

✓  
ENVIRONMENTAL CHECKLIST

Preliminary Plat of Jensen Farm  
Subdivision Development Comprehensive  
Plan Amendment and Rezone

June 1994

RECEIVED

JUN 21 1994

CB  
CITY OF ARLINGTON

To recipients of the environmental checklist for the proposed Jensen Farm Development.

This environmental checklist addresses the potential impact from development of approximately 63 acres of uplands and bottom lands into a mix of residential and commercial.

Information from several sources is included as a part of this checklist and can be found attached hereto.

## ENVIRONMENTAL CHECKLIST

### A. BACKGROUND

1. Name of proposed project, if applicable:

Plat of Jensen Farm

2. Name of Applicant:

Grant Jensen

3. Address and phone number of applicant and contact person:

Grant Jensen  
804 Hazel  
Arlington, WA 98223  
435-9487

4. Date checklist prepared:

June 1994

5. Agency requesting checklist:

City of Arlington

6. Proposed timing or schedule (including phasing, if applicable):

Comprehensive plan and rezone, fall 1994. Projects will be started over the next 2-3 years. Division One completed 1993, Division Two in 1995, and Division Three in 1996.

7. Do you have any plans for future additions, expansions, or further activity related to or connected with this proposal?

Future development will be guided by the approved Comprehensive Plan. Specific development of individual sites will be approved by the City of Arlington as future plans are submitted.

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

SEPA documentation was prepared for the ULID #20 which included this subject parcel. A checklist was also submitted for Arlington Elementary School No. 4, Jensen Short Plat and the Plat of Farmstead Estates.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

Yes. (1) Finalization of assessment for LID No. 21, 204th Street LID, (2) Portage Creek Drainage Study, (Centennial Clean Water Grant Project)

10. List any governmental approvals or permits that will be needed for your proposal, if known.

City of Arlington approval of Comprehensive Plan amendment, City of Arlington approval of zoning change, City of Arlington approval of subdivision, and Washington State Department of Fisheries Hydraulics Permit and NPDES Permit as required.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

Enclosed for your review and scheduling before the City of Arlington Planning Commission is an amended Preliminary Plat of Jensen Farms and the Comprehensive Plan/Rezone for the remaining Jensen ownership. This amended packet follows the four lot short plat and the Plat of Farmstead Estates which were originally included in the application to your office in September 1992.

The revised project will be completed in phases which include a 70 lot single family residential plat, a 5 lot multi-family development and a 7 lot commercial development. The proposed projects will require rezoning as a part of their final development.

This preliminary plat and rezone follows along the same line as the previously approved Arlington Elementary School, Plat of Farmstead Estates and the 204th Street improvements.

The existing roadway and drainage system was designed and installed with the knowledge that this proposed land division was forthcoming.

A strip of property 340 feet from the centerline of Highway 9, extending the entire length of this parcel is designated as community business in the Arlington Comprehensive Plan. This 340 foot wide strip is currently zoned community business.

The remainder of the Jensen property is designated as phased urban in the Arlington Comprehensive plan and is currently zoned rural conservation.

The proposed changes meet the goals of the Arlington Comprehensive Plan which has the phased urban residential as a holding zone until such time as appropriate utilities are available. The criteria for amending the plan have been met with the construction of the necessary utilities and infrastructure via Arlington Elementary School, LID No. 20 (water) LID No. 21 (204th St.) and Farmstead Estates.

The intent of the Jensen Farm Development is to provide for compatible uses and a logical transition from commercial to high density/multi-family and a further transition from multi-family to single family residential.

The following summarizes the acreage of the proposed Jensen property rezone:

Total ownership	=	62.86 acres
CB Zoning (includes current CB Zoning of 8.2 acres)	=	14.89 acres
MR-1 and MR-2 Zoning	=	13.20 acres
Proposed R7200 Zoning	=	15.39 acres
Tracts A, C and D to the City of Arlington		
for park and storm water	=	13.85 acres
Road rights of way	=	5.53 acres

Anticipated development of the Jensen Farm property would take place as follows:

1) The Plat of Farmstead Estates Division No. 2, would include development of Olympic Place north of 204th Street and Portage Drive from Olympic Place to Lot 43. The proposed lots within this division would include 1-C through 7-C, 1-M through 3-M and Lots 43-55 and Lot 69. Development of the Portage Creek, park and drainage improvements would begin as a part of this phase.

2) The last phase would include development of the remaining portion of Portage Drive after removal of the existing farm buildings. Also included would be the residential cul-de-sac, the cul-de-sac at the north end of Olympic Place and the cul-de-sac at the west end of Portage Street. The lots within this final phase would include Lots 4M and 5M, Lots 30-42 and Lots 56-68. Any remaining improvements required for Portage Creek, parks or drainage would be completed as a part of this final phase.

The proposed Comprehensive Plan designation for this development would include commercial (CB), multiple family residential (MR-2), high urban residential (MR-1), and urban residential (R 7200).

Lot 70 is a tract which includes an existing house, swimming pool, tennis court and a smaller racket sports court. It is proposed that this remain a residential use until another use such as a community or Senior Center can be explored.

This proposal offers other important features:

Portage Creek and its tributaries will be buffered with natural vegetation setbacks and enhanced to protect the riparian environment.

A walking trail to connect with existing and proposed city wide trail systems may also be included within this buffering area.

Approximately 2 acres of land has been set aside for a playfield which will provide recreational facilities for the Jensen Farm area.

At the present time there are no development plans for the area between Old Burn Hill Road and the Plat of Farmstead Estates, the R7200 zoning would be appropriate for this area.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

Property is located on the southern edge of the Arlington city limits, east of Highway 9, west of Burn Road and north of 204th Street. - Southeast quarter of Section 11, Township 31 North, Range 5 East, W.M.

Any storm drainage system proposed will take into account Portage Creek and provide adequate methods of insuring the preservation of water quality. The storm drainage system will also be designed to have the same discharge rate to the Portage Creek system after development as it did prior to development up to a 25 year storm event.

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

Yes, but only insignificant amounts as might occur from domestic and commercial site use.

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

Comply with City of Arlington's regulations pertaining to storm water retention.

#### 4. Plants

- a. Check or circle types of vegetation found on the site:
- \_\_\_\_\_ deciduous tree: **alder, maple**, aspen, other
  - \_\_\_\_\_ evergreen tree: fir, cedar, pine, other
  - \_\_\_\_\_ shrubs
  - \_\_\_\_\_ grass
  - \_\_\_\_\_ pasture
  - \_\_\_\_\_ crop or grain
  - \_\_\_\_\_ wet soil plants: cattail, **buttercup**, bulrush, skunk cabbage, other
  - \_\_\_\_\_ water plants: waterlily, eelgrass, milfoil, other
  - \_\_\_\_\_ other types of vegetation

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

Primarily grasses.

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

None known.

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

A vegetative buffer along Portage Creek and its tributary will be provided according to City of Arlington requirements. Commercial and multifamily development will require landscape plans as a condition to building permit approval. Individual lot owners will put in landscaping on their lots.

5. Animals

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

birds: hawk, heron, eagle, songbirds, other: \_\_\_\_\_

mammals: deer, bear, elk, beaver, other: \_\_\_\_\_

fish: bass, salmon, trout, herring, shellfish, other: \_\_\_\_\_

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

None known.

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

Not known to be.

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

A vegetative buffer will be provided along both sides of Portage Creek and its tributary according to City of Arlington requirements as follows: 25 foot native growth protection area and a 25 foot building setback (all measurements being from the top of the bank of Portage Creek).

6. Energy and Natural Resources

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

Electric, natural gas and wood heat for residential and commercial purposes.

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

No.

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

Building insulation.

7. Environmental Health

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

No.

