

Town of Yacolt
Yacolt Town Council Meeting Agenda
Monday, November 02, 2020
7:00 PM
Town Hall

Call to Order

Flag Salute

Roll Call

Late Changes to the Agenda

Approve Minutes of Previous Meeting(s)

- [1.](#) Draft Meeting Minutes - October 19th, 2020
- [2.](#) Draft Meeting Minutes- Budget Workshop- October 21st, 2020

Unfinished Business

- [3.](#) Budget Update

New Business

- [4.](#) Public Hearing- Yacolt Community Church- Parcel #279222-000
- [5.](#) Development of 34502 NE Amboy Road, parcel #279222-000

Citizen Communication

Anyone requesting to speak to the Council regarding items not on the agenda may come forward at this time. Comments are limited to 3 minutes. Thank you.

Town Clerk's Report

Public Works Department Report

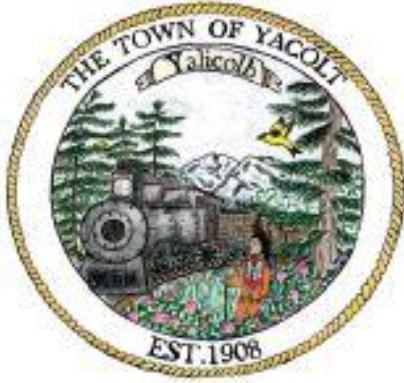
Attorney's Comments

Council's Comments

Mayor's Comments

Approve to Pay Bills on Behalf of the Town

Adjourn



Town of Yacolt
Yacolt Town Council Meeting Minutes
Monday, October 19, 2020
7:00 PM
Town Hall

Call to Order

Mayor Listek called the meeting to order at 7:00 pm

Flag Salute

Roll Call

PRESENT

Mayor: Katelyn Listek

Council Members: Amy Boget, Herb Noble, Michelle Dawson, Malita Mosely, Marina Viray

Public Works: Director Tom Esteb

Town Attorney: David Ridenour

Approve Minutes of Previous Meetings

1. Motion was made to approve minutes of the October 5th Council meeting

Motion: Boget

2nd: Noble

Yea: Boget, Noble, Dawson, Mosely, Viray

Nay: 0

Absent: 0

Motion passed

2. Motion was made to approve minutes of the October 5th Budget workshop

Motion: Boget

2nd: Viray

Yea: Boget, Viray, Noble, Mosely, Dawson

Nay: 0

Absent: 0

Motion passed

Unfinished business

3. Schedule of regular meetings

Motion was made for the staff to prepare an ordinance to amend YMC 2.05.010 to state that regular council meetings will be on the 2nd Monday of each month at 7pm

Motion: Boget

2nd: Moseley

Yea: Boget, Dawson, Viray, Noble, Mosely

Nay: 0

Absent: 0

Motion passed

New Business

4. Rotate finance committee

Motion was made to nominate Council member Viray to the Finance Committee, as this position must rotate every six months

Motion: Boget

2nd: Dawson

Yea: Dawson, Mosely, Noble, Boget, Viray

Nay:0

Absent:0

Motion Passed

Town Clerk's Report

New clerk begins on Wednesday, October 21st

Public Works Report

- 5. The fence repair and gate addition will run \$1192.40, and will be done in early November.

Attorney's Comments

Citizen Communication

Council Members' Comments

Council Member Boget reminded that ballots are out, so everyone please VOTE!

Council Member Noble also said VOTE!

Council Member Dawson confirmed that the nearest ballot drop-off box is located at Yacolt Primary.

Council Member Viray has secured Curly the Camel for the Christmas Tree Lighting event.

Mayor's Comments

Mayor Listek called for a moment of silence in honor of Daniel Tveidt, who lost his life this past weekend. She said we appreciate his work in life, and that he will be remembered fondly by those who knew him. We are thankful for the legacy he left here at Town Hall.

Approval to Pay Bills on behalf of the Town

Motion was made to pay the bills on behalf of the town

Motion: Mosely

2nd: Viray

Yea: Mosely, Viray, Noble, Dawson, Boget

Nay:0

Absent: 0

Motion Passed

Adjournment

Meeting adjourned at 7:36pm

DRAFT



**Town of Yacolt
Budget Workshop
Wednesday, October 21, 2020
6:00 PM
Town Hall**

Call to Order

Mayor Listek called the meeting to order at 6:00 pm

Flag Salute

Roll Call

PRESENT

Mayor: Katie Listek

Council Members: Amy Boget, Herb Noble, Michelle Dawson, Marina Viray, Malita Mosely

Public Works: Director Tom Esteb, Terry Gardner

Clerk: Stephanie Fields

Town Attorney: David Ridenour

Mayor Listek presented the Proposed 2021 Budget and accompanying Mayor's Message. General discussion was had regarding clarification of some expense and income accounts; we will work with BIAS to address consolidation of duplicate accounts.

Discussion included saving money and increasing income by:

- Selling off surplus equipment
- Moving to 1 Council meeting per month
- Looking into a different accounting system
- Following up on past building permit accounts that don't show as paid
- Possibly accessing REET2 funds
- improve street lighting along main roads and possibly the new reader-boards
- Using existing T-shirts, mugs, key fobs, medals, etc. for upcoming events
- Reducing Spring Clean-up expense
- Reducing Legal Service Expenses
- Consolidating events (ie: Bigfoot Fun Run and Sidewalk Chalk Contest)

Discussion regarding expanded expenditures in/ or to add to proposed budget:

- Drywalling upstairs to create new Council chambers
- Adding more to the Christmas Tree Lighting Event
- Initiating work on the town trail plan
- Purchasing a bucket for the town's tractor
- Beginning grading, applying fabric and rock for phase 1 of Public Works shop improvement

- Beginning grading, etc. for Cemetery access improvement project

Mayor Listek adjourned the meeting at 9:22 pm

Katelyn J. Listek, Mayor

Stephanie Fields, Clerk

DRAFT



Town of Yacolt

Request for Council Action

CONTACT INFORMATION FOR PERSON/GROUP/DEPARTMENT REQUESTING COUNCIL ACTION:

Names: Mayor Listek

**Group
Name:**

Address: 202 W Cushman St

Phone: 360-686-3922

Email Address:
MayorListek@townofYacolt.com

Alt. Phone:

ITEM INFORMATION:

Item Title:

- Budget Update

Proposed Meeting Date:

- November 2, 2020

Action Requested of Council:

- none

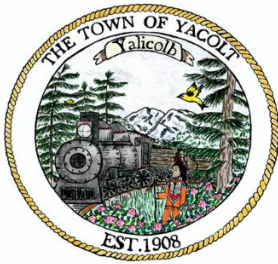
Proposed Motion: none

- **Summary/ Background:**
Discussion and update on
preliminary budget
proposal

Staff Contact(s):

- Mayor Listek, Clerk
Stephanie

Attachments: none



Town of Yacolt Request for Council Action

CONTACT INFORMATION FOR PERSON/GROUP/DEPARTMENT REQUESTING COUNCIL ACTION:

Names: Clerk

Group
Name:

Address: 202 W Cushman St

Phone: 360-686-3922

Email Address:

Alt. Phone:

Clerk@townofYacolt.com

ITEM INFORMATION:

Item Title:

- Public Hearing

Proposed Meeting Date:

- November 2, 2020

Action Requested of Council:

- none

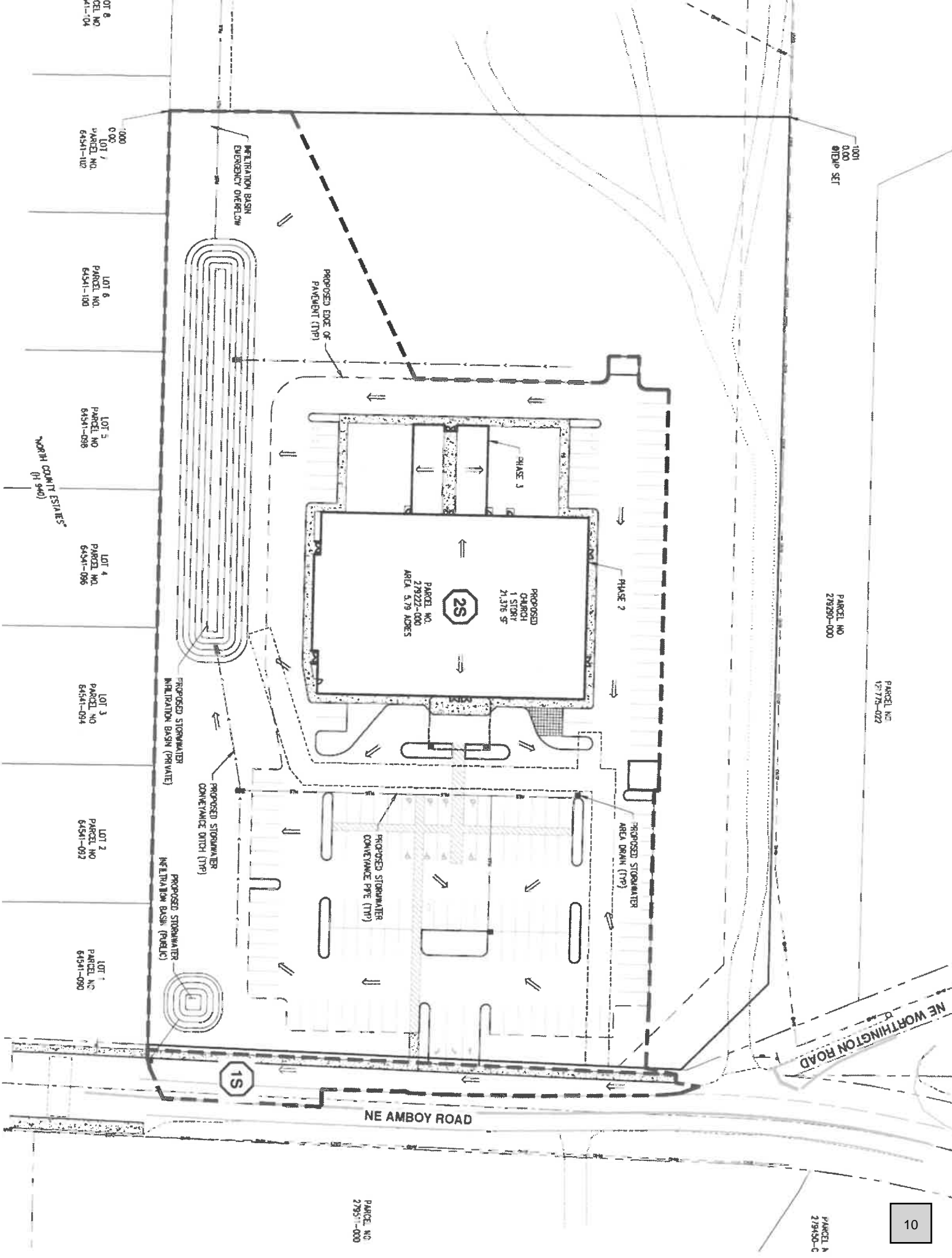
Proposed Motion: none

- Development of 34502 NE
Amboy Road, parcel
#279222-000

Staff Contact(s):

- Stephanie Fields- Clerk
- Devin Jackson- Engineer

Attachments: Map and Notice of
Application and of Public Hearing



1001
0.00
87D² SFT

PARCEL NO
279280-000

PARCEL NO
12778-022

NE WORTHINGTON ROAD

PARCEL A
279300-C

PARCEL NO
27951-000

2S

PROPOSED
CHURCH
1 STORY
21,376 SF
PARCEL NO.
279222-000
AREA 5.79 ACRES

PHASE 2

PHASE 3

PROPOSED EDGE OF
PAVED (TYP)

INFILTRATION BASIN
EMERGENCY OVERFLOW

PROPOSED STORMWATER
INFILTRATION BASIN (PRIVATE)

PROPOSED STORMWATER
CONVEYANCE DITCH (TYP)

PROPOSED STORMWATER
INFILTRATION BASIN (PUBLIC)

PROPOSED STORMWATER
CONVEYANCE PVE (TYP)

PROPOSED STORMWATER
AREA DRAIN (TYP)

1S

NE AMBOY ROAD

LOT 7
PARCEL NO.
64541-112
0.00

LOT 6
PARCEL NO.
64541-100

LOT 5
PARCEL NO
64541-098

LOT 4
PARCEL NO.
64541-096

LOT 3
PARCEL NO
64541-094

LOT 2
PARCEL NO
64541-092

LOT 1
PARCEL NO
64541-090

LOT 8
CEL NO
41-104

NORTH COUNTY ESTATES
(H 940)

**Town of Yacolt
Yacolt, Washington**

**Notice of Application and of Public Hearing:
Development of 34502 NE Amboy Road, Parcel # 279222-000**

HEARING DATE: MONDAY, NOVEMBER 2, 2020

HEARING TIME: 7:00 p.m.

**HEARING LOCATION: Town of Yacolt Council Chambers
202 W. Cushman
Yacolt, WA 98675**

[The Public Hearing and Associated Council Meeting will be virtual only. Attendance will be solely by video conferencing and telephone connection. You may join the meeting from your computer, tablet or smartphone by linking to:

<https://global.gotomeeting.com/join/384882149>.

You can also dial in using your phone. United States: +1 (872) 240-3212

- One-touch: tel:+18722403212,,384882149#. Access Code: 384-882-149

SUBJECT: The Town Council will hold a Public Hearing on the application of AKS Engineering & Forestry, LLC, on behalf of The Yacolt Community Church, for (a) a Conditional Use Permit; (b) a boundary line adjustment; (c) site plan for construction of a new church building and associated facilities; and, (d) a related Environmental Determination of Non-Significance, (DNS), under the State Environmental Policy Act, (SEPA).

NOTICE IS HEREBY GIVEN that the Town of Yacolt has received an application for Development and a Conditional Use Permit. Pursuant to YMC 18.95, the Town of Yacolt established a comment period on said Applications and scheduled a public hearing on the Applications and the proposed development.

1. Case File Name/Number: Yacolt Community Church
2. Date of Application: March, 2020
3. Date of Notice of Complete Application: N/A.
4. Description of Proposed Project: Development of Parcel #279222-000; construction of a 24,364-square-foot building, parking areas, stormwater facilities, and frontage improvements along NE Amboy Road.
5. Project permits included with the Applications: Master Land Use, Conditional Use
6. Further studies requested by reviewing authorities: No additional studies requested by reviewing authorities.
7. Other permits not included in the Application: The Application does not include applications for or relating to building permits, including Clark County Health Department septic permits. The Application does not include final approval by Clark Public Utilities.
8. Existing environmental documents that evaluate the proposed project: There are no mapping indicators of wetlands or flood plain present. The proposed development is inside a Category 1 Critical Aquifer Recharge Area (CARA); however, the final user of the site

will not engage in any activities on site that are prohibited or require a permit based upon Yacolt Municipal Code 16.25.

9. The public has the right to comment on the Applications through testimony or written comments. The public has the right to receive notice of and to participate in any hearings; to request a copy of the decision once made; and to any appeal rights that may apply.
10. The deadline for submitting written comments is Thursday, October 29, 2020. Written comments received by the Town on or before Thursday, October 29, 2020, will be considered by the Town Council.
11. A consolidated staff report, the SEPA checklist, and the SEPA DNS will be available for inspection by the public at no cost beginning Wednesday, October 14, 2020.
12. The deadline for submitting a SEPA appeal and/or any appeal of the final decisions on the substantive Applications is 30 days following final decision on the Applications.
13. Name and contact information for applicant / applicant's representative:
Owner: Bill Douglas
Representative: Seth Halling
AKS Engineering & Forestry
9600 NE 126th Avenue, Suite 2520
Vancouver, WA 98682
(360) 882-0419
14. Description of site: The site is West of N. Amboy Ave and North of W. Christy St. The site is bordered by single family residences to the South, Single-family residential to the North and West, and Parks/Open Space to the East. The site is located SE ¼ of Section 34, T5N, R3E, WM. Assessor Parcel #279222-000. The Parcel is roughly 5.78 acres and is zoned as R1-12.5. The Parcel is currently vacant, with exception to fencing and a concrete slab.
15. A site plan of the subject property and area is provided below.
16. Information about the applications may be examined by the public from Wednesday, October 14, 2020, through Monday, November 2, 2020, at Yacolt Town Hall, 202 W. Cushman, Yacolt, Washington, on business days between the hours of 8:00 a.m. and 5:00 p.m. (Note: Closed between 12:00 and 1:00) Due to the State of Washington's Emergency Coronavirus Orders, please contact Town Hall to make arrangements to view the applications.
17. The authority for this review is described in YMC 18.25 (Single-Family Residential Districts); YMC 18.95 (Public Hearing Procedures and Notice of Hearings); YMC 13.10 (Stormwater Management and Facility Maintenance); YMC 13.25 (Public Works Construction Standards); YMC 16.05-16.10 (SEPA); and the Town of Yacolt Comprehensive Growth Management Plan 2003-2023 (as updated). The Application appears to comply with YMC 16.20-16.45, (Critical Areas). The public hearing will be conducted in accordance with rules of procedure adopted by the Yacolt Town Council. The final decision on the Applications will be made by the Yacolt Town Council.

For further information, please contact the Yacolt Town Clerk at 360-686-3922 or at clerk@townofyacolt.com.

THE PUBLIC IS INVITED to attend this public hearing. Dated this 14th day of October, 2020.
Katelyn J. Listek, Mayor

**STATE ENVIRONMENTAL POLICY ACT (SEPA)
DETERMINATION OF NON-SIGNIFICANCE**

CASE NO: **YACOLT COMMUNITY CHURCH**

APPLICANT: **BILL DOUGLAS**

Location: **34502 NE Amboy Road Yacolt, WA 98675**

Parcels: **279222-000**

Legal Description: **SE ¼ of Section 34
T5N, R3E, W.M.
5.68 ACRES**

SEPA Determination: **Determination of Non-significance (DNS)**

Comment Deadline: **October 28, 2020** (comments should be delivered to the town hall office at 202 W. Cushman, Yacolt, WA, 98675)

As lead agency under the State Environmental Policy Act (SEPA) Rules [Chapter 197-11, Washington Administrative Code (WAC)], the Town of Yacolt must determine if there are possible significant adverse environmental impacts associated with this proposal. The options include the following:

- **DS = Determination of Significance** (The impacts cannot be mitigated through conditions of approval and, therefore, requiring the preparation of an Environmental Impact Statement (EIS);
- **MDNS = Mitigated Determination of Non-Significance** (The impacts can be addressed through conditions of approval), or;
- **DNS = Determination of Non-Significance** (The impacts can be addressed by applying the Town Code).

Determination:

Determination of Non-Significance (DNS). The Town of Yacolt, as lead agency for review of this proposal, has determined that this proposal does not have a probable significant adverse impact on the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030 (2) (e). This decision was made after review of a completed environmental checklist and land use application documents as they apply to the Town's Municipal Code and adopted standards.

Yacolt Community Church

Preliminary Technical Information Report

Date:	March 2020
Submitted To:	Town of Yacolt Engineering Department 202 Cushman Street Yacolt, WA 98675
Applicant:	Yacolt Community Church PO Box 175 Yacolt, WA 98675 PH: (360) 686-3322 Contact: Bill Douglas Email: bill@yacoltcc.org
Engineering Contact:	Seth Halling, PE (360) 882-0419 Sethh@aks-eng.com
Prepared By:	AKS Engineering & Forestry, LLC 9600 NE 126 th Avenue, Suite 2520 Vancouver, WA 98682
AKS Job Number:	6978



www.aks-eng.com

Certificate of the Engineer
Yacolt Community Church
Town of Yacolt, Washington
Preliminary Stormwater Technical Information Report

This Technical Information Report and the data contained herein were prepared by the undersigned, whose seal, as a Professional Engineer licensed to practice as such, is affixed below. All information required by the Town of Yacolt Municipal Code (YMC) Chapter 13.10, Stormwater Management and Facility Maintenance Erosion Control, is included in the Stormwater Plan. This project complies with Best Management Practices as identified by the State Department of Ecology (ECY) 1992 *Stormwater Management Manual for the Puget Sound Basin*.



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Preliminary Stormwater Technical Information Report (TIR)

YACOLT COMMUNITY CHURCH
YACOLT, WASHINGTON

Section A – Project Overview

The 5.79-acre site is zoned R1-12.5 (single family residential) and is located on parcel number 279222-000 in Clark County, WA. The project site is located within the Southeast 1/4 of Section 34, Township 5 North, Range 3 East, Willamette Meridian, Clark County, Washington. More specifically, the site is bound by NE Amboy Road to the East and single-family residences to the south and west. A Vicinity Map for the project is included in Appendix A of this report.

The site is characterized by site topography that is gently sloping from the northeast to the southwest. The project site is primarily grass field with deciduous and coniferous trees and underlying vegetation along the north and east property lines. There are no streams or steep slopes present on site.

The project proposes to construct a 24,364-square-foot building, sidewalks, parking areas, stormwater facilities, and frontage improvements along NE Amboy Road. Proposed land disturbances will consist of grading and excavation for construction of the above-listed improvements. In total, approximately 3.36 acres will be disturbed. Due to the amount of proposed impervious surfaces (greater than 5,000 square feet) and the amount of disturbed area (greater than 1 acre), the project is required to meet Minimum Requirements 1-11 of the 1992 *Stormwater Management Manual for the Puget Sound Basin* (SMMPBS) (See Appendix H). The proposed stormwater infiltration basin is proposed to be privately owned and maintained.

There are no surface waters, adjacent critical areas (within ¼ mile), or adjacent developments that will be negatively affected by the project. Stormwater runoff from neighboring properties appears to not impact the site.

Section B – Approval Conditions Summary

An approval conditions summary will be provided during final engineering.

Section C – Downstream Analysis

The proposed stormwater facilities will collect, treat, and infiltrate all stormwater from the new development on site, resulting in no downstream conveyance to be analyzed.

Section D – Quantity Control Analysis and Design

The project proposes to meet flow control requirements using two stormwater infiltration basins that follow the requirements of the SMMPBS Section III-3.6.2, BMP RI.05 Water Quality (WQ) Infiltration Basin. One basin will provide collection, temporary storage, treatment, and infiltration for runoff from new hardscapes located within the public right-of-way. The second infiltration basin will provide the same function for runoff from the private development. Runoff from new hardscapes in the public right-of-way will not mix with runoff from the private development. Refer to the stormwater plan and stormwater basin plans included in Appendix B for additional information.

Private Infiltration Basin (East)

Measured Infiltration Rate: 9.2 inches/hour at depths 4.5 feet below existing grade
 Safety Factor: 4.0
 Design Infiltration Rate: 2.2 inches/hour
 Groundwater Elevation: Approximately 20 feet below existing grade

Private Infiltration Basin (West)

Measured Infiltration Rate: 14.1 inches/hour at depths 4.5 feet below existing grade
 Safety Factor: 4.0
 Design Infiltration Rate: 3.0 inches/hour
 Groundwater Elevation: Approximately 20 feet below existing grade

Tables D.1 and D.2, below, list the areas of hard surface and landscaping under the existing and proposed conditions.

Table D.1: Existing Hard Surface and Landscaping

Basin	Landscape	Road	Roof	Sidewalk	Total Impervious Area	Total Area
1X	3.33	0.03	0.00	0.00	0.03	3.36

Note: Areas are in acres.

Table D.2: Proposed Hard Surface and Landscaping

Basin	Landscape	Road	Roof/Driveway	Sidewalk	Total Impervious Area	Total Area
1S	0.00	0.14	0.00	0.04	0.18	0.18
2S	0.80	1.69	0.57	0.12	2.38	3.18

Note: Areas are in acres.

Tables D.3 and D.4, below, list the curve numbers that were used in the HydroCAD analysis (Appendix E). These curve numbers are for Hydrologic Soil Group B per the Natural Resources Conservation Service (NRCS) Web Soil Survey provided in the project Geotechnical Report (Appendix D). See Appendix G for SMMP SB curve number table.

Table D.3: Pre-Development Curve Numbers

Area	Curve Number (CN)	Land Use	Description
3.33	85	Grass (Landscaping)	Fair condition (50-75% grass cover) Soil Group B
0.03	98	Paved Road	Impervious Surface

Note: Areas are in acres.

Table D.4: Post-Development Curve Numbers

Area	Curve Number (CN)	Land Use	Description
0.80	85	Grass (Landscaping)	Fair condition (50-75% grass cover) Soil Group B
1.83	98	Paved Road	Impervious Surface
0.57	98	Roof	Impervious Surface
0.16	98	Sidewalk	Impervious Surface

Note: Areas are in acres.

All proposed stormwater quantity facilities for the site have been designed in conformance with the SMMP SB. The infiltration facilities were analyzed using the HydroCAD program and show that the proposed facilities can fully infiltrate the 100-year storm event (Appendix E).

Section E – Conveyance Systems Analysis and Design

A basic stormwater layout was designed at this time, without detailed hydraulic analysis of all proposed conveyance systems. Due to site topography sloping one direction, the standard size and land coverage of this development, and locating of the stormwater facility at the lowest point on site, it was determined that a detailed analysis was not needed to determine the feasibility of the project. A detailed hydraulic analysis will be provided during final engineering.

Section F – Water Quality Design

Stormwater treatment will be provided by the infiltration basins per the requirements of SMMP SB Section III-3.6.2, BMP RI.05 Water Quality (WQ) Infiltration Basin. Stormwater in the infiltration basins will percolate through soils and vegetated root systems in addition to a 3-inch layer of compost. This percolation process will remove pollutants from stormwater. (Appendix F).

Section G – Soils Evaluation

According to the NRCS web soil survey, on-site soils are primarily Yacolt loam, which is hydrologic soil group B (Appendix C). Hydrologic group B soils are characterized by moderately low runoff potential when thoroughly wet, and moderately high to high infiltration rates. The Geotechnical Report contains additional information about site conditions (Appendix D).

Section H – Special Reports and Studies

A geotechnical evaluation was conducted by True North Geotechnical, and a report summarizing the results of the evaluation was issued October 23, 2019 (See Appendix D).

Section I – Other Permits

No permits outside of this application are applicable.

Section J – Maintenance and Operations Manual

A private Operation and Maintenance Manual will be provided with final engineering.

