify all dimensions of existing structures in the field and shall notify the Engineer of all field changes prior to fabrication and installation.

PILE PLACEMENT: Alternate piles shall be placed and completed so that at least 24 hours is allowed for concrete to set prior to the adjacent piles.

SHORING MONITORING: A systematic program of observation shall be conducted during the project execution to monitor for any adverse effects of construction on adjacent facilities and structures. Refer to the Geotechnical investigation for instrumentations. Field data and measurements are to be submitted to the Structural and Geotechnical Engineers for review.

INSTRUCTION MANUAL: Reference the Geotechnical report for installation and testing requirements for anchors.

AUGER CAST PILES

REFERENCE STANDARDS: Conform to

(1) ICC Sec 1810
(2) ACI 318 "Building Code Requirements for Structural Concrete and Commentary"

SUBMITTALS: Conform to ACI 318. Submit the following items for review

(1) Placing drawings showing reinforcement, reinforcement grade, grout material and strength
(2) Grout mix design
(3) Grout strength test results.

MATERIALS: Conform to notes for CONCRETE REINFORCEMENT and CAST-IN-PLACE CONCRETE.

GROUT STRENGTH: 4000 psi Lean Mix

SIZE: Pile shape shall be as noted on the foundation drawings. Test piles are required for this project and load-verify pile capacities. Pile lengths shall be determined and verified in the size by the Geotechnical Engineer during the test pile production.

CAPACITY: The contractor shall be as indicated on the drawings.

CAST-IN-PLACE CONCRETE

REFERENCE STANDARDS: Conforms to the latest editions of the following:

(1) ACI 318 "Building Code Requirements for Structural Concrete and Commentary"
(2) IBC Chapter 19

FIELD REFERENCE: The contractor shall keep a copy of ACI Field Reference manual SP-15 "Standard Specifications for Structural Concrete (ACI 301) with Selected ACI and ASTM References."

CONCRETE MIXTURES: Conform to ACI 318 Chapter 3 "Materials" for requirements for cementitious materials, aggregates, mixing water and admixtures.

SUBMITTALS: Provide as submittals required by ACI 301 Sec 4.1.3. Submit mix designs for each mix in the table below.

Member	Strength	Max Agg.	Slump	Air Content	Cement Type	Fly Ash	Slag	Air Entrained
Foundations - exposed to fresh water	3000	1"	7"			0-10		
Footings - exposed to fresh water								
Exterior Stairwell Walls	4000	1"	7"	F2	C3	0-40		5.0%
Retaining Walls	4000	1"	7"	F2	C1	0-40		4.0%
Covered Elev. Towers & Exits	3000	1"	7"	F1	C2	0-40		4.0%
Covered Building Walls	3000	1"	7"	F1	C1	0-40		4.0%
Retaining Walls	3000	1"	7"	F2	C1	0-40		4.0%
Columns - 14" or less	3000	1"	7"					

MIX DESIGN NOTES:

(1) Mix design shall be cementitious material ratios shall be based on the total weight of cementitious materials. Ratios not shown in the table above are controlled by strength requirements.
(2) Cementitious Content:
  - The use of fly ash or other pozzolanic additives, slag, or slag shall conform to ACI 301 Sec 4.2.2.1b. Maximum amount of fly ash shall be 25% of total cementitious content unless reviewed and approved otherwise by EOR.
  - For concrete used in exposed floors, Portland cement content shall conform to ACI 301 Sec 4.2.1. Acceptance of lower cement content is contingent on providing supporting data to the Engineer for review and acceptance.
(3) In Concrete Contact in ACI 301 Sec 4.2.3.4 Water-soluble sulfate surfaces in contact with the soil mixture indicated as Use Exposure Category S2, S3, P2, C2 unless noted otherwise. Total sulfate is ≤ 1.00%, no cement shall be measured at point of placement.
(4) Exposure Classifications: The mix design provided shall meet the requirements of ACI 318 Section 4.3, based on the exposure classification indicated in the table above.
(5) Slump: Conform to ACI 301 Sec 4.2.2.2. Slump shall be determined at point of placement.
(6) Shrinkage Limit: Concrete used in elevated slabs and beams shall have a shrinkage limit of 0.05% at 28 days measured in accordance with ASTM C157.
(7) Non-cementitious admixtures: Non-metallic admixtures, admixtures may be used in concrete mixes should a written recommendation below 50% of the manufacturer's specs.

