

Sewall Wetland Consulting, Inc.

Po Box 880
Fall City, WA 98024

Phone: 253-859-0515

January 20, 2017

Lawrence Vandenberg
Puyallup School District
323 12th Street NW
Puyallup, Washington 98371

RE: Critical Areas Report Addendum – Northwood School
SWC Job #16-190

Dear Lawrence,

This report describes our observations of any jurisdictional wetlands, streams and buffers on or within 100' of the Northwood School property (Parcels #0420091011 & #0420091014) located on the north side of 24th Street East, in the City of Edgewood, Washington (the "site").



Vicinity Map of site

Specifically, the site consist of two parcels with a total area of 20.0 acres located in the NW ¼ of Section 9, Township 20 North, Range 4 East of the Willamette meridian in Pierce County Washington.

METHODOLOGY

A delineation of the site was conducted in 2008-2009 by Landau Associates and confirmed as accurate by the City of Edgewood at that time. A single Category III wetland was noted on the southeast corner of the site. An existing gravel sewer access road borders the west side of the averaged buffer of the Category III wetland.

This present study is to confirm the accuracy of the previous delineation and to confirm that conditions have remained the same.

Ed Sewall of Sewall Wetland Consulting, Inc. inspected the site on October 25, 2016. The site was reviewed using methodology described in the *Washington State Wetlands Identification Manual* (WADOE, March 1997). This is the methodology currently recognized by the City of Edgewood and the State of Washington for wetland determinations and delineations. The site was also inspected using the methodology described in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987), and the *Western Mountains, Valleys and Coast region Supplement* (Version 2.0) dated June 24, 2010, as required by the US Army Corps of Engineers. Soil colors were identified using the 1990 Edited and Revised Edition of the *Munsell Soil Color Charts* (Kollmorgen Instruments Corp. 1990).

Soil colors were identified using the 1990 Edited and Revised Edition of the ***Munsell Soil Color Charts*** (Kollmorgen Instruments Corp. 1990).

OBSERVATIONS

Existing Site Documentation.

As previously mentioned, a critical area study was conducted by Landau Associates delineating a Category III wetland on the southeast corner of the site. This was confirmed as accurate by the City.

In 2011, Sewall Wetland Consulting again confirmed this wetland delineation as accurate and prepared a mitigation plan enhancing portions of this Category III wetland for a City sewer project. Enhancement included portions of the wetland, as well as the buffer which extended west to the existing gravel sewer access road.

Observations

As previously observed in past studies, the site contains an existing elementary school with associated lawn, playground, outbuildings and paved access road and parking areas. A storm pond exists on the south end of the site.

Wetland A

Wetland A is an emergent, wetland that is identical in configuration to the previous delineations. As a result there was no need to re-flag the wetland. This wetland extends off-site to the east near its center.

The wetland is dominated by reed canary grass with scattered Canadian thistle.

Soil pits excavated throughout the wetland revealed a dark (10YR 2/2) silt loam with few fine faint redoximorphic concentrations. Soils were moist during our fall site visit.

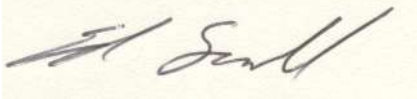
Using the US Fish and Wildlife Wetland Classification Method (Cowardin et al. 1979), Wetland A would be classified as PEM1E (palustrine, emergent, persistent, saturated).

Using the City of Edgewood Wetland Rating Form, this wetland scored a total of 8 points which indicates a Category III wetland. Category III wetlands typically have a 50' buffer measured from the wetland edge

(EMC 14..30.060.A). An existing legally established roadbed for the sewer line is located along the west side of the wetland. The eastern edge of the roadbed is the limits of the buffer from this wetland.

If you have any questions in regards to this report or need additional information, please feel free to contact me at (253) 859-0515 or at esewall@sewallwc.com .

Sincerely,
Sewall Wetland Consulting, Inc.

A handwritten signature in black ink on a light yellow background. The signature appears to be 'Ed Sewall' written in a cursive, flowing style.

Ed Sewall
Senior Wetlands Ecologist PWS #212

Attached: Rating Form
Site Survey

REFERENCES

Cowardin, L., V. Carter, F. Golet, and E. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service, FWS/OBS-79-31, Washington, D. C.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1. U. S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mississippi.

Muller-Dombois, D. and H. Ellenberg. 1974. Aims and Methods of Vegetation Ecology. John Wiley & Sons, Inc. New York, New York.

Munsell Color. 1988. Munsell Soil Color Charts. Kollmorgen Instruments Corp., Baltimore, Maryland.

National Technical Committee for Hydric Soils. 1991. Hydric Soils of the United States. USDA Misc. Publ. No. 1491.

Reed, P., Jr. 1988. National List of Plant Species that Occur in Wetlands: Northwest (Region 9). 1988. U. S. Fish and Wildlife Service, Inland Freshwater Ecology Section, St. Petersburg, Florida.

Reed, P.B. Jr. 1993. 1993 Supplement to the list of plant species that occur in wetlands: Northwest (Region 9). USFWS supplement to Biol. Rpt. 88(26.9) May 1988.

Edgewood Municipal Code

USDA NRCS & National Technical Committee for Hydric Soils, September 1995. Field Indicators of Hydric Soils in the United States - Version 2.1



1. EQUIPMENT USED: TOPCON QS ROBOTIC TOTAL STATION
2. THIS SURVEY WAS PERFORMED BY FIELD TRAVERSE WITH THE FINAL RESULTS MEETING OR EXCEEDING THE CURRENT TRAVERSE STANDARDS CONTAINED IN W.A.C. 332-130-090. ALL MEASUREMENTS WERE MADE WITH A TOPCON QS ROBOTIC TOTAL STATION IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S SPECIFICATIONS.
3. IN ACCORDANCE WITH THE REVISED CODE OF WASHINGTON (R.C.W.) 58.09 AND THE WASHINGTON ADMINISTRATIVE CODE (W.A.C.) 332-130, THIS SURVEY MAY DEPICT OCCUPATIONAL INDICATORS THAT DIFFER FROM THE DEEDED LOT LINES. THESE INDICATORS, IF AT ALL PRESENT, MAY REPRESENT A POTENTIAL FOR CLAIMS OF UNWRITTEN TITLE. THIS SURVEY DOES NOT PURPORT TO RESOLVE SUCH ITEMS.
4. FIELD WORK PERFORMED IN AUGUST 2016, UNDER SITTS & HILL JOB NUMBER 17046.
5. UTILITIES AS SHOWN HEREON ARE BASED ON FIELD SURVEY OBSERVATION OF UTILITY LOCATE SERVICES PERFORMED BY MOUNTAIN VIEW LOCATING SERVICES, LLC, IN AUGUST 2016 FOR THIS SURVEY. THIS HAS BEEN SUPPLEMENTED BY RECORD INFORMATION PROVIDED BY SITTS & HILL ENGINEERS UNDER PROJECT NUMBERS 12769 & 12896. RECORD UTILITY LINES SHOWN HEREON ARE DEPICTED WITH A DASHED LINEDTYPE AS SHOWN IN THE LEGEND. UTILITIES OTHER THAN SHOWN EXIST. THIS SURVEY IS NOT TO BE CONFUSED WITH A UTILITY LINE IN MIDDLE OF TWO DASHED LINES WHICH IS TO REPRESENT THREE LINES BEING LOCATED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR DOES CERTIFY THAT THEY ARE SHOWN AS ACCURATELY AS POSSIBLE FROM FIELD SURVEY AND PAINTED UTILITY LOCATE LINES. COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA IS CONSISTENT WITH QUALITY LEVEL (B) OF THE ASCE STANDARD GUIDELINES 38-02.