**APPENDIX 1**

**SOIL MAPS**

# SOIL LEGEND

SYMBOL

NAME

- 1 Alderwood gravelly sandy loam, 2 to 8 percent slopes
- 2 Alderwood gravelly sandy loam, 8 to 15 percent slopes
- 3 Alderwood gravelly sandy loam, 15 to 25 percent slopes
- 4 Alderwood-Everett gravelly sandy loam, 15 to 25 percent slopes
- 5 Alderwood-Urban land complex, 2 to 8 percent slopes
- 6 Alderwood-Urban land complex, 8 to 15 percent slopes
- 7 Bellingham silty clay loam
- 8 Bellingham Variant mucky silty clay loam
- 9 Cathcart loam, 3 to 15 percent slopes
- 10 Cathcart loam, 15 to 25 percent slopes
- 11 Cathcart loam, 25 to 50 percent slopes
- 12 Cryochemists, nearly level
- 13 Custer fine sandy loam
- 14 Elwell silt loam, 3 to 30 percent slopes
- 15 Elwell-Olomount complex, 15 to 30 percent slopes
- 16 Elwell-Olomount-Rock outcrop complex, 30 to 60 percent slopes
- 17 Everett gravelly sandy loam, 0 to 8 percent slopes
- 18 Everett gravelly sandy loam, 8 to 15 percent slopes
- 19 Fluvents, tidal
- 20 Gatchell silt loam, 3 to 30 percent slopes
- 21 Gatchell-Oso complex, 15 to 30 percent slopes
- 22 Gatchell-Oso-Rock outcrop complex, 30 to 65 percent slopes
- 23 Greenwater loamy sand
- 24 Hartnit-Potchub-Rock outcrop complex, 65 to 90 percent slopes
- 25 Indianola loamy sand, 15 to 25 percent slopes
- 26 Kitsap silt loam, 0 to 8 percent slopes
- 27 Kitsap silt loam, 8 to 25 percent slopes
- 28 Lynnwood loamy sand, 0 to 3 percent slopes
- 29 Lynnwood loamy sand, 0 to 3 percent slopes
- 30 Lynnwood-Nargar complex, 65 to 90 percent slopes
- 31 McKenna gravelly silt loam, 0 to 8 percent slopes
- 32 Menzel silt loam, 0 to 3 percent slopes
- 33 Mukilteo muck
- 34 Nargar fine sandy loam, 0 to 15 percent slopes
- 35 Nargar fine sandy loam, 15 to 30 percent slopes
- 36 Nargar-Lynnwood complex, 30 to 65 percent slopes
- 37 Nargar Variant sandy loam, 3 to 30 percent slopes
- 38 Norma loam
- 39 Norma Variant loam
- 40 Ogarty-Tokul-Rock outcrop complex, 65 to 90 percent slopes
- 41 Olomount gravelly loam, 3 to 15 percent slopes
- 42 Olomount-Elwell-Rock outcrop complex, 65 to 90 percent slopes
- 43 Orcas peat
- 44 Oso gravelly loam, 3 to 15 percent slopes
- 45 Oso-Gatchell-Rock outcrop complex, 65 to 90 percent slopes
- 46 Pastik silt loam, 0 to 8 percent slopes
- 47 Pastik silt loam, 8 to 25 percent slopes
- 48 Pichuck loamy sand
- 49 Pits
- 50 Potchub silt loam, 3 to 30 percent slopes
- 51 Potchub-Harmit complex, 15 to 30 percent slopes
- 52 Potchub-Harmit-Rock outcrop complex, 30 to 65 percent slopes
- 53 Puget silty clay loam
- 54 Puget silty clay loam
- 55 Puget fine sandy loam, 0 to 8 percent slopes
- 56 Puget fine sandy loam, 8 to 15 percent slopes
- 57 Riverwash
- 58 Rober silt loam, 0 to 15 percent slopes
- 59 Rober silt loam, 15 to 30 percent slopes
- 60 Rober silt loam, 30 to 65 percent slopes
- 61 Skykomish gravelly loam, 0 to 30 percent slopes
- 62 Skykomish silt loam
- 63 Sulsavar gravelly loam, 0 to 8 percent slopes
- 64 Sultan silt loam
- 65 Sultan Variant silt loam
- 66 Terric Medisaprists, nearly level
- 67 Tokul silt loam, 2 to 8 percent slopes
- 68 Tokul silt loam, 8 to 15 percent slopes
- 69 Tokul gravelly loam, 0 to 8 percent slopes
- 70 Tokul gravelly loam, 8 to 15 percent slopes
- 71 Tokul gravelly loam, 15 to 25 percent slopes
- 72 Tokul-Ogarty-Rock outcrop complex, 0 to 25 percent slopes
- 73 Tokul-Ogarty-Rock outcrop complex, 25 to 65 percent slopes
- 74 Urban land
- 75 Verlot mucky silt loam, 3 to 25 percent slopes
- 76 Winston gravelly loam, 0 to 3 percent slopes
- 77 Winston gravelly loam, 3 to 30 percent slopes
- 78 Xerorthents, nearly level

# CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

## CULTURAL FEATURES

- BOUNDARIES**
- National, state or province
  - County or parish
  - Minor civil division
  - Reservation (national forest or park, state forest or park, and large airport)
  - Land grant
  - Limit of soil survey (label)
  - Field sheet matchline & neatline
- AD HOC BOUNDARY (label)**
- Small airport, airfield, park, oilfield, cemetery, or flood pool
- STATE COORDINATE TICK**
- LAND DIVISION CORNERS (sections and land grants)**
- ROADS**
- Divided (median shown if scale permits)
  - Other roads
  - Trail
- ROAD EMBLEMS & DESIGNATIONS**
- Interstate
  - Federal
  - State
  - County, farm or ranch
- RAILROAD**
- Without road
  - With road
  - With railroad
- DAMS**
- Large (to scale)
  - Medium or small
- PITS**
- Gravel pit
  - Mine or quarry

## SPECIAL SYMBOLS FOR SOIL SURVEY

- SOIL DELINEATIONS AND SYMBOLS**
- ESCARPMENTS
  - Bedrock (points down slope)
  - Other than bedrock (points down slope)
  - SHORT STEEP SLOPE
  - GULLY
  - DEPRESSION OR SINK
  - SOIL SAMPLE SITE (normally not shown)
  - MISCELLANEOUS
  - Blowout
  - Clay spot
  - Gravelly spot
  - Gumbo, slick or scabby spot (sodic)
  - Dumps and other similar non soil areas
  - Prominent hill or peak
  - Rock outcrop (includes sandstone and shale)
  - Saline spot
  - Sandy spot
  - Severely eroded spot
  - Slide or slip (tips point upslope)
  - Stony spot, very stony spot

## MISCELLANEOUS CULTURAL FEATURES

- Farmstead, house (omit in urban areas)
- Church
- School
- Indian mound (label)
- Located object (label)
- Tank (label)
- Wells, oil or gas
- Windmill
- Kitchen midden

## WATER FEATURES

- DRAINAGE**
- Perennial, double line
  - Perennial, single line
  - Intermittent
  - Drainage end
  - Canals or ditches
  - Double-line (label)
  - Drainage and/or irrigation
- LAKES, PONDS AND RESERVOIRS**
- Perennial
  - Intermittent
- MISCELLANEOUS WATER FEATURES**
- Marsh or swamp
  - Spring
  - Well, artesian
  - Well, irrigation
  - Wet spot

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthorectified maps prepared by the State of Washington, Department of Natural Resources, and cooperating agencies.



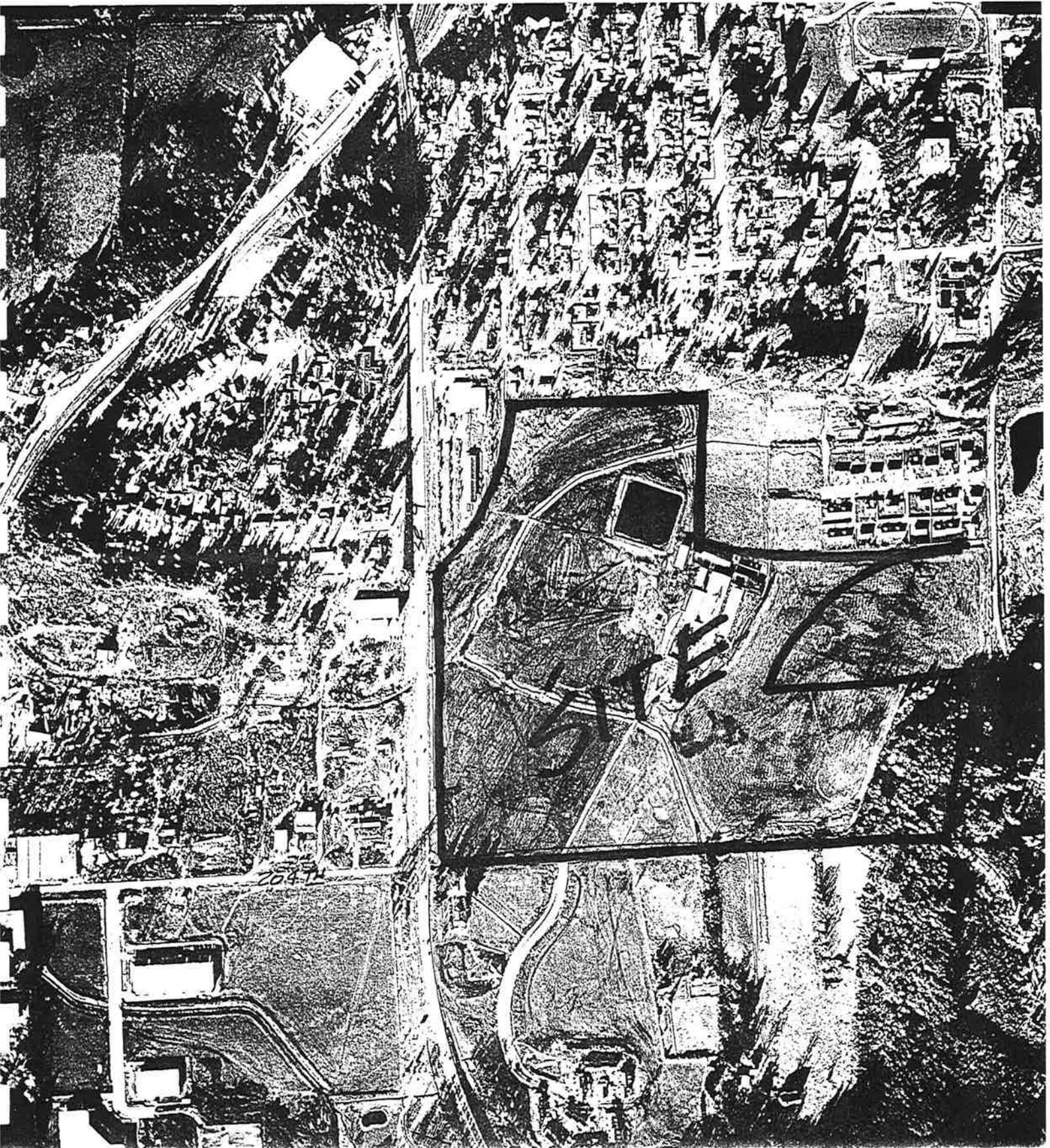
APPENDIX 2  
AIR PHOTO OF SITE

NORTH

PRE-DEVELOPMENT PHOTOGRAPH

JENSEN FARM

JAN - 25 - 1991



**APPENDIX 3**  
**GEOTECHNICAL REPORTS**

204TH STREET DEVELOPMENT

204TH AT SR-9

ARLINGTON, WASHINGTON

JOB NO. 8911-5G

PRELIMINARY

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Appendix B	Test Pit Logs
Appendix C	Unified Soils Classification System



CASCADE GEOTECHNICAL  
A DIVISION OF CASCADE TESTING LABORATORY, INC.  
12919 N.E. 126TH PLACE KIRKLAND, WASHINGTON 98034  
(206) 821-5080 FAX: (206) 823-2203

November 17, 1989  
Job No. 8911-5G

**PRELIMINARY**

City of Arlington  
238 N. Olympic  
Arlington, Washington 98223

Attention: Kathy Peterson

Reference: 204th Street Development  
204th at SR-9  
Arlington, Washington

Dear Ms. Peterson:

As requested by Eldon McCall of Cascade Surveying and Engineering, Inc., we have conducted a preliminary soils investigation for a proposed roadway in Arlington, Washington. The following preliminary report contains our initial findings, conclusions and recommendations.