Section K – Technical Appendix

Appendix A: Map Submittals

Appendix B: Preliminary Development and Basin Plans

Appendix C: NRCS Soils Report

Appendix D: Geotechnical Report

Appendix E: HydroCAD Analysis

Appendix F: BMP Details

Appendix G: Curve Numbers

Appendix H: New Development Flow Chart

Appendix I: Isopluvial Maps

Appendix A: Map Submittals

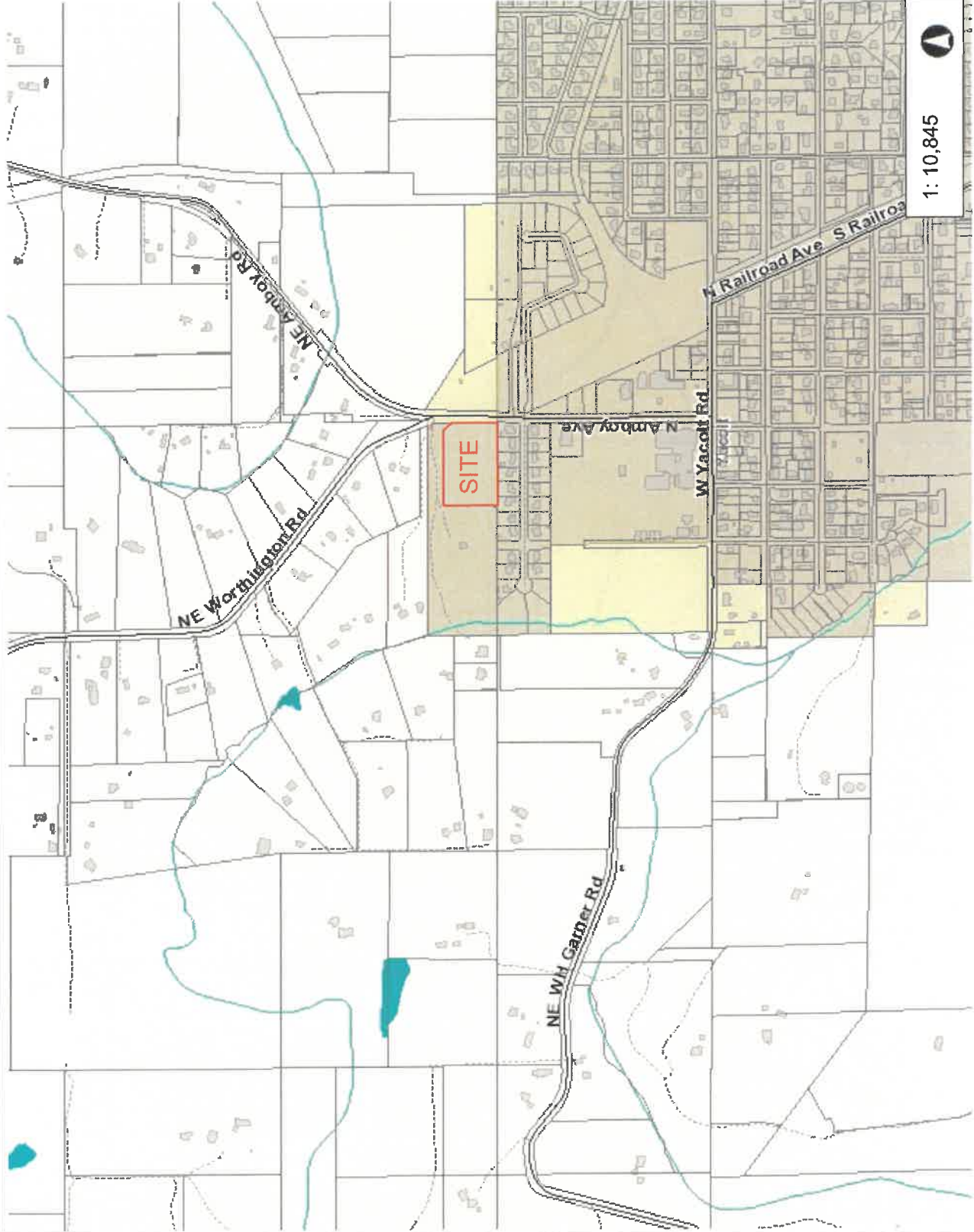
Vicinity Map



Legend

- Building Footprints
- Taxlots
- Cities Boundaries
- Urban Growth Boundaries

Notes:



1: 10,845

1,807.6 Feet

903.78

0

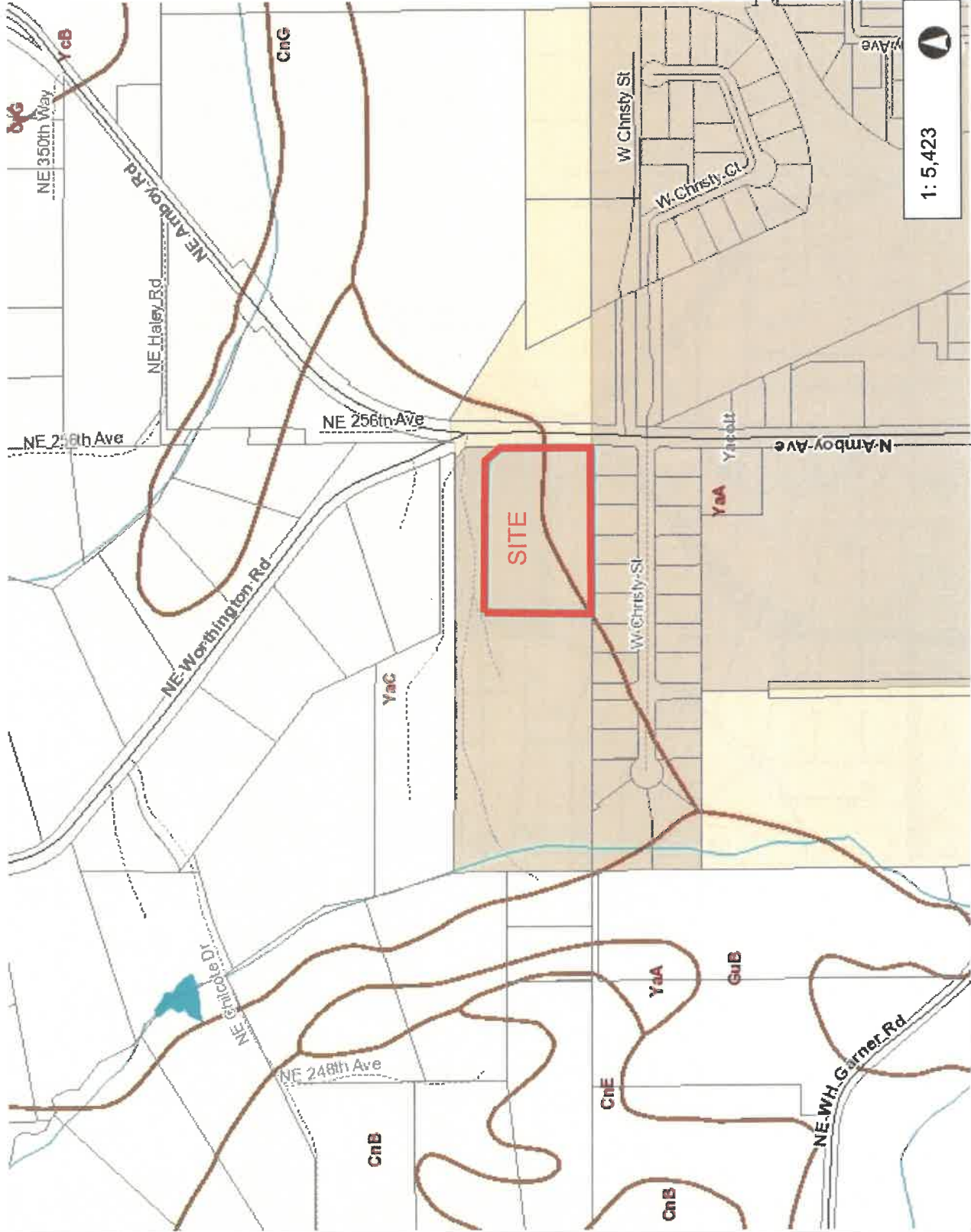
1,807.6

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 County, WA, GIS - <http://gis.clark.wa.gov>



Soil Types



903.8 0 451.89 903.8 Feet

1: 5,423



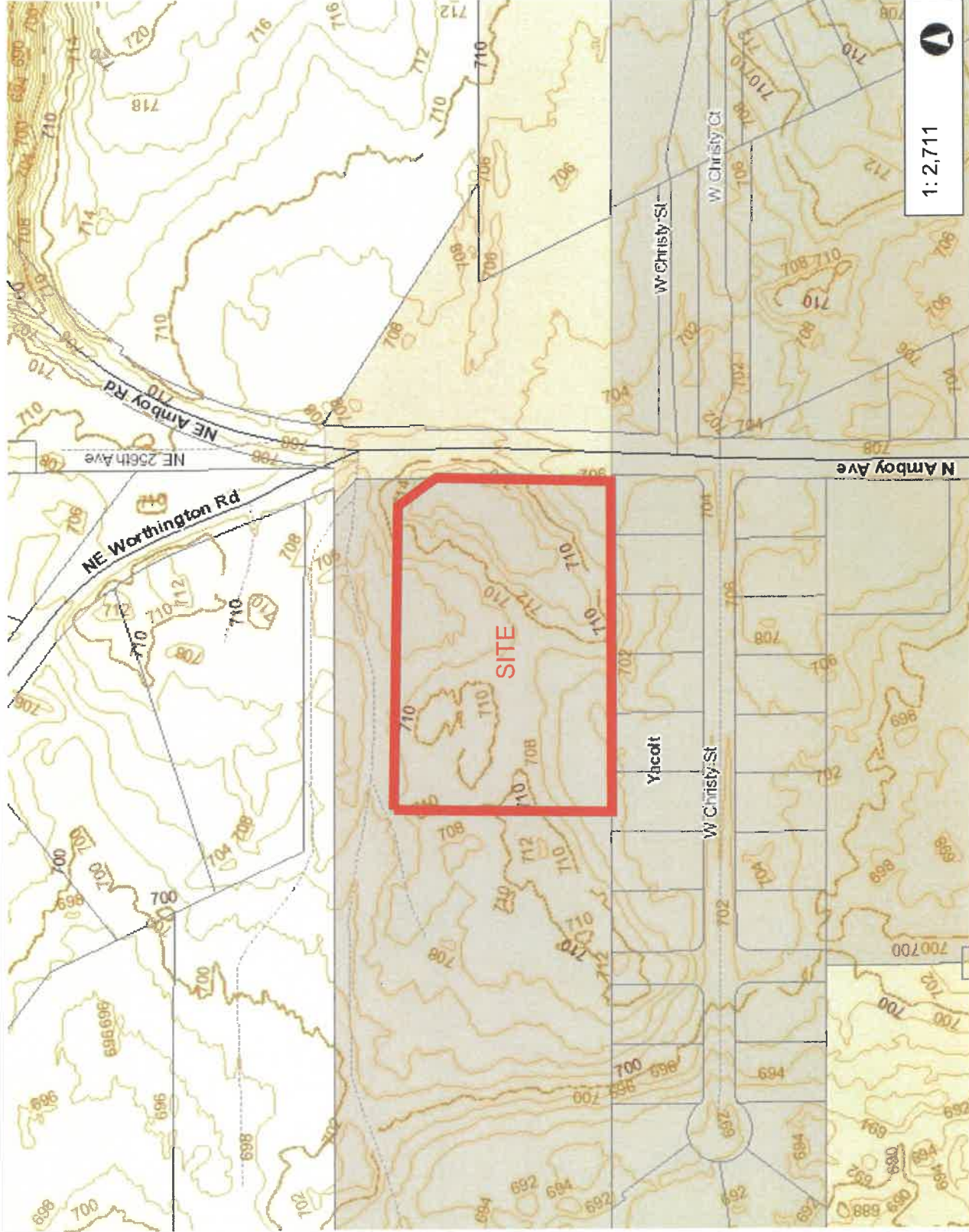
Legend

- Taxlots
- Soil Type
- All Roads**
 - Interstate
 - State Route
 - Arterial
 - Forest Arterial
 - Minor Collector
 - Forest Collector
 - Private or Other
- Cities Boundaries
- Urban Growth Boundaries

Notes:

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Elevation Contours



1:2,711



Legend

- Taxlots
- Contour Lines - 2 ft
- Contour Lines - 10 ft
- Contour Lines - 200 ft
- All Roads
- Interstate
- State Route
- Arterial
- Forest Arterial
- Minor Collector
- Forest Collector
- Private or Other
- Cities Boundaries
- Urban Growth Boundaries

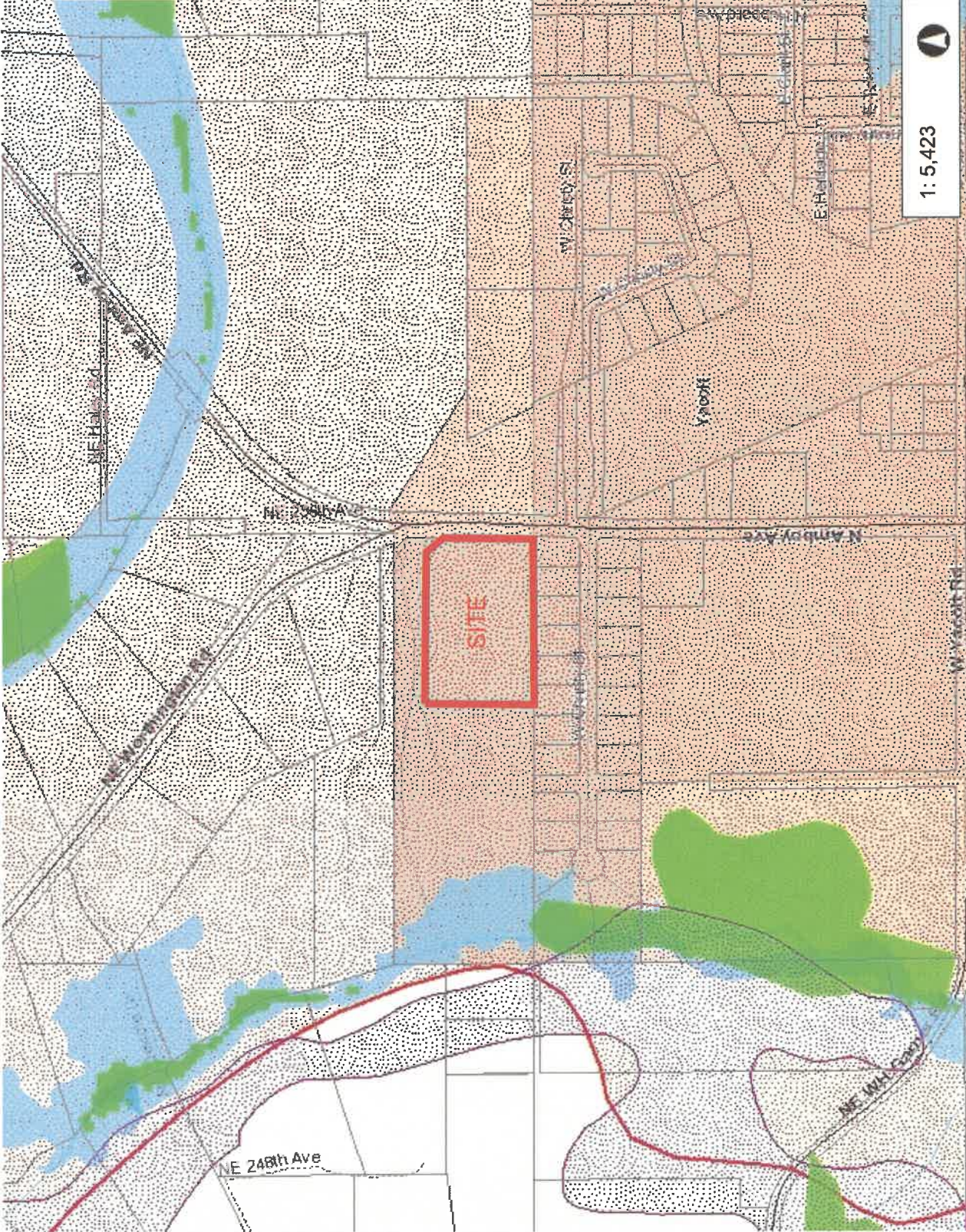
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451.9 0 225.95 451.9 Feet



Environmental Constraints I



- Legend**
- Taxlots
 - Hydric Soils
 - Wetlands Presence
 - Flood Zone Designation
 - Floodway
 - Floodway Fringe
 - 500 Year Flood Area
 - Area Not Studied
 - Stream
 - Critical Aquifer Recharge Area
 - Cities Boundaries
 - Urban Growth Boundaries

Notes:

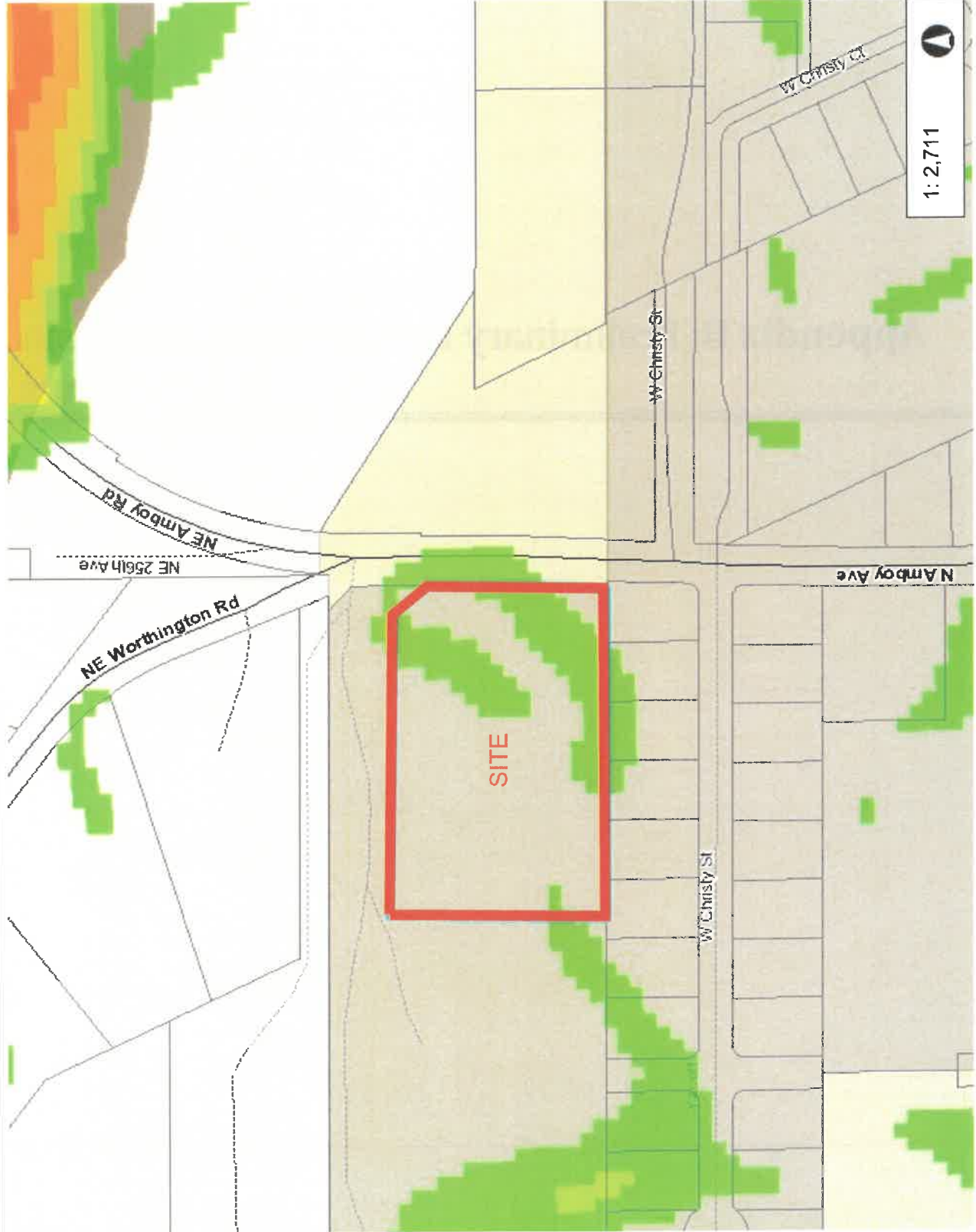
1:5,423

903.8 451.89 903.8 Feet

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Clark County, WA, GIS - <http://gis.clark.wa.gov>

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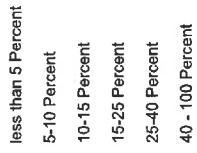
Environmental Constraints II



Legend

Taxlots

Slopes



Severe Erosion Hazard

Stream

Historic Site

Clark County Heritage Registry

Clark County Cultural Resources In

National Register Historic Places

Washington Heritage Register

Cities Boundaries

Urban Growth Boundaries

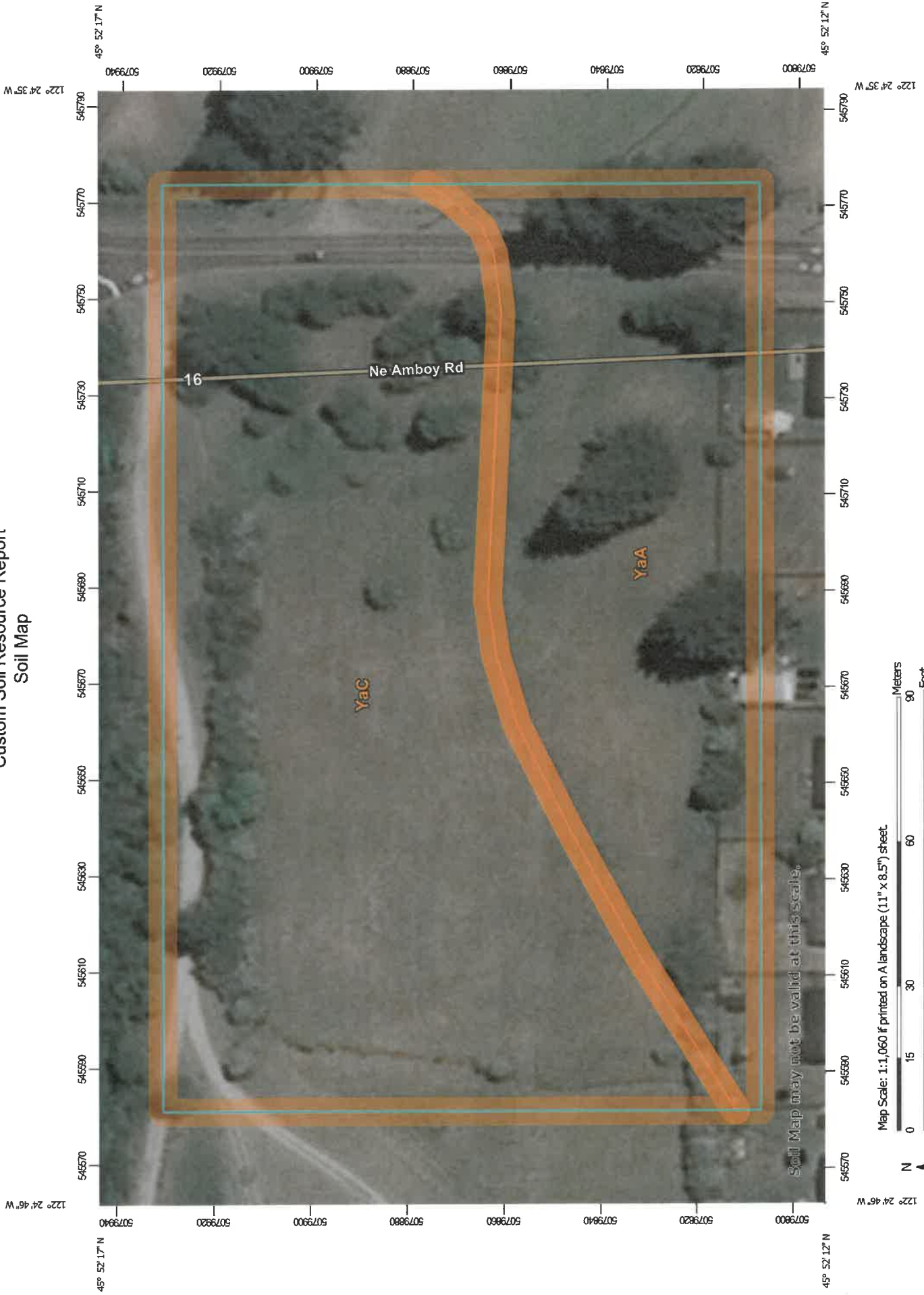
Notes:

451.9 0 225.95 451.9 Feet

This map was generated by Clark County's "MapsOnline" website. Clark County does not warrant the accuracy, reliability, or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

Appendix B: Preliminary Development and Basin Plans

Custom Soil Resource Report
Soil Map



Map Scale: 1:1,060 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84



MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Clark County, Washington
 Survey Area Data: Version 16, Sep 10, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 24, 2018—May 10, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

MAP LEGEND

Area of Interest (AOI)	Spoil Area
Soils	Stony Spot
Soil Map Unit Polygons	Very Stony Spot
Soil Map Unit Lines	Wet Spot
Soil Map Unit Points	Other
Special Point Features	Special Line Features
Blowout	Water Features
Borrow Pit	Streams and Canals
Clay Spot	Transportation
Closed Depression	Rails
Gravel Pit	Interstate Highways
Gravelly Spot	US Routes
Landfill	Major Roads
Lava Flow	Local Roads
Marsh or swamp	Background
Mine or Quarry	Aerial Photography
Miscellaneous Water	
Perennial Water	
Rock Outcrop	
Saline Spot	
Sandy Spot	
Severely Eroded Spot	
Sinkhole	
Slide or Slip	
Sodic Spot	

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
YaA	Yacolt loam, 0 to 3 percent slopes	2.1	35.9%
YaC	Yacolt loam, 3 to 15 percent slopes	3.8	64.1%
Totals for Area of Interest		5.9	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Appendix D: Geotechnical Report

October 23, 2019



Yacolt Community Church
509 W Cushman Street
Yacolt, WA 98675

Attn: Mr. Bill Mason – Yacolt Community Church
Mr. Seth Halling – AKS Engineering & Forestry

Subject: Geotechnical Evaluation
Yacolt Community Church
34502 NE Amboy Road
Yacolt, Washington 98675
True North Project # 19-0052

Dear Mr. Mason:

At your request, True North Geotechnical Services (True North) is providing you with this report summarizing our geotechnical services for the proposed new Yacolt Community Church project to be located at the above-mentioned address in Yacolt, Washington. (site). The purpose of our services was to provide a geotechnical evaluation of the site as it pertains to the proposed new development of the site.