THE LAND IN THE COUNTY OF PIERCE, STATE OF WASHINGTON
DESCRIBED AS FOLLOWS:

THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF THE
NORTHEAST QUARTER AND THE WEST HALF OF THE SOUTHWEST
QUARTER OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER
OF SECTION 9, TOWNSHIP 20 NORTH, RANGE 4 EAST OF THE W.M.

EXCEPT THE SOUTH 30 FEET OF SAID WEST HALF FOR 24TH STREET
EAST (MICKELSON COUNTY ROAD).

THE EAST HALF OF THE SOUTHWEST QUARTER OF THE SOUTHEAST
QUARTER OF THE NORTHEAST QUARTER OF SECTION 9, TOWNSHIP 20
NORTH, RANGE 4 EAST OF THE W.M.

EXCEPT THE SOUTH 30 FEET FOR 24TH STREET EAST (MICKELSON COUNTY ROAD).

SITUATE IN THE CITY OF EDGEWOOD, COUNTY OF PIERCE, STATE OF WASHINGTON.

1. FIRST AMERICAN TITLE INSURANCE COMPANY DATED AUGUST 15, 2016
GUARANTEE NUMBER 2709912
2. RECORD OF SURVEY, AFN 200604255002
3. RECORD OF SUREY, AFN 9210260268

EXCEPTION NUMBER	AFN	DESCRIPTION
1.	9810140295	UTILITY EASEMENT AGREEMENT; AFFECTS PARCEL A
2.	9309090308	MAINTENANCE AGREEMENT; AFFECTS PARCEL A
3.	9210260268	CONDITIONS, NOTES, EASEMENTS, PROVISIONS AND/OR ENCROACHMENTS CONTAINED OR DELINEATED ON THE FACE OF THE SURVEY; AFFECTS PARCEL B
4.	200604255002	CONDITIONS, NOTES, EASEMENTS, PROVISIONS AND/OR ENCROACHMENTS CONTAINED OR DELINEATED ON THE FACE OF THE SURVEY; AFFECTS PARCEL A & B



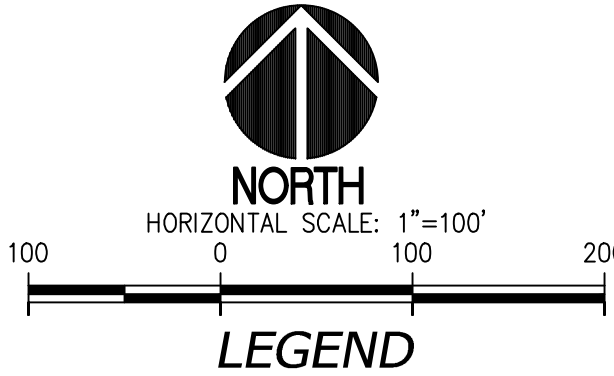
WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE,
NAD 83/2011. BASED ON GPS OBSERVATION UTILIZING THE
WASHINGTON STATE REFERENCE NETWORK WSRN)

MEASURED SOUTH 88°32'25" EAST 2646.02 FEET BETWEEN TWO
FOUND MONUMENTS ALONG 24TH ST EAST AT THE INTERSECTIONS
OF MERIDIAN AVE EAST AND 97TH AVE EAST.

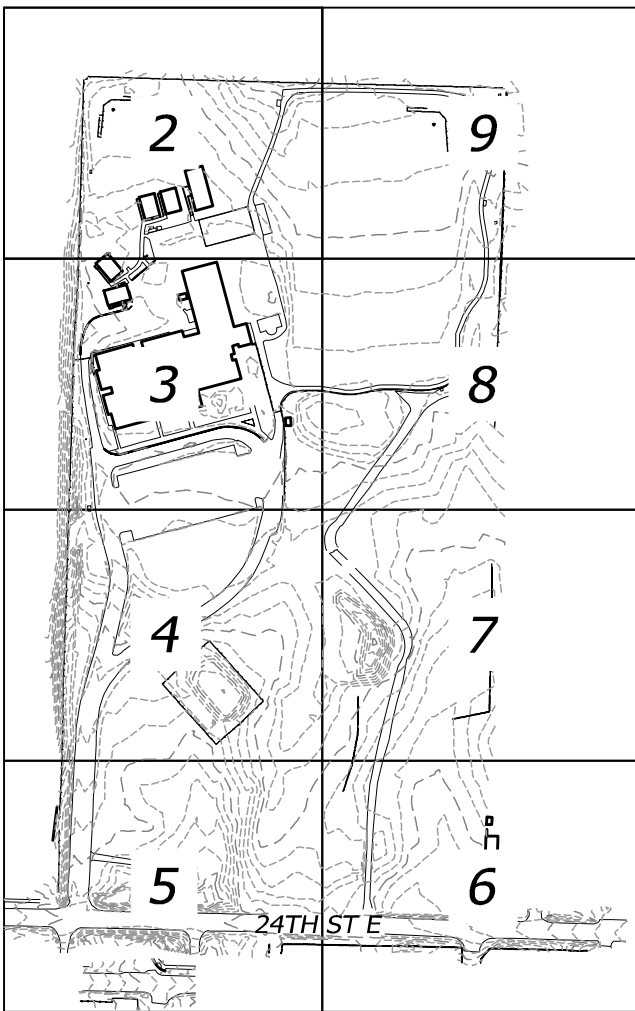
NAVD 88

ESTABLISHED BY GPS OBSERVATION UTILIZING THE WASHINGTON
STATE REFERENCE NETWORK WITH THE GEOID 2012A LOADED

TAX PARCEL NO. 0420091011
ADDRESS: 9805 24TH ST E, PUYALLUP, WA 98371
SITE AREA: 850,533 SQ. FT., 19.53± ACRES



-  FOUND SECTION CORNER
 FOUND 1/4 SECTION CORNER
 FOUND MONUMENT, AS NOTED
 FOUND PROPERTY CORNER, AS NOTED
 TPN TAX PARCEL NUMBER
 (M) MEASURED DISTANCE
 (R#) RECORD DISTANCE
 (C) CALCULATED DISTANCE