FORMWORK: Conform to ACI 301 Sec 3 "Formwork and Form Accessories." Removal of Forms sides conform to Sec 2.3.2 except strength indicated in Sec 2.3.2.3 shall be 0.75 f'c. re-shoring shall conform to Sec 2.3.5.

MEASURING, MIXING AND DELIVERY: Conform to ACI 301 Sec 1.3

HANDLING, PLACING, CONSTRUCTING AND CURING: Conform to ACI 301 Sec 5.

CONCRETE CURING: Provide curing compounds for concrete as follows.

(1) Apply specified curing compound to concrete slabs as soon as final finishing operations are complete (within 2 hours and after surface water sheen has disappeared). Apply uniformly to continuous operation by power spray or roller in accordance with manufacturer's directions. Recoat areas subjected to heavy rainfall within 3 hours after initial application. Maintain continuity of coating and repair damage during subsequent construction.
(2) Use membrane curing compounds that will not affect surfaces to be covered with finish materials adjacent directly to concrete.
(3) Apply curing compound at rate equivalent to rate of application of which curing compound was originally tested for conformance to requirements of ASTM C309.
(4) Use curing compound compatible with and applied under direction of system manufacturer of protective sealer.
(5) At concrete which achieves (3000) PSI compressive strength before being suspended for forming and shoring cycles.
(6) Apply sealer/protective coats with lint-allowed or become tacky before applying sealer. Direction of sealing application shall be at right angles to direction of lint.

CONCRETE SEALER: Curing cure coatings containing 40% solids shall be applied to all supported slab surfaces and exposed up vertical surfaces as noted.

CONSTRUCTION JOINTS: Conform to ACI 301 Sec 2.2.2.6, 5.1.2.3a, 5.2.2.1, and 6.3.2.6. Construction joints shall be located and detailed as on the construction drawings. Use of an adjustable adhesive, surface retarder. Performed cement grout, or roughening the surface is not required unless specifically noted on the drawings. Where shear bond is required, roughen surfaces to 1/4" amplitude.

EMBEDDED ITEMS: Position and secure in place expansion joint material, anchors and other structural and nonstructural embedded items before placing concrete. Contractor shall refer to mechanical, electrical, plumbing and architectural drawings and coordinate all other embedded items.

GROUT: Use 7000 PSI non shrink grout for column base plates and anchor bolt sleeves.

GROUTED ANCHORS AND ANCHOR BOLTS: Follow manufacturer's written instructions. Drill holes in existing concrete to depth noted on plans or to depth as necessary to develop the strength of the rebar noted in the manufacturer's ICC or ESR report. Drill the hole diameter per manufacturer's instructions. Roughen sides of holes by pneumatic chiseling methods. Holes shall be brushed and blown free of debris and surface residue before grouting operation. Special inspection is required.

BONDING AGENT: Use Water Bottom Concrete Unit (UPL). Apply in accordance with manufacturer's instructions.

JOINT SEALANT: Provide and maintain silicone joint where noted on the drawings. Submit product data for review.

LEAN CONCRETE BACKFILL: Conform to recommendations of ACI 229R "Controlled Low Strength Materials (CLSM)" for mixing and placing lean concrete backfill shown on the drawings. Use 100 PSI mix. Use standard slump test to verify flowability. Test in accordance with ASTM D4832-88 "Preparation and Testing of Soil-Cement Slurry Test Cylinders."

TESTING AND ACCEPTANCE:

Testing: Obtain samples and conduct tests in accordance with ACI 301 Sec. 1.6.4.2. Additional samples may be required to obtain concrete strengths or alternate minimum than shown below.

- Cure 4 cylinders for 28-day test age (6 cylinders for post-tensioned concrete). Test 2 cylinders at 2 or 3 days for post-tensioned concrete only, test 1 cylinder at 7 days, test 2 cylinders at 28 days, and hold 1 cylinder in reserve for use as the Engineer directs. After 56 days, unless notified by the Engineer to the contrary, the reserve cylinder may be destroyed without being tested for specimens meeting 28-day strength requirements. Acceptance: Strength is satisfactory when.
- The averages of all sets of 3 consecutive tests equal or exceed the specified strength. No individual test falls below the specified strength by more than 500 psi. A "set" for acceptance is the average strength of the two cylinders tested at the specified test age.