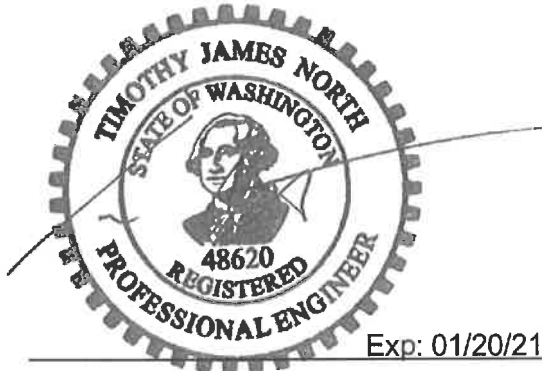
We have endeavored to prepare this report in accordance with generally accepted geotechnical engineering practices at the time we prepared it, for the exclusive use of Yacolt Community Church, AKS Engineering & Forestry, and their agents, for specific application to this project. Use or reliance upon this report by a third party is at their own risk. True North does not make any representation or warranty, express or implied, to such other parties as to the accuracy or completeness of this report or the suitability of its use by such other parties for any purpose whatever, known or unknown, to True North.

Based on the results of our study, development of the site with the proposed church building and associated parking and utilities is feasible provided the recommendations in this report are included in the project design and implemented during construction. The chief geotechnical concerns of note associated with the project are ensuring proper grading and fill placement of the site prior to construction, and ensuring proposed foundations, pavements and other surface improvement are bearing on firm, competent native soils or properly placed structural fill.

The attached report includes a summary of our project understanding, geologic site reconnaissance, subsurface exploration and our conclusions regarding the expected effect that the proposed lot development will have on the site.

We appreciate the opportunity to be of service to you. If you have any questions, or if we can be of further assistance to you, please contact us at (360) 558-0005.

Respectfully Submitted,



Timothy J. North, P.E.
Principle Engineer

Attachments: Geotechnical Evaluation – Yacolt Community Church
 Figure 1 – Vicinity Map
 Figure 2 – Site Plan
 Appendix A – Field and Laboratory Procedures



**Yacolt Community Church
Geotechnical Evaluation**

**New Yacolt Community Church
34502 NE Amboy Road
Yacolt, Washington 98675**

**True North Project No. 19-0052
October 2019**

PURPOSE AND SCOPE OF WORK

This report presents the results of the True North Geotechnical Services' (True North) geotechnical engineering services for the proposed new Yacolt Community Church to be located at Clark County Tax Parcel No. 279222000 in Yacolt, Washington (site). The general site location is shown on the Vicinity Map, Figure 1. The locations of our explorations in relation to existing site features are shown on the Site Plan, Figure 2.

The following describes our specific scope of work that was completed:

- **Geologic Map and Literature Review:** We reviewed published geologic and geologic hazard mapping for the site.
- **Test Pits:** We excavated six soil test pits on the property. The test pit excavations extended to depths ranging from about 6.5 to 10 feet below the existing ground surface (bgs). Samples were collected from the subsurface soils encountered, and field testing was performed.
- **Field Infiltration Testing:** We performed three field infiltration tests at locations designated by the project civil engineer.
- **Laboratory Testing:** Samples collected from the borings were returned to our office for further examination including classification in general accordance with the Unified Soil Classification, Visual-Manual Procedure. Select samples were subjected to laboratory testing, including natural moisture content analysis and fines content analysis.
- **Analysis:** Data collected during the literature research, subsurface explorations, and laboratory testing were used to develop site-specific geotechnical design parameters and construction recommendations.
- **Report Preparation:** This report of Geotechnical Services summarizes the results of our explorations and analyses, including information relating to the following:
 - Boring logs and site plan with boring locations
 - Field infiltration testing results
 - Laboratory test results
 - Site preparation and earthwork recommendations
 - Shallow foundation design recommendations
 - Groundwater considerations
 - Subsurface drainage requirements
 - Slab and pavement subgrade preparation
 - Seismic design criteria and design considerations

PROJECT UNDERSTANDING

The proposed project consists of the construction of a new church building and associated parking, utilities and stormwater facility. Access to the site is provided by way of NE Amboy Road, which runs along eastern boundary of the site. The proposed new church building will occupy approximately 21,000 square feet in the center of the site, with an asphalt concrete paved access road surrounding the the building and parking located mostly to the east and north. Planned septic facilities will be located along the western boundary of the site, while a stormwater infiltration facility is planned along the southern boundary of the site. Based on our understanding of the proposed development, we estimate cuts for the proposed new building foundation will be less than 5 feet.

Based on our experience with similar projects and information provided by you, estimated maximum building loads may be as high as 100 kips for columns, 2 kips per linear foot for walls, and less than 250 pounds per square foot (psf) for floors. We anticipate that the proposed project may be supported with slab-on-grade floors and conventional reinforced concrete spread footings. The purpose of our explorations and analyses was to evaluate subsurface conditions and provide geotechnical recommendations for design and construction for support of the new building, utilities and paved areas.

SITE CONDITIONS

Surface Description

The project site consists of an approximately 3.9 acre, mostly undeveloped, rectangular lot located southwest of the intersection of NE Amboy Road and NE Worthington Road. The site is currently undeveloped. The ground surface at the site generally consists of grass, with a few mature trees bordering the site near the east boundary, bushes along the north boundary, and a chain-link fence along the south boundary.

The site is bordered to the west by a residential lot on land, to the north by a private access road to the lot to the west, to the east by NE Amboy Road, and to the south and existing residential development. The ground surface at the site is relatively flat with some shallow soil berms in the east and northeast. The elevation at the site ranges from a high of approximately 714 feet above mean sea level (AMSL) at the top of the tallest berm, down to a low of approximately 706 feet AMSL along the southwest boundary.

Geologic Setting

The project area consists of Pleistocene aged Glacial deposits of the Amboy Drift formation. The site is mapped as glacial outwash consisting of poorly-consolidated pebbly to cobbly gravel and sand. Bedrock at the project site is expected to be at approximately 50 to 100 feet below the ground surface, and consist of Basaltic Andesite of Elkhorn Mountain. Some alluvium consisting of stream deposits from modern streams may be located at or near the project site, and may consist of clay, silt, sand, gravel and organic material (Evarts, 2006).

Subsurface Conditions

On August 9, 2019, we visited the site to observe the excavation of six soil test pits at the site (see Figure 2 - Site Plan). The test pits, designated TP-1 through TP-6, extended to maximum depths ranging from about 6.5 to 10.0 feet below the existing ground surface (bgs). The test pits were logged and representative soil samples collected by us, to be returned to our office for further testing and examination. Descriptions of field and laboratory procedures and the test pit logs are included in Attachment A. The following is a generalized description of the subsurface units encountered:

SILT: Soft to medium stiff, light brown Silt (ML) with trace to some sand and Sandy Silt (ML/SM) was encountered just below the topsoil in all the test pits, extending to depths ranging from 2.5 to 5 feet bgs. In general, the silt exhibited low plasticity, and the sand portion was fine grained. The moisture content of five samples from this unit ranged from 26 to 39 percent.

SAND: Medium dense to dense brown poorly-graded Sand (SP) with varying amounts of silt, trace gravel and occasional cobbles was encountered below the silt in all the test pits, extending to the termination depth of the explorations in all. In general, the sand portion was fine to coarse grained. The moisture content of samples from this unit ranged from 24 to 58 percent. The fines content of three samples from this unit ranged from 8 to 9 percent.

Groundwater

Static groundwater was not encountered in any of the test pits during our investigation. Based on a review of local hydrological data, we anticipate that the seasonal static groundwater level at the property is located at a depth of approximately 20 to 30 feet bgs, however the groundwater level may approach the ground surface during periods of prolonged precipitation.

USDA Soil Identification

According to the USDA Web Soil Survey, the near-surface soils at the site are generally identified as Yacolt loam, which generally consists of soils classified as "cobble loam" at the approximate infiltration test depths and are assigned the hydrologic soil group "B" based on drainage and other properties, indicating the soils have a moderately high to high capacity to transmit water.

Infiltration Testing

Infiltration testing was completed in TP-1, TP-2 and TP-5, all at a depth of approximately 4.5 feet bgs, through casing embedded in the bottom of the excavations. The infiltration test was conducted within a 6-inch outside diameter PVC pipe embedded into the underlying soils using the single-ring falling head method, in general accordance with the 2015 Clark County Stormwater Manual (CCSWM). Water was placed into the pipe to achieve a minimum 1-foot-high column of water (head). After a period of saturation, the height of the water column in the pipe was then measured initially and at regular timed intervals to determine the rate of water infiltration into the soil. Results of the field infiltration testing are presented in Table 1.

Location	Depth of Test (feet bgs)	Infiltration Rate ¹ (inches/hour)	Soil Classification
TP-1	4.5	14.1	Clayey Silt with Sand
TP-2	4.5	53.4	
TP-5	4.5	9.2	

¹ Average in-situ infiltration rate (coefficient of permeability, k) measured in the field.

The infiltration rates presented in Table 1 are not permeabilities/hydraulic conductivities, but field-measured rates and do not include correction factors related to long-term infiltration rates. In accordance with the 2015 CCSWM, we recommend a base correction factor of 2 as well as a soils correction factor of 2 be applied to the rates shown in Table 1. It is also recommended that the designer include correction factors to account for the level of maintenance, type of system, vegetation, siltation, etc. Field measured infiltration rates are typically reduced by a minimum factor of 2 for use in design.

Geologic Hazards

The following provides a geologic hazard review for the subject site. The geologic hazard review as based on our site reconnaissance and explorations, as well as a review of publicly available published literature and maps.

Slope and Landslide Hazards:

The site is nearly level, located within a relatively flat portion of Clark County, with no slopes that exceed 15 percent on site, and therefore slope and landslide hazards are not a concern.

Seismic Hazards:

The following seismic hazards have been considered as part of our geologic hazards review for the project site:

Ground Motion Amplification: Based on the soils encountered in our explorations, publicly available well logs for adjacent sites, and our understanding of the site and underlying geology, we interpret the on-site subsurface conditions to correspond to Site Class D, as defined by the 2015 International Building Code (IBC). Our recommended seismic design parameters are summarized in Table 2.

Location	Short Period	1-Second
Maximum Credible Earthquake Spectral Acceleration	S _s = 0.830 g	S ₁ = 0.365 g
Site Class	D	
Site Coefficient	F _a = 1.168	F _v = 1.669
Adjusted Spectral Acceleration	S _{MS} = 0.969 g	S _{M1} = 0.610 g
Design Spectral Response Acceleration Parameters	S _{DS} = 0.646 g	S _{D1} = 0.407 g

g – acceleration due to gravity

Liquefaction: Based on the anticipated groundwater table depth (greater than 35 feet bgs), as well as the relative density/consistency and fines content of the expected bearing soils, we consider the potential for liquefaction and liquefaction induced lateral spread within the site boundaries to be very low to negligible.

CONCLUSIONS

Geotechnical Design Considerations

Based on the results of our site reconnaissance, subsurface explorations, and geologic map review, development of the site with the proposed church building and associated parking and utilities is feasible provided the recommendations in this report are included in the project design and implemented during construction. Our opinion is based on field observations and subsurface explorations completed by True North and review of the following documents and information sources: State and local soils and groundwater mapping, a published geologic map, geotechnical reports for similar nearby projects, and our understanding of the proposed development plans.

Site Preparation

After any surface and near surface water sources have been controlled, the construction areas should be cleared and stripped of organic matter, and other deleterious materials. Silt fences, hay bales, buffer zones of natural growth, sedimentation ponds, and granular haul roads should be used as required to reduce sediment transport during construction to acceptable levels.

Where present, existing pavement, embedded structures and other disturbed surface materials should be stripped and removed from proposed development locations and for a five-foot-margin around such areas. Based on our explorations, the depth of stripping may range from 12 to as much as 24 inches, although greater stripping depths may be required if loose or soft materials are encountered. Deleterious materials encountered during site preparation should be removed from the subgrade soils and hauled off site for disposal. Stripped material should be transported off site for disposal or stockpiled for use in landscaped areas. If stripping operations occur during wet weather, a generally greater stripping depth might be required in order to remove disturbed moisture sensitive soils; therefore, stripping is best performed during a period of dry weather.

Wet/Freezing-Weather/Wet-Soil Conditions

Due to the presence of fine-grained silt and clay in the near-surface materials at the site, construction equipment may have difficulty operating on the near-surface soils when the moisture content of the surface soil is more than a few percentage points above the optimum moisture required for compaction. Soils that have been disturbed during site preparation activities, or unsuitable areas identified during proofrolling or probing, should be removed and replaced with compacted structural fill. Site earthwork and subgrade preparation should not be completed during freezing conditions.

Protection of the subgrade is the responsibility of the contractor. Construction of granular haul roads may help reduce further damage to the pavement and disturbance of site soils. The thickness of

the granular material for haul roads and staging areas will depend on the amount and type of construction traffic. The actual thickness of haul roads and staging areas should be based on the contractors' approach to site development, and the amount and type of construction traffic. The imported granular material should be placed in one lift over the prepared, undisturbed subgrade and compacted using a smooth-drum, non-vibratory roller. A geotextile fabric should be used to separate the subgrade from the imported granular material in areas of repeated construction traffic.

Excavations

Where required, temporary soil cuts associated with site excavations or regrading activities should be adequately sloped back to prevent sloughing and collapse, unless a shoring box or other suitable excavation side wall bracing is provided. It is the responsibility of the contractor to ensure that excavations are properly sloped or braced for worker safety protection, in accordance with OSHA safety guidelines.

Structural Fill

Structural fill includes any fill materials placed under footings, pavements, or driveways and backfill over the embedded mat foundation. Typical materials used for structural fill include: clean, well-graded sand and gravel; clean sand; crushed rock; controlled-density fill (CDF); lean-mix concrete; and various soil mixtures of silt, sand, and gravel. Use of the on-site soils as structural fill may be feasible, provided they are properly moisture conditioned prior to placement and compaction.

Imported granular structural fill should consist of angular pit or quarry run rock, crushed rock, or crushed gravel and sand that is fairly well graded between coarse and fine particle sizes. The fill should contain no organic matter or other deleterious materials, have a maximum particle size of one inch, and have less than 5 percent passing the U.S. No. 200 Sieve. In deep excavations, or where subgrade soils require stabilization, the particle size may be increased to four inches. The percentage of fines can be increased to 12 percent of the material passing the U.S. No. 200 Sieve if placed during dry weather and provided the fill material is moisture-conditioned, as necessary, for proper compaction. The material should be placed in lifts with a maximum uncompacted thickness of 12 inches and be compacted to not less than 95 percent of the maximum dry density, as determined by ASTM D 1557. During the wet season or when wet subgrade conditions exist, the initial lift thickness may be increased to 24 inches and should be compacted by rolling with a smooth-drum, nonvibratory roller.

Foundations

Continuous-wall and isolated-spread footings should be at least 12 and 24 inches wide, respectively. For frost protection, the footings should be founded at least 12 inches below the lowest adjacent grades or deeper if required by local building code. The footings should be founded below an imaginary line project at a 1H:1V slope from the base of any adjacent, parallel utility trenches.

Footings should bear on the near-surface medium stiff silty sand or structural fill placed in accordance with our recommendations. Footings should be sized for an allowable bearing capacity

of 2,000 psf. The recommended allowable bearing pressure applies to the total of dead plus long-term live loads. The allowable bearing pressure may be increased by a factor of 1/3 for short-term loads, such as those resulting from wind or seismic forces. We estimate post construction settlements will be less than one inch for our recommended allowable bearing capacity. We estimate that the differential settlement will be approximately half of the total settlement. Our recommended bearing capacity is based on limiting settlements and includes a minimum factor of safety of 3 against ultimate bearing failure.

Lateral loads acting on the foundations can be resisted by passive earth pressures on the sides of the foundation and by friction along the soil-rock-concrete interface at the base of the foundation. We recommend using an allowable passive earth pressure of 250 pounds per cubic foot (pcf) for foundations confined by the near-surface medium stiff silt or structural fill placed in accordance with our recommendations. We recommend an allowable coefficient of friction of 0.40 for foundations. In order to develop these capacities, concrete must be poured neat in excavations, the adjacent grade must be level, and the static ground water level must remain below the base of the footing throughout the year. The passive pressure within the upper foot of embedment should be neglected. These allowable lateral resistance values include a factor of safety of 1.5.

Slab-on-grade Floors

Satisfactory subgrade support for lightly-loaded building floor slabs can be obtained on the undisturbed native soil or on engineered structural fill. A subgrade modulus of 125 pounds per cubic inch may be used to design floor slabs.

A minimum 6-inch-thick layer of drain rock should be placed and compacted over the prepared subgrade to assist as a capillary break and blanket drain. The drain rock may include a capping layer of clean ¾ inch minus crushed rock that contains no more than 5% fines. The drain rock and capping rock should be placed in one lift and compacted until well-keyed, about 90% of the maximum dry density as determined by ASTM D698.

A vapor retarder manufactured for use beneath floor slabs should be installed according to the manufacturer's recommendations. Careful attention should be made during construction to prevent perforating the retarder, and to seal edges and utility penetrations. We recommend following ACI 302.1, Chapter 3 with regard to installing a vapor retarder.

Drainage

The Contractor should be made responsible for temporary drainage of surface water and groundwater as necessary during construction to prevent standing water and/or erosion at the site.

As a matter of good construction practice, we recommend that perimeter drains be installed for all buildings. Perimeter drains should consist of perforated drainpipe embedded in a zone of free draining fill that is wrapped in a non-woven geotextile filter. The pipe should be connected to a tightline drainpipe leading to storm drain facilities. Foundation and crawl space drainage should be

sloped to drain to a sump or low point drain outlet. Water should not be allowed to pond within crawl spaces. Roof drains should be connected to a tightline drainpipe leading to storm drain outlet facilities.

Water should not be allowed to “pond” or collect anywhere on the site. The ground surface around structures should be sloped to drain away from building foundations for a distance of at least 5 feet. Surface water should be directed away from all buildings into drainage swales or other approved drainage areas. “Trapped” planting areas should not be created next to any buildings without providing means for drainage.

Pavement Design

The following pavement design recommendations are based on our experience with similar facilities and subgrade conditions.

For automobile parking areas, we recommend a pavement section consisting of 3 inches of asphaltic concrete (AC) over 8 inches of crushed rock base (CRB) or 5 inches of Portland Cement concrete (PCC) over 5 inches of crushed rock base (CRB). For truck traffic areas, the pavement section should consist of 4 inches of AC over 12 inches of CRB or 6 inches of PCC over 8 inches of CRB. These recommended pavement sections are based on the assumption that the subgrade consists of firm structural fill or compacted native subgrade and that the pavement will be constructed during the dry summer months. Proofrolling should be used to evaluate pavement subgrade. Any soft areas disclosed by proofrolling will likely need to be reworked. Some contingency should be provided for the repair of any soft areas. If pavement construction is scheduled for the wet season, it will be necessary to increase the above-recommended base course sections. AC and CRB materials should conform to WSDOT specifications. All CRB should be compacted to at least 95 percent of the modified proctor ASTM D-1557 laboratory test standard.

Permanent, properly installed drainage is also an essential aspect of pavement design and construction. All paved areas should have positive drainage to prevent ponding of surface water and saturation of the base course. This is particularly important in cut sections or at low points within the paved areas, such as in sunken loading dock areas or around stormwater catch basins. Effective means to prevent saturation of the base course including installing subdrain systems below sunken loading docks and weep holes in the sidewalls to catch basins.

Soil Erosion

Site-specific erosion control measures should be implemented to address the maintenance of slopes or exposed areas. This may include silt fence, bio-filter bags, straw wattles, or other suitable methods. During construction, all exposed areas should be well compacted and protected from erosion. Temporary slopes or expose areas may be covered with straw, crushed aggregate, or rip in localized areas to minimize erosion.

Finished slopes should be vegetated as soon as possible with erosion-resistant native grasses and plants. Once established, slope vegetation should be properly maintained. Concentrated water should be prevented from flowing over slope faces.

CONSTRUCTION OBSERVATIONS

Satisfactory earthwork performance depends on the quality of construction. Sufficient monitoring of the contractor's activities is a key part ensuring that work is completed in accordance with the construction drawings and specifications. We recommend that True North observe that the subsurface conditions observed during our site investigation are consistent with those encountered during construction, and that foundation subgrades are suitable for placement of structural fill, rebar, or concrete for the new structures.

Clark County may require a final letter of geotechnical compliance before they will finalize a permit. If such a letter is required, a representative from True North MUST observe foundation subgrades PRIOR to concrete being poured for the foundation. If True North does not perform this observation, we cannot provide a final letter of geotechnical compliance, and a permit will not be eligible for final sign-off. It is the owner's responsibility to ensure that True North be notified in a timely manner (i.e., at least 48 hours prior to the required observation) of the need for our services during construction.

CLOSING

We have prepared this report for use by the owner/developer and other members of the design and construction team for the proposed Yacolt Community Church project site. The opinions and recommendations contained within this report are not intended to be, nor should they be, construed as a warranty of subsurface conditions, but are forwarded to assist in the planning/design process.

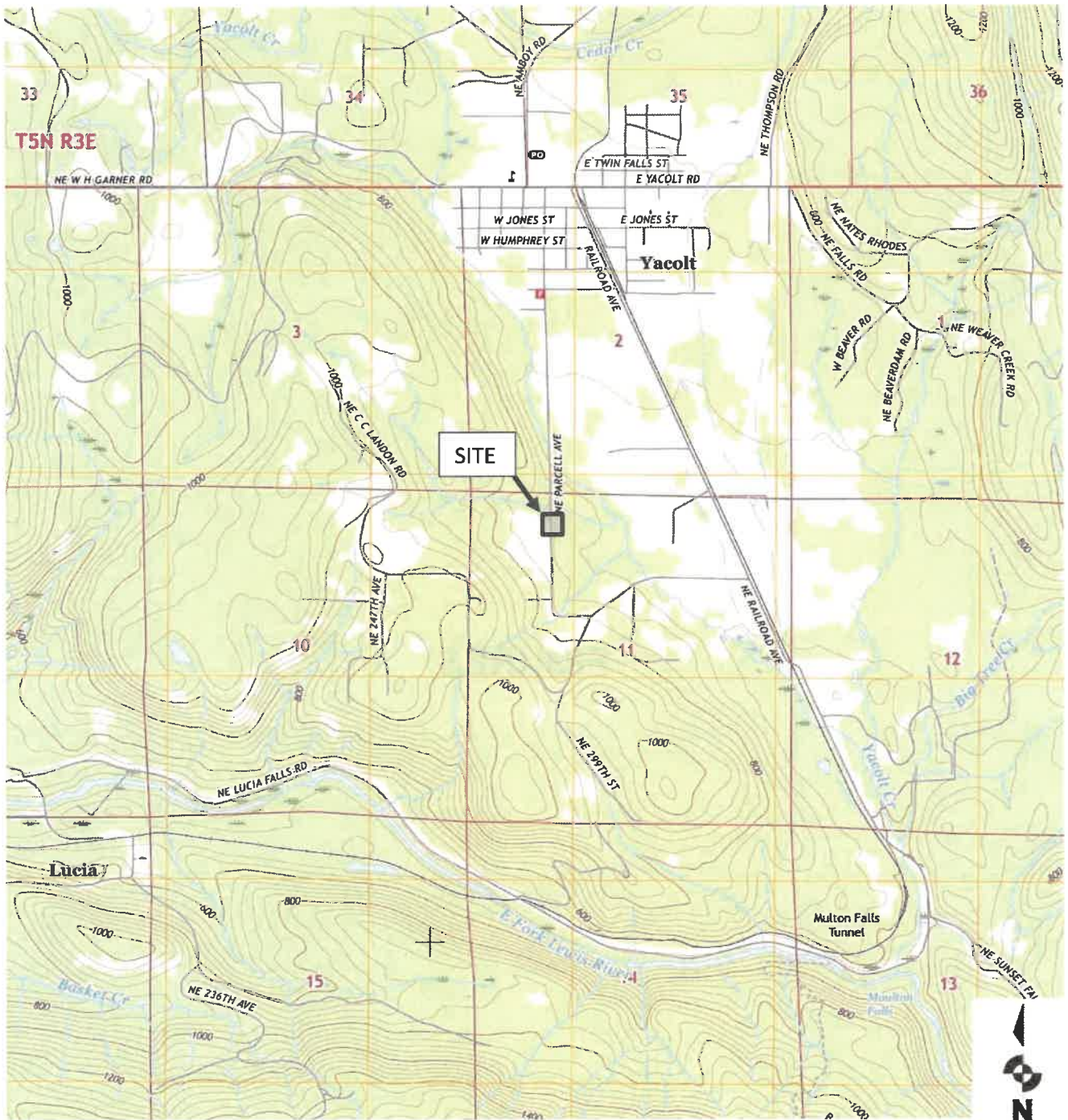
We have made observations based on our explorations that indicate the soil conditions at only those specific locations and only to the depths penetrated. These observations do not necessarily reflect soil types, strata thickness, or water level variations that may exist in other locations. If subsurface conditions vary from those encountered in our site exploration, True North should be alerted to the change in conditions so that we may provide additional geotechnical recommendations, if necessary. The future performance and integrity of the improvements will depend largely on proper initial site preparation, drainage, and construction procedures. Observation by experienced geotechnical personnel should be considered an integral part of the construction process.