#### INTRODUCTION

The purpose of our study was to determine the subsurface soil and ground water conditions of the site and to offer recommendations to be used for roadway construction.

We understand that a three (3) lane roadway is planned for the present and five (5) lanes are planned for the future. At the time of our investigation, the center line had been staked along the proposed roadway.

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#### SITE DESCRIPTION

The site is located at the end of the existing 204th Street on the east side of SR-9 in Arlington, Washington.

At the time of our visit, the site was covered with grass (pasture).

The site slopes gently downward from the east to the west.

The ground was wet from recent rains and in places saturated.

#### SUBSURFACE CONDITIONS

Site subsurface conditions were determined by excavating fourteen (14) test pits on November 8, 1989 using a backhoe. The test pit locations are shown on the site plan in Appendix A. Depths referred to in this report are relative to the ground surface at the time of our investigation. The test pits were four and one-half (4 1/2) to eight and one-half (8 1/2) feet deep.

In test pits #1, #2, #3, #4 and #5 we observed interbedded layers of topsoil and sand four (4) to five (5) feet thick. Below these layers was a medium dense to dense brown to blue gray sand with minor silt. Beneath the sand layer in test pit #4 and #5 at five and one-half (5 1/2) feet below the surface, we noted dense, gray gravelly sand.

One and one-half (1 1/2) feet of topsoil was observed in test pit #6. Rusty brown medium dense sand with some organics two and one-half (2 1/2) feet thick was found below the topsoil. At four (4)

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feet from the surface, we noted a rusty brown sand with some gravel and below this layer was the dense, blue-gray gravelly sand.

Two (2) to three (3) feet of topsoil was observed in test pits #7, #8, #9, #10 and #14. Below the topsoil was rusty brown to gray gravelly sand. In test pit #8, however the top one and one-half (1 1/2) feet of gravelly sand contained organics and in test pit #9, a one (1) foot thick layer of brown sand was noted at the contact between the topsoil and gravelly sand.

In test pits #11, #12 and #13, we encountered the interbedded topsoil and sand layers noted in test pits #1, #2, #3, #4 and #5 four (4) to five (5) feet thick. Rusty brown to gray dense to very dense, gravelly sand was noted below the interbedded layers.

Ground water was visible in test pits #1, #2, #3, #4, #5, #6, #11, #13 and #14. the heaviest ground water was noted in #1, #13 and #14.

Detailed soil descriptions and test pit logs may be found in Appendix B. Soils were classified using the Unified Soils Classification System shown in Appendix C.

CONCLUSIONS AND RECOMMENDATIONS

Most of the proposed roadway is underlain by three to five feet of organic soils. Removing this organic soil and replacing it with gravel fill would provide a good subgrade and allow a relatively light pavement section. Leaving much of this soil in place would reduce excavation and fill quantities, but the resulting poor subgrade would require a heavier pavement section. Leaving the

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PRELIMINARY

organic soil in place would also result in some long-term settlement of the pavement. We recommend that the roadway work be done during the summer when the water table is lower.

Drainage

We recommend excavating a drainage ditch adjacent to the proposed roadway prior to construction to divert ground water from the side. The depth of the ditch should be determined by the groundwater level at the time of construction. Ground water elevations should be reviewed prior to the start of construction.

We understand that this area in Arlington is subject to flooding and that a storm system is planned for the roadway.

Pavement Section

We understand from Eldon McCall of Cascade Surveying and Engineering, Inc. that the expected traffic volume in ten (10) years is 17,000 vehicles per day with 6 to 7 percent being heavy trucks. We have based our design on the traffic described above and on a twenty (20) year design life.

If the organic soils are left in place, we recommend a pavement section of thirty (30) inches of gravel base (see Structural Fill section), six (6) inches of crushed rock and four (4) inches of Class B Asphaltic concrete. This may involve a change in roadway grade.

If all organic soil is excavated, a pavement section of eight (8) inches of gravel base, six (6) inches of crushed rock and three (3)

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 Page 5

**PRELIMINARY**

inches of Class B asphaltic concrete would be suitable. Since the area is subject to flooding, final pavement grades will require adjustment. This should be done with selected granular filler. Since curb, gutter, sidewalk and storm sewers will be added at a later date, we suggest reducing the A.C. thickness by one (1) inch when the initial roadway is constructed. After the curb, gutter and storm drains are built, a one (1) inch A.C. overlay could be done to provide a better finished surface. All materials and placement should conform to WSDOT specifications.

Roadway Fill

The gravel base used in the pavement section should meet the following standard:

<u>Sieve Size</u>	<u>Percent Passing</u>
4 inch	100
1/4"	25 - 75
#200	10 maximum

We recommend placing lifts a maximum of twelve (12) inches thick, compacted to at least 95% of the ASTM D-698 maximum dry density value.

We recommend the use of filter fabric on the subgrade prior to fill placement where wet or organic material is present. Placement of this fabric should be determined by the geotechnical engineer on site at the time of construction. Where practical, the subgrade should be rolled to a non-yielding condition before any fill is placed.

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PRELIMINARY

General

We recommend that we be engaged to review the final plans before construction begins to see that our recommendations have been properly interpreted. We also recommend that we be on site to confirm bearing soil and to observe all placement of fill.

We expect the on-site conditions to reflect our findings; however, some variations may occur. Should soil conditions be encountered that cause concern and/or are not discussed herein, we should be contacted immediately to determine if additional or alternate recommendations are required.

This report has been prepared for the exclusive use of the City of Arlington for specific application to the proposed construction of 204th Street in Arlington, Washington in accordance with generally accepted soils and foundation engineering practices. No other warranty, expressed or implied, is made.

Thank you for this opportunity to work with you. Should you have any questions, please feel free to contact us at any time.