CONCRETE REINFORCEMENT

REFERENCE STANDARDS: Conform to

(1) ACI 301 "Standard Specifications for Structural Concrete", Sec 3 "Reinforcement and Reinforcement Supports"
(2) IBC Chapter 19, Concrete.
(3) ACI 318 and ACI 318R.
(4) ACI SP-66 "ACI Detailing Manual" including ACI 315 "Details and Detailing of Concrete Reinforcement."
(5) CRSI MSP 2 "Manual of Standard Practice."
(6) ANSI/AWS D1.4 "Structural Welding Code - Reinforcing Steel."

SUBMITTALS: Conform to ACI 301 Sec 3.1.1 "Submittals, data and drawings." Submit placing drawings showing fabrication dimensions and locations for placement of re-inforcement and reinforcement supports.

LETTING REQUIREMENTS in Tilt-Up Panels: The contractor is responsible for designing and detailing additional reinforcement required for lifting & erecting panels and for temporarily bracing the panels against wind or other forces that may occur during construction and use connections to the permanent structural system are completed.

MATERIALS:

Reinforcing Bars	ASTM A615, Grade 60 deformed bars.
Deformed Welded Wire Fabric	ASTM A497
Bar Supports	CRSI MSP-10, Chapter 3 "Bar Supports"
Tie Wire	

FABRICATION: Conform to ACI 301 Sec 3.2.2 "Fabrication" and ACI SP-66 "ACI Detailing Manual."

PLACING: Conform to ACI 301 Sec 3.3.2 "Placement." Placing tolerances shall conform to Sec 3.3.2.1 "Tolerances."

CONCRETE COVER: Conform to the following cover requirements from ACI 301 Table 3.3.2.5

Concrete cast against earth	3"
Concrete exposed to earth or weather (#5 & smaller)	1 1/2"
Ties in columns and beams	1 1/2"
Bars in slabs and walls	3/4"

SPLICES & DEVELOPMENT LENGTH: Conform to ACI 301 Sec 3.3.2.7. The splices and development lengths indicated on individual sheets control over the schedule. Use Class B splices unless otherwise noted. Mechanical connectors may be used when approved by the EOR.

LAP & DEVELOPMENT SCHEDULE (Concrete strength f'c = 3000)

Bar Designation	Lap Length	Development Length
#4	24"	18"
#5	30"	23"
#6	37" or as noted and edges	

FIELD BENDING: Conform to ACI 301 Sec 3.3.2.5 "Field Bending or Straightening." Bar sizes #3 through #5 may be field bent cold the first time. Other bars require preheating. Do not refeed bars.

CONNECTIONS: Provide matching sized "L" corner bars for all horizontal wall and footing bars with the appropriate splice length UNO.

STRUCTURAL STEEL

DESIGN STANDARDS: Structural steel for the project is designed in accordance with the latest edition of the AISC Steel Construction Manual.

REFERENCE STANDARDS: Conform to:

(1) AISC "Code of Standard Practice for Steel Buildings & Bridges."
(2) AISC "Specification for Structural Joints using ASTM A325 or A490 Bolts."
(3) AWS D1.1 "Structural Welding Code - Steel."
(4) RCSC 24 "Research Prequalifications for Structural Steel Buildings."
(5) AISC 9 "Standard for the Structural Design of Composite Slabs."

MATERIALS:

Bars & Plates	ASTM A36, Fy = 36 ksi
Steel Pipe	ASTM A53, Grade B, Fy = 35 ksi
Bolts	ASTM A307
Nuts	ASTM A563 or ASTM A194, Grade 2H
Washers (flat or beveled)	ASTM A436
Threaded Rods	ASTM A36 (seamless steel)
Welding Electrodes	E7000

WELDING: Conform to AWS D1.1. Welders shall be certified in accordance with AWS and WABO requirements. Use E70 electrodes of type required for materials to be welded.

SHOP PAINTING: Conform to AISC 360, AISC Specification Sec M3, and AISC Code Sec 6 b. Do not paint small to be embedded in concrete, fireproofed or galvanized by the Interior building finish. Do not paint surfaces to be field welded or where slip-critical bolts are specified. All other interior steel shall be painted with one coat of gray shop primer. All exposed exterior steel shall be painted with an exterior multi-coat system as per the Architect or project specifications. Field touch-up painting shall be with primer for exposed interior surfaces and as per the Architect or project specifications for exposed exterior surfaces.