F

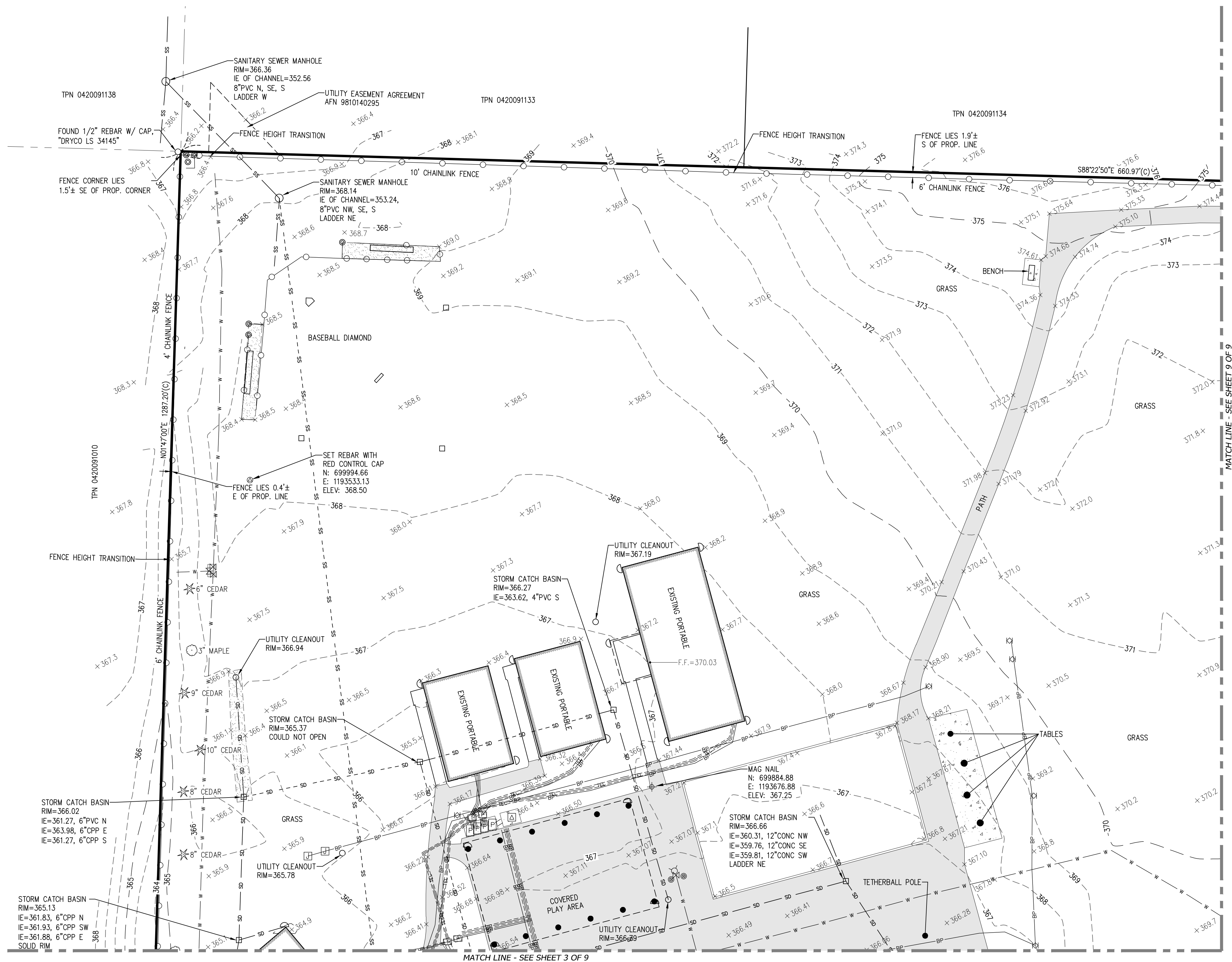
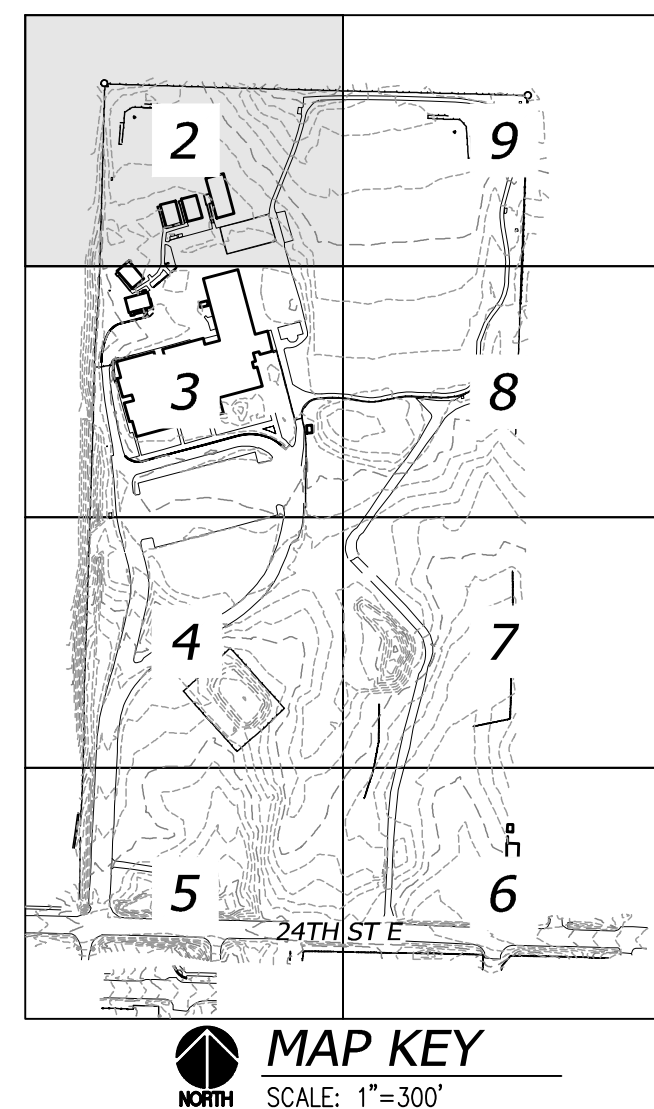
PUYALLUP
SCHOOL DISTRICT