Sincerely,

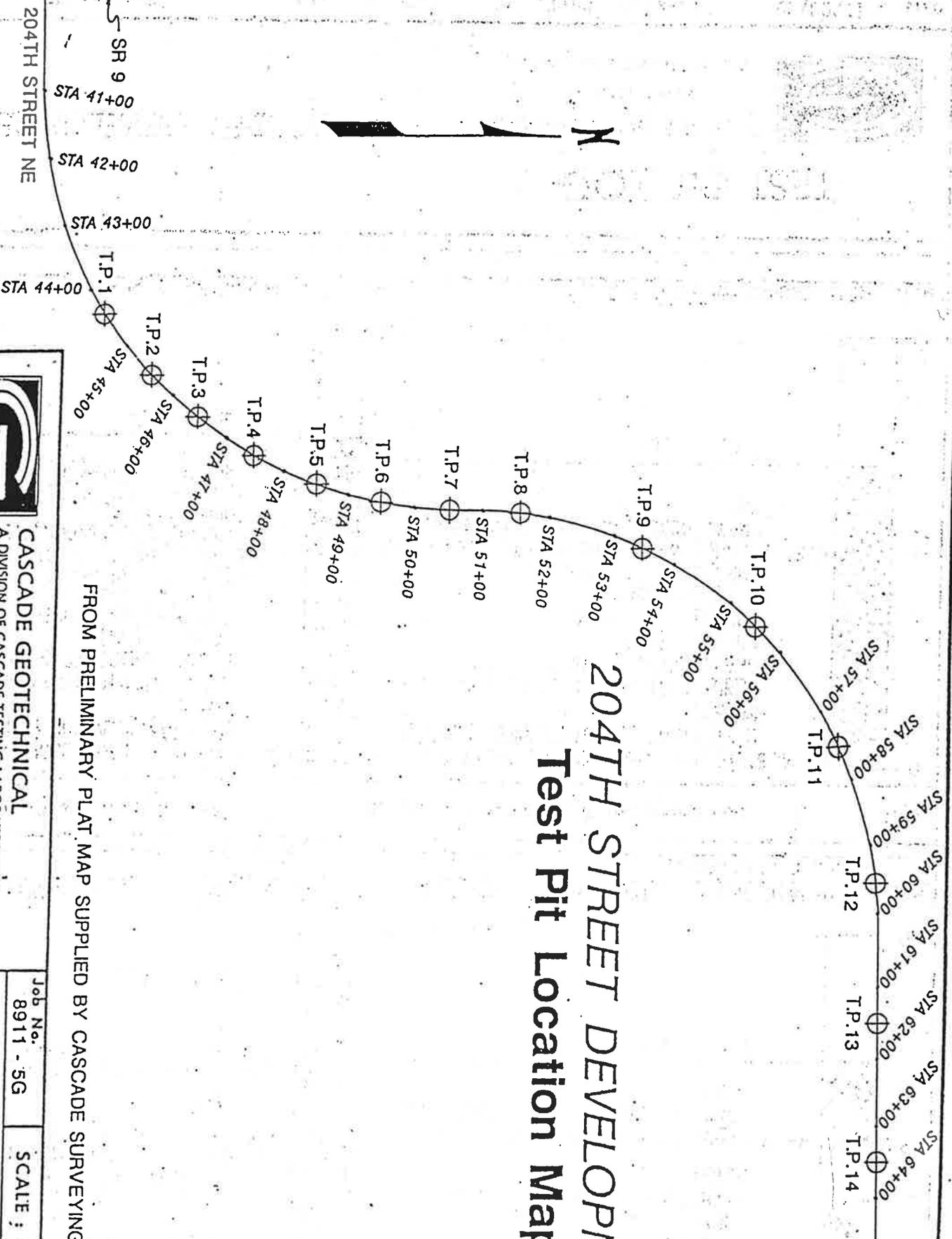
CASCADE GEOTECHNICAL

George E. Lamb, P.E.  
Principal Engineer

Bridget Krause  
Geologist

BK:lal

# 204TH STREET DEVELOPMENT Test Pit Location Map



FROM PRELIMINARY PLAT MAP SUPPLIED BY CASCADE SURVEYING



**CASCADE GEOTECHNICAL**

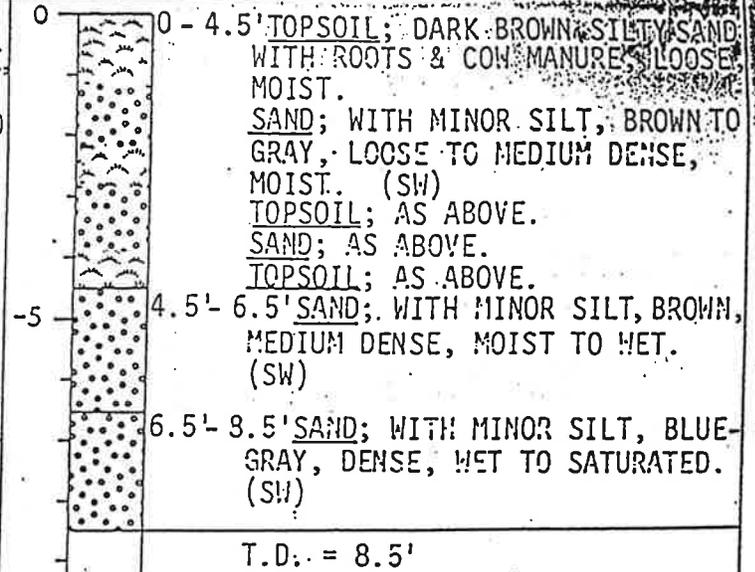
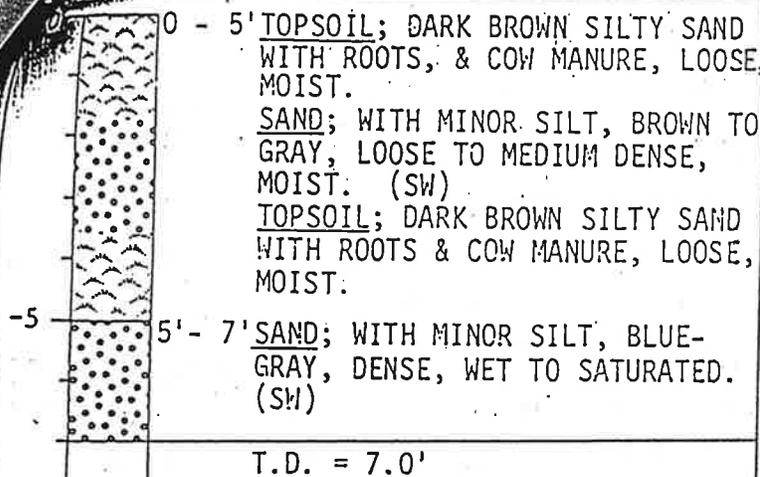
A DIVISION OF CASCADE TESTING LABORATORY, INC.  
12919 N.E. 126TH PLACE KIRKLAND, WASHINGTON 98034  
KIRKLAND: (206) 821-5080 SEATTLE: (206) 525-6700

Job No. 8911 - 5G	SCALE : 1" = 200'
Date 11/08/89	Dwn. By HLA
LOCATIONS ARE APPROXIMATE	
Eng - Geol JK	

Soil Description & Classification

T.P.- 2

Soil Description & Classification



Notes: MODERATE GROUND WATER @ 6'. CAVING @ 2'. HOLE FILLED FAST.

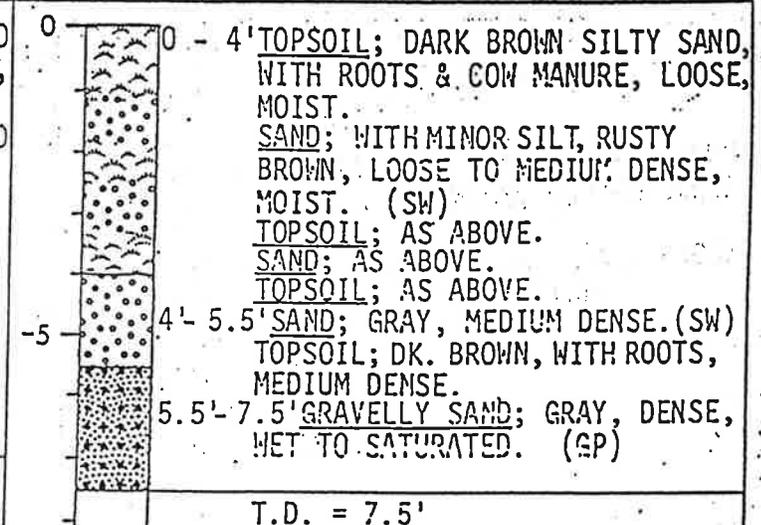
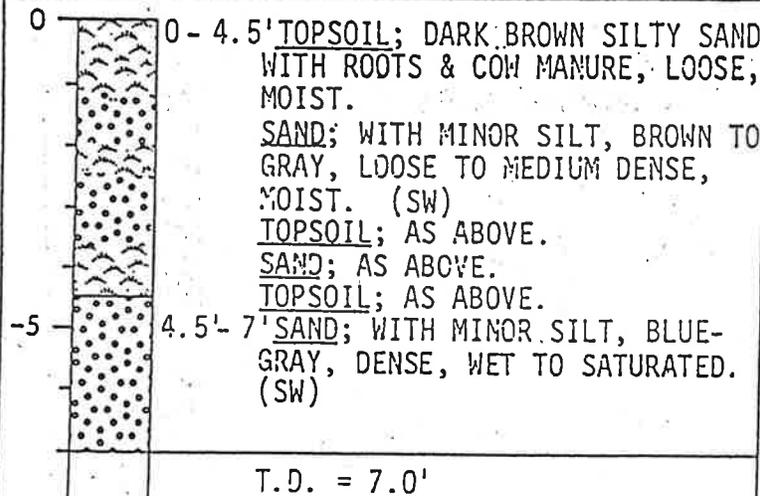
Notes: WEAK GROUND WATER @ 5'. CAVING @ 4.5'.

T.P.- 3

Soil Description & Classification

T.P.- 4

Soil Description & Classification



Notes: WEAK GROUND WATER @ 3.5'.

Notes: WEAK GROUND WATER @ 4'.