GALVANIZING: All exposed steel outside the building envelope shall be hot-dipped galvanized. Apply field touch-ups per project specifications.

WOOD FRAMING

REFERENCE STANDARDS: Conform to

(1) IBC Chapter 23 "WOOD."
(2) NDS and NDS Supplement - "National Design Specification for Wood Construction."
(3) ANSI/TPI 1 "National Design Standard for Metal Plate-Connected Wood Truss Construction."
(4) SCSI 2000 "Building Component Safety Information."

CONSTRUCTION: All same number and size members below wood joists shall be identified by the grade mark of a certificate of inspection issued by the lumbering agency.

MATERIALS:

Stud Grading: Conform to grading rules of WWPA, NLGA or NLGA. Fungus treated studs acceptable as internal walls only.

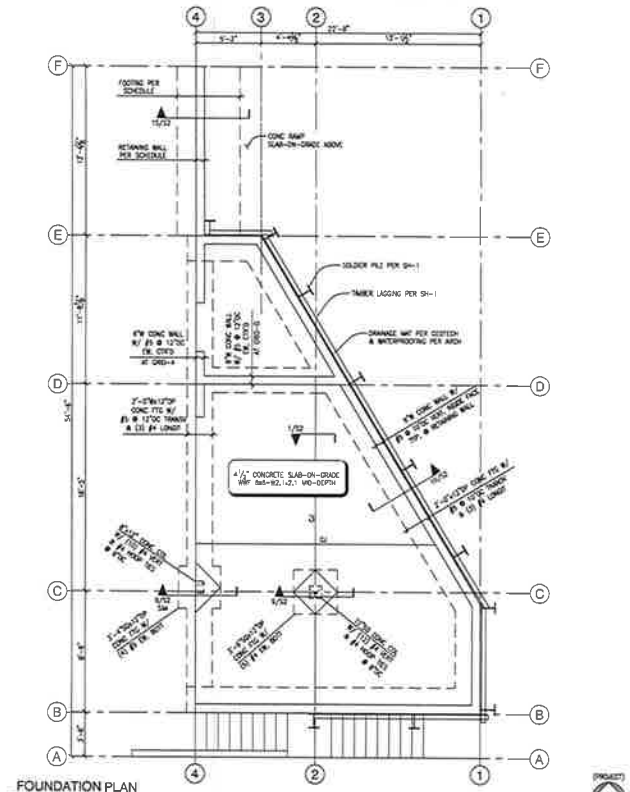
Member Use	Size	Species	Grade
Joists	2x6 - 2x12	HF	No. 2
Posts	4x4, 6x6	DF	No. 2

Glued Laminated Timber: Conform to AITC 117 "Standard Specifications for Structural Glue-Laminated Timber of Softwood Species, Manufacturing and Design" and ANSI/AITC A190.1 "Structural Glued Laminated Timber." Glued laminated member beams shall not be combined unless shown otherwise on the plans or specifications.

Member Use	Size	Species	Grade	Glue
Beams	All	DF-L	24F-V4	Douglas Quality

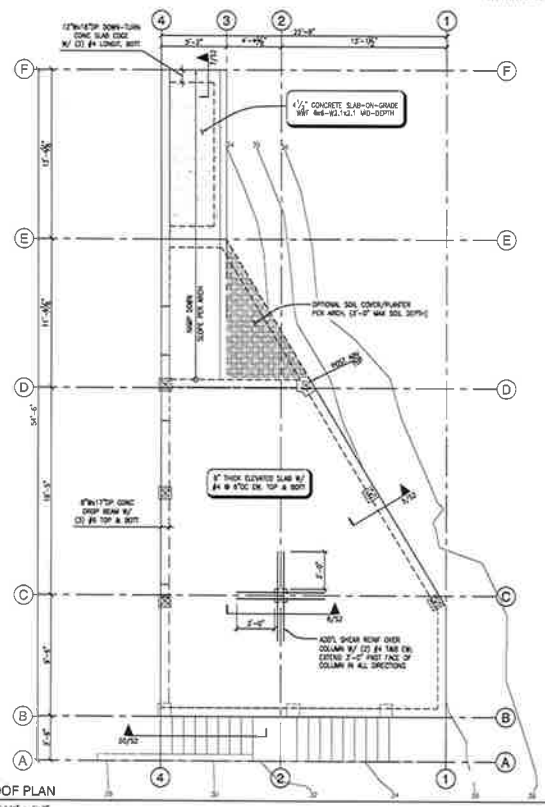
Bolts	Length	Diameter
Bolt	2-1/2	0.13 in
Gap	3"	0.148"
Gap (1/8 in x 4 in)	3-1/4"	0.147"
Nail	3-1/2"	0.162"