The conclusions and recommendations contained in this report are based on our understanding of the currently proposed project, as derived from written and verbal information supplied to us by you. When the design has been finalized, we recommend that we review the design and specifications to see that our recommendations have been interpreted and implemented as intended. If design changes are made, we request that we be retained to review our conclusions and recommendations and to provide a written modification or verification.

Within the limitations of scope, schedule, and budget, our services have been executed in accordance with the generally accepted practices in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

The scope of our services does not include services related to construction safety precautions, and our recommendations are not intended to direct the contractor's methods, techniques, sequences, or procedures, except as specifically described in our report for consideration in design.

FIGURES



Source: "Yacolt Quadrangle, Washington, 7.5-minute series (topographic)", 2017, United States Geologic Survey (USGS).

Not to Scale

<p>TRUE NORTH ◆ GEOTECHNICAL ◆</p>	<p>Yacolt Community Church 34502 NE Amboy Rd Yacolt, WA 98675</p>	<p>Project # 19-0052-1</p>
<p>915 Broadway St # 116 Vancouver, WA 98660 360-558-0005</p>	<p>October 2019</p>	<p>Figure 1 –Vicinity Map</p>



Scale:
1" ≈ 80'



TP-1  Approximate Test Pit Locations, August 09, 2019

Aerial and Topo - Clark County MapsOnline, accessed September 1, 2019.

Site Plan - "AKS – Yacolt Community Church, Preliminary Site Plans", dated March 6, 2019

<p>TRUE NORTH ◆ GEOTECHNICAL ◆</p>	<p>Yacolt Community Church 34502 NE Amboy Rd Yacolt, WA 98675</p>	<p>Project # 19-0052-1</p>
<p>915 Broadway St # 116 Vancouver, WA 98660 360-558-0005</p>	<p>October 2019</p>	<p>Figure 2 –Site Plan</p>

APPENDIX A
Field Exploration Procedures
Laboratory Testing Procedures
Exploration Boring Logs

FIELD EXPLORATION PROCEDURES

General

We explored the subsurface conditions at the site by observing the excavation of six soil test pits (TP-1 through TP-6), to depths ranging from about 6.5 to 10 feet below the existing ground surface (bgs), on August 9, 2019. The test pits were excavated with a track-mounted Taekuchi compact excavator owned and operated by a subcontractor hired by Yacolt Community Church. Test pits, once completed, were backfilled with excavated soils, and tamped back into place.

Soil Sampling

A True North representative observed subsurface explorations to record the soil, rock, and groundwater conditions encountered, and to obtain soil samples. Disturbed soil samples were obtained from the sidewalls of the excavation or the excavator bucket at selected depths throughout the explorations. Soil samples were sealed to retain moisture and returned to our laboratory for additional examination and testing.

Field Classification

Soil samples were initially classified visually in the field. Consistency, color, relative moisture, degree of plasticity, peculiar odors, and other distinguishing characteristics of the soil samples were noted. The terminology used is described in the key and glossary that follow.

Summary Exploration Logs

Results from the test pits are shown in the summary exploration logs. The left-hand portion of a log provides our interpretation of the soil encountered, sample depths, and groundwater information. The right-hand portion of a log shows the results of field and laboratory testing. Soil descriptions and interfaces between soil types shown in summary logs are interpretive, and actual transitions may be gradual.

LABORATORY TESTING PROCEDURES

Soil samples obtained during field explorations are examined in a laboratory, and representative samples may be selected for further testing. The testing program included visual-manual classification and natural moisture content, fines content, and direct shear testing.

Visual Manual Classification

Soil samples are classified in general accordance with guidelines presented in ASTM D2488, *Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)*. The physical characteristics of the samples are noted and the field classifications are modified, where necessary, in accordance with ASTM terminology, though certain terminology that incorporates current local engineering practice may be used. The term which best described the major portion of the sample is used to describe the soil type.

Natural Moisture Content

Natural moisture content is determined in general accordance with guidelines presented in ASTM D2216, *Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass*. The natural moisture content is the ratio, expressed as a percentage, of the weight of water in a given amount of soil to the weight of solid particles.

Fines Content

Fines content testing is performed in general accordance with guidelines presented in ASTM D1140, *Standard Test Methods for Determining the Amount of Material Finer than 75- μ m (No.200) Sieve in Soils by Washing*. The fines content is the fraction of soil that passes the U.S. Standard Number 200 Sieve. This sieve differentiates fines (silt and clay) from sand and gravel. Soil material that remains on the Number 200 sieve is sand. Material that passes the sieve is fines. The test is used to refine soil type.



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TABLE A1 Key to Test Pit and Boring Terminology and Symbols

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTION
			GRAPH	LETTER	
Coarse Grained Soils More Than 50% Material Retained on No. 200 Sieve	Gravel and Gravelly Soils	Clean Gravels (Little or No Fines)		GW	Well-graded Gravels, Gravel-Sand Mixtures, Little or No Fines
		More Than 50% Coarse Fraction Retained on No. 4 Sieve		GP	Poorly-graded Gravels, Gravel-Sand Mixtures, Little or No Fines
	Sand and Sandy Soils	Gravels with Fines (Significant Percentage of Fines)		GM	Silty Gravels, Gravel-Sand-Silt Mixtures
				GC	Clayey Gravels, Gravel-Sand-Clay Mixtures
		Sands with Fines (Significant Percentage of Fines)		SW	Well-graded Sands, Gravelly Sands, Little or No Fines
				SP	Poorly-graded Sands, Gravelly Sands, Little or No Fines
	Sands with Fines (Significant Percentage of Fines)		SM	Silty Sands, Sand-Silt Mixtures	
			SC	Clayey Sands, Sand-Clay Mixtures	
Fine Grained Soils More Than 50% Material Passing No. 200 Sieve	Silts and Clays	Liquid Limit Less than 50 percent		ML	Inorganic Silts and Very Fine Sands, Rock Flour, Silty-Clayey Fine Sands, Clayey Silts
				CL	Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays
				OL	Organic Silts and Organic Silty Clays of Low Plasticity
	Silts and Clays	Liquid Limit Greater than 50 percent		MH	Inorganic Silts Micaceous or Diatomaceous Fine Sand or Silty Soils
				CH	Inorganic Clays of High Plasticity, Fat Clays
				OH	Organic Clays of Medium to High Plasticity, Organic Silts
				PT	Peat, Humus, Swamp Soils
Topsoil					Humus and Duff Layer
Fill					Highly Variable Constituents

Relative Density of Coarse-Grained Soils	
Relative Density	N - Blows per Foot
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	50+

Consistency of Fine-Grained Soils	
Relative Density	N - Blows per Foot
Very Soft	0 - 2
Soft	2 - 4
Medium Stiff	4 - 8
Stiff	8 - 15
Very Stiff	15 - 30
Hard	30 - 50
Very Hard	50+

Key to Sampler Type Symbols

Grab	SPT	Shelby Tube	Dames & Moore	Rock Core



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Project Name Yacolt Community Church		TEST PIT LOG TP-1	
Project Location 34502 NE Amboy Rd, Yacolt, WA 98675		Project No. 19-0052	
Digging Equipment Taekuchi Compact Excavator	Equipment Operator Jes	Date Started 08/09/2019	
Logged By TJN/SP	Checked By TJN	Date Completed 08/09/2019	

Depth (feet)	Sample Type	Sample No.	Graphic Log	USCS Symbol	Soil Description	Water Content, %	Field Testing	Notes and Lab Data
0					Topsoil			
1					Medium stiff, light brown SILT with trace to some sand; low plasticity; fine sand; moist.			
2	G	S-1		ML		33	PP = 2.0	
3					Medium dense to dense, brown poorly-graded SAND with silt; low plasticity; fine sand; moist.			
4	G	S-2		SP/SM	boulders encountered at 4.5' bgs and below	41	PP = 4.0	Infiltration Test @ 4.5ft Fines = 7.6%
5								
6	G	S-3				50		
7					Excavation terminated at 6.5 feet bgs due to equipment refusal. Groundwater not encountered. Backfilled with excavated soils.			
8								
9								
10								
11								
12								
13								
14								
15								



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Project Name Yacolt Community Church		TEST PIT LOG TP-2	
Project Location 34502 NE Amboy Rd, Yacolt, WA 98675		Project No. 19-0052	
Digging Equipment Taekuchi Compact Excavator	Equipment Operator Jes	Date Started 08/09/2019	
Logged By SP	Checked By TJN	Date Completed 08/09/2019	

Depth (feet)	Sample Type	Sample No.	Graphic Log	USCS Symbol	Soil Description	Water Content, %	Field Testing	Notes and Lab Data
0					Topsoil			
1				ML	Medium stiff, light brown SILT with trace to some sand; dry to moist.			
2	G	S-1				26	PP = 1.0	
3				SP/SM	Medium dense, brown poorly-graded SAND with silt and trace gravel; low plasticity; fine to medium sand; subrounded gravel; moist.			
4	G	S-2				30	PP = 3.0	
5					sand content increases with depth			
6				SP	Dense, brown, poorly-graded SAND with trace silt; fine and coarse sand; moist.			
7								
8					proportion of coarse sand to fine sand increases with depth			
9								
10	G	S-3				56		
11					Excavation terminated at 10.0 feet bgs. Groundwater not encountered. Backfilled with excavated soils			
12								
13								
14								
15								



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Project Name Yacolt Community Church		TEST PIT LOG TP-3	
Project Location 34502 NE Amboy Rd, Yacolt, WA 98675		Project No. 19-0052	
Digging Equipment Taekuchi Compact Excavator	Equipment Operator Jes	Date Started 08/09/2019	
Logged By SP	Checked By TJN	Date Completed 08/09/2019	

Depth (feet)	Sample Type	Sample No.	Graphic Log	USCS Symbol	Soil Description	Water Content, %	Field Testing	Notes and Lab Data
0					Topsoil			
1	G	S-1		ML	Medium stiff, light brown SILT with trace sand and organics; fine sand; dry to moist.	30	PP = 2.0	
2								
3	G	S-2		SM	Medium dense to dense, brown silty SAND; low plasticity; fine to medium sand; moist.	39	PP = 3.25	
4								
5	G	S-3		SP	Dense, brown, poorly-graded SAND with silt, cobbles, and boulders; coarse sand; subangular cobbles; subangular boulders; moist.	58		
6								
7								
8					Excavation terminated at 8.75 feet bgs due to practical equipment refusal. Groundwater not encountered. Backfilled with excavated soils.			
9								
10								
11								
12								
13								
14								
15								



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Project Name Yacolt Community Church		TEST PIT LOG TP-4	
Project Location 34502 NE Amboy Rd, Yacolt, WA 98675		Project No. 19-0052	
Digging Equipment Taekuchi Compact Excavator	Equipment Operator Jes	Date Started 08/09/2019	
Logged By SP	Checked By TJN	Date Completed 08/09/2019	

Depth (feet)	Sample Type	Sample No.	Graphic Log	USCS Symbol	Soil Description	Water Content, %	Field Testing	Notes and Lab Data
0				Topsoil			
1				ML	Soft, light brown SILT with sand and organics; low plasticity; fine sand; dry to moist.	28	PP = 0.5	
2	G	S-1						
3					Medium dense, brown sandy SILT; fine sand; moist.	39	PP = 1.25	
4	G	S-2		ML/SM				
5					Medium stiff, light, orange-brown silty SAND; low plasticity; fine sand; moist.			
6						42		
7				SM				
8					sand and moisture content increase with depth			
9								
10	G	S-3			Excavation terminated at 10.0 feet bgs. Groundwater not encountered. Backfilled with excavated soils.			
11								
12								
13								
14								
15								



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Project Name Yacolt Community Church		TEST PIT LOG TP-5	
Project Location 34502 NE Amboy Rd, Yacolt, WA 98675		Project No. 19-0052	
Digging Equipment Taekuchi Compact Excavator	Equipment Operator Jes	Date Started 08/09/2019	
Logged By SP	Checked By TJN	Date Completed 08/09/2019	

Depth (feet)	Sample Type	Sample No.	Graphic Log	USCS Symbol	Soil Description	Water Content, %	Field Testing	Notes and Lab Data	
0					Topsoil				
1		S-1		ML	Light brown SILT with sand and organics; fine sand, dry to moist.	33	PP = 2.5	Infiltration Test @ 4.5ft Fines = 9.2%	
2	G								
3		S-2		SP/ SM	Brown poorly-graded SAND with silt; fine to medium sand; moist.	37	PP = 4.5		
4	G				subrounded cobbles encountered at 4.0 feet bgs and below				
5									
6		S-3		SP	Brown, poorly-graded SAND with silt, cobbles and trace boulders; medium to coarse sand; subrounded cobbles; subrounded boulders; moist.	24			
7									
8	G								
9		Excavation terminated at 8.5 feet bgs due to practical equipment refusal. Groundwater not encountered. Backfilled with excavated soils.							
10									
11									
12									
13									
14									
15									

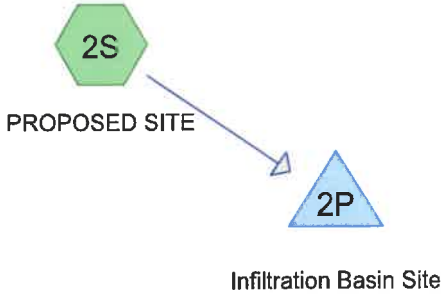
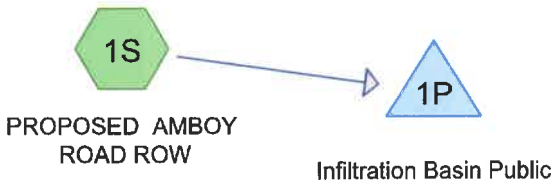


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Project Name Yacolt Community Church		TEST PIT LOG TP-6	
Project Location 34502 NE Amboy Rd, Yacolt, WA 98675		Project No. 19-0052	
Digging Equipment Taekuchi Compact Excavator	Equipment Operator Jes	Date Started 08/09/2019	
Logged By SP	Checked By TJN	Date Completed 08/09/2019	

Depth (feet)	Sample Type	Sample No.	Graphic Log	USCS Symbol	Soil Description	Water Content, %	Field Testing	Notes and Lab Data
0					Topsoil			
1				ML	Soft, light brown sandy SILT with organics; low plasticity; fine sand; moist.	28	PP = 0.5	
2	G	S-1						
3						35	PP = 3.5	
4	G	S-2		SM	Medium dense to dense, brown silty SAND; low plasticity; fine sand; moist.			
5						42		
6					Dense, brown, poorly-graded SAND with silt; fine to coarse sand; moist.			
7				SP				
8								
9	G	S-3						
10					Excavation terminated at 9.5 feet bgs. Groundwater not encountered. Backfilled with excavated soils.			
11								
12								
13								
14								
15								

Appendix E: HydroCAD Analysis



Routing Diagram for 6978 Pond
Prepared by AKS Engineering and Forestry, Printed 3/18/2020
HydroCAD® 10.00-22 s/n 05094 © 2018 HydroCAD Software Solutions LLC

6978 Pond

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.560	98	Imp. (1S, 2S)
0.800	85	Landscape (2S)
3.360	95	TOTAL AREA

6978 Pond

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
3.360	Other	1S, 2S
3.360		TOTAL AREA

6978 Pond

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Page 4

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	2.560	2.560	Imp.	1S, 2S
0.000	0.000	0.000	0.000	0.800	0.800	Landscape	2S
0.000	0.000	0.000	0.000	3.360	3.360	TOTAL AREA	

6978 Pond

Type IA 24-hr 100-YR Rainfall=6.80"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: PROPOSED AMBOY Runoff Area=0.180 ac 100.00% Impervious Runoff Depth>6.55"
Tc=5.0 min CN=0/98 Runoff=0.29 cfs 0.098 af

Subcatchment 2S: PROPOSED SITE Runoff Area=3.180 ac 74.84% Impervious Runoff Depth>6.17"
Tc=5.0 min CN=85/98 Runoff=4.88 cfs 1.636 af

Pond 1P: Infiltration Basin Public Peak Elev=2.90' Storage=0.034 af Inflow=0.29 cfs 0.098 af
Discarded=0.06 cfs 0.078 af Primary=0.00 cfs 0.000 af Outflow=0.06 cfs 0.078 af

Pond 2P: Infiltration Basin Site Peak Elev=4.36' Storage=0.616 af Inflow=4.88 cfs 1.636 af
Discarded=0.77 cfs 1.160 af Primary=0.00 cfs 0.000 af Outflow=0.77 cfs 1.160 af

Total Runoff Area = 3.360 ac Runoff Volume = 1.734 af Average Runoff Depth = 6.19"
23.81% Pervious = 0.800 ac 76.19% Impervious = 2.560 ac

Summary for Subcatchment 1S: PROPOSED AMBOY ROAD ROW

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.29 cfs @ 7.89 hrs, Volume= 0.098 af, Depth> 6.55"

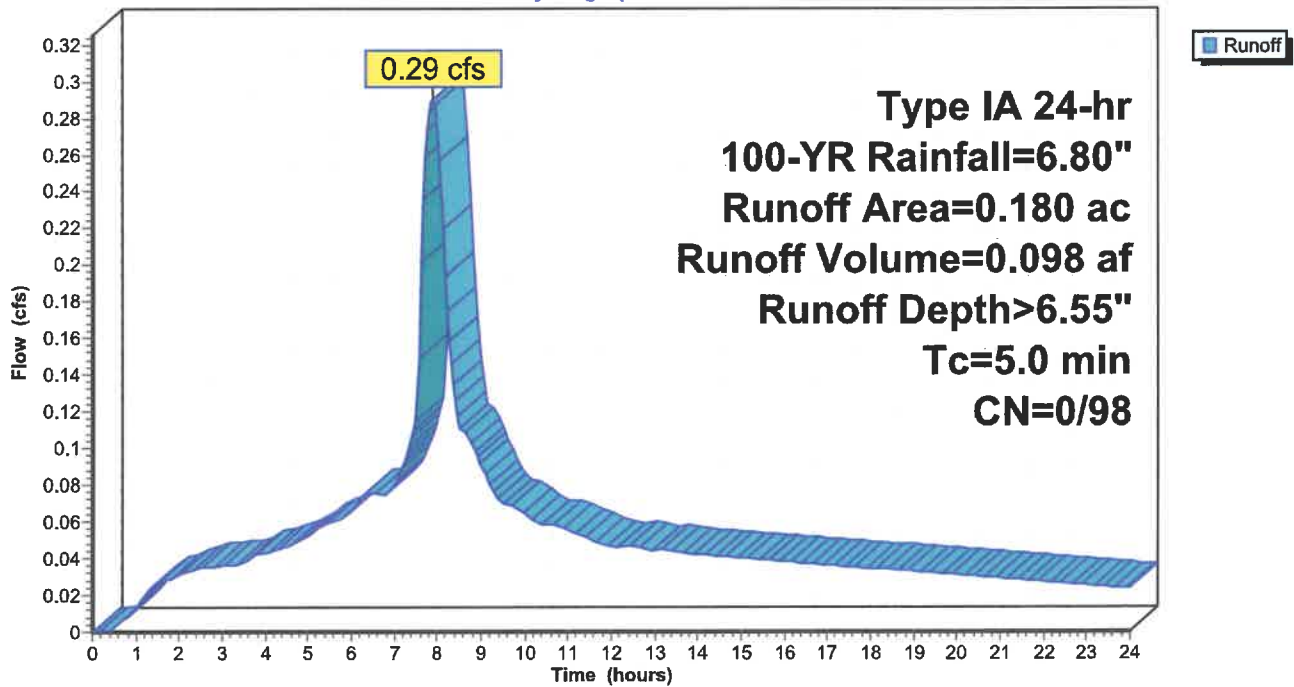
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 100-YR Rainfall=6.80"

Area (ac)	CN	Description
* 0.180	98	Imp.
0.180	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: PROPOSED AMBOY ROAD ROW

Hydrograph



6978 Pond

Prepared by AKS Engineering and Forestry

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Type IA 24-hr 100-YR Rainfall=6.80"

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Summary for Subcatchment 2S: PROPOSED SITE

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 4.88 cfs @ 7.90 hrs, Volume= 1.636 af, Depth> 6.17"

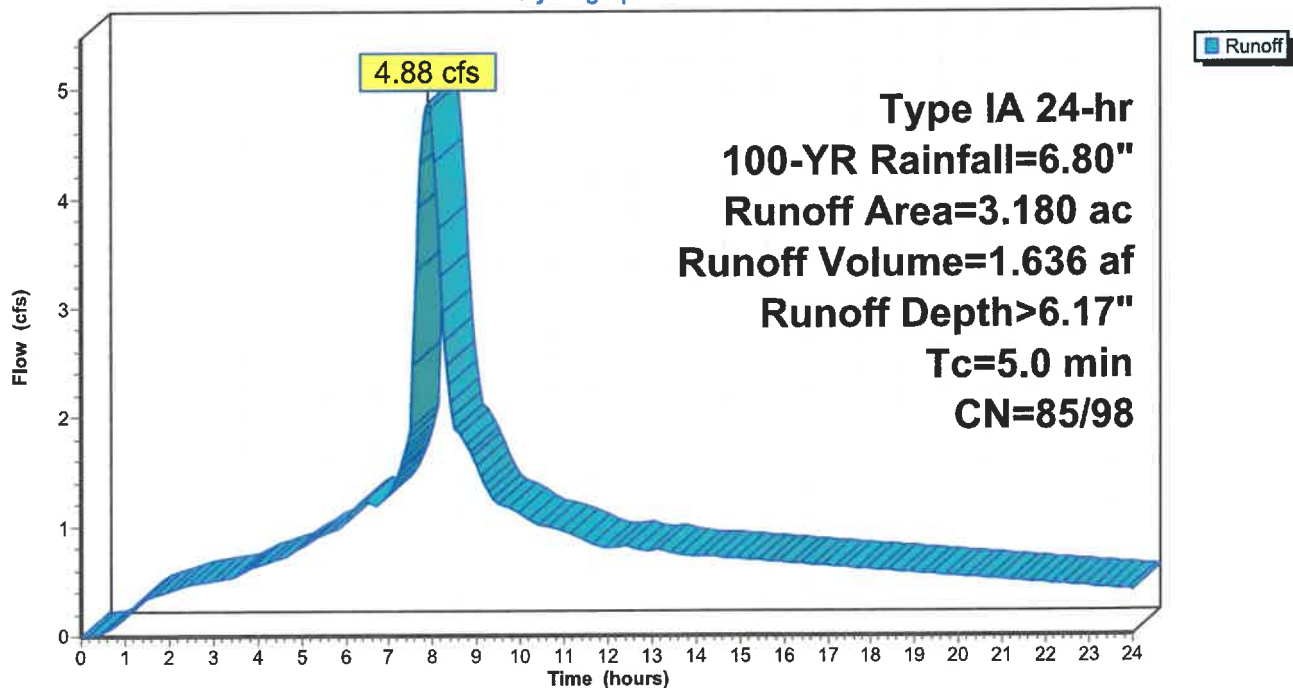
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, $dt= 0.05$ hrs
 Type IA 24-hr 100-YR Rainfall=6.80"

	Area (ac)	CN	Description
*	2.380	98	Imp.
*	0.800	85	Landscape
	3.180	95	Weighted Average
	0.800	85	25.16% Pervious Area
	2.380	98	74.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 2S: PROPOSED SITE

Hydrograph



Summary for Pond 1P: Infiltration Basin Public

Inflow Area = 0.180 ac, 100.00% Impervious, Inflow Depth > 6.55" for 100-YR event
 Inflow = 0.29 cfs @ 7.89 hrs, Volume= 0.098 af
 Outflow = 0.06 cfs @ 10.92 hrs, Volume= 0.078 af, Atten= 81%, Lag= 181.4 min
 Discarded = 0.06 cfs @ 10.92 hrs, Volume= 0.078 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 2.90' @ 10.92 hrs Surf.Area= 0.025 ac Storage= 0.034 af

Plug-Flow detention time= 326.8 min calculated for 0.078 af (80% of inflow)
 Center-of-Mass det. time= 190.9 min (840.1 - 649.1)

Volume #1	Invert	Avail.Storage	Storage Description
	0.00'	0.053 af	10.00'W x 10.00'L x 3.55'H Prismatic Z=4.0

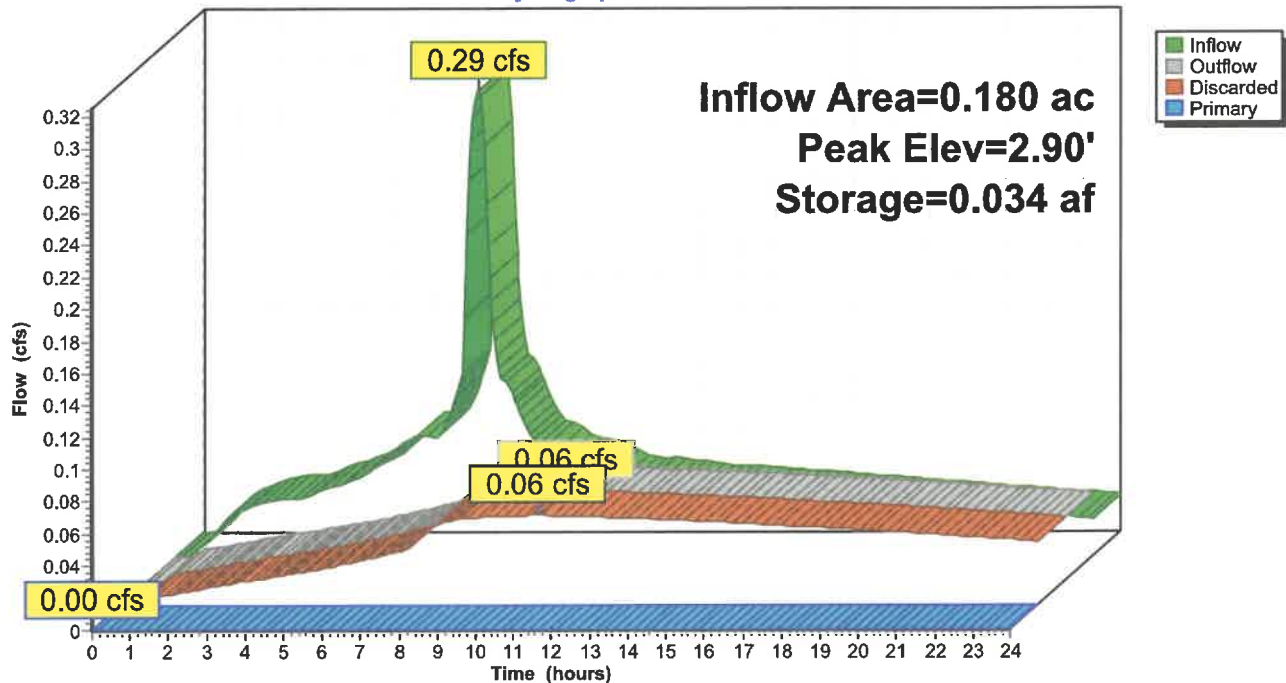
Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	2.200 in/hr Exfiltration over Surface area
#2	Primary	3.54'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.06 cfs @ 10.92 hrs HW=2.90' (Free Discharge)
 ↳1=Exfiltration (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
 ↳2=Orifice/Grate (Controls 0.00 cfs)