# TEST PIT LOG



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A DIVISION OF  
CASCADE TESTING LABORATORY, INC

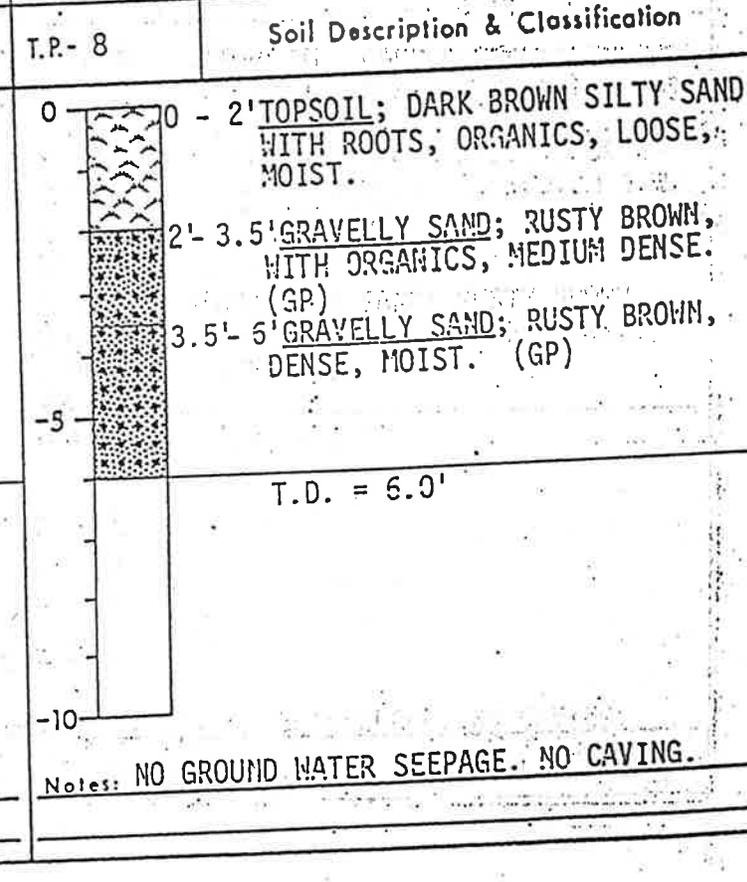
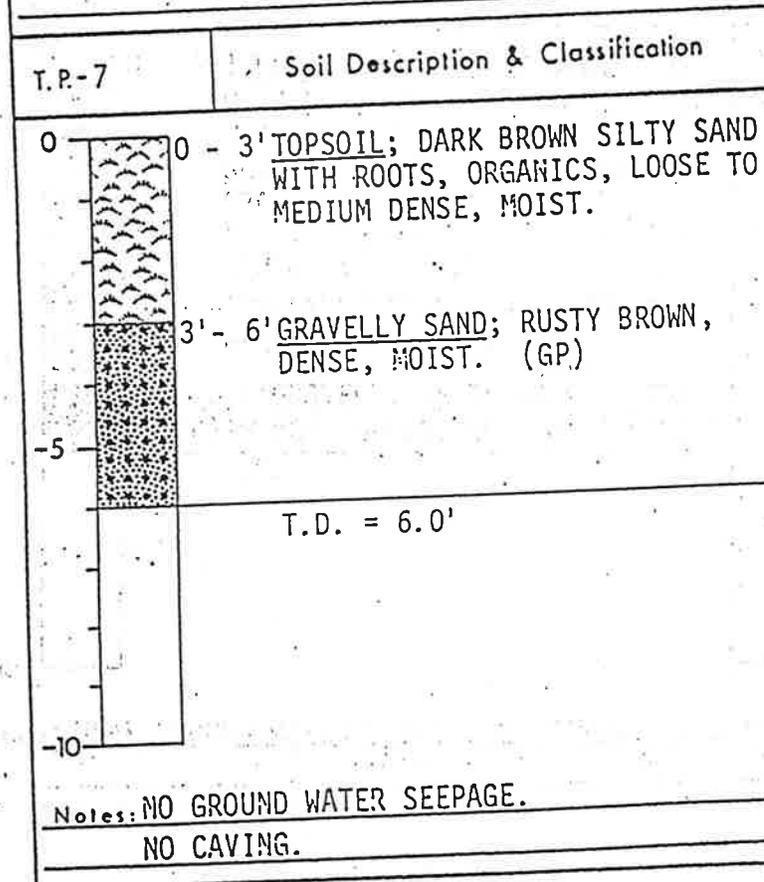
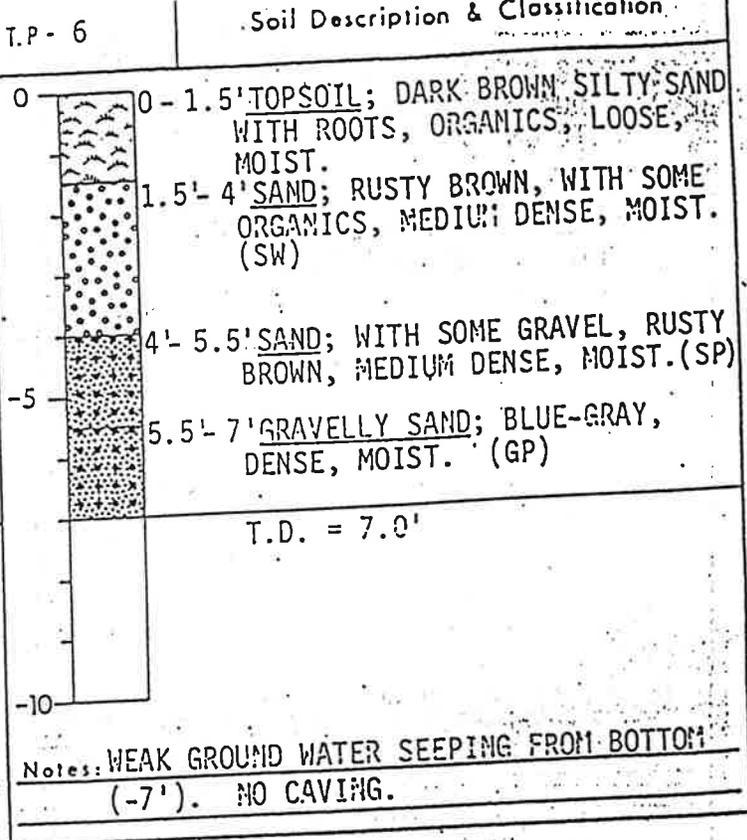
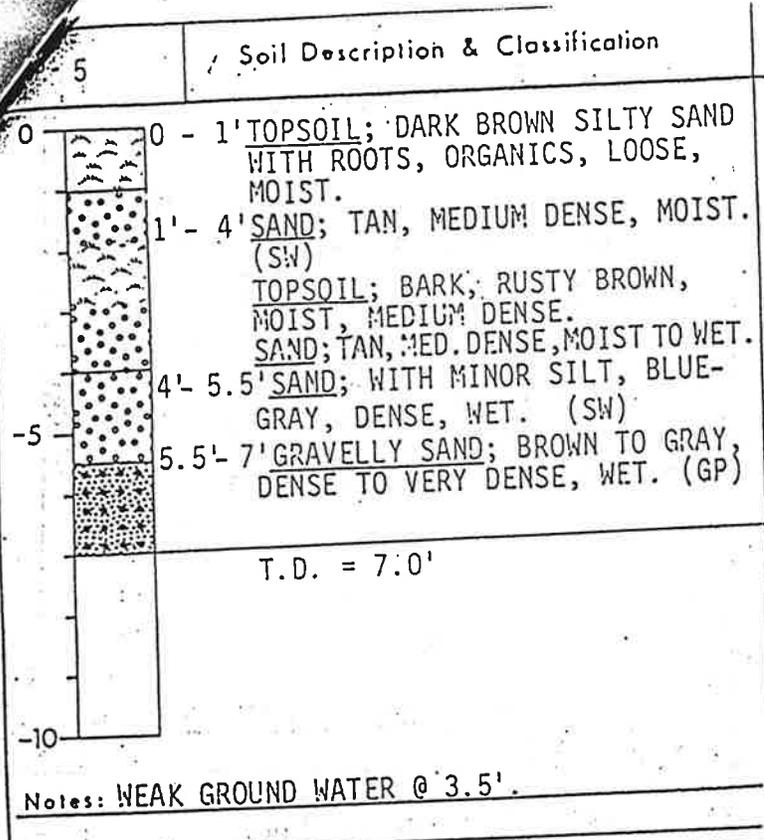
204TH STREET DEVELOPMENT

Date: 11/08/89

Job No. 8911 - 5G

Dwn. By HIA

Geo. Eng. RV



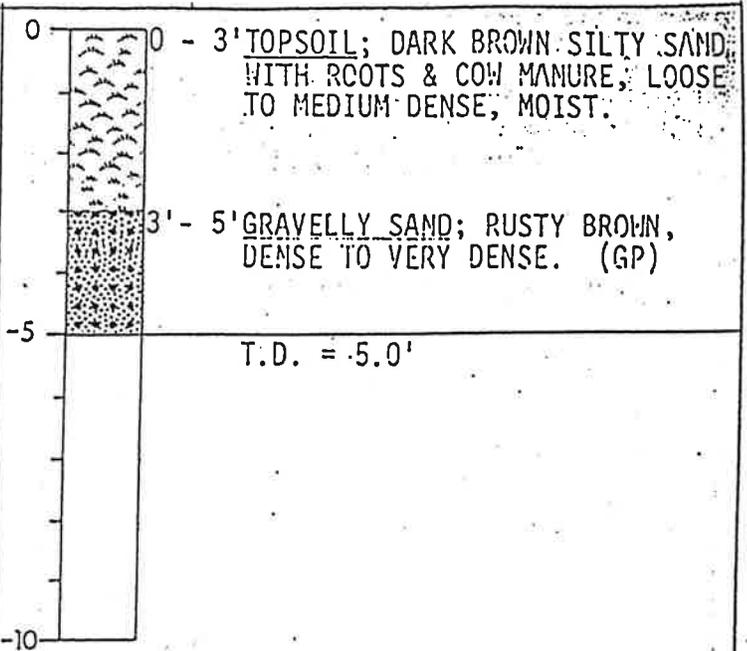
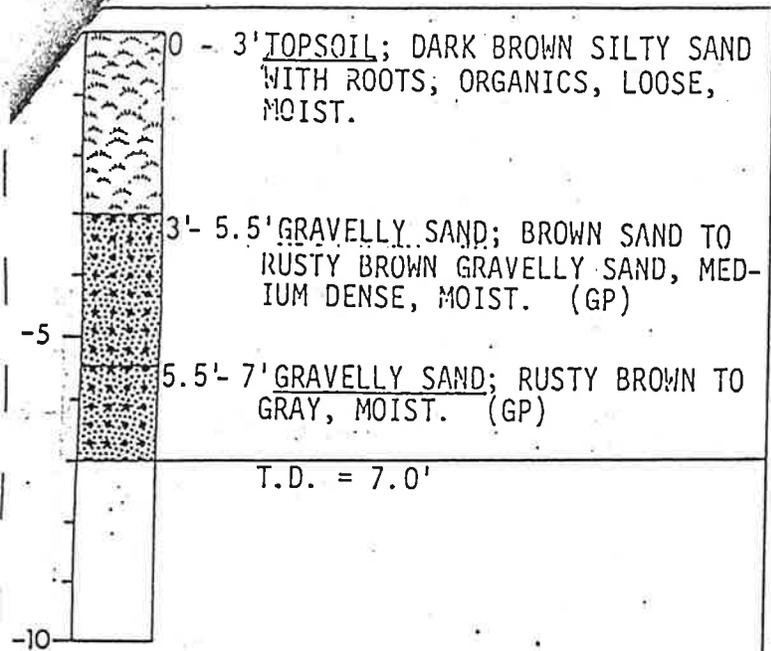
# TEST PIT LOG