Lag Bolts/Screw: Conform to ASTM A307



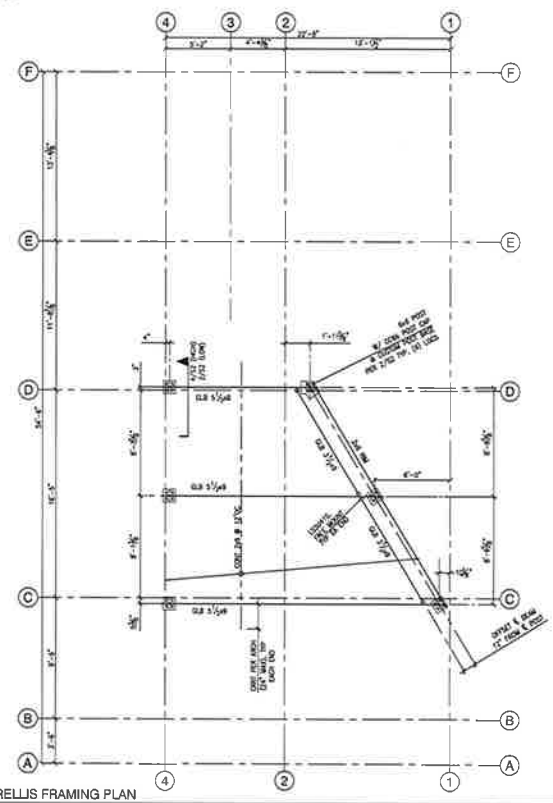
FOUNDATION PLAN

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



ROOF PLAN

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



TRELLIS FRAMING PLAN

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

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STRUCTURAL
GENERAL NOTES,
FOUNDATION & FRAMING PLAN

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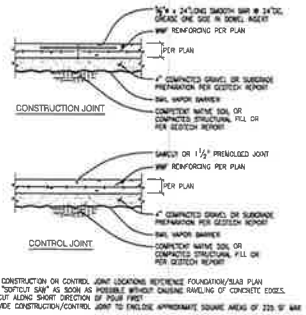
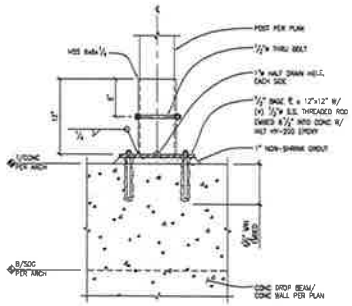
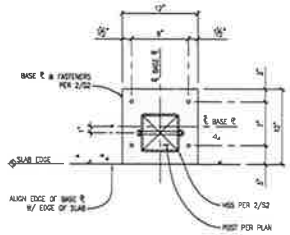


NOTES:
1. FOR CONSTRUCTION OR CONTROL JOINT LOCATIONS REFERENCE FOUNDATION/SLAB PLAN
2. USE "SOFTCUT SAW" AS SOON AS POSSIBLE WITHOUT CAUSING RAVELING OF CONCRETE EDGES. SAWCUT ALONG SHORT DIRECTION OF POUR FIRST
3. PROVIDE CONSTRUCTION/CONTROL JOINT TO ENCLOSE APPROXIMATE SQUARE AREAS OF 225 SF MAX

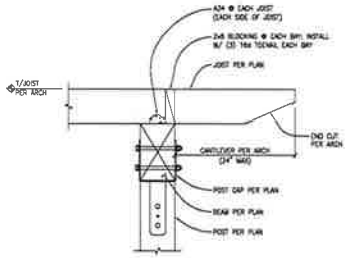
TYPICAL SLAB ON GRADE JOINT DETAILS (1)
SCALE: N.T.S.