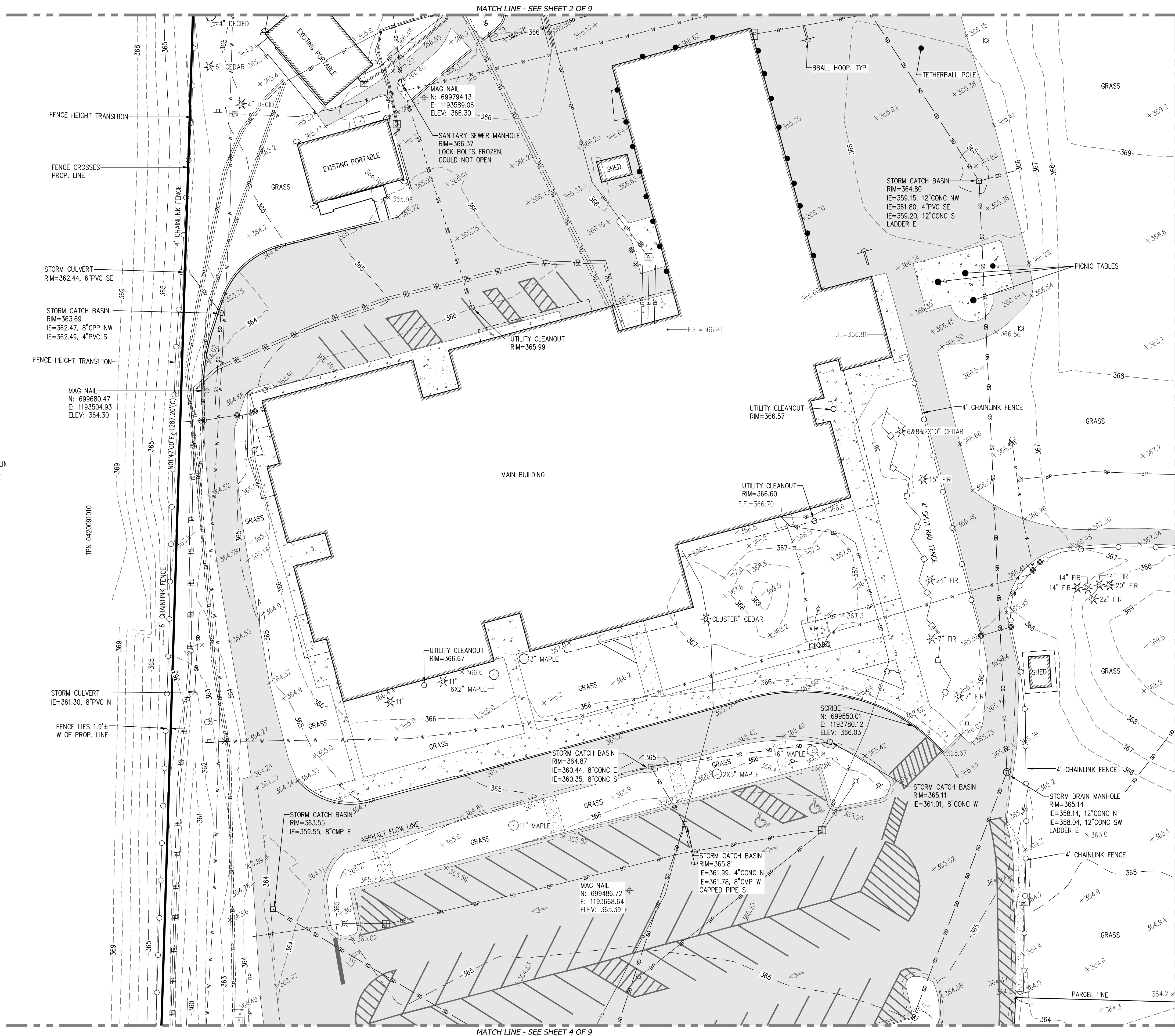
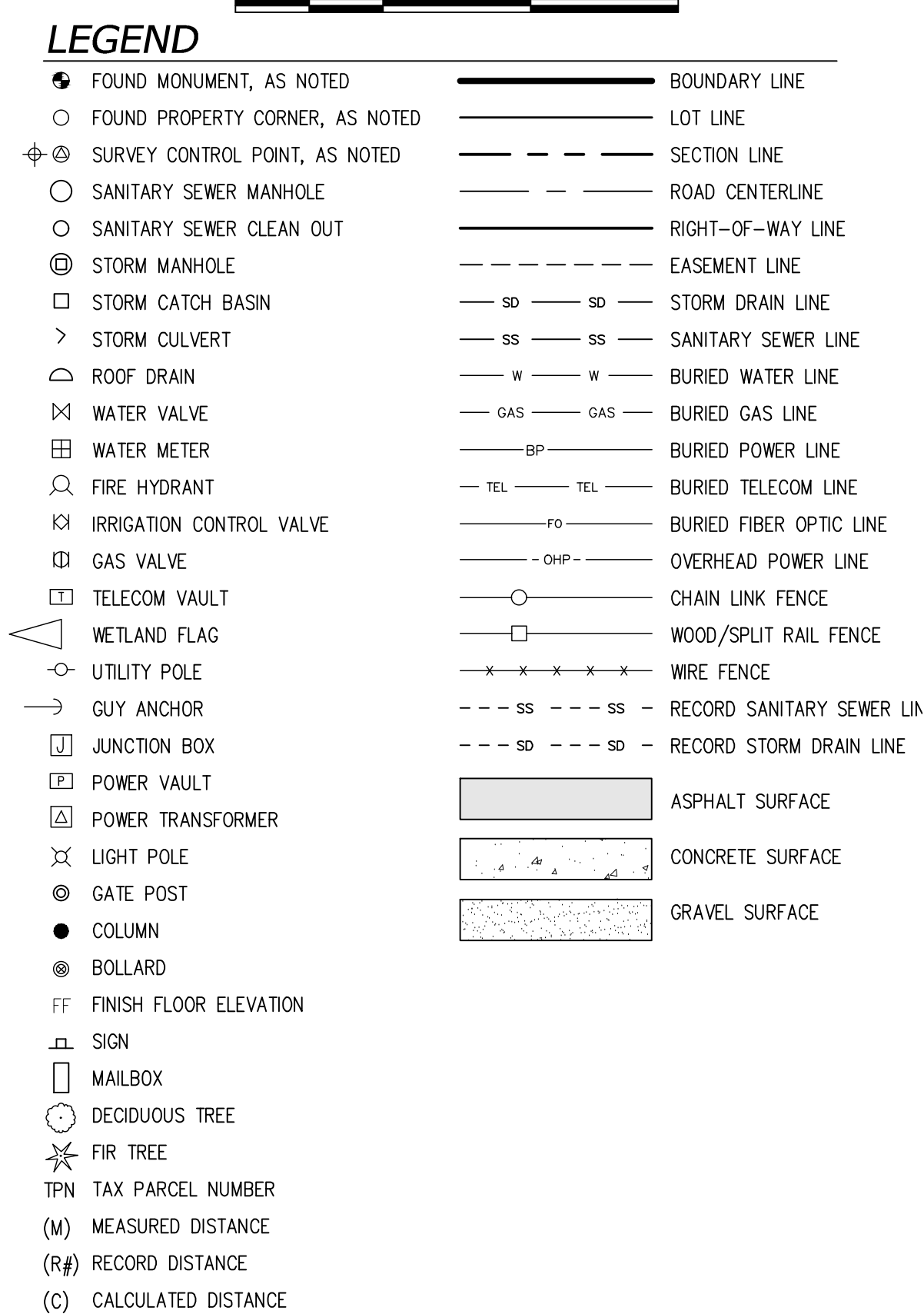
**NORTHWOOD
ELEMENTARY SCHOOL**
PUYALLUP, WA