Pond 1P: Infiltration Basin Public

Hydrograph



6978 Pond

Type IA 24-hr 100-YR Rainfall=6.80"

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Summary for Pond 2P: Infiltration Basin Site

Inflow Area = 3.180 ac, 74.84% Impervious, Inflow Depth > 6.17" for 100-YR event
 Inflow = 4.88 cfs @ 7.90 hrs, Volume= 1.636 af
 Outflow = 0.77 cfs @ 12.77 hrs, Volume= 1.160 af, Atten= 84%, Lag= 292.0 min
 Discarded = 0.77 cfs @ 12.77 hrs, Volume= 1.160 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 4.36' @ 12.77 hrs Surf.Area= 0.255 ac Storage= 0.616 af

Plug-Flow detention time= 374.6 min calculated for 1.157 af (71% of inflow)
 Center-of-Mass det. time= 192.4 min (857.6 - 665.1)

Volume	Invert	Avail.Storage	Storage Description			
#1	0.00'	0.791 af	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)	
0.00	0.036	489.9	0.000	0.000	0.036	
1.00	0.082	520.2	0.057	0.057	0.093	
2.00	0.131	545.3	0.106	0.163	0.143	
3.00	0.182	570.5	0.156	0.319	0.196	
4.00	0.236	595.6	0.208	0.527	0.252	
5.00	0.292	620.7	0.264	0.791	0.309	

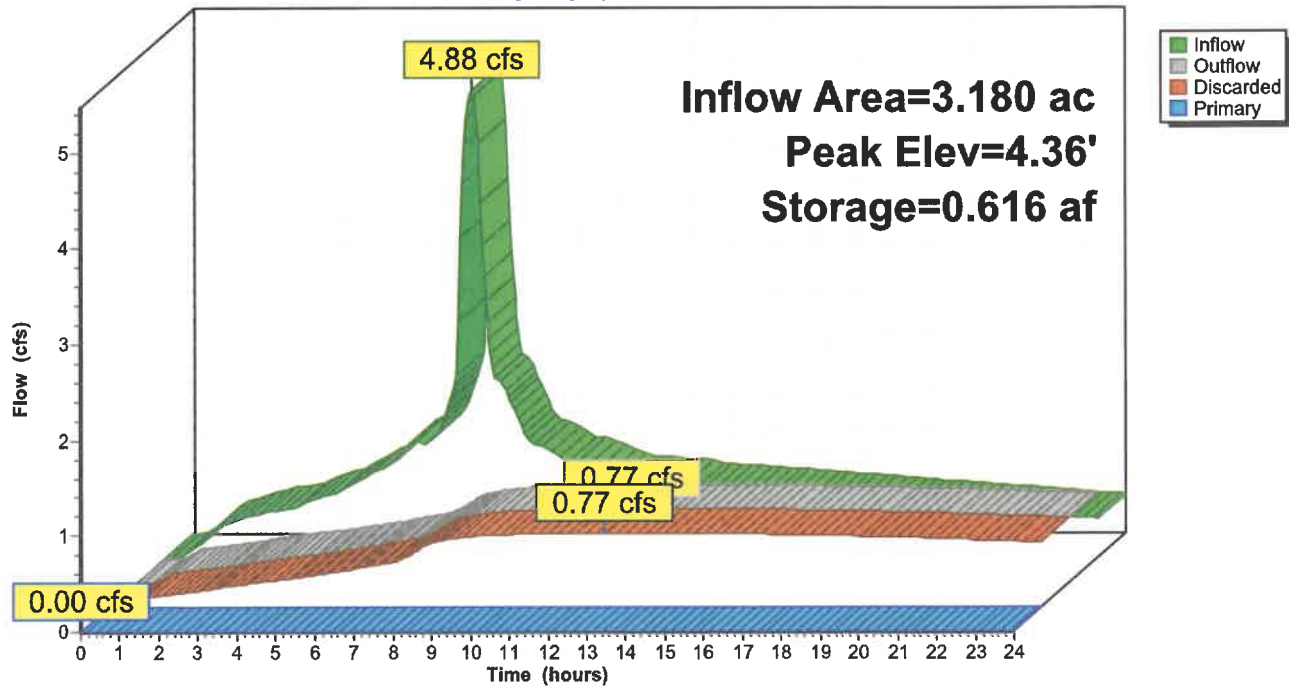
Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	3.000 in/hr Exfiltration over Surface area
#2	Primary	4.40'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.77 cfs @ 12.77 hrs HW=4.36' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.77 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 2P: Infiltration Basin Site

Hydrograph



Appendix F: BMP Details

III-3.6.2 BMP RI.05 Water Quality (WQ) Infiltration Basin

Purpose and Definition

This BMP is a vegetated open impoundment which is designed primarily for runoff treatment purposes and not streambank erosion control. Runoff conveyed to the basin is infiltrated into the underlying soil, where pollutant removal by the soil and vegetative root system takes place. The underlying soil will likely have insufficient permeability to be used for streambank erosion control. Infiltration basins are made by constructing a dam or an embankment, or by excavating a pit or a dugout.

Figure III-3.7 illustrates an infiltration basin.

Planning Considerations

Appropriate soil conditions and the protection of ground water are among the important considerations which may limit the use of the BMP. See Section III-3.3 for a description of General Limitations.

This BMP will typically be located off-line from the primary conveyance/detention system because streambank erosion control is generally not provided. Water Quality Infiltration BMPs must always be preceded by a pretreatment BMP to remove suspended solids that could clog the infiltration soils.

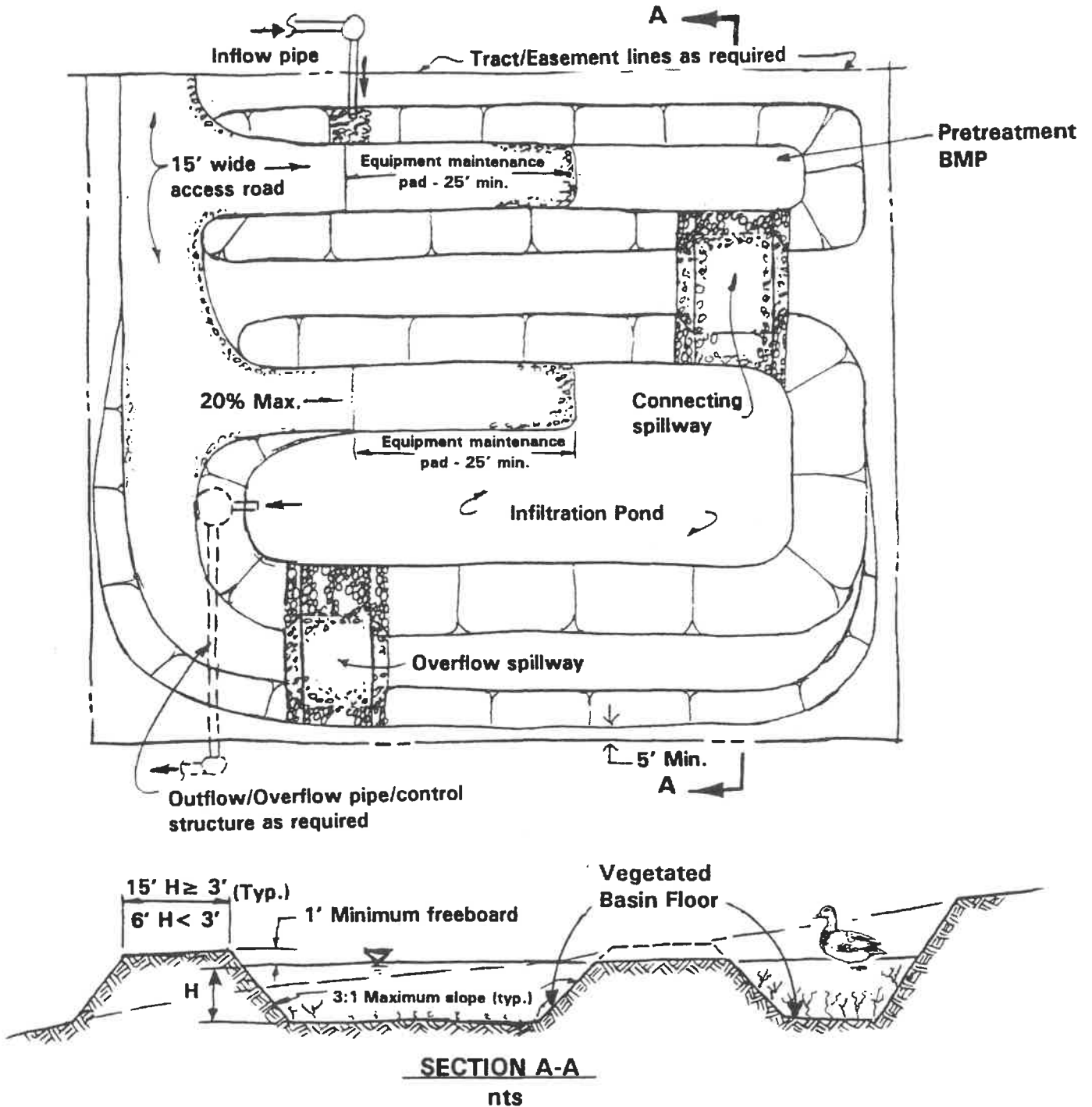
Drainage areas can be up to 50 acres for Water Quality Infiltration Basins. Basin depths are generally from 3 - 12 feet.

Design Criteria

The design procedure described in Section III-3.4 should be used to design an infiltration basin.

- **General** - The construction of structures, materials allowed, accessibility for maintenance, safety measures, easements, and hydraulic design methods shall be the same as those required for detention basins in Chapter III-4.
- **Soils Investigation** - A minimum of one soils log shall be required for each 5,000 square feet of infiltration basin area (plan view area) and in no case less than three soils logs per basin. Each soils log shall extend a minimum of 3 feet in depth below the bottom of the proposed basin, describe the SCS series of the soil, the textural class of the soil horizon(s) through the depth of the log, and note any evidence of high ground water level, such as mottling. In addition, the location of impermeable soil layers or dissimilar soil layers shall be determined.
- **The design infiltration rate, f_d** , will be equal to one-half the infiltration rate found from the soil textural analysis.
- **Pretreatment** - Water Quality Infiltration Basins must be preceded by a pretreatment BMP. See Chapter I-4 for selecting appropriate pretreatment BMPs.
- **Slopes** - Basins should be a minimum of 50 feet from any slope greater than 15 percent. A geotechnical report should address the potential impact of the basin infiltration upon the steep slope.

Figure III-3.7
Infiltration Basin



Note: Detail is schematic representation only. Actual configuration will vary depending on specific site constraints and applicable design criteria.

- Buildings - Basins should be a minimum of 100 feet upslope and 20 feet downslope from any building.
- Surface Area - The infiltration surface area (A_i) used for sizing the basin shall be computed by measuring the surface area (plan view area) below the maximum design water surface.
- Drawdown Time - Water Quality Infiltration basins shall be designed to completely drain stored runoff within one day following the occurrence of the 6-month, 24-hour design storm. Thus, a maximum allowable drawdown time of 24 hours shall be used. This will ensure that the necessary aerobic conditions exists in order to provide effective treatment of pollutants. If a Presettling Basin (BMP RD.10) precedes the infiltration basin, the combined drawdown time for both BMPs should be 24 hours.
- Vegetation - The basin floor and side banks are to be vegetated. See Volume II for criteria on establishing permanent vegetation.

Construction and Maintenance Criteria

Construction Schedule

The sequence of various phases of basin construction shall be coordinated with the overall project construction schedule. A program should schedule rough excavation of the basin with the rough grading phase of the project to permit use of the material as fill in earthwork areas. The partially excavated basin could serve as a temporary sediment trap or pond in order to assist in erosion and sediment control during construction. However, basins near the final stages of excavation should never be used prematurely for runoff disposal. Drainage from untreated, freshly constructed slopes within the watershed area would load the newly formed basin with a heavy concentration of fine sediment. This could seriously impair the natural infiltration characteristics of the basin floor. Final grade of an infiltration basin shall not be attained until after its use as a sediment control basin is completed.

Specifications for basin construction should state the earliest point in construction progress when storm drainage may be directed to the basins, and the means by which this delay in use should be accomplished. Due to the wide variety of conditions encountered among projects, each should be separately evaluated in order to postpone use as long as is reasonably possible.

Excavation

Initial basin excavation should be carried to within 1 foot of the final elevation of the basin floor. Final excavation to the finished grade should be deferred until all disturbed areas in the watershed have been stabilized or protected. The final phase of excavation should remove all accumulated sediment. Relatively light-tracked equipment is recommended for this operation to avoid compaction of the basin floor. After the final grading is completed, the basin floor should be deeply tilled by means of rotary tillers or disc harrows to provide a well-aerated, highly porous surface texture.

Lining Material

A healthy stand of vegetation is to be established on the basin floor and side slopes. This vegetation will not only prevent erosion and sloughing, but will also provide a natural means of maintaining infiltration rates and will provide additional pollution removal. Erosion protection of inflow points to the basin shall also be provided (e.g., riprap, flow spreaders, energy dissipators). Removal

of accumulated sediment is a problem only at the basin floor. Little maintenance is normally required to maintain the infiltration capacity of side slope areas.

Selection of suitable vegetative materials for the basin floor and side slopes to be stabilized, and application of correct amounts of fertilizer and mulches shall be done in accordance with Volume II, Standards and Specifications for Soil Erosion and Sediment Control. Local extension agencies should also be consulted.

Maintenance

Inspection Schedule

- When infiltration basins are first placed into use they should be inspected on a monthly basis, and more frequently if a large storm occurs in between that schedule. During the period October 1 through March 31 inspections shall be conducted monthly. Thereafter, once it is determined that the basin is functioning in a satisfactory manner and that there are no potential sediment problems, inspection can be reduced to a semi-annual basis with additional inspections following the occurrence of a large storm. This inspection shall include investigation for potential sources of contamination.

Sediment Control

- The basin should be designed with maintenance in mind. Access should be provided for vehicles to easily maintain the forebay (presettling basin) area and not disturb vegetation, or resuspend sediment any more than is absolutely necessary.
- Grass bottoms in infiltration basins seldom need replacement since grass serves as a good filter material. If silty water is allowed to trickle through the turf, most of the suspended material is strained out within a few yards of surface travel. Well established turf on a basin floor will grow up through sediment deposits forming a porous turf and preventing the formation of an impenetrable layer. Grass planted on basin side slopes will also prevent erosion.

Vegetation Maintenance

- Maintenance of vegetation established on the basin floor and side slopes is necessary in order to promote dense turf with extensive root growth which enhances infiltration, prevents erosion and consequent sedimentation, and prevents invasive weed growth. Bare spots are to be immediately stabilized and revegetated.
- The use of low-growing, stoloniferous grasses will permit long intervals between mowings. Mowing twice a year is generally satisfactory. Fertilizers should be applied only as necessary and in limited amounts to avoid contributing to the pollution problems, including ground water pollution, that the infiltration basin is there to solve. Consult the local extension agency for appropriate fertilizer types and application rates.

III-3.6.6 BMP RI.15 Roof Downspout System

Purpose and Definition

A roof downspout system is an infiltration trench system intended only for use in infiltrating runoff from roof downspout drains. This BMP is not designed to directly infiltrate any surface water that could transport sediment or pollutants such as from paved areas. Because runoff from rooftops is relatively clean, no treatment is required prior to its discharge to the soil. Figure III-3.17 illustrates a typical roof downspout system.

Planning Considerations - none.

Conditions Where Practice Applies

Roof downspout systems may be used in any situation where it is acceptable to dispose of this runoff by avoiding or replacing the use of direct connections to storm or sanitary sewers, or where such facilities do not exist. Because of their small size, they are well suited for a retrofit in areas where additional runoff control becomes necessary.

Advantages

- In areas where such practices can be used, they may cause a significant reduction in the need for installation of storm sewers and other stormwater runoff control facilities.
- Roof downspout systems are small and relatively simple to install and can be retrofit into subdivisions as necessary.

Disadvantages/Problems

- As with all underground infiltration systems, these systems are difficult to monitor, and may be difficult to replace if they are installed under paved areas.
- If used on single family residences, provisions should be made for maintenance responsibility, perhaps through the homeowner's association.

Specific Limitations

- Roof downspout systems are meant only to be used in areas where there is no significant depositional air pollution. Advice on this should be sought from Ecology or local agencies responsible for managing air quality if the residence is near major sources of air pollution.

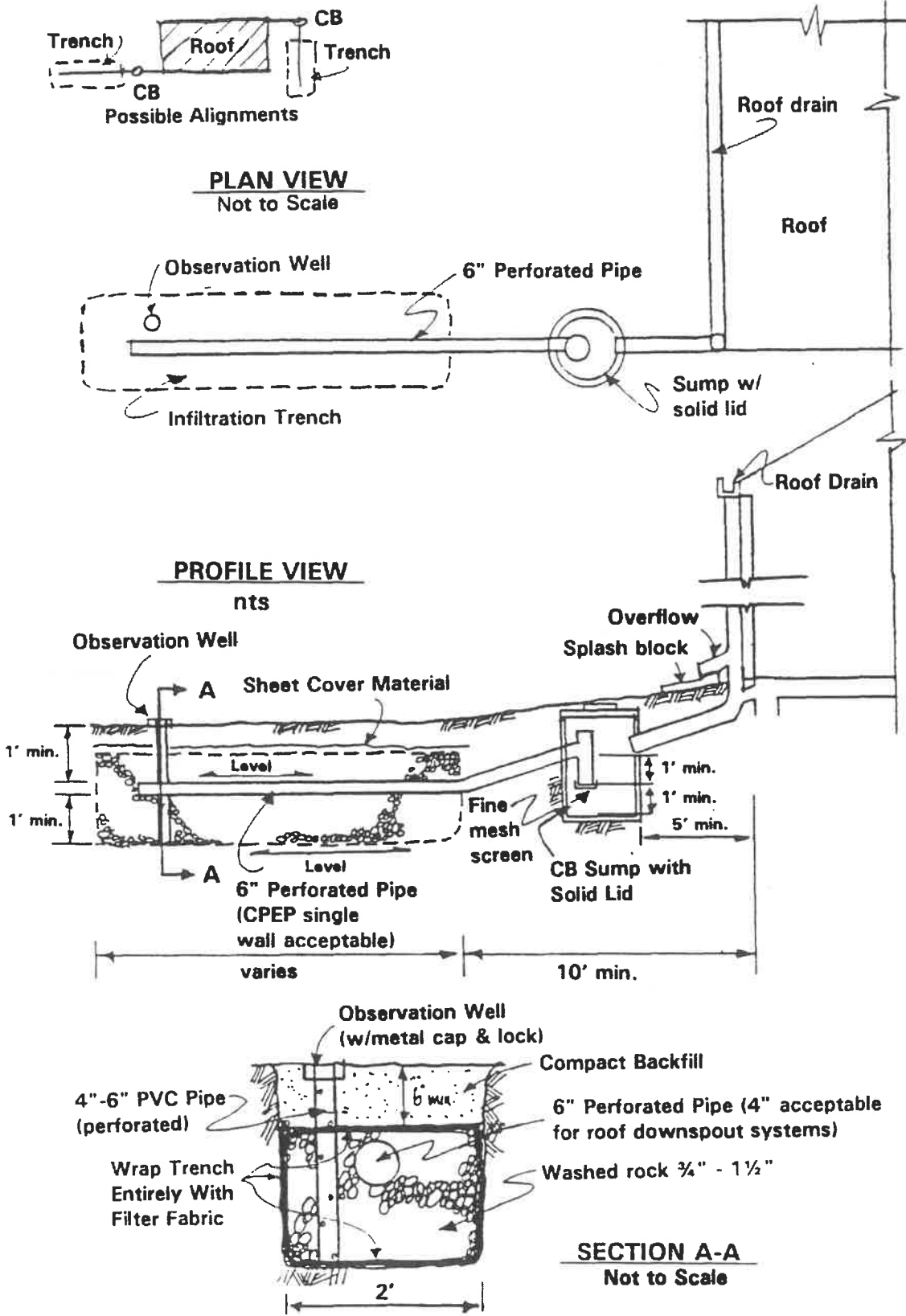
Design Criteria

The design criteria for infiltration trenches also applies to roof downspout systems with the following exceptions and/or additions:

Trenches Installed Under Pavement

- Trenches may be located under pavement provided that a small yard drain\ catchbasin with a grate cover is placed at the end of the trench pipe such that if the trench infiltration capacity is exceeded, the overflow would occur out of the catchbasin at an elevation at least 1 foot below that of any overlying pavement, and in a location which can accommodate the overflow and meet the requirements of Minimum Requirement #2 (Preservation of Natural Drainage Systems).

Figure III-3.17 Roof Downspout System



Other Requirements

- Roof downspout systems shall be a minimum of 10 feet from any structure, property line, or NGPE, and 30 feet from any septic tank or drainfield.
- Roof downspout systems shall be a minimum of 50 feet from any steep slope.
- The length of a roof downspout system should not exceed 100 feet from the inlet sump.
- Each roof downspout system shall have an observation well similar to that described for an infiltration trench. It should extend to the bottom of the trench and be located at a point approximately halfway in length.
- Filter fabric shall be wrapped entirely around the aggregate rock prior to backfilling.

Construction and Maintenance Criteria

Construction Specifications

Construction specifications are identical to those for infiltration trenches.

Maintenance

Maintenance procedures are identical for those of an infiltration trench. It is important to consider the fact that since these facilities are installed on individual structures, provision needs to be made for the maintenance of these structures, especially when the systems are installed on single family dwellings.

Appendix G: Curve Numbers

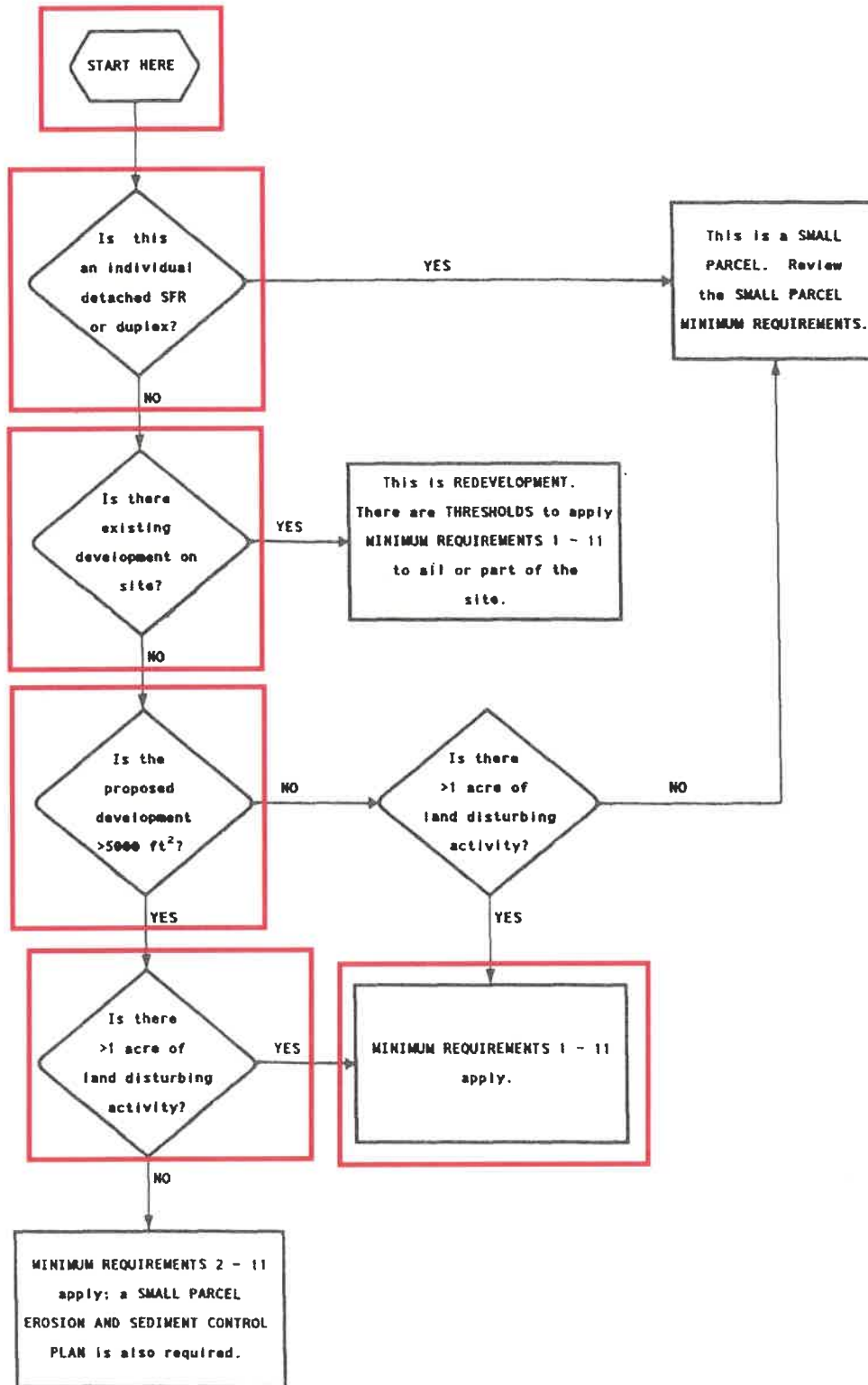
Table III-1.3 SCS Western Washington Runoff Curve Numbers
 (Published by SCS in 1982) Runoff curve numbers for selected agricultural,
 suburban and urban
 land use for Type 1A rainfall distribution, 24-hour storm duration.