TRELLIS POST BASE CONNECTION (2)
SCALE: 1 1/2" = 1'-0"

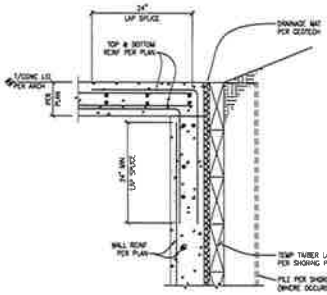


PLAN VIEW - BASE PLATE CONNECTION (3)
SCALE: 1 1/2" = 1'-0"

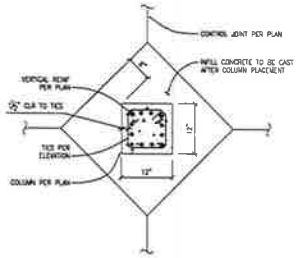


NOTE:
AT ROTATED POSTS, CUSTOM CC66 POST CAPS WILL BE REQUIRED WITH STRAPS ROTATED RELATIVE TO BUCKET TO MATCH POST ROTATION ANGLE (31° PER ARCH). CONTRACTOR TO CONTACT SIMPSON STRONG-TIE DIRECTLY FOR ORDERING INFORMATION.

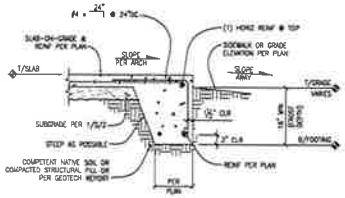
POST/BEAM/JOIST CONNECTION (4)
SCALE: 1 1/2" = 1'-0"



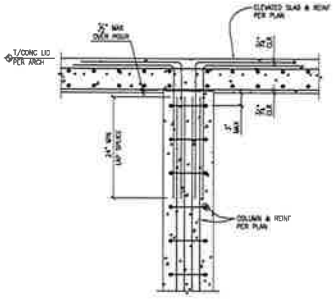
LID-TO-WALL CONNECTION (5)
SCALE: 1" = 1'-0"



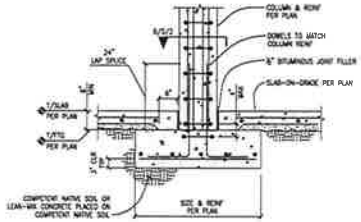
TYPICAL CONTROL JOINT AT CONCRETE COLUMN (6)
SCALE: 1" = 1'-0"



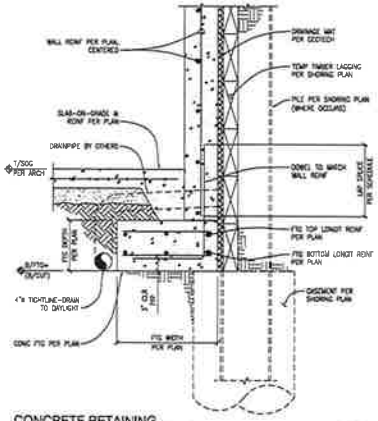
TYPICAL THICKENED SLAB EDGE FOOTING (7)
SCALE: N.T.S.



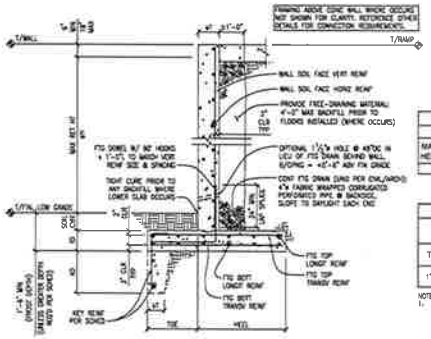
TOP CONCRETE COLUMN AT ELEVATED SLAB (8)
SCALE: 1" = 1'-0"



TYPICAL
SPREAD FOOTING AT CONCRETE COLUMN (9)
SCALE: N.T.S.



