

Area: Kirkland

Status: _____

DocID 16755

Source: City of Kirkland - Building Dept.

Local ID#1 BLD04-00683

Local ID#2 _____

Site Address 75 Stake St.

Date 5/17/06 By LT

Title page with the following information:

- Company (Author) name*
- Report date*
- Project Name*
- Company's job number*
- Site address*

Executive Summary / Introduction of the report

- Table of contents**
- Project Location Map / Vicinity Map**
- Site / Exploration Plans, Boring Location Plans**
- Cross-sections / Subsurface profiles**
- Exploration Logs**
- Monitoring Well Logs**
- Cone Penetrometer Logs**
- Groundwater Elevation Tables / Data**

Includes data from Previous Reports

No new data /data review

Missing Data /Illegible Data

Explanation _____

Comments: _____

ArcView RM Layers C.L. GW _____

Checked C.L. Checked KO Chkd _____

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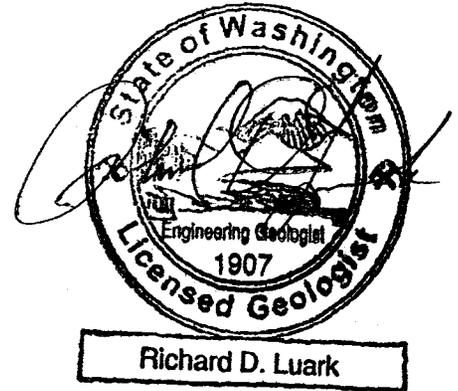


16755

REPORT ON
PRELIMINARY GEOTECHNICAL INVESTIGATION
75 STATE STREET PROJECT
KIRKLAND, WASHINGTON

Submitted to:

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West Water Real Estate Group
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2 Copies - West Water Real Estate Group
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July 9, 2003

Richard D. Luark, P.E., L.E.G.
Senior Consultant

033-1562-100.2000



EXECUTIVE SUMMARY

Golder Associates Inc. (Golder) is pleased to present the results of our preliminary geotechnical investigation of the property located at 75 State Street in Kirkland, Washington. We completed this investigation in accordance with our proposal to you dated June 20, 2003. The purpose of our investigation was to characterize and evaluate the subsurface geologic conditions and provide geotechnical design and construction recommendations for the development of the proposed site development.

Our work consisted of a site reconnaissance, subsurface drilling investigation, engineering analyses to develop geotechnical recommendations, and preparation of this report. This report documents the results of the investigation and presents our geotechnical design and construction recommendations. In addition to this preliminary geotechnical investigation, Golder has also prepared a separate report providing a Phase I/II Environmental Site Assessment (ESA).

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1.0 SITE AND PROJECT DESCRIPTION

The subject property is located at 75 State Street in downtown Kirkland, Washington. The site consists of a roughly triangular shaped parcel bounded by Kirkland Avenue to the north, State Street to the northeast, 1st Avenue South to the south and existing retail space to the west. Presently, a one-story masonry block building dating from the 1940s and associated asphalt parking lot occupies the property.

The general topography of the area slopes gently down to the northwest. A steep slope (approximately 1.5H:1V {horizontal:vertical}) occupies the south property line and slopes up to the south towards 1st Avenue South. A wood piling retaining wall is located at the base of the 1.5H:1V slope and is approximately 2 to 4 feet in height.

Site development plans include the development of four stories of residential space with retail space at street level along Kirkland Avenue and below grade parking. Site development will require maximum cuts of approximately 27-feet in the southern portion of the site (at 1st Avenue South).

3.0 SUBSURFACE CONDITIONS

The recent geologic history of the Puget Sound Lowland region has been dominated by several glacial episodes. The most recent, the Vashon stage of the Fraser glaciation, is responsible for most of the present day geologic and topographic conditions. The Puget lobe of the Cordillerian ice sheet deposited a heterogeneous assemblage of proglacial lacustrine deposits, advance outwash, lodgment till, and recessional outwash. As the glacier retreated northward, it uncovered a sculpted landscape of elongate uplands and intervening valleys. This site is located on a gently rolling elevated plain that was formed during the last period of continental glaciation.

Geological information for the site was obtained from the "Geologic Map of the Kirkland Quadrangle, Washington" by J.P. Minard (1983, Miscellaneous Field Studies Map MF-1543, United States Geological Survey). According to this map, the site is underlain by transitional beds dating from the Fraser Glaciation and pre-Fraser Glaciation. The transitional beds consist of nonglacial and glacial deposits and are mostly massive to bedded, medium gray to dark gray, clay, silt, and fine to very fine sand.