LAND USE DESCRIPTION		CURVE NUMBERS BY HYDROLOGIC SOIL GROUP			
		A	B	C	D
Cultivated land(1):	winter condition	86	91	94	95
Mountain open areas:	low growing brush & grasslands	74	82	89	92
Meadow or pasture:		65	78	85	89
Wood or forest land:	undisturbed	42	64	76	81
Wood or forest land:	young second growth or brush	55	72	81	86
Orchard:	with cover crop	81	88	92	94
Open spaces, lawns, parks, golf courses, cemeteries, landscaping.					
Good condition:	grass cover on $\geq 75\%$ of the area	68	80	86	90
Fair condition:	grass cover on 50-75% of the area	77	85	90	92
Gravel roads & parking lots:		76	85	89	91
Dirt roads & parking lots:		72	82	87	89
Impervious surfaces, pavement, roofs etc.		98	98	98	98
Open water bodies:	lakes, wetlands, ponds etc.	100	100	100	100
Single family residential(2):					
Dwelling Unit/Gross Acre	%Impervious(3)				
1.0 DU/GA	15				
1.5 DU/GA	20				
2.0 DU/GA	25				
2.5 DU/GA	30				
3.0 DU/GA	34				
3.5 DU/GA	38				
4.0 DU/GA	42				
4.5 DU/GA	46				
5.0 DU/GA	48				
5.5 DU/GA	50				
6.0 DU/GA	52				
6.5 DU/GA	54				
7.0 DU/GA	56				
PUD's, condos, apartments, commercial businesses & industrial areas					
	%impervious must be computed				
		Separate curve number shall be selected for pervious & impervious portions of the site or basin			

- (1) For a more detailed description of agricultural land use curve numbers refer to National Engineering Handbook, Sec. 4, Hydrology, Chapter 9, August 1972.
- (2) Assumes roof and driveway runoff is directed into street/storm system.
- (3) The remaining pervious areas (lawn) are considered to be in good condition for these curve numbers.

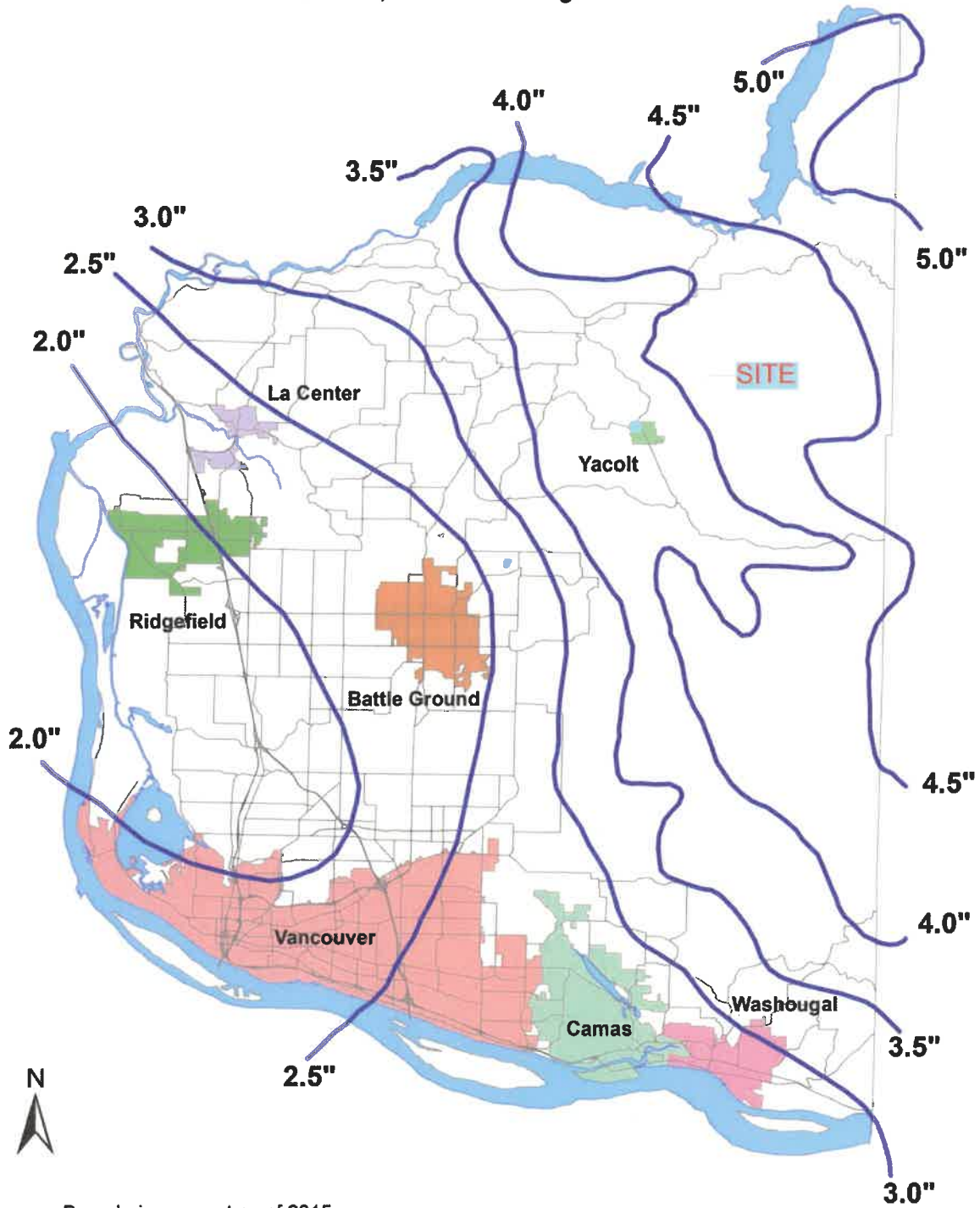
Appendix H: New Development Flow Chart

Figure I-2.1 Flowchart Demonstrating Minimum Requirements



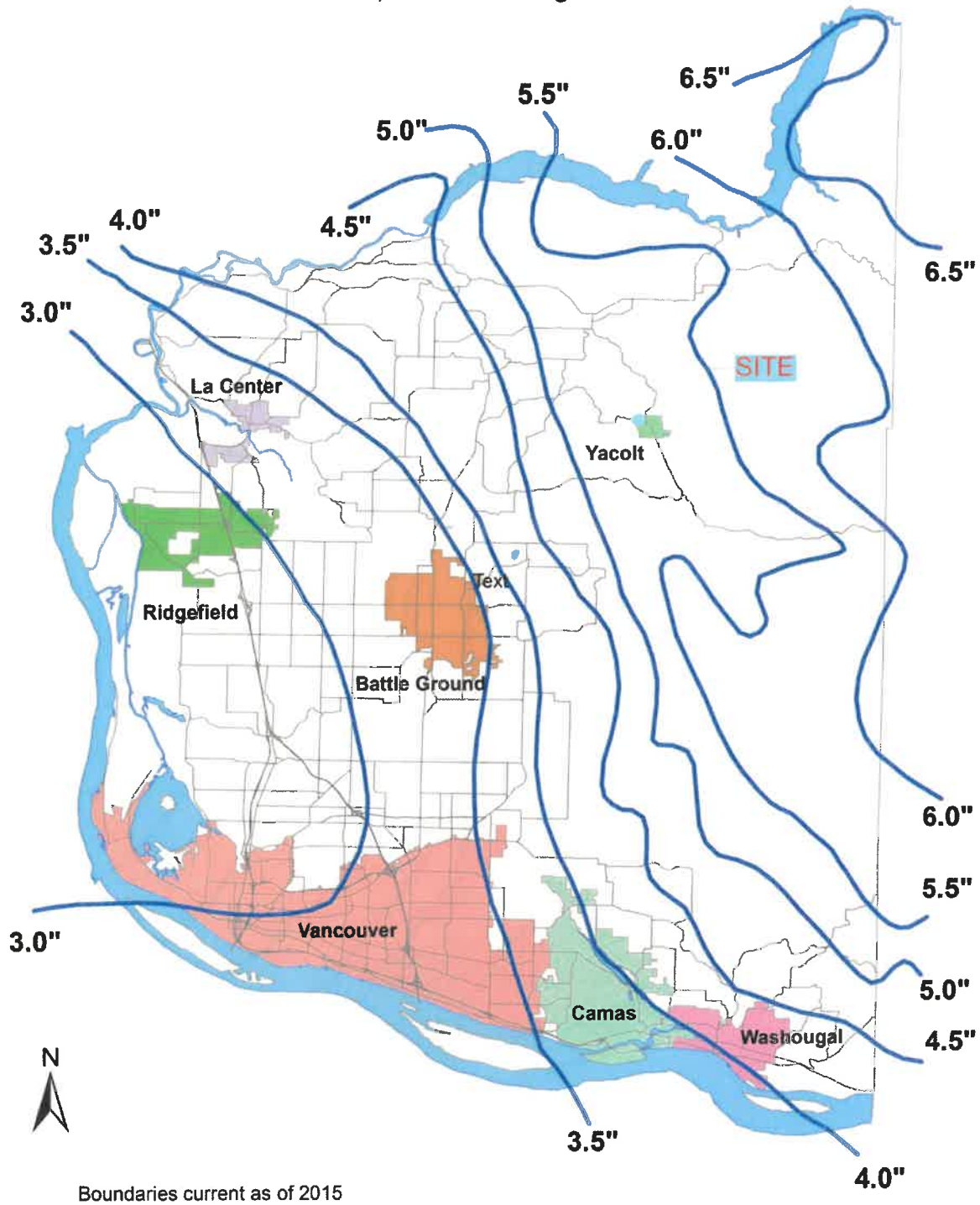
Appendix I: Isopluvial Maps

Isopluvial Map for Clark County 2-Year, 24-Hour Design Storm

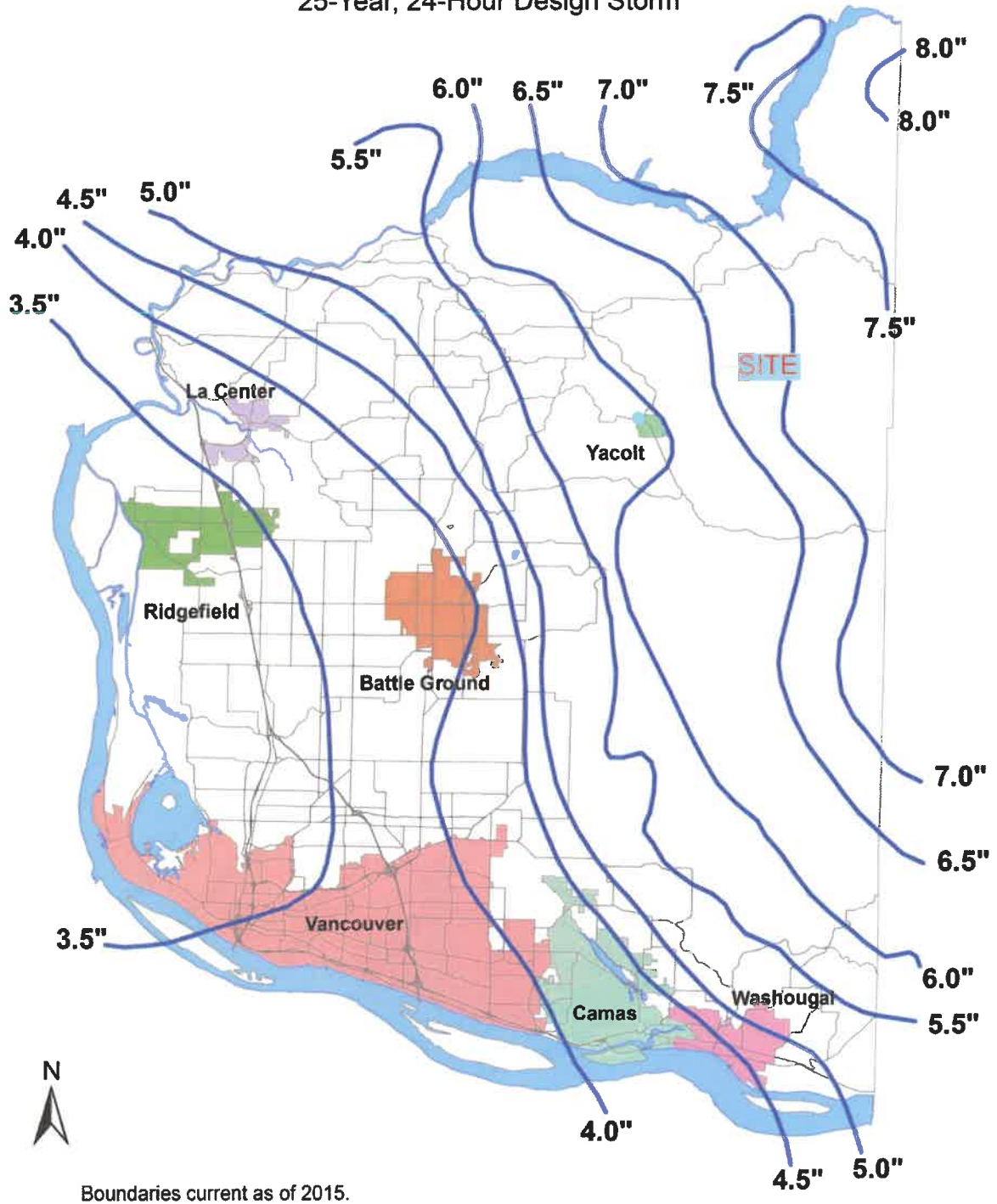


Boundaries current as of 2015

Isopluvial Map for Clark County 10-Year, 24-Hour Design Storm

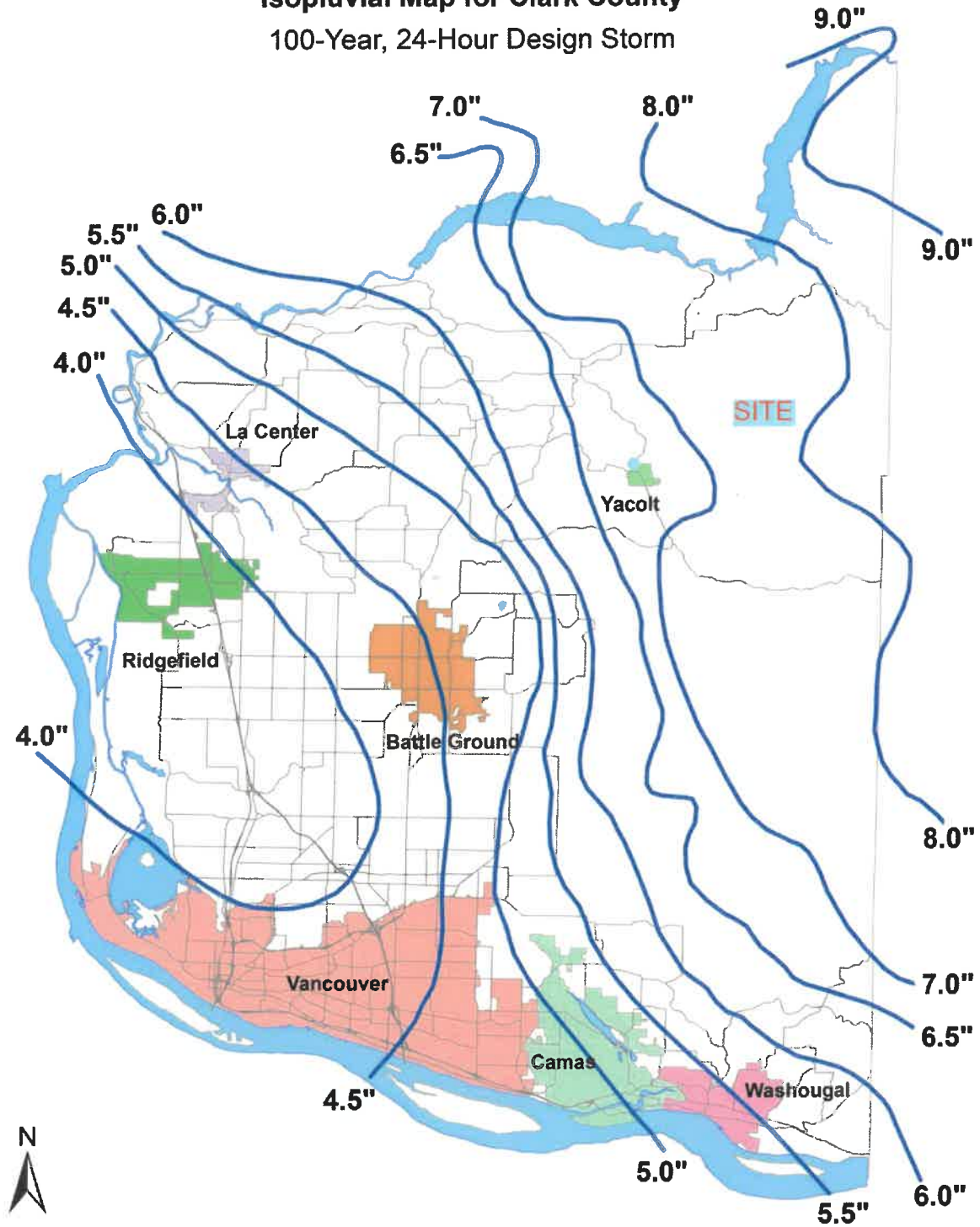


Isopluvial Map for Clark County 25-Year, 24-Hour Design Storm



Boundaries current as of 2015.

Isopluvial Map for Clark County 100-Year, 24-Hour Design Storm



Boundaries current as of 2015.

Town of Yacolt
202 W. Cushman ST P. O. Box 160
Yacolt, WA 98675
(360) 686-3922 FAX (360) 686-3853
Townofyacolt.com



Conditional Use Application

First Name(s): Evangelical Free Church Yacolt Last Name: _____
Mailing Address: PO Box 175 City, State, Zip: Yacolt, WA 98675
Phone Number(s): 360-686-3322 Project Address: 34502 NE Amboy Road Yacolt, WA 98675
Legal Description: SE1/4 Sec 34 TN5 R3E
Parcel No. 279222000

REASON FOR CONDITIONAL USE REQUEST: Construction of a 364 seat church and associated infrastructure.

BUSINESS PLAN:

Name of Business: Yacolt Community Church
Owners of Business: Evangelical Free Church Yacolt
Type of Business: Retail Sales Service **Other**
Type of Merchandise: N/A
Type of Service: Church
Hours of Operation: Monday-Thursday 9:30am-1:30pm and Sunday 9am-12pm
Number of Employees: 1 Full-time, 3 Part-time
Off street Parking Plan: Parking lot included on site plan
Size of Structure to be used for Business: 24,364 square feet
New Structure: Yes Existing Structure: No
Signage Plan: N/A
Exterior Lighting Plan: Lighting plan included in plan set
Environmental Hazards: N/A
Other Comments: _____

There is a Non-refundable filing fee of \$250.00 due at time of application.

This information provided for this document is truthful and accurate to the best of my knowledge. I understand that this statement is null and void if any of the above information is not supplied or is inaccurate.

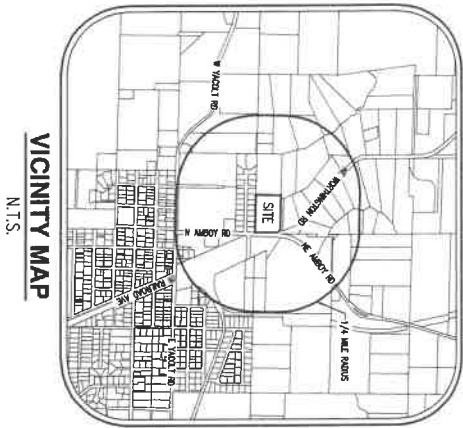
Pole Dore
Signature of Applicant

2/13/20
Date

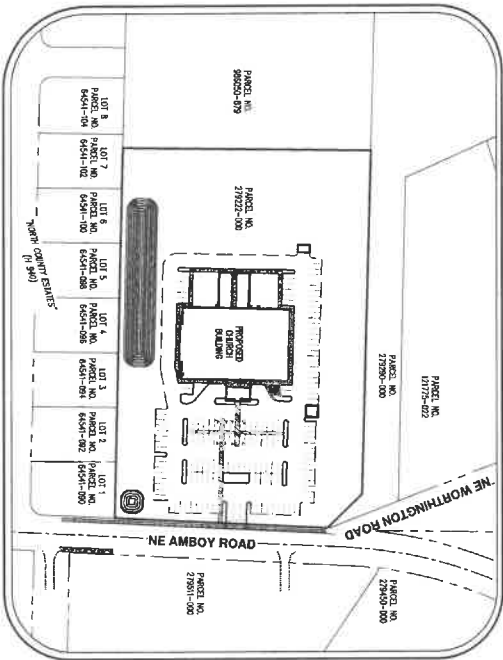
OFFICE USE ONLY	
DATE APPLICATION RECEIVED:	<u>6-24-2020</u>
FILING FEE:	<u>250⁰⁰</u>
APPROVED:	_____
DISAPPROVED:	_____
TO BE REVIEWED IN: 1 YEAR 3 YEARS 5 YEARS 10YEARS 20YEARS 25YEARS	
CONDITIONS OF APPROVAL: _____	

YACOLT COMMUNITY CHURCH

SITE PLAN - CONDITIONAL USE PERMIT



VICINITY MAP
N.T.S.



SITE MAP
N.T.S.

SHEET INDEX

- P1.0 COVER SHEET
- P2.0 EXISTING CONDITIONS PLAN
- P3.0 PROPOSED IMPROVEMENTS PLAN
- P4.0 PROPOSED STORMWATER PLAN
- P5.0 PROPOSED LANDSCAPE PLAN

EXISTING	PROPOSED	EXISTING	PROPOSED
GEODESIC POLE	STORM SEWER CLEAN OUT	EXISTING	PROPOSED
CONCRETE POLE	STORM SEWER LIFT STA. MANHOLE	EXISTING	PROPOSED
PIPE INJECTION	STORM SEWER MANHOLE	EXISTING	PROPOSED
WATER MANHOLE	CURB CUT	EXISTING	PROPOSED
WATER VALVE	4\"/>		

COVER SHEET

YACOLT COMMUNITY CHURCH

SITE PLAN - CONDITIONAL USE PERMIT

YACOLT, WA

AKS ENGINEERING & FORESTRY, LLC
 9600 NE 126TH AVE, STE 2320
 VANCOUVER, WA 98662
 360.882.0419
 WWW.AKS-DWG.COM

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P1.0

PRELIMINARY
NOT FOR CONSTRUCTION

GENERAL NOTES

1. THERE ARE NO EXISTING IMPROVEMENTS OR TRAVEL FACILITIES PROPOSED ON SITE.
2. A 3.5' FOOT ASPHALT DRIVEWAY IS PROPOSED TO PROVIDE ACCESS FROM NE AMBOY ROAD.
3. PROPOSED DRIVEWAYS INCLUDE IMPROVEMENTS ALONG NE AMBOY ROAD AS SHOWN.
4. DRIVEWAYS SHALL BE SET THROUGH THE TOP OF CURB OR ONE OR MORE INCHES WITH BAYDASH BOUNDING.
5. BUILDING ROOF AND FOUNDATION BOUNDS WILL BE CONNECTED TO THE STRUCTURE FACILITY FOR INSULATION OF STRUCTURES.
6. THE SITE WILL BE SERVED WITH PUBLIC WATER BY GUY WVA AN EXTENSION OF THE DRIVEWAY WHICH LIES AT NE AMBOY ROAD.
7. ONE-SITE SERVICE TREATMENT AND DISPOSAL IS PROPOSED.
8. ONE-SITE SERVICE TREATMENT AND DISPOSAL IS PROPOSED.
9. SET SHEET PAVEMENT FOR TREATMENT STRUCTURES FROM AND NOTES.
10. NO BUILDINGS EXIST ON SITE.
11. NE AMBOY ROAD IS AN ACTUAL PAVED ROAD.
12. PROJECT FINISHING SETTINGS TO BE DONE CONSTRUCTION OUT.