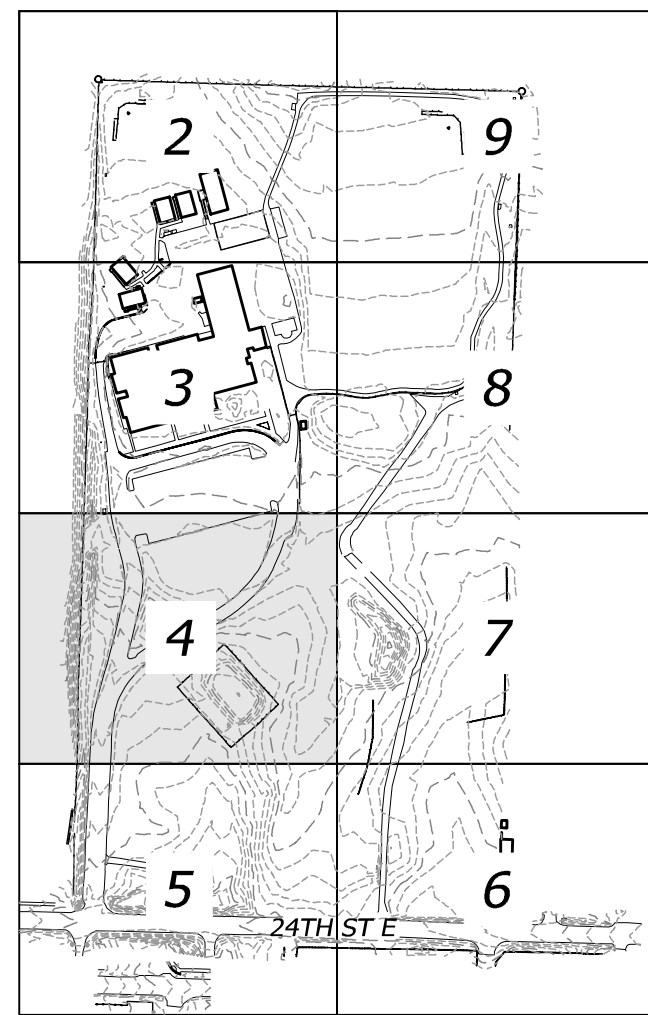
**NORTH
ELEMENT
PUYALLUP**

1 OF 9

PROJECT NO. 17046

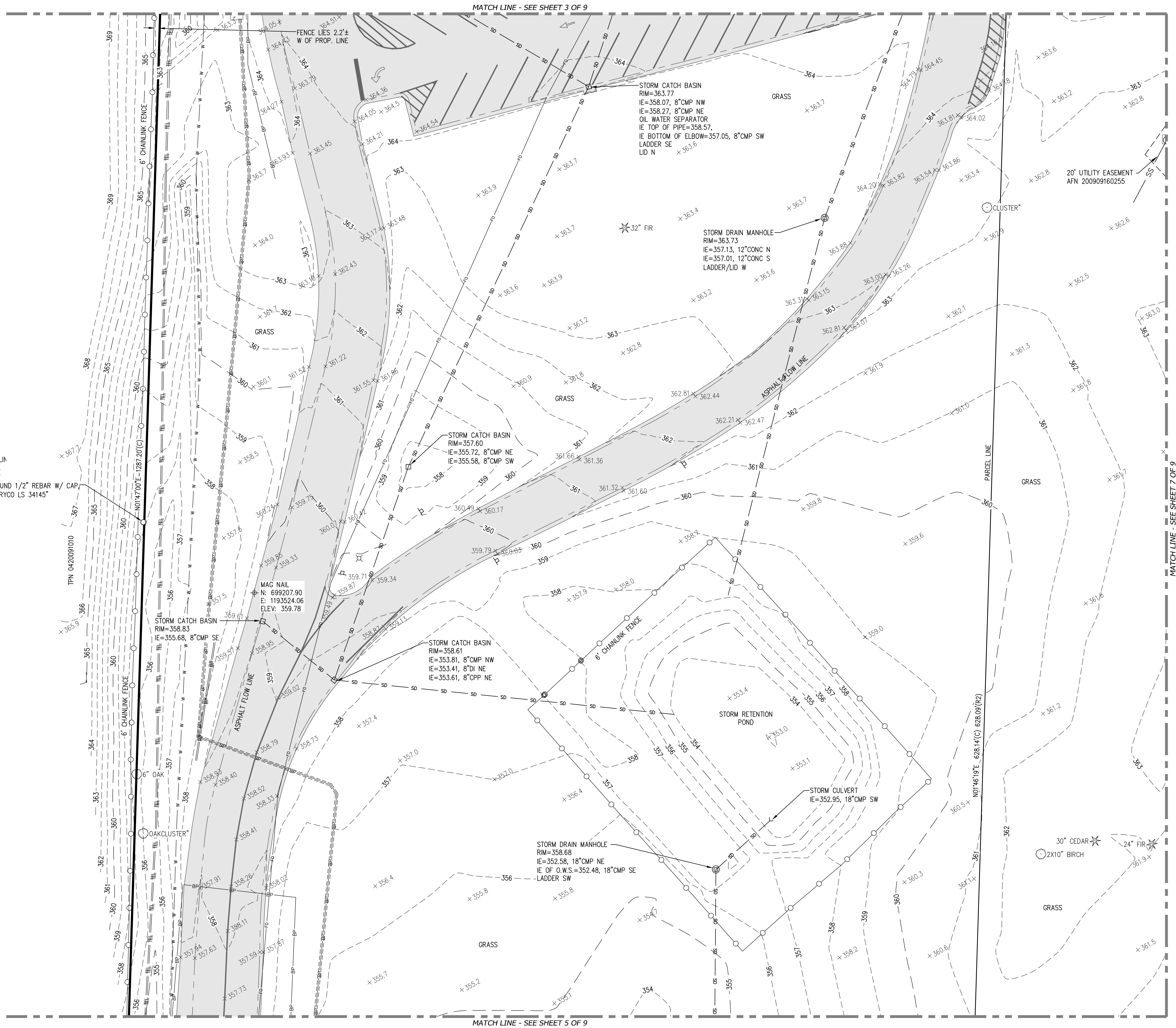






MAP KEY
SCALE: 1"=300'

- LEGEND**
- | | |
|---------------------------------|--------------------------------|
| FOUND MONUMENT, AS NOTED | BOUNDARY LINE |
| FOUND PROPERTY CORNER, AS NOTED | LOT LINE |
| SURVEY CONTROL POINT, AS NOTED | SECTION LINE |
| SANITARY SEWER MANHOLE | ROAD CENTERLINE |
| SANITARY SEWER CLEAN OUT | RIGHT-OF-WAY LINE |
| STORM MANHOLE | EASEMENT LINE |
| STORM CATCH BASIN | SD SD STORM DRAIN LINE |
| STORM CULVERT | SS SS SANITARY SEWER LINE |
| ROOF DRAIN | W W BURIED WATER LINE |
| WATER VALVE | GAS GAS BURIED GAS LINE |
| WATER METER | BP BURIED POWER LINE |
| FIRE HYDRANT | TEL TEL BURIED TELECOM LINE |
| IRRIGATION CONTROL VALVE | FO BURIED FIBER OPTIC LINE |
| GAS VALVE | OHP OVERHEAD POWER LINE |
| TELECOM VAULT | CHAIN LINK FENCE |
| WETLAND FLAG | WOOD/SPLIT RAIL FENCE |
| UTILITY POLE | WIRE FENCE |
| GUY ANCHOR | SS SS RECORD SANITARY SEWER LN |
| JUNCTION BOX | SD SD RECORD STORM DRAIN LINE |
| POWER VAULT | ASPHALT SURFACE |
| POWER TRANSFORMER | CONCRETE SURFACE |
| LIGHT POLE | GRAVEL SURFACE |
| GATE POST | |
| COLUMN | |
| BOLLARD | |
| FF FINISH FLOOR ELEVATION | |
| SIGN | |
| MAILBOX | |
| DECIDUOUS TREE | |
| FIR TREE | |
| TPN TAX PARCEL NUMBER | |
| (M) MEASURED DISTANCE | |
| (Rd) RECORD DISTANCE | |
| (C) CALCULATED DISTANCE | |



REVISIONS

APPROVALS



**SITTS & HILL
ENGINEERS, INC.**
CIVIL • STRUCTURAL • SURVEYING
4815 CENTER STREET | TACOMA, WA 98409
PHONE: (253) 474-9449 | FAX: (253) 474-0153
http://www.sitts-hill-engineers.com/

**PUYALLUP
SCHOOL DISTRICT**
302 2ND ST
PUYALLUP, WA 98372

**NORTHWOOD
ELEMENTARY SCHOOL**
PUYALLUP, WA
SHEET TITLE
BOUNDARY AND
TOPOGRAPHIC SURVEY

4 OF 9
PROJECT NO.
17046

MATCH LINE - SEE SHEET 4 OF 9

REVISIONS

APPROVALS

DESIGNED
DRAWN
CHECKED
DATE
SCALE

PREPARED BY

PROJECT

SHEET TITLE

SHEET NO.

PROJECT NO.