CASCADE GEOTECHNICAL  
A DIVISION OF  
CASCADE TESTING LABORATORY, INC

204TH STREET DEVELOPMENT

Geo. Eng. BK

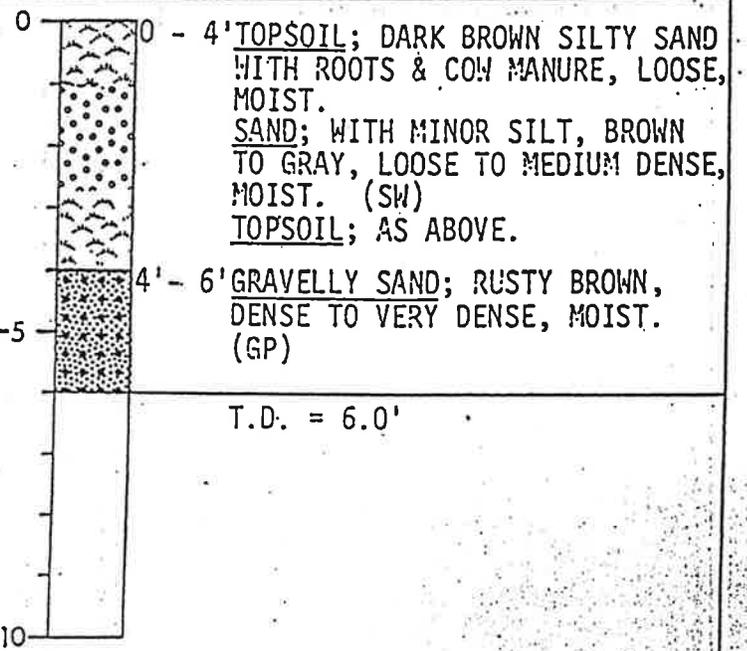
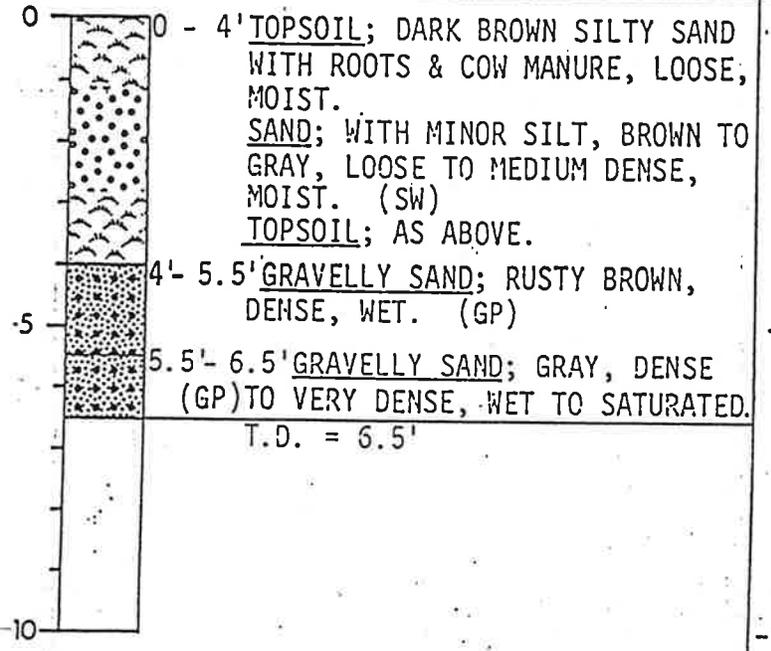


Notes: NO GROUND WATER SEEPAGE. NO CAVING.

Notes: NO GROUND WATER SEEPAGE. NO CAVING.

T.P.- 11      Soil Description & Classification

T.P.- 12      Soil Description & Classification



Notes: WEAK GROUND WATER @ 5.5'. NO CAVING.

Notes: NO GROUND WATER SEEPAGE. NO CAVING.

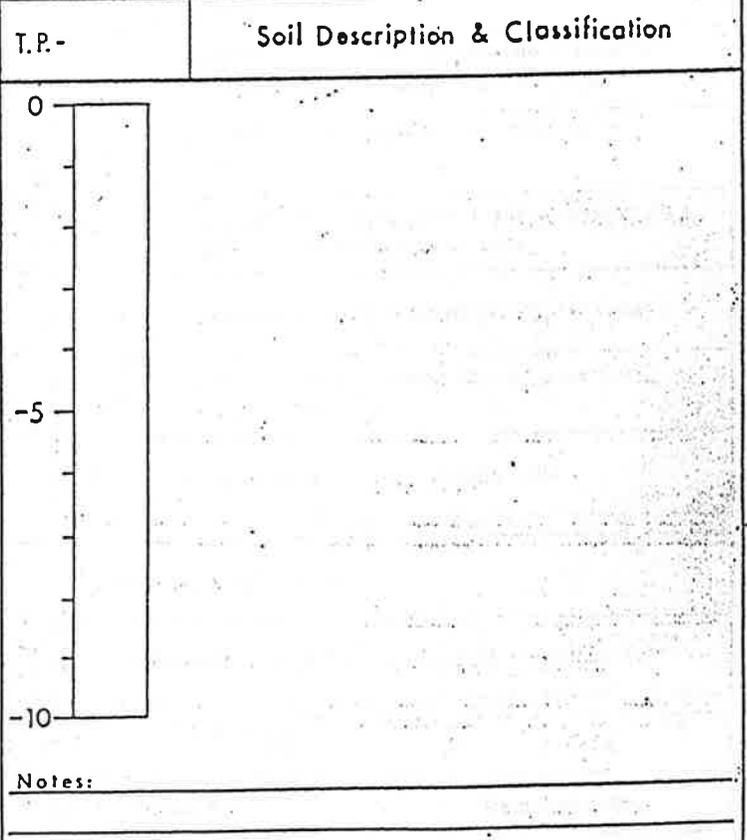
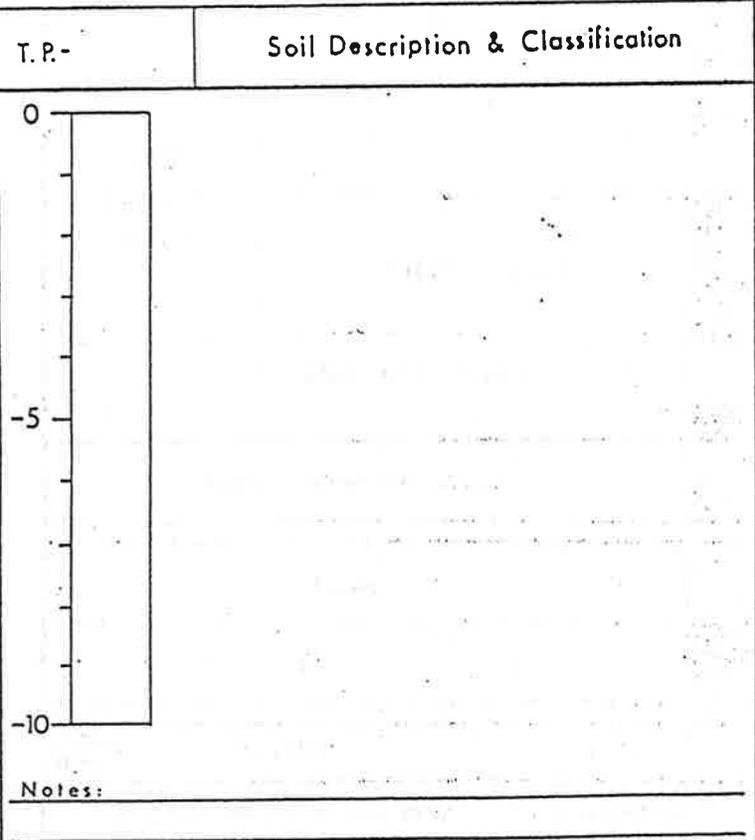
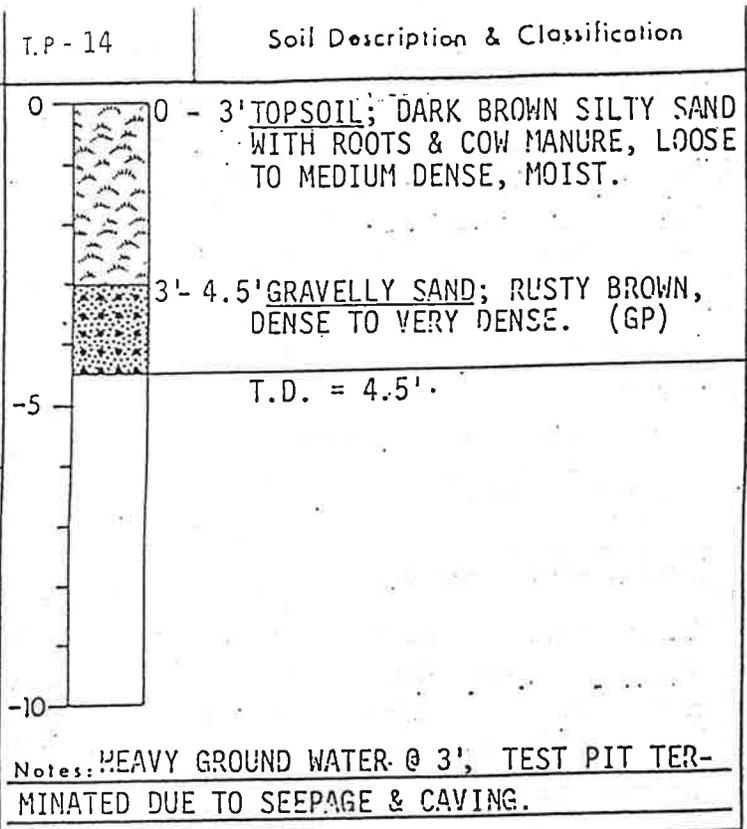
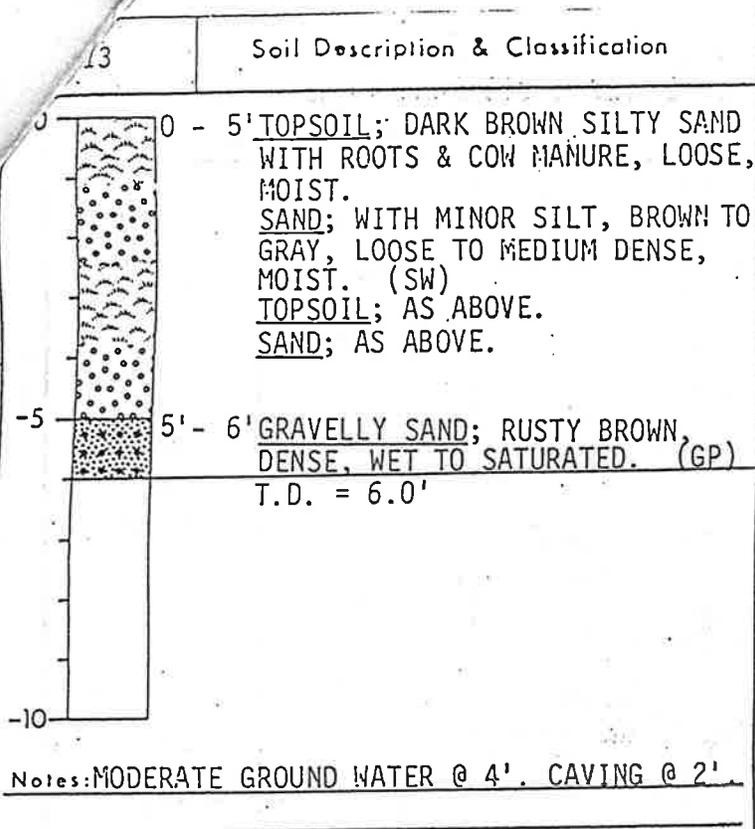
# TEST PIT LOG