SITE STATISTICS (SHEET 097822-003)

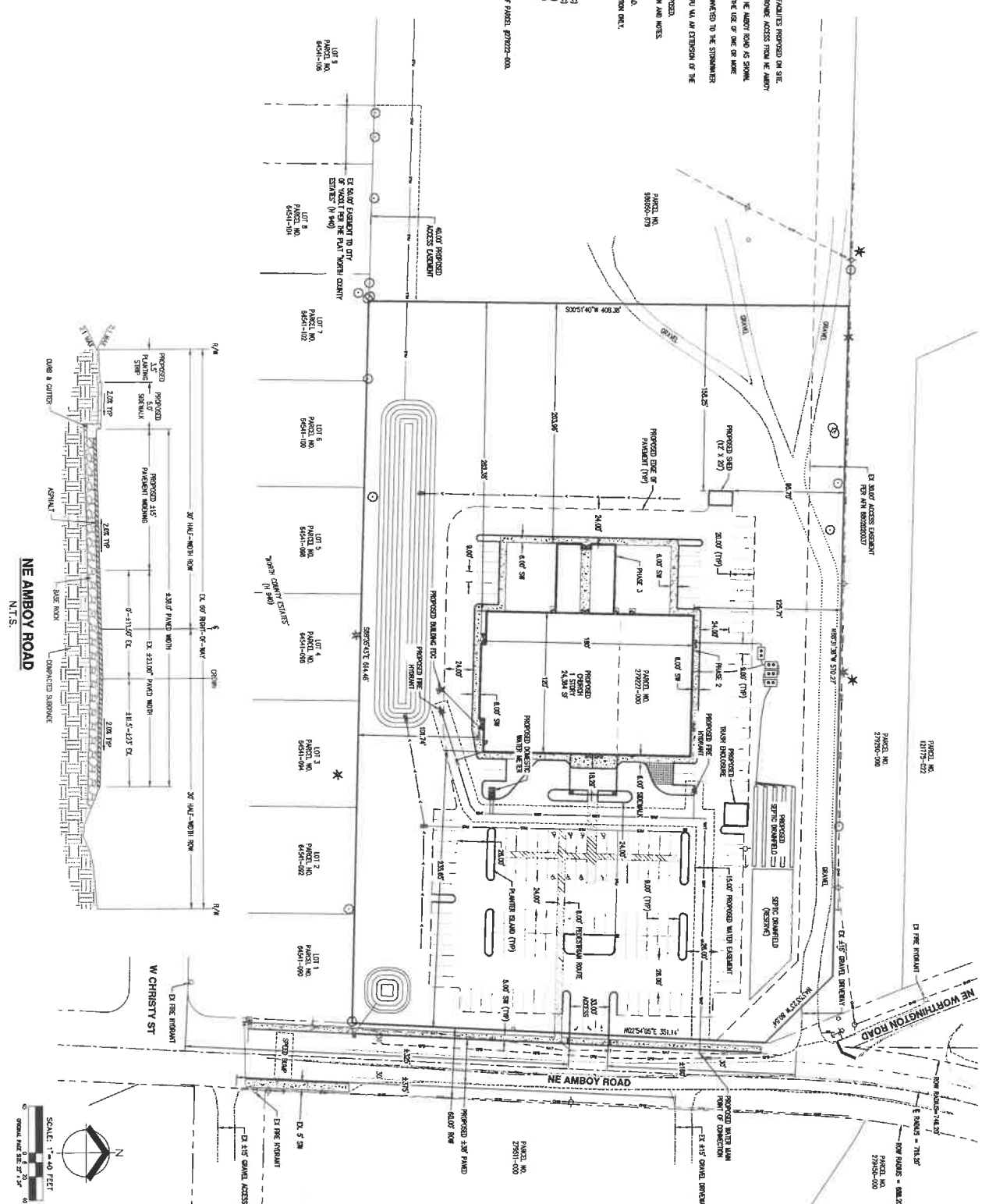
PROPOSED GROSS SITE AREA: 25,390 SF (0.57 AC)
 PROPOSED IMPROVEMENT AREA: 10,424 SF (0.24 AC)
 PROPOSED UNIMPROVED AREA: 14,966 SF (0.34 AC)
 STORMWATER WETLANDS BUFFER: 13,870 SF (0.31 AC)
 PROPOSED PAVEMENT: 13,870 SF (0.31 AC)
 PROPOSED PAVEMENT: 13,870 SF (0.31 AC)

BUILDING STATISTICS

GROSS FLOOR AREA: 24,324 SF
 NET FLOOR AREA: 11,071 SF
 3RD FLOOR

PARKING STATISTICS

EXISTING: 0
 PROPOSED: 10
 TOTAL: 10
 TOTAL: 103



PRELIMINARY NOT FOR CONSTRUCTION

PROPOSED IMPROVEMENTS PLAN YACOLT COMMUNITY CHURCH SITE PLAN - CONDITIONAL USE PERMIT YACOLT, WA

AKS ENGINEERING & FORESTRY, LLC
 9600 NE 126TH AVE, STE 2520
 WACHTON, WA 98652
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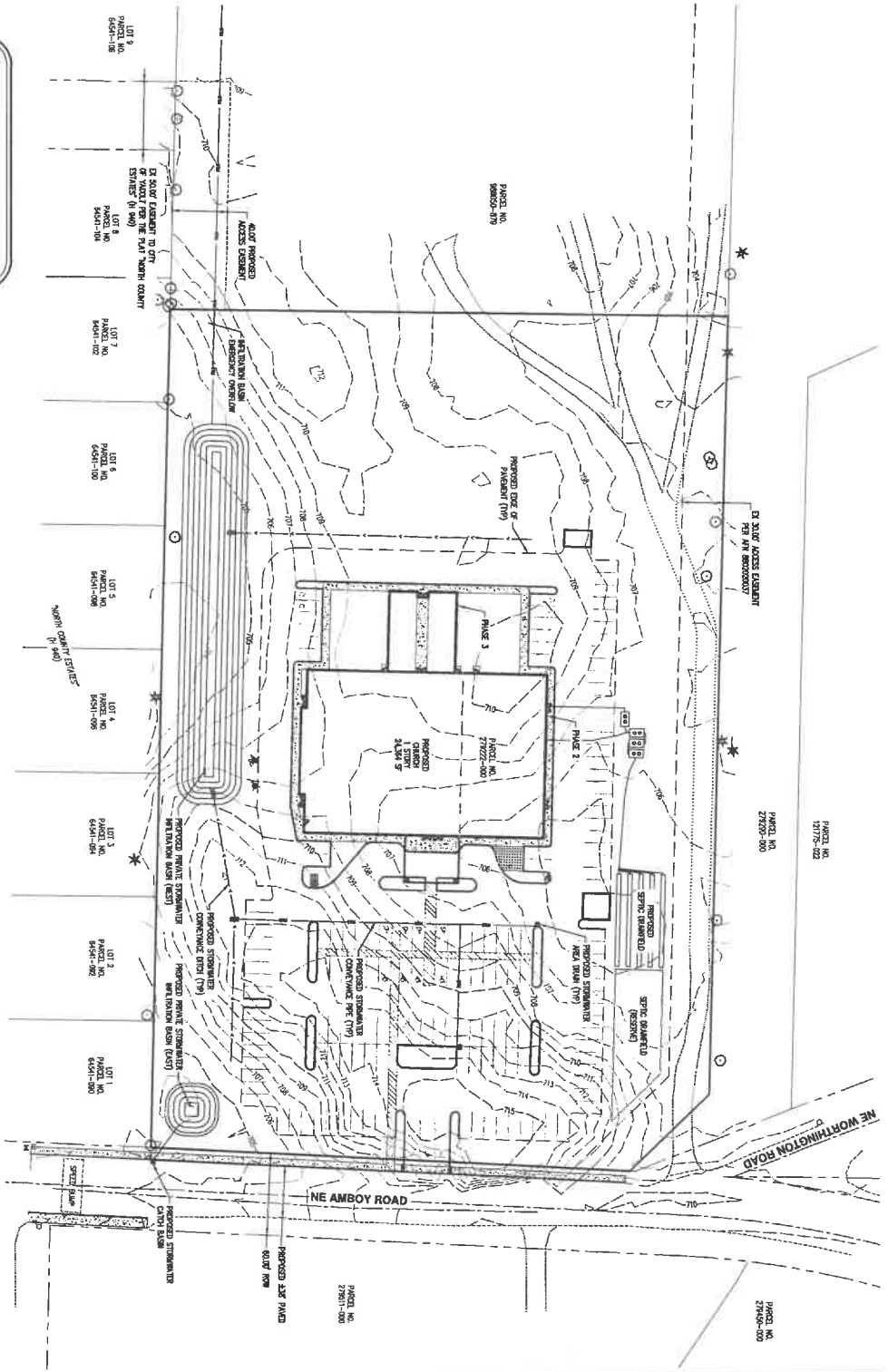
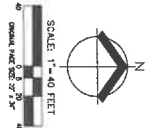
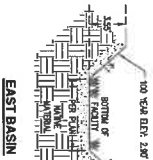
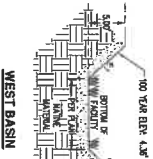
Yacolt COMMUNITY CHURCH

DATE: 3/16/2020
 DRAWN BY: MS
 CHECKED BY: MS
 SCALE: 1" = 40' FEET
 ORIGINAL FILE SIZE: 27' x 34'

P3.0



- GENERAL NOTES**
1. STORMWATER QUALITY AND QUANTITY REQUIREMENTS WILL BE MET THROUGH THE USE OF A BEST QUALITY PRACTITION DESIGN.
 2. ALL STORMWATER WILL BE TREATED ON SITE.
 3. STORMWATER FROM THE ROOF WILL BE CONVEYED TO THE WATER QUALITY PRACTITION DESIGN.



P4.0

AKS ENGINEERING & FORESTRY, LLC
 3600 NE 126TH AVE, SUITE 2520
 VANCOUVER, WA 98662
 360.882.0410
 WWW.AKS-ENG.COM

**PROPOSED STORMWATER PLAN
 YACOLT COMMUNITY CHURCH
 SITE PLAN - CONDITIONAL USE PERMIT
 YACOLT, WA**



AKS

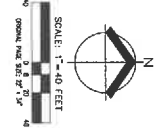
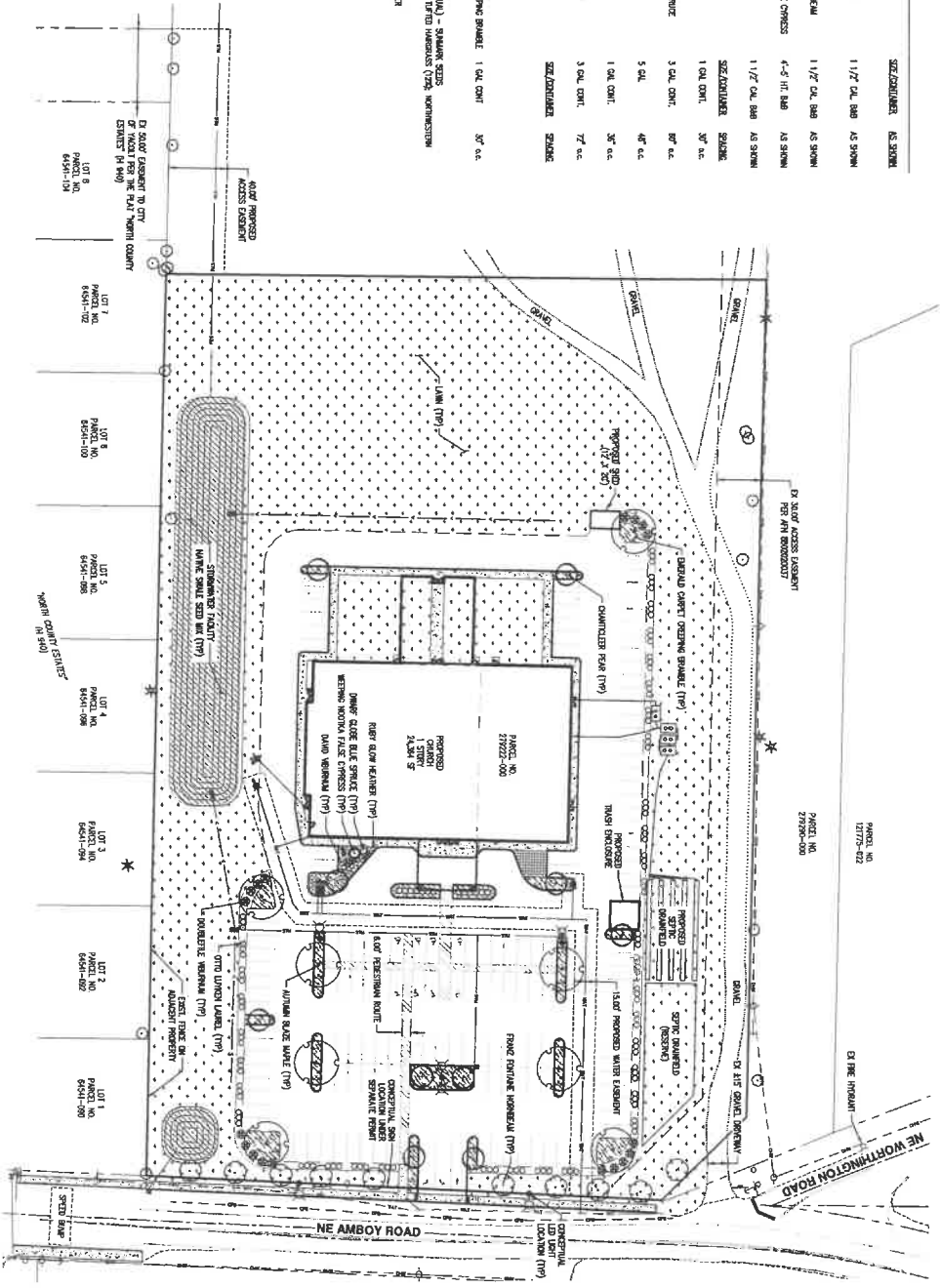
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PLANT SCHEDULE

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE/SPACING	AS SHOWN
	6	ACER N. FREEMAN 'JEFFERY'	NORTH OAK LAUREL	1 1/2' O.L. 8'8" AS SHOWN	AS SHOWN
	10	CYPRIPEDIUM FLORIS	FRONT GARDEN HONEYDEW	1 1/2' O.L. 8'8" AS SHOWN	AS SHOWN
	1	CHAMAECYPARIS NANA	WESTERN REDWOOD	4-5' H.T. 8'8" AS SHOWN	AS SHOWN
	10	PINES OUTERMAY VETS	CHAMPAGNE PINE	1 1/2' O.L. 8'8" AS SHOWN	AS SHOWN
	0	BOTANICAL NAME	COMMON NAME	SIZE/SPACING	AS SHOWN
	20	CALLUNA VETS	RED GUM	1 O.L. 8'8" AS SHOWN	AS SHOWN
	1	PICEA VETS	SPRAY GUM	3 O.L. 8'8" AS SHOWN	AS SHOWN
	10	PINES	OTD LINDEN	5 O.L. 4'8" AS SHOWN	AS SHOWN
	10	VANILLA	DAWN VERNONIA	1 O.L. 8'8" AS SHOWN	AS SHOWN
	10	VANILLA	ROSEAL FLE VERNONIA	3 O.L. 8'8" AS SHOWN	AS SHOWN
	0	BOTANICAL NAME	COMMON NAME	SIZE/SPACING	AS SHOWN
	2	2' x 4' x 8' LAMIN	GRAPE	2' x 4' x 8'	AS SHOWN
	2	6' x 2' x 2' ROBS	ROBS CUTTINGS	6' x 2' x 2'	AS SHOWN
	1	4' x 4' x 4' STRAWBERRY	STRAWBERRY	4' x 4' x 4'	AS SHOWN

GENERAL LANDSCAPING NOTES:

1. ALL PLANTINGS SHALL BE PERFORMED IN ACCORDANCE WITH THE SCHEDULED PLANT SCHEDULE AND THE GENERAL NOTES.
2. ALL PLANTINGS SHALL BE PERFORMED IN ACCORDANCE WITH THE SCHEDULED PLANT SCHEDULE AND THE GENERAL NOTES.
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9. ALL PLANTINGS SHALL BE PERFORMED IN ACCORDANCE WITH THE SCHEDULED PLANT SCHEDULE AND THE GENERAL NOTES.
10. ALL PLANTINGS SHALL BE PERFORMED IN ACCORDANCE WITH THE SCHEDULED PLANT SCHEDULE AND THE GENERAL NOTES.



P5.0

**PRELIMINARY
NOT FOR
CONSTRUCTION**

PROPOSED LANDSCAPE PLAN YACOLT COMMUNITY CHURCH SITE PLAN - CONDITIONAL USE PERMIT YACOLT, WA



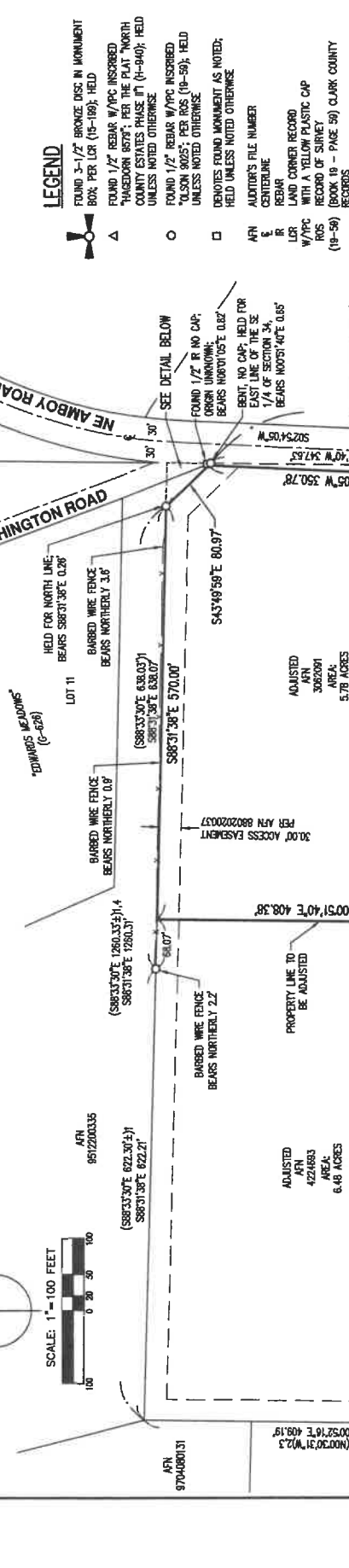
AKS
ENGINEERING & FORESTRY, LLC
5900 NE 128TH AVE, STE 2020
VANCOUVER, WA 98682
360.862.0419
WWW.AKS-ENG.COM

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PRELIMINARY RECORD OF SURVEY

LOCATED IN THE NE 1/4 OF THE SE 1/4 OF SECTION 34,
TOWNSHIP 5 NORTH, RANGE 3 EAST, WILLAMETTE MERIDIAN,
TOWN OF YACOLT, CLARK COUNTY, WASHINGTON
FEBRUARY 17, 2020

PREPARED FOR
EVANGELICAL FREE CHURCH YACOLT
PO BOX 175
YACOLT, WA 98675



ADJUSTED
AFN
4224683
AREA:
6.48 ACRES

ADJUSTED
AFN
3062591
AREA:
5.78 ACRES

ADJUSTED
AFN
951220335

- LEGEND**
- FOUND 3-1/2" BRONZE DISK IN MONUMENT BOX PER LTR (15-199); HELD
 - FOUND 1 1/2" REBAR W/PPC INSCRIBED "MACDONALD 8807", PER THE PLAT "NORTH COUNTY ESTATES PHASE II" (H-940); HELD UNLESS NOTED OTHERWISE
 - FOUND 1/2" REBAR W/PPC INSCRIBED "OLSON 8025"; PER ROS (10-59); HELD UNLESS NOTED OTHERWISE
 - DENOTES FOUND MONUMENT AS NOTED; HELD UNLESS NOTED OTHERWISE
 - AFN AUDITOR'S FILE NUMBER
 - ⊕ CENTERLINE
 - R REBAR
 - W/PPC LAND CORNER RECORD WITH A YELLOW PLASTIC CAP
 - ROS RECORD OF SURVEY (10-59)
 - RECORDS (BOOK 19 - PAGE 59) CLARK COUNTY

NOTE: FOUND MONUMENTS WERE TIED SEPTEMBER, 2019

- REFERENCES**
- (1) RECORD INFORMATION PER ROS (10-59)
 - (2) RECORD INFORMATION PER THE PLAT "NORTH COUNTY ESTATES PHASE II" (H-940)
 - (3) RECORD INFORMATION PER ROS (41-140)
 - (4) RECORD INFORMATION PER ROS (47-15)
 - (5) RECORD INFORMATION PER AFN 4224683

AUDITOR'S CERTIFICATE
FILED FOR RECORD THIS _____ DAY OF _____, 2020 AT _____ M. IN BOOK _____ AT THE REQUEST OF _____ SURVEYING & FORESTRY.

SURVEYOR'S CERTIFICATE
THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY SUPERVISION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEYING ACT AT THE REQUEST OF EVANGELICAL FREE CHURCH YACOLT IN FEBRUARY, 2020.

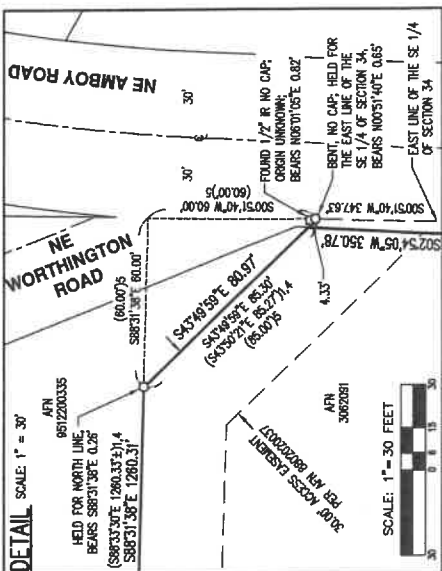
JAMES O. HANNON
PROFESSIONAL LAND SURVEYOR
LICENSE NO. 54000
DATE: 2-18-2020

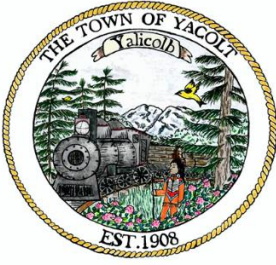


AKS ENGINEERING & FORESTRY, LLC
1000 1ST ST. SW
YACOLT, WA 98678
360.892.0415
WWW.AKS-ENG.COM

JOB NAME: YACOLT CHURCH
JOB NUMBER: 6978
DRAWN BY: CJC
CHECKED BY: JOH
DRAWING NO.: 6978CROSS PRE

NARRATIVE
THE PURPOSE OF THIS SURVEY WAS TO ESTABLISH THE ADJUSTED OUTER BOUNDARY OF THE PROPERTY DESCRIBED IN AUDITOR'S FILE NO. 3062091, CLARK COUNTY DEED RECORDS. THE BASIS OF BEARINGS IS THE EAST LINE OF SECTION 34 AS SHOWN, BEARINGS SHOWN HEREON ARE ON WASHINGTON STATE PLANE, SOUTH ZONE NAD83(2011) EPOCH 2010.0000 DERIVED FROM THE WASHINGTON STATE REFERENCE NETWORK (WERN). THE NORTH LINE OF THE PLAT "NORTH COUNTY ESTATES PHASE II" (H-940), BEING THE SOUTH LINE OF THE SUBJECT TRACT WAS ESTABLISHED BY HOLDING FOUND MONUMENTS PER SAID PLAT. THE WESTERLY SOUTH LINE OF AUDITOR'S FILE NO. 951220335, BEING THE WESTERLY NORTH LINE OF THE SUBJECT TRACT WAS ESTABLISHED BY HOLDING FOUND MONUMENTS PER RECORD OF SURVEY 19-98. THE NORTHEAST CORNER OF THE SUBJECT TRACT WAS ESTABLISHED BY HOLDING DEED DISTANCES PER AUDITOR'S FILE NO. 4224683. THE CENTERLINE OF THE AMBOY ROAD WAS ESTABLISHED BY HOLDING FOUND CENTERLINE MONUMENTS PER THE PLAT "NORTH COUNTY ESTATES PHASE II" (H-940) AND PROJECTING SAID LINE NORTHERLY.





Town of Yacolt Request for Council Action

CONTACT INFORMATION FOR PERSON/GROUP/DEPARTMENT REQUESTING COUNCIL ACTION:

Names: Stephanie Fields, Clerk

**Group
Name:**

Address: 202 W Cushman St

Phone: 360-686-3922

Email Address:

Alt. Phone:

Clerk@townofYacolt.com

ITEM INFORMATION:

Item Title: Council Review of Land Use Application

- Development of 34502 NE Amboy Road, parcel #279222-000

Proposed Meeting Date:

- November 2, 2020

Action Requested of Council:

- Decision on Land Use Application

Proposed Motion:

“I make a motion to approve the Land Use Application for the development of the property at 34502 NE Amboy Road, Parcel #279222-000”

Staff Contact(s):

- Stephanie Fields- Clerk
- Devin Jackson- Engineer

Attachments:

Staff Report and Recommendation to the Town Council



Town of Yacolt

202 W. Cushman Street, Yacolt, WA 98675
(360) 686-3922

Staff Report and Recommendation to the Town Council

Project Name: Yacolt Community Church

Report Date: October 9, 2020

Hearing Date: November 2, 2020

Proposal: The applicant is proposing a site plan for the construction of a 24,364 square foot church building. The applicant is proposing a boundary line adjustment for Parcel #279222-000.

Location: The site is West of N. Amboy Ave and North of W. Christy St. The site is bordered by single family residences to the South, Single-family residential to the North and West, and Parks/Open Space to the East. The site is located SE ¼ of Section 34, T5N, R3E, WM. Assessor Parcel #279222-000.

Applicant/Owner: Yacolt Community Church

Applicant's Rep: AKS Engineering & Forestry, LLC.
Contact: Seth Halling
9600 NE 126th Ave, Suite 2520
Vancouver, WA 98682
360-882-0419
sethh@aks-eng.com

Staff: Bill Ross, Public Works
Katelyn J. Listek, Mayor, (Acting Town Clerk)
Devin Jackson, Town Engineer (*Consultant*)

SEPA: Recommending a Final Determination of Non-Significance (DNS)

Recommendation: **Preliminary Approval** subject to conditions listed at the conclusion of this report.

Date October 12, 2020

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 - 3. Title 16 Environment
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 - B. Service Development Charges, Impact Fees, Credits
 - C. Agency / Public Comments
- IV. RECOMMENDATION**
- V. EXHIBITS**
- VI. APPEAL**

I. BACKGROUND

A. General Site Information

Size of Site: 5.78 acres

Existing Vegetation: Mature trees, shrubs

Existing Structures: No existing structures on site.

Adjacent Land Uses: Surrounded by single family residences, single-family residential, and Park/Open Space

Adjacent Zoning: R1 12.5 Single family residences to the South, Single-family Residential (R1-12.5) to the North and West, and Public Facilities (PF), General Commercial (GC), Community Commercial (C2), and Parks/Open Space (P/OS) to the East.