17046

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ELEMENTARY SCHOOL**
PUYALLUP, WA
BOUNDARY AND
TOPOGRAPHIC SURVEY

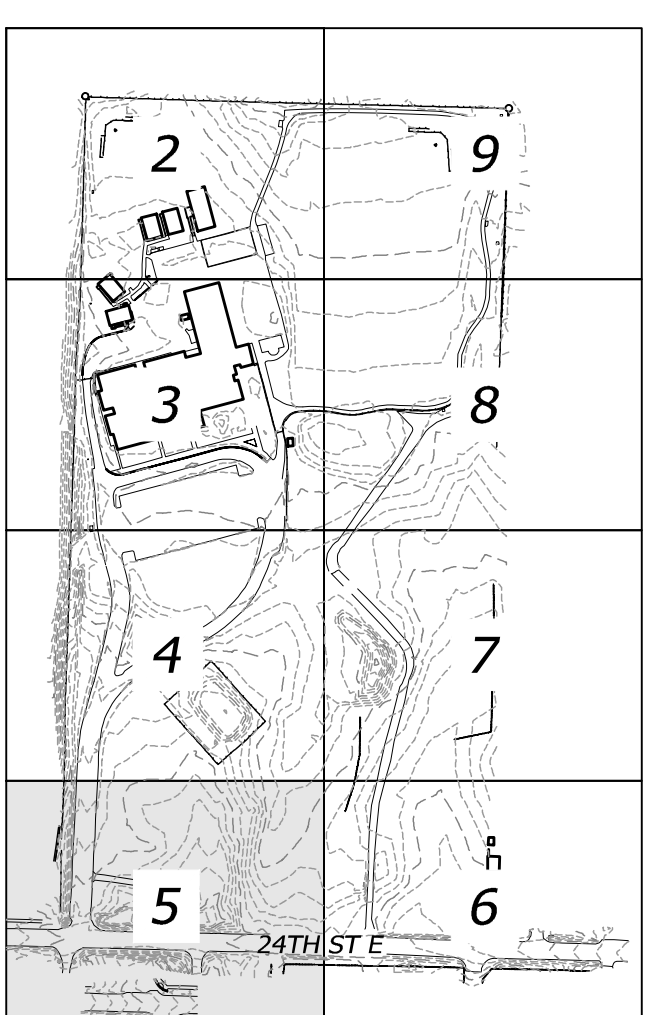
5 OF 9



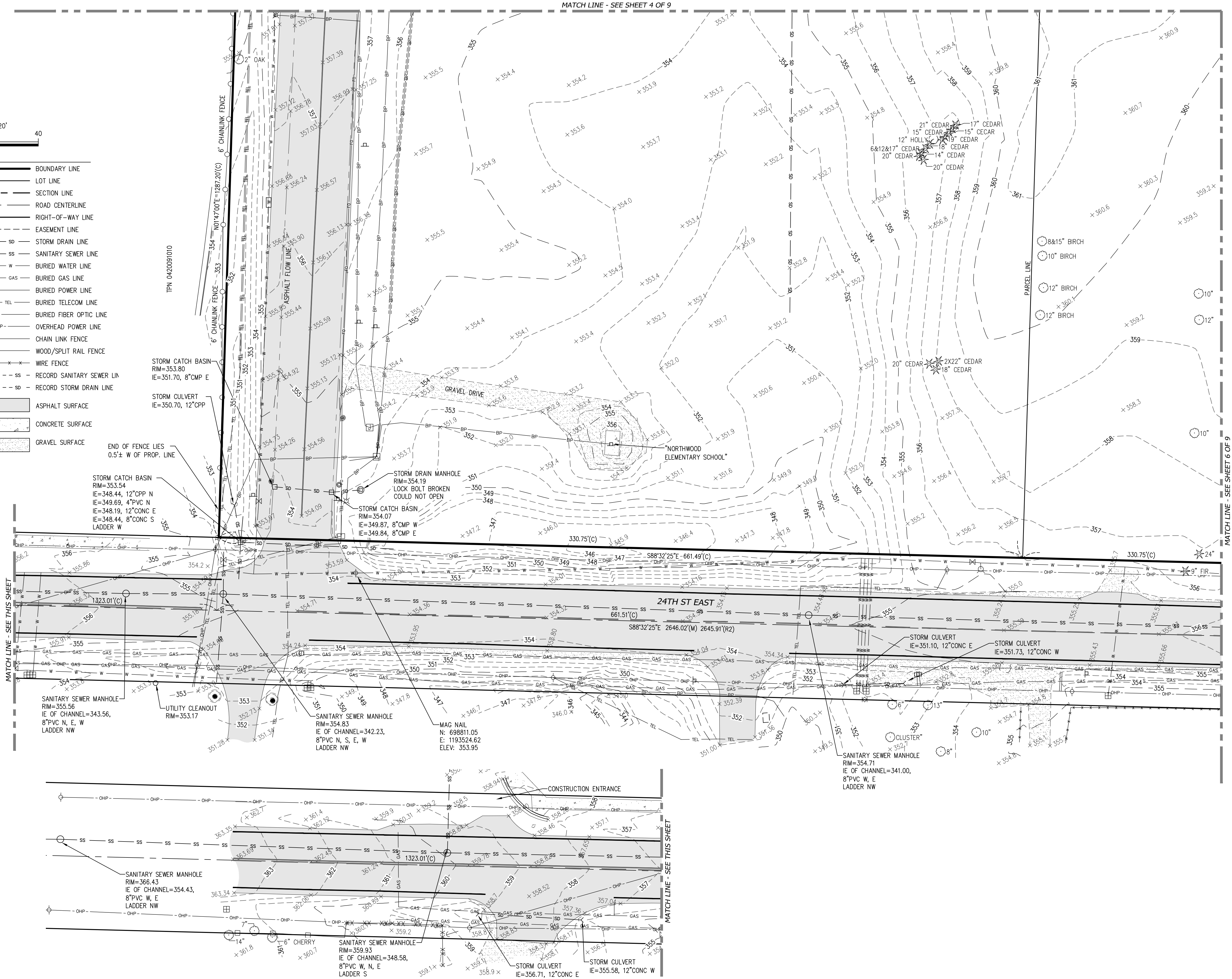
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20 0 20 40

LEGEND

- FOUND MONUMENT, AS NOTED
- FOUND PROPERTY CORNER, AS NOTED
- SURVEY CONTROL POINT, AS NOTED
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEAN OUT
- STORM MANHOLE
- STORM CATCH BASIN
- STORM CULVERT
- ROOF DRAIN
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- IRRIGATION CONTROL VALVE
- GAS VALVE
- TELECOM VAULT
- WETLAND FLAG
- UTILITY POLE
- GUY ANCHOR
- JUNCTION BOX
- POWER VAULT
- POWER TRANSFORMER
- LIGHT POLE
- GATE POST
- COLUMN
- BOLLARD
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- SIGN
- MAILBOX
- DECIDUOUS TREE
- FIR TREE
- TPN TAX PARCEL NUMBER
- (M) MEASURED DISTANCE
- (R#) RECORD DISTANCE
- (C) CALCULATED DISTANCE
- BOUNDARY LINE
- LOT LINE
- SECTION LINE
- ROAD CENTERLINE
- RIGHT-OF-WAY LINE
- EASEMENT LINE
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- WIRE FENCE
- SS RECORD SANITARY SEWER LIN
- SD RECORD STORM DRAIN LINE
- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE



MAP KEY
SCALE: 1"=300'



MATCH LINE - SEE THIS SHEET

MATCH LINE - SEE SHEET 6 OF 9

APPENDIX F

EDGEWOOD WETLANDS RATING FORM*

OFFICE DATA SECTION

Background Information:

Name of Rater: Ed Sewall Affiliation: Sewall Wetland Cons. Date: 1-20-17

Application No./Case No.: _____ Project Name: _____

Project Location: _____ Parcel No.(s): 0420091014

Property Owner Name: Puyallup School Dist.

Property Owner Address: _____

Location: _____ ¼ Section of _____ ¼ Section, of Section _____, Township _____, Range _____, W.M., Edgewood, WA

SOURCE OF INFORMATION: (Check all sources that apply.)

Site Visit: ☒ USGS Topo Map: _____ NWI Map: _____ Aerial Photo: _____ Soil Survey: _____

Edgewood Inventory: _____ Edgewood Drainage Map: _____ Other: Previous studies

When the Office and/or Field Data Forms are completed enter category here: _____

ANSWER ALL QUESTIONS BELOW. If the source agency identifies the wetland as satisfying any of the questions below, circle the category in "CATEGORY" column.

DATA SOURCE

CATEGORY (the highest qualifies)

Does the wetland contain federal- or state-listed threatened or endangered plant species; or, is the wetland a historic location of a plant species potentially extirpated from Washington?

DNR (Natural Heritage)
U.S. Fish & Wildlife Service

Yes: Category I
No: Next Question

Is the wetland associated with documented habitat for endangered or threatened plant, fish, or animal species or for potentially extirpated plant species recognized by state or federal agencies?

Wash. Dept. of Wildlife
Wash. Dept. of Fisheries
U.S. Fish & Wildlife Service

Yes: Category I
No: Next Question

Is the wetland already on record with the Washington Natural Heritage Program as a high quality native wetland?

DNR (Natural Heritage)

Yes: Category I
No: Next Question

Is the wetland documented as a Category I Wetland of Local Significance? (None currently designated.)