CONCRETE RETAINING
WALL FOOTING CONNECTION (10)
SCALE: 1" = 1'-0"

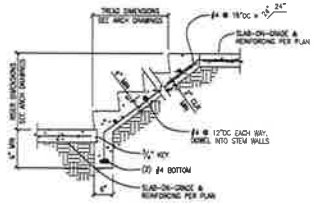


WALL SCHEDULE			
SIZE		REINFORCING	
		SOIL FACE	
MAX RETAIN HEIGHT (wH)	WIDTH (wT)	VERTICAL	HORIZONTAL
5'-6"	5'-6"	#5 @ 12"OC	#4 @ 12"OC

FOOTING SCHEDULE										
SIZE					REINFORCING					MIN SOIL COVER AT TOE
					TRANSVERSAL		LONGITUDINAL			
TOE	HEEL	THK (fD)	DEPTH (fD)	THK (fT)	TOP	BOTTOM	TOP	BOTT		
1'-6"	3'-6"	1'-3"	1'-6"	1'-0"	#5 @ 12"OC	#5 @ 12"OC	#4 @ 12"OC	#4 @ 12"OC		8"

NOTE:
1. CONTRACTOR TO COORDINATE FOOTING SIZES WITH RETAINED SOIL HEIGHT AT WALL.

TYPICAL CONCRETE RETAINING WALL & SCHEDULE (15)
SCALE: N.T.S.



TYPICAL STAIR-ON-GRADE (20)
SCALE: N.T.S.

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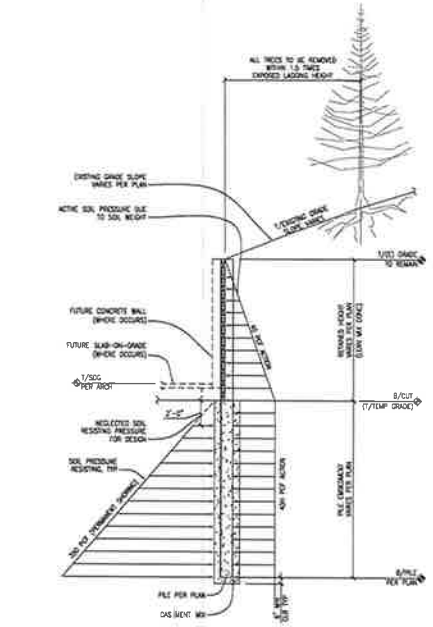
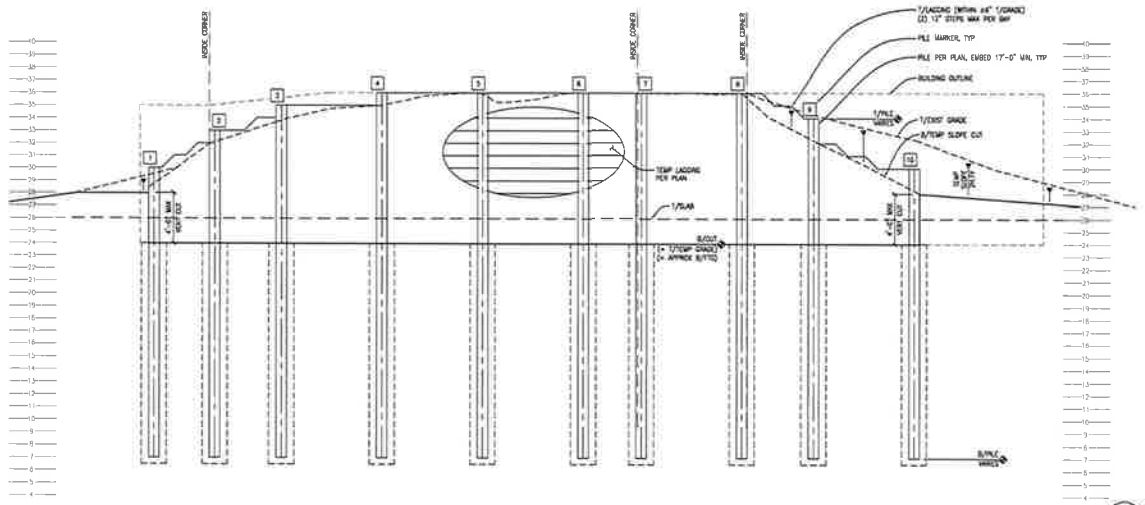


SOIL DESIGN PRESSURE DIAGRAM

SCALE: N.T.S.