Street/Classification: N Amboy Avenue is an Arterial under Town of Yacolt jurisdiction

Topography: The site is flat

Wetlands: No mapping indicators

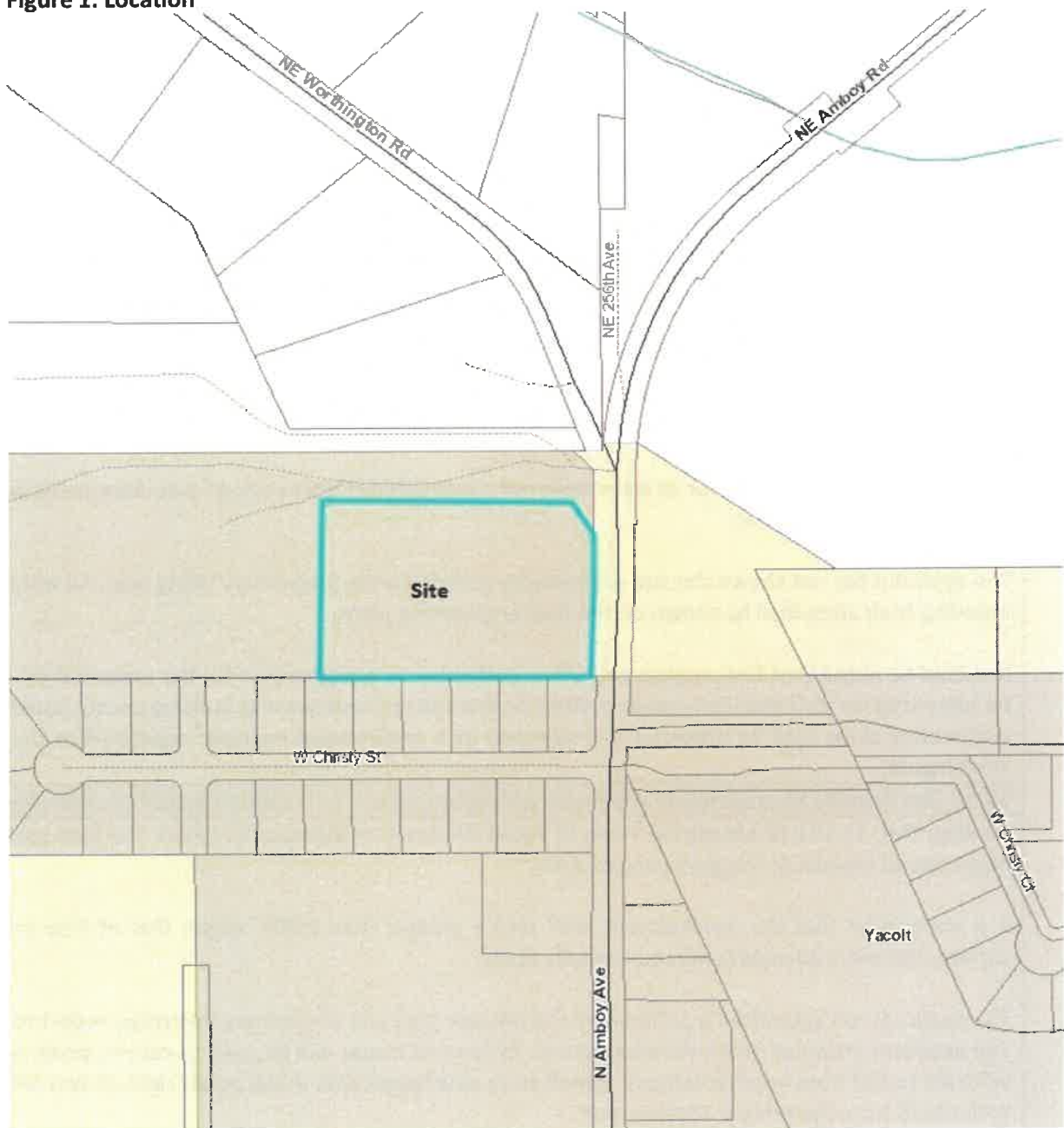
Flood Plain: No mapping indicators

Access Roads: N Amboy Rd

B. Land Use Processing

Application Submitted:	28 Day Counter Complete Determination
Application Technically Complete:	120 Day for Review

Figure 1. Location



II. PROCEDURAL REQUIREMENTS

The authority for this review is described in YMC 18.25 (Single-Family Residential Districts); YMC 13.10 (Stormwater Management and Facility Maintenance); YMC 13.25 (Public Works Construction Standards); YMC 16.05-16.10 (SEPA); and the Town of Yacolt Comprehensive Growth Management Plan 2003-2023 (as updated). The Application appears to comply with YMC 16.20-16.45, (Critical

Areas). The public hearing will be conducted in accordance with rules of procedure adopted by the Yacolt Town Council. The final decision on the Applications will be made by the Yacolt Town Council.

III. APPLICABLE REGULATIONS/ANALYSIS

A. Yacolt Municipal Code (YMC); Town of Yacolt Engineering Standards

1.	Title 13 Public Services
13.05 Water Main Installation	Compliance: Conditionally
<p>Finding: Potable water will be required for this project. Clark Public Utilities is the public water purveyor for properties within the town limits.</p> <p>Currently, an 8-inch water line in N Amboy Avenue runs north/south in the street. The applicant shall make a connection at this location.</p> <p>Easements shall be provided for all water lines not constructed in town right-of-way. Easements are shown on the Preliminary Plan Set.</p> <p>The applicant has not shown the size of the water meters on the preliminary utility plan. All water meters including their sizes shall be shown on the final engineering plans.</p> <p>It should be noted that final engineering plans pertaining to water service for the proposed project shall be submitted for staff and Clark Public Utilities review and approval prior to building permit issuance. Final engineering plans shall be prepared and stamped by a professional engineer registered in the State of Washington.</p>	
13.10 Stormwater Management and Facility Maintenance	Compliance: Conditionally
<p>Finding: YMC 13.10.010 adopts the Town of Yacolt Stormwater Management Plan. The plan specifies the Puget Sound Manual as the governing manual.</p> <p>It is anticipated that the development shall create greater than 2,000 square feet of new impervious surface, therefore all minimum requirements apply.</p> <p>The applicant has submitted a preliminary stormwater plan and preliminary hydrology report for review. The applicant proposes two infiltration basins. Infiltration basins will be used to collect, store, treat, and infiltrate runoff from new hardscapes. Runoff from new hardscapes in the public right-of-way will not mix with runoff from the private development.</p> <p>YMC 13.10.080 - The final plat shall include a note specifying the stormwater facilities are to be privately owned and maintained.</p> <p>It should be noted that final engineering plans for stormwater control and drainage shall be submitted for staff review and approval prior to building permit issuance. Final engineering plans shall be prepared and stamped by a professional engineer registered in the State of Washington.</p>	
13.15 On-site Sewage Disposal Systems	Compliance: Conditionally
<p>Finding: The proposed development will require the construction of on-site sewage disposal systems.</p>	

The systems are subject to State and Clark County Health Department requirements. The applicant shall submit a development review application and include approval letter with the land use application. Additionally, applicant shall show compliance with CARA restrictions on Class V injection wells.

The applicant has shown the location for on-site septic and septic drain field. The applicant has provided an approval letter from the Clark County Health Department.

It should be noted that final engineering plans pertaining to the on-site sewage disposal systems for the proposed project shall be submitted for staff and Clark County Health Department review and approval prior to building permit issuance. Final engineering plans shall be prepared and stamped by a professional engineer registered in the State of Washington.

13.20 Fire Hydrants	Compliance: Yes
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Finding: Applicant shall meet hydrant spacing per Town of Yacolt’s Engineering Standards for Public Works Construction section 5A.06 and YMC 13.20.030.

The town shall require commercial building standards for hydrant spacing.

The existing hydrant on the west side of N Amboy Ave. shall not be considered in the fire hydrant placement requirements, as it is located on the opposite side of an arterial roadway.

Two fire hydrants are proposed on site, each with all portions of the proposed building within 250 feet from these hydrants. These two proposed hydrants are approximately 280 feet apart, satisfying the maximum separation distance of 400 feet.

13.25 Public Works Construction Standards	Compliance: Conditionally
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Finding: The project shall meet the Town of Yacolt’s Engineering Standards for Public Works Construction.

Chapter 1.00 Requirements for Public Improvements

A) All public improvements shall meet Americans with Disabilities Act (ADA) requirements.

2A.04 Erosion Control – *Applicant has provided a preliminary stormwater plan and technical information report with application.*

2B.01 Temporary Erosion Control - *Applicant shall provide an erosion control plan as part of the final engineering drawings.*

3A.01 Access – Applicant is proposing two access points onto N Amboy Road which is considered an arterial. Typical conditions of approval for town standards under 3A.18.B.1 restricts access to arterials. No other access is feasible however access shall be restricted to a single access. Applicant shall provide spacing to adjacent intersections and driveways for the land use application.

Proposed access to be used shall be ±33 ft in width.

3A.07 Street Frontage Improvements – Applicant proposes an increase in pave width for NE Amboy Road, from ±23 feet to ±38 feet. Frontage improvements also include curb and gutter, street illumination, and a concrete sidewalk.

3A.12 Curb and Gutter – Curb and gutter shall be utilized for street edges whenever possible and shall always be used under the following conditions:

- 1) All streets – residential, commercial, or arterial

Curb and Gutter are included and proposed in the application.

3A.14 Concrete Sidewalks – Sidewalk proposed along frontage of development. Sidewalk to tie into existing sidewalk along NE Amboy Road. Proposed building to have concrete sidewalk that wraps around its entirety. All sidewalks, publicly and privately owned, shall meet Yacolt Engineering Standards and ADA requirements.

3A.18 Driveways – Applicant is proposing two driveways onto N Amboy Road which is considered an arterial. Typical conditions of approval for town standards under 3A.18.B.1 restrict access to arterials. No other access is feasible however access shall be restricted to a single access. Applicant provides distance from proposed driveway to Northern and Southern property line. Applicant shall provide spacing to adjacent intersections and driveways for the land use application.

3A.22 Street Illumination – Street lighting is required as a part of all commercial street frontages. *The applicant has not provided a lighting plan. Illuminaires are located on landscaping plan. Calculations shall be included as part of the final engineering plans. A plan compliant with 3B.17 shall be provided as part of the final engineering plans.*

3A.29 Trench Backfill and Restoration – *Applicant shall be required to provide a trench backfill/roadway restoration plan and details as part of the final engineering drawings.*

Trenching will occur on NE Amboy Road for the construction of the proposed water main. Trench backfill and restoration will be completed per the Town of Yacolt Engineering Standards and Washington State Department of Transportation Standard Specifications as required.

It should be noted that the applicant is responsible for submitting an application compliant with the Town of Yacolt’s Engineering standards. Failure to include specific section in this pre-application agenda does not relieve the applicant from their duty to comply with all pertinent standards.

2.	Title 15 Building and Construction	
15.05 Code for the Abatement of Dangerous Buildings		Compliance: Conditionally
Finding: The Town of Yacolt adopts the “Uniform Code for the Abatement of Dangerous Buildings, 1976 Edition.”		
All permits must be secured prior to any construction and all applicable impact and permit fees shall be paid prior to the issuance of the permits.		
15.10 Energy Code		Compliance: Conditionally
Finding: The Town of Yacolt adopts the “Northwest Energy Code 1987 Edition.”		
All permits must be secured prior to any construction and all applicable impact and permit fees shall be paid prior to the issuance of the permits.		
15.15 Flood Damage Prevention		Compliance: Yes

Finding: The Town of Yacolt has adopted a 100-year Flood Plain Map. The proposed development falls outside of identified flood plains.

3.	Title 16 Environment	Compliance: Yes
<p>Division 1: YMC 16.05 - State Environmental Policy Act (SEPA). This standard is met.</p> <p>Division 2: YMC 16.25 - The proposed development is inside a Category 1 Critical Aquifer Recharge Area (CARA). The final user of the site will not engage in any activities on site that are prohibited or require a permit based on this section of the Yacolt Municipal Code; therefore, a CARA permit is not required. This standard is met.</p>		

4.	Title 18 Zoning																													
18.25 Single Family Residential Districts		Compliance: Yes																												
<p>Finding: A. Recognize, maintain and protect low density residential areas. B. Establish higher densities where a full range of community services and facilities are present or will be present at the time of development. C. Provide for additional related issues such as schools, parks and utility uses necessary to serve immediate residential areas.</p> <p><i>YMC 18.25.030(A) allows churches as a conditional use in single-family residential zones with approval from council and a conditional use permit.</i></p> <p><i>YMC 18.25.040 regulates building heights to a maximum height of 35 feet. The proposed building is 29 feet. This standard is met.</i></p> <p style="text-align: center;">Table 4A</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Classification</th> <th rowspan="2">Minimum Lot Area (sq. ft.)</th> <th rowspan="2">Average Lot Width (feet)</th> <th rowspan="2">Average Lot Depth (feet)</th> <th colspan="4">SETBACK</th> </tr> <tr> <th>Front Yard (feet)</th> <th>Side Yard (feet)</th> <th>Opposite Side Yard (feet)</th> <th>Rear Yard (feet)</th> </tr> </thead> <tbody> <tr> <td>R1-10</td> <td>10,000</td> <td>60</td> <td>90</td> <td>25</td> <td>5</td> <td>5</td> <td>25</td> </tr> <tr> <td>R1-12.5</td> <td>12,500*</td> <td>80</td> <td>90</td> <td>25</td> <td>5</td> <td>5</td> <td>25</td> </tr> </tbody> </table> <p><i>YMC 18.25.050 requires minimum lot requirements per zoning classification. The subject site is in the R1-12.5 zone. Dimensional requirements within the residential districts shall be in accordance with Table 4A above. The minimum lot area shall be 12,500 sq. ft. The site has an area of 251,777 sq. ft. All other dimensional standards including yard setbacks, lot widths, and lot depths shall conform to R1-12.5 zoning classification. This standard is met.</i></p> <p><i>YMC 18.25.060 allows for a maximum lot coverage of 50 percent by buildings and structures. Proposed lot coverage for the proposed church and shed is ±26,063 square feet. This is approximately ±10% of the lot. This standard is met.</i></p>			Classification	Minimum Lot Area (sq. ft.)	Average Lot Width (feet)	Average Lot Depth (feet)	SETBACK				Front Yard (feet)	Side Yard (feet)	Opposite Side Yard (feet)	Rear Yard (feet)	R1-10	10,000	60	90	25	5	5	25	R1-12.5	12,500*	80	90	25	5	5	25
Classification	Minimum Lot Area (sq. ft.)	Average Lot Width (feet)					Average Lot Depth (feet)	SETBACK																						
			Front Yard (feet)	Side Yard (feet)	Opposite Side Yard (feet)	Rear Yard (feet)																								
R1-10	10,000	60	90	25	5	5	25																							
R1-12.5	12,500*	80	90	25	5	5	25																							

18.40 Conditional Use Permits	Compliance: Conditionally
<p>Finding: In certain districts, conditional uses may be permitted, subject to the granting of a conditional use permit. Because of their unusual characteristics, or the special characteristics of the area in which they are to be located, conditional uses require special consideration so that they may be properly located with respect to the objectives of this chapter and their effect on surrounding properties.</p> <p><i>YMC 18.25.030(A) allows churches as a conditional use in single-family residential zones with approval from council and a conditional use permit.</i></p> <p>Conditional Use Application has been submitted to the Town of Yacolt and is awaiting approval from council. Upon approval, this section is satisfied.</p>	
18.70 Parking, Access, and Circulation	Compliance: Yes

Finding: Application will be required to meet parking standards and the standards of the Town of Yacolt's Engineering Standards.

Table 11A

USE	MINIMUM NUMBER OF PARKING SPACES
A. Residential	
1. 1-, 2- and 3-unit family dwellings	2 spaces/dwelling unit. Single-family and duplex parking may be tandem (one car behind the other).
2. Multifamily dwelling containing 4 or more dwelling units	1 1/2 spaces/dwelling unit
3. Apartment, hotel, rooming or boarding house	1 1/2 spaces/guest accommodation
4. Residential care facility	1 space/7 residents served under age of 12 1 space/5 residents served ages 12 – 17 1 space/4 residents served ages 18 years or older
5. Retirement housing facilities	1 space/each 3 units
B. Commercial residential	
1. Hotel	1 space/bedroom
2. Motel	1 space/bedroom
3. Clubs/lodges	Spaces to meet the combined requirements of the uses being conducted, such as hotel, restaurant, auditorium, etc.
C. Institutions	
1. Welfare or correctional institutions	1 space/3 beds for patients or inmates
2. Convalescent hospital, nursing home, sanitarium, rest home, home for the aged	1 space/3 beds for patients or residents
3. Hospital	2 spaces/bed
D. Places of assembly	
1. Church	1 space/4 seats, or 8 feet of bench length in the main auditorium

YMC 18.70.020A requires a certain number of parking spaces based on the area of a building. Per Table 11A, above, the proposed church is to provide 364 seats, which requires 91 parking spaces. Proposed plan will be provided 153 parking spaces. This standard is met.

Table 11B

Angle (degrees)	Type	Stall width	Stall depth	Aisle width	Curb length
A		B	C	D	E
0	Compact	8.0	8.0	12.0	22.0
	Standard	9.0	9.0	12.0	22.0
45	Compact	8.0	19.1	14.0	11.3
	Standard	9.0	19.8	13.0	12.7
60	Compact	8.0	20.4	19.0	9.2
	Standard	9.0	21.8	18.0	10.4
70	Compact	8.0	20.6	20.0	8.5
	Standard	9.0	21.0	19.0	9.6
90	Compact	7.5	15.0	24.0	7.5
	Standard	9.0	20.0	24.0	9.0

YMC 18.70.030 requires off-street parking spaces comply with the standards for stalls and aisles, as set for by Table 11B, above. The application proposes that all standard parking stalls are 10 feet wide and 20 feet deep. Proposed compact stalls are 8 feet wide and 20 feet deep or 8.5 feet side and 20 feet deep. Proposed ADA stalls are 9 feet wide and 20 feet deep. The proposed drive aisles are 24 feet in width. This standard is met.

YMC 18.70.040B requires public buildings to provide a loading space per 30,000 square feet of floor area. The proposed church has a floor area of 24,364 square feet and therefore no loading spaces are required. This standard is met.

YMC 18.70.060 requires access and circulation for a proposed development, which shall be improved to the standards in this chapter before the county issues an occupancy permit or final inspection for the development in question. Access is provided from NE Amboy Road through a proposed 33-foot wide driveway. Vehicles will circulate through drive aisles, which have a minimum width of 24 feet. This standard is met.

YMC 18.70.070 requires circulation be provided to pedestrian and bicycle routes. Striped pedestrian routes are proposed to connect the church building to the public right-of-way. Sidewalks are proposed to provide access to the proposed church building. This standard is met.

Parking Lot is defined as a paved surface on private property in the engineering standards.

18.75 Landscaping and Screening	Compliance: Conditionally
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Finding: Landscaping will be required per this section.

Table 12A – Landscaping and Screening Matrix

Zoning of land abutting development site	Zoning of proposed development							
	Single-family		Multifamily		Commercial		Light Manufacturing	
	Separated from site by a street	Not separated by a street	Separated from site by a street	Not separated by a street	Separated from site by a street	Not separated by a street	Separated from site by a street	Not separated by a street
Single-family	None	None	L2 10-ft	L3 5-ft	L2 10-ft	L4 in 15-ft L5 in 10-ft	L3 10-ft	L4 in 50-ft L5 in 40-ft
Multifamily	None	L3 5-ft	L1 5-ft	L1 5-ft	L2 10-ft	L4 in 15-ft L5 in 10-ft	L3 10-ft	L4 in 15-ft L5 in 10-ft
Commercial	L1 5-ft	L3 10-ft	L2 5-ft	L3 10-ft	L2 10-ft	L1 5-ft	L2 10-ft	L3 5-ft
Light Manufacturing	L1 5-ft	L3 50-ft	L2 5-ft	L3 10-ft	L3 10-ft	L2 5-ft	L2 10-ft	L1 5-ft

YMC 18.75.020 requires landscaping and screening matrix dependent upon zoning adjacent to the proposed development. The proposed development is zoned single-family residential, as are the properties to the North, South, and West. No landscaping or screening is required along these site boundaries. The property to the east is separated by NE Amboy Road which is zoned as commercial. This requires a 5-foot wide L1 landscaping along the site’s frontage. Refer to the Table 12A, above. This standard is met.

YMC 18.75.040 requires landscaping and screening for outdoor activity areas and equipment. The final location of equipment is unknown; however, appropriate screening will be installed after equipment installation. Any outdoor activity area within 100 feet from property lines will be screened. Proposed outdoor activity areas are planned to be located over 100 feet from all property lines. This standard is met.

YMC 18.85 requires the addition of signs common to the several zoning districts for preservation of the character of the area, structures, and uses; the needs of residential, commercial, industrial, and agricultural potential; the need for health, safe, and convenient use of all lands, and the conservation and promulgation of values and resources. The requirements include, but are not limited to, standards relating to the number, size, placement, and physical characteristics of signs.

No signage is proposed with this application. This standard is met.

5.	Service Development Charges, Impact Fees, Credits
<p>Fees will be calculated at the time of building permit issuance based on the adopted Fee Schedule at that time. This project doesn’t address any creditable capital infrastructure therefore no credits are available for this project.</p> <p>The Town’s fees and costs to process the applications and matters that are referenced in this Staff Report are recoverable by the Town from the Applicant pursuant to a Cost Recovery Agreement dated June 25, 2020.</p>	

IV. RECOMMENDATION

Staff recommends Preliminary Site Plan approval, Condition Use approval, and Final SEPA Review approval contingent on a conditional use permit approval. Based upon the findings and conclusions herein, the criteria for approval have been satisfactorily met, or shall be met with the conditions of approval, and no significant adverse impacts have been identified.

CONDITIONS OF APPROVAL

A. Prior To Engineering Approval:

1. Submit final engineering plans, for review and approval by staff, pertaining to transportation, sewer, water, grading, erosion control, stormwater, driveways, street lighting, and landscaping prepared and stamped by a registered engineer in the state of Washington. The following statement shall appear on the cover sheet of all plans at a location immediately above or below the developer engineer's professional stamp. **"I hereby certify that these plans, and related design, were prepared in strict conformance with the Town of Yacolt's Engineering Standards."**
2. Submit final engineering plans:
 - a. Showing an ADA compliant sidewalk along N Amboy Ave.
 - b. Containing a combined street landscaping and driveway plan.
 - c. Showing sight distance triangles.
 - d. Containing a street lighting plan detailing a LED decorative cobra type unit for N Amboy Avenue as needed to meet the Yacolt Engineering standards section 3B.17
 - e. Showing the proposed development having its own water service connecting to existing water main along NE Amboy Road. Applicant shall provide the Town with proof of Clark Public Utilities approval of the plans.
 - f. Showing septic locations and dimensions to meet State and Clark County Health Department Standards. Applicant shall provide the Town with proof of Clark County Health Department approval of the plans.
 - g. Showing fire hydrants meeting spacing requirements.
 - h. Showing stormwater facilities that meet the requirements of the Town of Yacolt Stormwater Plan.
 - i. Showing grading and erosion control in conformance with applicable Town standards and standard construction details.

3. A photometric plan shall be done for all access points, intersections, frontage roads out to centerline, and any existing lights to ensure that proposed lights meet the standards of Yacolt Engineering Standards section 3B.17.
4. Submit proof of Clark County Health Department approval.
5. Submit proof of Clark County Fire District approval.
6. Submit proof of Clark Public Utilities approval.
7. Submit a stormwater report that addresses all requirements of the Town of Yacolt Stormwater Plan.
8. Submit a SWPPP that meets the requirements of the Town of Yacolt Stormwater Plan.

B. Prior To Construction of The Site:

1. Receive signed and approved engineering plans from the Town of Yacolt.
2. Receive an approved ROW permit from the Town of Yacolt
3. Submit a surety bond meeting the requirements of Engineering Standards section 1.10 Securities.
4. Submit a Certificate of Liability Insurance.
5. Erect and conduct erosion control measures consistent with the approved Erosion Control Plan and Town of Yacolt erosion control standards.
6. Submit evidence that an individual on-site has successfully completed formal training in erosion and sediment control by a recognized organization acceptable to the Town.
7. Conduct a pre-construction conference with Town staff. Contact Town Hall to schedule an appointment.
8. If any cultural resources are discovered in the course of undertaking the development activity, the State Office of Historic Preservation and Archaeology and the Town of Yacolt must be notified.

C. Prior To Creation of Impervious Surface:

1. Except roofs, the stormwater treatment and control facilities shall be installed in accordance with the approved final engineered plans and in accordance with the Town of Yacolt Stormwater Plan.

D. Prior To Engineering Acceptance:

1. Construct all public improvements, if applicable, and go on a walkthrough with Town of Yacolt Staff and Engineer and correct any deficiencies as determined by staff and Engineer.
2. A letter shall be provided by the applicant showing that fire flow requirements can be met.
3. Submit complete sets of as-built drawings for all required public improvements for streets and roads, stormwater drainage and control, sanitary sewer and water services, as applicable prior to the issuance of the occupancy permit for review and approval by the Town Engineer. Upon acceptance by the Engineer, submit prior to the issuance of the occupancy permit, one (1) Mylar set, one (1) full size paper set, two (2) 11x17 paper sets of As-Built record drawings and one thumb drive version of the as-built drawings in AutoCAD, and PDF formats.

E. Prior To Final Plat Approval:

1. Construct all required public improvements and gain engineering acceptance or provide appropriate bonding.
2. Submit a final plat:
 - a. That shows easements for public utilities not located in the right-of-way.
 - b. That shows 5' public utility easement along all frontage lines.
 - c. With the following note: "No fences are allowed in the sight distance triangle."
 - d. With the following note: "All utilities are to be located outside of the sidewalk section and to be underground where possible."
 - e. With the following note: "The Town of Yacolt has no responsibility to improve or maintain the private roads contained within or private roads providing access to the property described in this plat."
 - f. With a note describing the maintenance responsibilities of each lot owner.
 - g. With a note specifying the parties responsible for long-term maintenance of stormwater facilities.
 - h. With a note stating: "All new structures shall conform to the setbacks and building heights of the R1-12.5 zoning district."
 - i. That shows where any control monuments have been placed.
 - j. That shows the dedication of any public roads.
3. Submit a two-year stormwater maintenance contract for review and/or approval.

4. Applicant shall possess a valid conditional use permit at the time of final plat approval.

V. EXHIBITS

Because of the size of the exhibits, they are not included with this report, but listed below. The documents are available for review at the Yacolt Town Hall, 202 W Cushman St, Yacolt, WA 98675.

Yacolt Community Church	
EXHIBIT #	DESCRIPTION
A	Staff Report and Recommendation dated September 22 nd , 2020
B	Application

VI. APPEAL

The Decision of the Town Council is appealable to the Washington Superior Court per RCW 36.70C.