Local Government

Yes: Category I
No: Next Question

Does the wetland contain sensitive plant species recognized by

DNR (Natural

Yes: Category II

federal or state agencies?		Heritage) U.S. Fish & Wildlife Service	No: Next Question
Does the wetland contain documented habitats of sensitive fish species recognized by federal or state agencies?		Wash. Dept. of Wildlife Wash. Dept. of Fisheries U.S. Fish & Wildlife Service	Yes: Category II No: Next Question
Does the wetland contain priority species or habitats documented by Washington Department of Wildlife's Priority Habitats and Species Program?		Wash. Dept. of Wildlife	Yes: Category II No: Next Question
Is the wetland documented as a Category II Wetland of Local Significance? (None currently designated.)		Local Government	Yes: Category II No: Go to Wetlands Rating Field Data Form
Is the wetland documented as a Category III Wetland of Local Significance? (None currently designated.)		Local Government	Yes: Category III No: Go to Wetlands Rating Field Data Form

*Adapted from Washington
State Wetlands Rating
System for Western
Washington, Second
Edition, August 1993 (publ.
#93-74), developed by the
Washington State
Department of Ecology.

EDGEWOOD WETLANDS RATING FORM

FIELD DATA SECTION

Background Information:		
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Name of Rater: _____	Affiliation: _____	Date of Field Visit: _____
Application No./Case No.: _____	Project Name: _____	
Project Location: _____	Parcel No.: _____	
Property Owner Name: _____		
Property Owner Address: _____		
Location: ____ ¼ Section of ____ ¼ Section, of Section ____, Township ____, Range ____, W.M., Edgewood, WA		
SOURCE OF INFORMATION: (Check all sources that apply).		
Site Visit: _____ USGS Topo Map: _____ NWI Map: _____ Aerial Photo: _____ Soil Survey: _____		
Edgewood Inventory: _____ Edgewood Drainage Map: _____ Other: _____		
WHEN THE FIELD DATA FORM IS COMPLETE ENTER CATEGORY HERE: _____		
Q.1. High Quality Natural Heritage Wetland Answer this question if you have adequate information or experience to do so. If not, find someone with the expertise to answer the questions. Then, if the answer to questions 1a, 1b, and 1c are all NO, contact the Natural Heritage Program of DNR to determine if it qualifies as a Natural Heritage wetland. 1a. Human-Caused Disturbances Is there significant evidence of human-caused changes to topography or hydrology of the wetland? Significant changes could include clearing, grading, filling, logging of the wetland or its immediate buffer, culverting, ditching, dredging, diking, or drainage of the wetland. Briefly describe the changes, their date of occurrence, and your information source(s): <i>Previously cleared converted to pasture</i>	Circle Answers Yes: Go to Q.3. No: Go to 1b.	
1b. Are there populations of nonnative plants which are currently present and appear to be invading native populations? Briefly describe any nonnative plant populations and information source(s):	Yes: Go to Q.3. No: Go to	

			1c.
1c. Is there significant evidence of human-caused disturbance of the water quality of the system? Degradation of water quality could be evidenced by culverts entering the system, direct road/parking lot runoff, evidence of historic dumping of wastes, oily sheens, extreme eutrophic conditions, livestock use, or dead fish, etc. Briefly describe:			Yes: Go to Q.3 No: Possible Category I.
Q.2. Regionally Rare Native Wetland Communities			
Edgewood has not yet developed any methodology for identifying regionally rare native wetland communities.			
Q.3. Irreplaceable Ecological Functions			No to all: go to Q.4.
Does the wetland:			
• have at least ½ acre of contiguous peat wetland;			Yes: go to 3a.
• or, have a forested component > one acre in size;			Yes: go to 3b.
• or, have characteristics of an estuarine system;			Yes: go to 3c.
• or, have eel grass, floating or nonfloating kelp beds;			Yes: go to 3d.
• or, have spring fed hydrology?			Yes: go to 3e.
3a. Peat Wetlands			
3a1. Does at least ½ acre of the contiguous peat wetland have < 25% areal cover of any combination of species from Table 1 in the List of Invasive/Exotic Species, and have < 80% areal cover of <i>Spiraea douglasii</i> ?			Yes: Category I No: go to Q.4.

3b. Forested Wetlands

3b1. Is the forested wetland a monotypic stand of red alder or black cottonwood with an average dbh of less than 8 inches?

Yes:
Category III
No: go to
3b2.

3b2. Is the average age of dominant trees in the forested wetland > 80 years?

Yes:
Category I
No: go to
3b3.

3b3. Is the average age of dominant trees in the forested wetland 50 to 80 years, AND is the structural diversity high, as characterized by a multi-layer community of trees > 50 feet tall, trees 20 to 49 feet tall, shrubs, and herbaceous ground cover?

Yes: go to
3b4.
No: go to
3b5.

3b4. Is > 50% (areal cover) of the dominant plants in one or more layers (canopy, young trees, shrubs, and herbs) invasive/exotic plant species from the Table 1 list?

Yes:
Category II
No:
Category I

3b5. Does the forested wetland contain three canopy layers (trees over 20 feet tall, shrubs or saplings, and herbaceous ground covers)?

Yes:
Category II
No: go to
Q.5.

3c. Estuarine Wetlands

3c1. Is the wetland listed as National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park, or Educational, Environmental or Scientific Reserves designated under WAC 332-30-151?

Yes:
Category I
No: go to
3c2.

3c2. Is the wetland > 5 acres?

Yes:
Category I

- or, is the wetland 1 to 5 acres;

Yes: go to
3c3.

- or, is the wetland < 1 acre?

Yes: go to
3c4.

3c3. Does the wetland meet at least 3 of the following 4 criteria: • minimum existing evidence of recent (since 1992) human-related disturbance such as diking, ditching, filling, cultivation, grazing, or the presence of nonnative plant species (see guidance for definition); • surface water connection with tidal saltwater or tidal freshwater; • at least 75% of the wetland has a 100-foot buffer of ungrazed pasture, open water, shrub, or forest; • have at least 3 of the following features: low marsh, high marsh, tidal channels, lagoon(s), woody debris, or contiguous freshwater wetland? 3c4. Does the wetland meet all of the 4 criteria under 3c3 above?			Yes: Category I No: Category II Yes: Category II No: Category III
3d. Eelgrass and Kelp Beds 3d1. Are eelgrass beds present? 3d2. Are there floating or nonfloating kelp bed(s) present with greater than 50% macro algal cover in the month of August or September? 3e. Significant Spring Fed Wetland Systems 3e1. Is the spring fed wetland system at least ½ acre in size?			Yes: Category I No: go to 3d2. Yes: Category I No: Category II Yes: Category II No: go to Q.4.
Q.4. Category II and IV Wetlands 4a. Is the wetland associated with year-round or intermittent salmonid fish bearing waters? Briefly describe source of information:			Yes: Category II No: go to

			4b.
4b. Is the wetland less than or equal to 1 acre in size, hydrologically isolated, and comprised of one wetland class that is dominated by one plant species (monotypic vegetation)? • Monotypic vegetation is defined as greater than 80% areal cover by one plant species. • Hydrologically isolated wetland means a wetland which is not contiguous to any 100-year flood plain of any water type; and, has no contiguous surface hydrology, hydric soil, or hydrophytic vegetation between the wetland and any other wetland or stream system.			Yes: Category IV No: go to Q.5.
Q.5. Wetlands with significant habitat value based on the following specific diversity and size criteria.			
5a. Is the wetland 10 acres or greater in size and have 2 or more wetland classes, together with open water, at any time during the normal year?			Yes: Category II No: go to 5b.
5b. Is the wetland 10 acres or greater in size, have 3 or more wetland classes, and 5 or more subclasses of vegetation in a dispersion pattern?			Yes: Category II No: go to 5c.
5c. Is the wetland 5 acres or greater in size, 40 to 60% open water at any time during a normal year, and 2 or more subclasses of vegetation in a dispersed pattern?			Yes: Category II No: go to Q.6.
Q.6. Wetlands with significant habitat value based on the following specific diversity and size criteria and significant use by fish and wildlife. Answer all questions and enter data requested:			Circle Scores That Qualify
6a. Total Wetland Area Estimate area, select from choices in the near right column, and score in the far right column: Enter acreage of wetland (including estimate of off-site acreage) here: _____ acres		Acres > 20.00 10 – 19.99 5 – 9.99 1 – 4.99	Yes = 6 Yes = 5 Yes = 4 Yes = 3