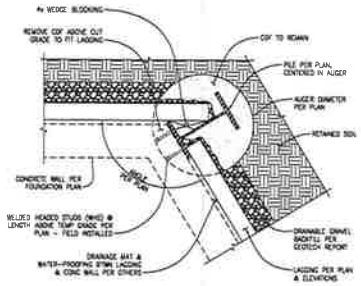
1



SOLDIER PILE ELEVATION

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

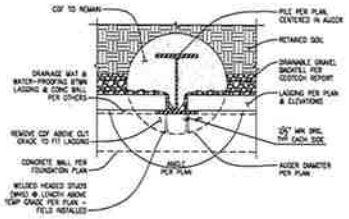
2



SKEWED OUTSIDE CORNER - PLAN VIEW

SCALE: N.T.S.

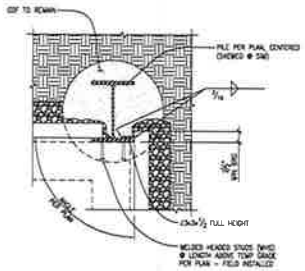
3



TYPICAL SOLDIER PILE - PLAN VIEW

SCALE: N.T.S.

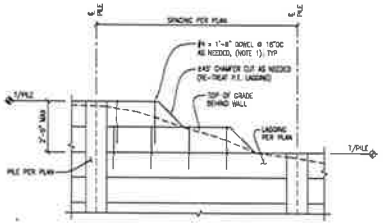
4



90° CORNER PILE - PLAN VIEW

SCALE: N.T.S.

5



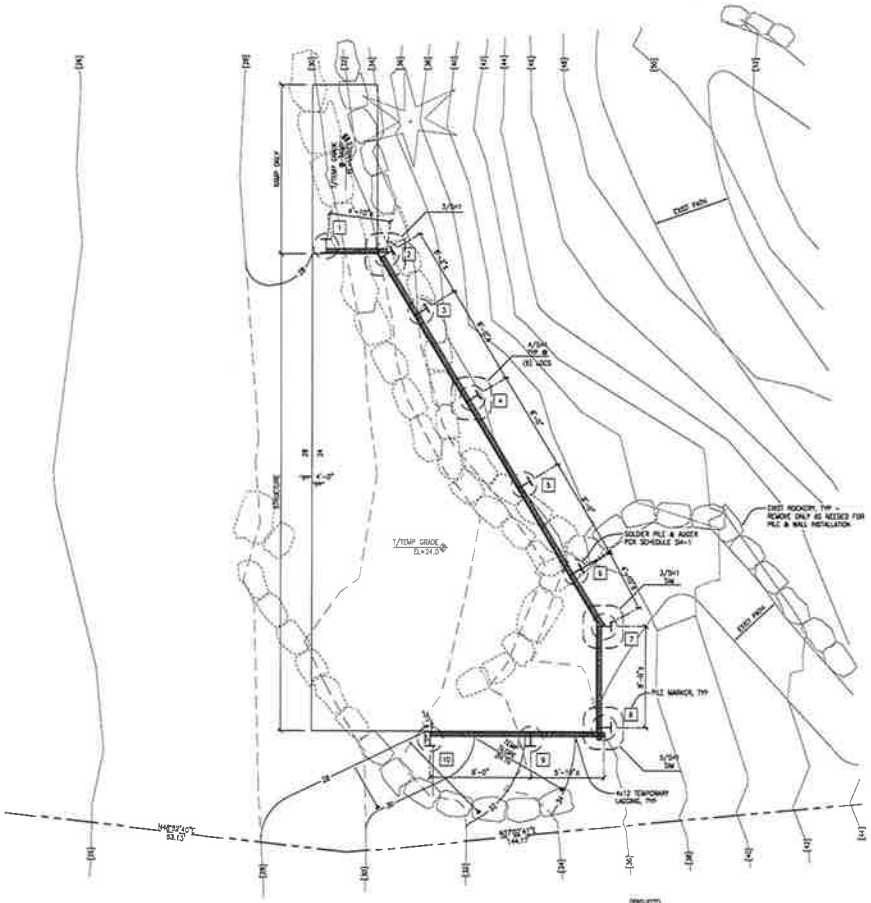
NOTE:

1. PRE-DRILL 7/16" DOWEL HOLE AT CENTER LINE OF LAGGING WIDTH. HAMMER DOWEL INTO HOLE, TOP FLUSH WITH LAGGING.

LAGGING TRANSITION AT WALL STEP

SCALE: N.T.S.

6



SHORING PLAN

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

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