CASCADE GEOTECHNICAL  
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CASCADE TESTING LABORATORY, INC

## 204TH STREET DEVELOPMENT

ate 11/08/89	Job No. 8911 - 5G	Dwn. By HLA	Geo. Eng. BK
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# TEST PIT LOG



CASCADE GEOTECHNICAL  
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204TH STREET DEVELOPMENT

Date 11/08/89

Job No. 8911 - 5G

Dwn. By HLA

Geo. Eng. BK

# UNIFIED SOILS CLASSIFICATION SYSTEM

MAJOR DIVISIONS			SYMBOL	LETTER	DESCRIPTION
<b>COARSE GRAINED SOILS</b>	<b>GRAVEL &amp; GRAVELLY SOILS</b>	CLEAN GRAVELS		GW	Well-graded gravels or gravel-sand mixtures, little or no fines
		GRAVELS WITH FINES		GP	Poorly graded gravels or gravel-sand mixtures, little or no fines
		GRAVELS WITH FINES		GM	Silty gravels or gravel-sand-silt mixtures
		GRAVELS WITH FINES		GC	Clayey gravels or gravel-sand-clay mixtures
	<b>SAND &amp; SANDY SOILS</b>	CLEAN SANDS		SW	Well-graded sands or gravelly sands, little or no fines
		CLEAN SANDS		SP	Poorly graded sands or gravelly sands, little or no fines
		SANDS WITH FINES		SM	Silty sands or sand-silt mixtures
		SANDS WITH FINES		SC	Clayey sands or sand-clay mixtures
<b>FINE GRAINED SOILS</b>	SILTS & CLAYS			ML	Inorganic silts & very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity
	Liquid Limit Less Than 50			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays or lean clays
	SILTS & CLAYS			OL	Organic silts & organic silty clays of low plasticity
	Liquid Limit Greater Than 50			MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
	SILTS & CLAYS			CH	Inorganic clays of high plasticity, fat clays
	Liquid Limit Greater Than 50			OH	Organic clays of medium to high plasticity, organic silts
<b>HIGHLY ORGANIC SOILS</b>				PT	Peat or other highly organic soils
<b>TOPSOIL</b>					Humus & duff layer
<b>FILL</b>					Uncontrolled, with highly variable constituents

SYM BOL	DATUM	NOTE
I	2" O.D. Split Spoon Sampler	Sample Interval
II	Ring or Shelby Sampler	Sample Interval
P	Sampler Pushed	Sample Interval
*	Other Sample Type	Sample Interval

SYM BOL	DATUM	NOTE
	Water Level	Date Recorded
Ts	Torvane Reading	
qu	Penetrometer Reading	
	Water Observation Well	Tip Elevation



**CASCADE GEOTECHNICAL**  
 A DIVISION OF  
 CASCADE TESTING LABORATORY, INC.

## KEY CHART

APPENDIX 4

CORRESPONDENCE FROM WASHINGTON STATE  
DEPARTMENT OF FISHERIES AND  
STILLAGUAMISH TRIBES WHICH ADDRESS  
CONCERNS ALONG THE PORTAGE CREEK CORRIDOR

SAID CONCERNS WERE INCORPORATED AS A PART  
OF THE PROPOSED PLAN SUBMITTAL



**Stillaguamish Tribe of Indians**

3439 Stoluckquamish Lane  
Arlington, WA 98223

March 5, 1993

Mr. Thomas R. Myers, City Administrator  
Department of Community Development  
City of Arlington  
238 North Olympic  
Arlington, WA 98223

Dear Mr. Myers:

On February 25, 1993, the City of Arlington as lead agency issued a Mitigated Determination of Non-Significance to install a storm water facility adjacent to Portage Creek. This project is proposed by the Arlington School District #16. Because of the close proximity to Portage Creek, a salmon spawning and rearing stream, and the potential for significant impacts to this resource, the Stillaguamish Tribe submits the following comments.

According to drawings of the proposed detention pond, a berm will be constructed within fifteen feet of the CENTER of the stream. This is in direct violation of City Code 19.12.110 which states "Wetlands and natural drainage courses shall be kept open and unobstructed. No structures shall be built within fifty feet of wetlands and watercourses." This code is supported by the Comprehensive Plan Policy RM-5 which will "insure that developments near stream corridors or wetlands . . . maintain a 25 foot buffer from the outside boundary of the stream or wetland." In addition Code RM-11 insures, "that developments along stream corridors generally maintain minimum greenbelt widths of 25 feet from the STREAM BANK as shown in Figure 9". I suggest that you review Figure 9, page 92 for details.

Plans also indicate that this berm will be planted in shallow rooted grass. The above referenced Code states "Dense, uncultivated vegetation shall be maintained to a minimum depth of 25 feet from all watercourses and wetlands." The above mentioned Policies state, "Natural vegetation should be maintained within the buffer," and "A mix of overstory and understory plants should be maintained or planted within the required greenbelt width.

The construction of this berm automatically eliminates all of the benefits of a native growth protection area adjacent to the

stream. Those benefits include bank stabilization, habitat diversity, large woody debris, shade, invertebrate food sources, surface runoff biofiltration, educational and recreational opportunities and aesthetic values. This is in direct violation of Comprehensive Plan Policy RM-10 which states "Documented fish and wildlife habitats and unique natural areas should be preserved, particularly those areas which experience high use by bald eagles and anadromous fish species."

The close proximity of the detention pond to the stream present additional concerns for future projects. Because of additional development, Portage Creek will incur more frequent and severe peak flow events. Also the beaver ponds in the headwaters will inevitably fail. These events may lead to bank erosion adjacent to the pond in which case the School District will want to protect their pond by armoring the stream bank with rip-rap. This will further degrade and eliminate anadromous fish habitat and turn this portion of Portage Creek into a conveyance ditch rather than a natural fish and wildlife corridor.

The MDNS indicates that the pond may be expanded to accommodate future development. This expansion potentially will further impact the fish and wildlife habitat due to the above mentioned impacts.

It is appropriate that the City comprehensively plan and manage the development of this area rather than address projects one at a time. The comprehensive plans for this area as well as individual projects such as the school detention pond should plan to accommodate at least a 20 year event.

There is mitigation that will address most of those concerns. That is to construct the detention pond more than fifty feet from the edge of the stream (ordinary high water mark). Most studies on fish habitat indicate that 100 feet is adequate. This buffer will provide minimum space for "dense, uncultivated vegetation" that will help stabilize the bank and provide the above mentioned benefits. In addition it will provide opportunity for a greenway for recreational, educational and environmental uses.

In the Comprehensive Plan the City of Arlington has set a goal to "Promote the maintenance and improvement of the excellent water quality of the Stillaguamish River and Portage Creek for human consumption as well as for use by fish and wildlife." In approving this proposed project, the City has fallen far short of that goal. The City Council also required a fifty foot Native Growth Protection Area on another upstream development for "public health and safety" reasons. It would seem that those same reasons apply here. Furthermore the City is presently working on preserving a corridor along Portage Creek through this area. The proposed detention pond will be a significant interruption of that corridor.

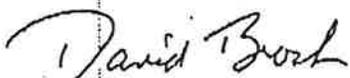
Thom Myers  
- page 3 -

Policy RM-3 of the Comprehensive Plan states "Fish bearing streams and their tributaries shall be protected from the adverse impacts of development." Policy RM-9 suggests the City "encourage advice and assistance from recognized experts ... to address complex issues." I suggest the City give due consideration to recommendations from the Departments of Fish, Wildlife and Ecology to effectively manage these public resources and meet previously stated goals and policies.

I would like to further quote from the Comprehensive Plan (page 82) since that is the applicable planning document:

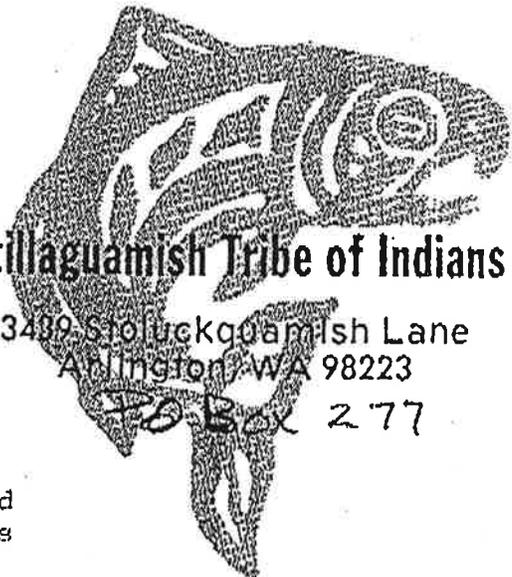
Drainage Management: The past has shown that changes in land use and urban development have led to increasing problems of flooding, erosion, sedimentation, water pollution and loss of fish habitat through inadequate control of drainage. It should be recognized that population growth and land development have the potential for further disruption of natural drainage systems and decreased water quality. It should also be recognized that uncontrolled and unplanned development may well lead to drainage problems for one another which can be most effectively addressed through comprehensive basin planning within the individual basins.