source: _____	0.1 – 0.99 < 0.1	Yes = 2 Yes = 1
6b. Wetland Community Types (include observations of off-site wetland area) Circle the wetland community types below that qualify: Open Water: If the area of open water is > ½ acre, or > 10% of the total wetland area. Source: _____ Aquatic Beds: If the area of aquatic beds are > 10% of the open water area, or > ½ acre. Emergent: If the area of emergent community type is > ½ acre, or > 10% of the total wetland area. Scrub-Shrub: If the area of scrub-shrub community type is > ½ acre, or 10% of the total wetland area. Forested: If the area of forested community type is > ½ acre, or 10% of the total wetland area.		
Add the number of wetland community types above that qualify, and then score according to the columns at right. e.g., If there are 4 community types (aquatic beds, open water, emergent, and scrub-shrub), you would circle 7 points in the far right column.	# of Community Types 1. 2. 3. 4. 5.	Yes = 1 Yes = 3 Yes = 5 Yes = 7 Yes = 10
6c. Plant Species Diversity (include observations of off-site wetland area) For all wetland community types (at right) that qualify in 6b. above, count the number of different plant species you can find. You do not have to name them. Score in column at far right: e.g., If a wetland has aquatic bed community type with 3 species, an emergent community type with 4 species, and a scrub-shrub community type with 2 species you would circle 2, 2, and 1 in the far column.		
	# of Community Type Species Aquatic Bed 1 – 2 Aquatic Bed 3 Aquatic Bed >3 Emergent 1 – 2 Emergent 3 – 4 Emergent >4 Scrub-Shrub 1 – 2 Scrub-Shrub 3 – 4 Scrub-Shrub >4 Forested 1 – 2 Forested 3 – 4 Forested >4	Yes = 1 Yes = 2 Yes = 3 Yes = 1 Yes = 2 Yes = 3 Yes = 1 Yes = 2 Yes = 3

6d. Structural Diversity (include observations of off-site wetland area)

If the wetland has a forested community type, add 1 point for each of the following:

Trees > 50 feet tall

Trees 20 feet to 49 feet tall

Shrubs/saplings

Herbaceous ground cover

NA

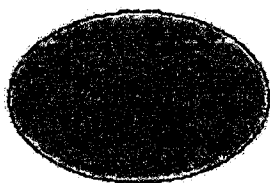
Yes = 1

Yes = 1

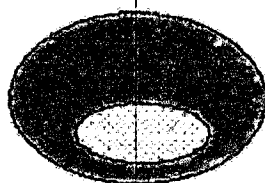
Yes = 1

Yes = 1

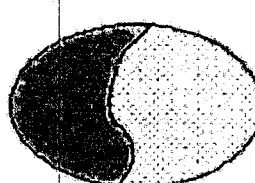
6e. Decide from the diagrams below whether interspersions between wetland community types is high, moderate, low, or none?



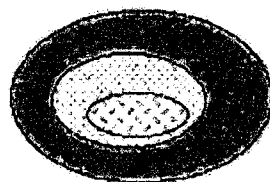
none



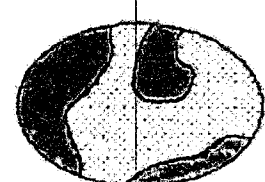
low



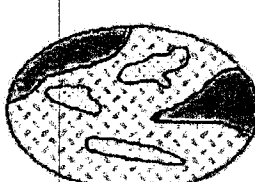
low



moderate



moderate



high

NA

High = 3

Moderate =

2

Low = 1

None = 0

6f. Habitat Features (include observations of off-site wetland areas)

Answer questions below, circle features that apply, and score to right:

Is there evidence of current use by beavers?

Is a heron rookery located within 300 feet?

Are raptor nest(s) located within 300 feet?

Are there at least 3 standing dead trees (snags) per acre?

Are any of these standing dead trees (snags) > 10 inches in diameter?

Are there any other perches (wires, poles, or posts)?

Are there at least 3 downed logs at least 10' in length with a diameter > 6" per acre (include observations of off-site wetland areas)?

NA

Yes = 3

Yes = 2

Yes = 1

Yes = 1

Yes = 1

Yes = 1

Yes = 1

6g. Connection to streams

Is the wetland connected at any time of the year via surface water to a seasonal stream? The connection could be during flood events, via a natural or manmade channel, culvert, or an area of open water.

Yes = 1

6h. Adjacent Land-Uses and Buffers**Step 1**

Estimate (to the nearest 5%) the percent of each land use or buffer type (below) that adjoins the wetland boundary.

Then multiply the percent(s) by the factor(s) below and enter result in column to right:

roads, buildings, or parking lots: % 40 x 0 =

lawn, grazed pasture, vineyards, or annual crops: % 40 x 1 =

ungrazed grassland or orchards: % ____ x 2 =

open water or native grasslands: % ____ x 3 =

forest or shrub: % 20 x 4 =

Step 2

Multiply result(s) of step 1:

By 1, if buffer width is 25 – 50 feet;

By 2, if buffer width is 50 – 100 feet;

By 3, if buffer width is > 100 feet.

Enter results below and add subscores:

40 x ____ =

0

40 x 2 =

80

____ x ____ =

____ x ____ =

80 x 2 =

160

Add buffer total:

Step 3

Score points according to table below:

Buffer Total:

900 – 1,200

600 – 899

300 – 599

100 – 299

Yes = 4

Yes = 3

Yes = 2

Yes = 1

6i. Connection to other habitat areas:

Is there a riparian corridor to other wetlands within 0.25 of a mile; or, a corridor > 100 feet wide with good forest or shrub cover to any other habitat area(1)? <i>no</i>	Yes = 5
Is there a narrow corridor < 100 feet wide with good cover; or, a wide corridor > 100 feet wide with low cover to any other habitat area? <i>no</i>	Yes = 3
Is there a narrow corridor < 100 feet wide with low cover; or, a significant habitat area within 0.25 mile but no corridor?	Yes = 1
Is the wetland and buffer completely isolated by development and or cultivated agricultural land?	Yes = 0
Add the scores circled (for Q.6a. – Q.6i. above) to get a total:	Total = <u>8</u>
Is the total greater than or equal to 22 points:	Yes: Category II No: <u>Category II</u>
(1) For purposes of this rating form the term "Habitat area" means any forested, shrub, and herbaceous areas that could be used by wildlife species that use wetlands to provide a part of their life cycle needs.	

(Ord. 02-200 § 2).

TABLE 1		
List of invasive/exotic plant species for Question 3a1 (peat wetlands), question 3b3 (forested wetlands), and question 4b (Category IV wetlands). This list is provided for use with the field data form.		
Scientific Name	Common Name	
<i>Agropyron repens</i>	Quackgrass	
<i>Alopecurus pratensis</i> , <i>A. aequalis</i>	Meadow foxtail	
<i>Arctium minus</i>	Burdock	
<i>Bromlus tectorum</i> , <i>B. rigidus</i> , <i>B. brizaeformis</i> , <i>B. secalinus</i> , <i>B. japonicus</i> , <i>B. mollis</i> , <i>Bromes</i>		
<i>B.</i>		
<i>commutatus</i> , <i>B. inermis</i> , <i>B. erectus</i>		
<i>Cenchrus longispinu</i>	Sandbur	
<i>Centaurea solstitiallis</i> , <i>C. repens</i> , <i>C. cyanus</i> , <i>C. maculosa</i> , <i>C. diffusas</i>	Knapweeds	