Respectfully,



David Brock  
Habitat Biologist

cc: Arlington School Board  
Department of Fisheries  
Department of Wildlife  
Department of Ecology



**Stillaguamish Tribe of Indians**

3499 Stillaguamish Lane  
Arlington, WA 98223

PO Box 277

March 9, 1993

Arlington School Board  
Administrative Offices  
600 East 1st Ave.  
Arlington, WA 98223

Dear School Board Members:

Enclosed is a copy of a letter the Stillaguamish Tribe sent to Thom Myers the City Administrator regarding the proposed detention pond to service the new school #4.

Due to its immediate proximity to Portage Creek, the project as proposed raises some serious concerns for potential significant impacts to the creek, its fish and wildlife habitat and the water quality. These concerns and potential mitigation are explained in the letter. I suggest the School Board consider these concerns and evaluate the repercussions of such a project.

Since the new school will be very close to Portage Creek, there will be opportunities for classes to explore and learn about the values of streams and riparian habitat. It will be unfortunate if their own sediment pond can be used as an example of what not to do. It would be more appropriate that the school provide an ample buffer strip with native vegetation as an example of how to protect these resources which are valuable to all of us.

I would also like the opportunity to explain and discuss these concerns with the Board. Kindly find a place for me on the agenda of the next Board meeting at which time I will be glad to answer any questions.

Respectfully,



David W. Brock  
Habitat Biologist



STATE OF WASHINGTON

DEPARTMENT OF FISHERIES

115 General Administration Building, M.S. AX-11 • Olympia, Washington 98504 • (206) 753-6600 • (SCAN) 234-6600

March 12, 1993

City of Arlington  
ATTENTION: Thomas Myers  
238 North Olympic Avenue  
Arlington, Washington 98223

SUBJECT: Comments on Mitigated Determination of Non-Significance,  
Stormwater Detention Pond for Arlington School District,  
WDF SEPA Log No. 21451

Dear Mr. Myers:

Washington Department of Fisheries (WDF) reviewed the above-referenced Mitigated Determination of Non-Significance and offers the following comments for your consideration. The proposed razone and development of property owned by Grant Jensen provides an excellent opportunity to provide protection for a salmon-producing stream that will provide for continued salmon production into the future. To accomplish this, the stream must be significantly improved compared to the existing degraded condition.

The proposed construction of the stormwater detention pond to address the stormwater run-off from the school is but a small portion of the planned development that will affect this section of Portage Creek. WDF is very concerned that the impacts from the various elements of the proposed development cannot be adequately evaluated if addressed on a piecemeal basis. We recommend that the SEPA Mitigated Determination of Non-Significance (MDNS) be withdrawn and reissued as a Determination of Significance to allow a comprehensive evaluation of potential adverse environmental impacts from the entire development proposal. This is consistent with the intent of SEPA as noted in WAC 197-11-330 and WAC 197-11-335. We also recommend the specific project proposal, described in this MDNS, be further evaluated to address our concerns.

The City of Arlington has put forward significant effort to develop a Comprehensive Plan to provide protection for the natural resources within the city's jurisdiction. The plan contains several goals and policies pertaining to the protection of streams and fish. The goal for water resources is to "promote the maintenance and improvement of the excellent water quality of the Stillaguamish River and Portage Creek for human consumption as well as for use by fish and wildlife." Recent water quality studies on Portage Creek have documented degraded water quality due mainly to agricultural practices and septic systems. Increased urban development in the basin will certainly contribute to water quality problems unless larger buffers are implemented with stronger stormwater drainage controls.

Thomas Myers  
March 12, 1993  
Page 2

Policy RM-3 states that "streams and drainage ways used for spawning should be protected from the adverse impacts of development."

Policy RM-4 requires that the city: "utilize assistance from Snohomish County's Stream Enhancement Program and the State Department of Fish and Game for identified stream problems."

Policy RM-5 references buffers widths and states "insure that developments near stream corridors or wetlands, as identified on the comprehensive plan map, maintain a 25- to 50-foot buffer from the outside boundary of the stream or wetland. Natural vegetation should be maintained within the buffer. The width of the buffer shall be determined by city officials depending on the degree of sensitivity of the site."

Policy RM-9 concerning SEPA and to "...encourage advice and assistance from recognized experts in government and the private sector to address complex issues."

Policy RM-10 requires that documented fish and wildlife habitats used by bald eagles and anadromous fish be preserved.

Policy RM-11 is to "...insure that developments along stream corridors generally maintain minimum greenbelt widths of 25 to 50 feet from the stream bank as shown in Figure 9. A mix of overstory and understory plants should be maintained or planted within the required greenbelt width. Native vegetation is preferred: water-tolerant species in the flood hazard area with less water-tolerant species farther up the bank."

As previously noted, Portage Creek supports spawning and rearing habitat for native coho and sea-run cutthroat trout. Both of these species are depressed in the Stillaguamish Basin. The coho stocks in particular are severely depressed as escapement levels have not been met for the last three years and are one of the weak stocks limiting recreational and commercial salmon fisheries off the coast, in the Strait of Juan de Fuca, and in Puget Sound.

Habitat in Portage Creek has been degraded over the years. The survival of coho in Portage Creek is dependent upon maintaining at a minimum the degraded habitat and enhancing it where possible. Maintaining the existing stream conditions is causing and will continue to cause a decline in the salmon population. Future enhancement opportunities in Portage Creek are dependent upon the maintenance of a sufficient riparian zone (buffer) along the stream.

The scientific literature supports minimum buffer areas of 100 feet or more from the top of stream banks to protect salmon habitat. Our professional experience with land use activities next to streams also supports the need for a minimum buffer of 100 feet from the top of the banks on both sides of the stream. While we recommend that

Thomas Myers  
March 12, 1993  
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buffers along Portage Creek be expanded to 100 feet, we commend the efforts of the City of Arlington to set aside a buffer for protection of the stream and the natural resources it supports. As buffer widths are reduced below the levels supported in the literature and past experience, it becomes very important to ensure the integrity of the remaining buffer.

Buffer restoration is especially needed on this section of Portage Creek due to the severe degradation the creek has already suffered from the loss of riparian vegetation, dredging, and channelization. Reestablishment of woody vegetation throughout the buffer is required to provide shade to restrict the growth of Reeds canary grass, maintain cooler water temperature, provide a source of food organisms for fish, and a source of large woody material contribution to the stream, which is so important to establishing habitat diversity.

The proposed placement of the stormwater detention pond within the designated 50-foot buffer and immediately adjacent to the stream is of great concern to WDF. The detention volumes and release rates proposed for the pond meet the WDF criteria. However, development within the buffer severely compromises the intended benefits of the buffer, particularly when the buffer is less than the optimal width to begin with. The bottom of the pond will be excavated lower than the adjacent creek bed, and is only 40 feet from the stream. This has significant potential to affect stream flows, groundwater and surface water quality.

The detention pond is separated from the top of the stream bank by a 10-foot wide earthen berm. The berm is to be planted with grass, which will not provide protection for the stream as intended by requiring a buffer. The location of the pond immediately adjacent to the stream increases the potential need to armor the bank of the stream to ensure the stream does not erode into the detention pond. This results in degradation of fish habitat. The pond would be located within the flood plain, increasing the potential for stranding of juvenile and adult salmonids during flood events.

Any fish trapped in this manner would likely perish. The excavation, grading, and berm construction associated with pond construction immediately adjacent to the stream is inconsistent with Policies RM-3, RM-5, and RM-11 adopted by the city for the protection of resources. The detention pond also conflicts with Policy RM-9 since the SEPA document does not address any of the concerns that we have raised. Policy RM-4 also applies since we have already identified this project as a threat to the stream.

Under the substantive authority of SEPA (WAC 197-11-660), WDF has the option to require conditions on the Hydraulic Project Approval in order to provide adequate protection for fish life. This could include a condition that the stormwater detention ponds be located outside the established 50-foot buffer. This action would protect

Thomas Myers  
March 12, 1993  
Page 4

the fish production potential of the stream. It would not be consistent to require stormwater run-off control for the protection of fish life and then permit the stormwater detention pond in a location that would adversely affect fish life. There appears to be adequate land available to site the stormwater detention pond in a manner that would result in decreased adverse impact to the environment.

WDF is also concerned with other aspects of the proposed rezone and development of the Grant Jensen property that are not included as part of the MDNS. In a conversation with Donald Haring of my staff, Ed McMillan indicated that much of the proposed area proposed for residential and commercial development is within the flood plain of Portage Creek. The stormwater ponds for the other development stages are also proposed to be located within the buffer and flood plain.

When questioned as to why this is being allowed, Mr. McMillan indicated that it was not a designated flood plain and that there was an intent within the basin to provide flood protection by construction of dikes. Whereas it may be appropriate to provide flood protection for existing structures, intentional development in known areas of flooding should be further questioned. This type of construction is contrary to the findings and recommendations of the Joint Select Committee on Flood Damage Reduction, which recently released its final report.

We recommend the above concerns be resolved before SEPA is finalized. We recommend this review explore alternative locations and designs for this detention pond. We would like to meet with you and other appropriate City of Arlington staff to discuss this project in more detail and to discuss other pending development proposals in the vicinity of this project.

We appreciate the opportunity to comment and hope that we can meet with you soon to resolve these and other concerns with future development within the Portage Creek basin.

Sincerely,



Duane E. Phinney, Chief  
Habitat Management Division

cc: Dave Brock, Stillaguamish Tribe  
Department of Ecology  
Mike Chamblin, WDF  
Millard Deussen, WDF  
Donald Haring, WDF