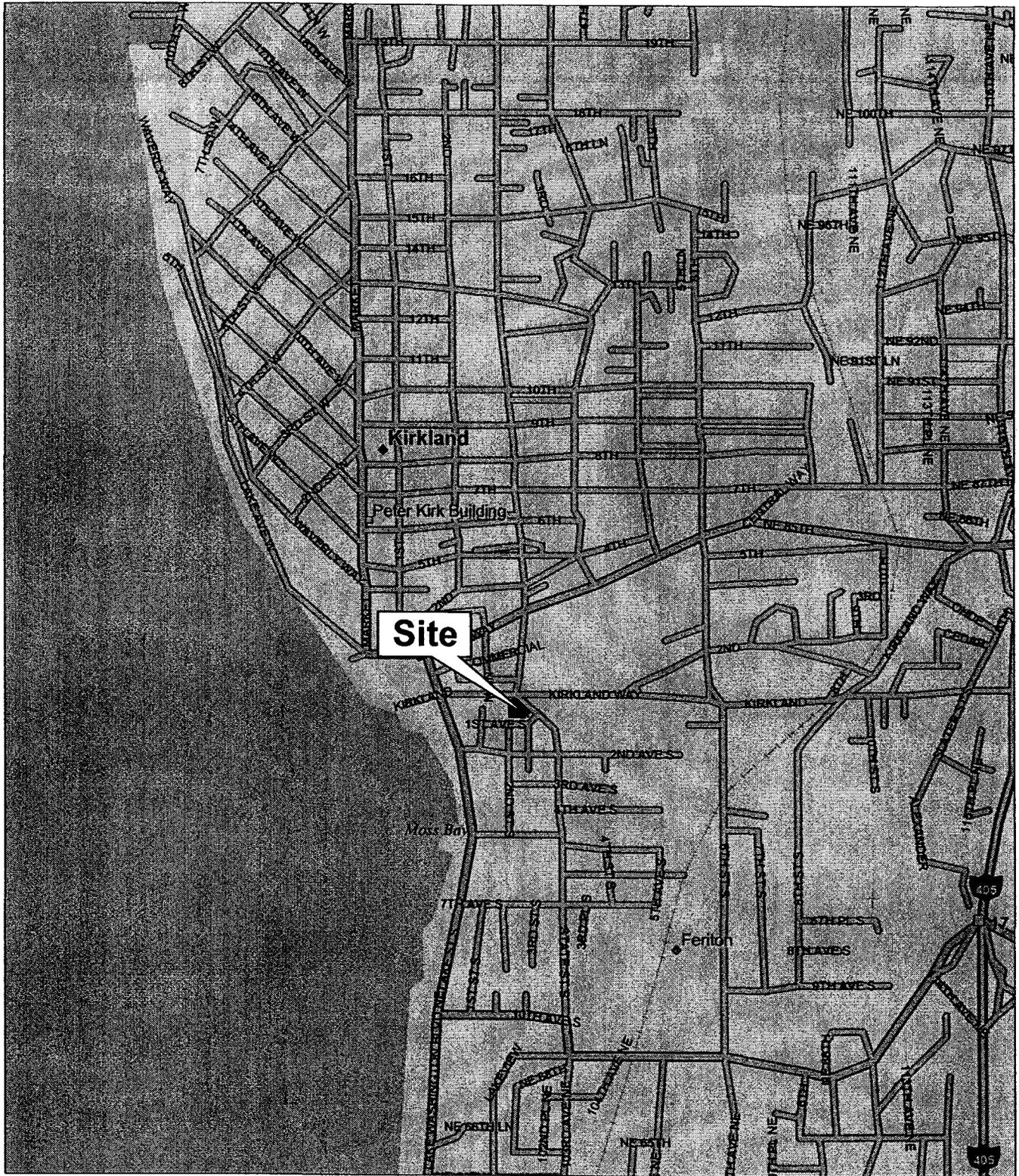
Based on the results of our exploration program, the soil conditions consist primarily of stiff to hard transitional bed deposits consisting of olive gray to dark gray, silt to silty clay with laminations of light gray fine sand and silt that dip at various angles from level to 75 degrees. Occasional lenses of fine to medium sand were noted in several borings and a zone of wet, silty, fine to medium sand was observed across the site at a depth of approximately 11 to 16 feet below ground surface.

Groundwater was not encountered in any of the borings during drilling, although the sand layer encountered from 11 to 16 feet appeared wet. Piezometer P-1 and monitoring well MW-1, which were screened at the depth of the sand layer, produced increasing amounts of water when monitored over a period of a week after drilling. Groundwater measurements taken in GB-1 and GB-6 are presented in Table 1.

TABLE 1

Groundwater Levels in GB-1 and GB-6

Boring	Date	Groundwater Level
GB-1	2/18/03	15.3
	2/25/03	12.47
GB-6	2/21/03	9.44
	2/25/03	7.34



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NOT TO SCALE

FIGURE 1
SITE LOCATION MAP
 W.W.R.E.G/75 STATE STREET/WA

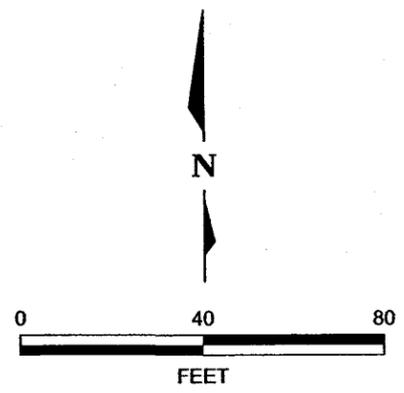
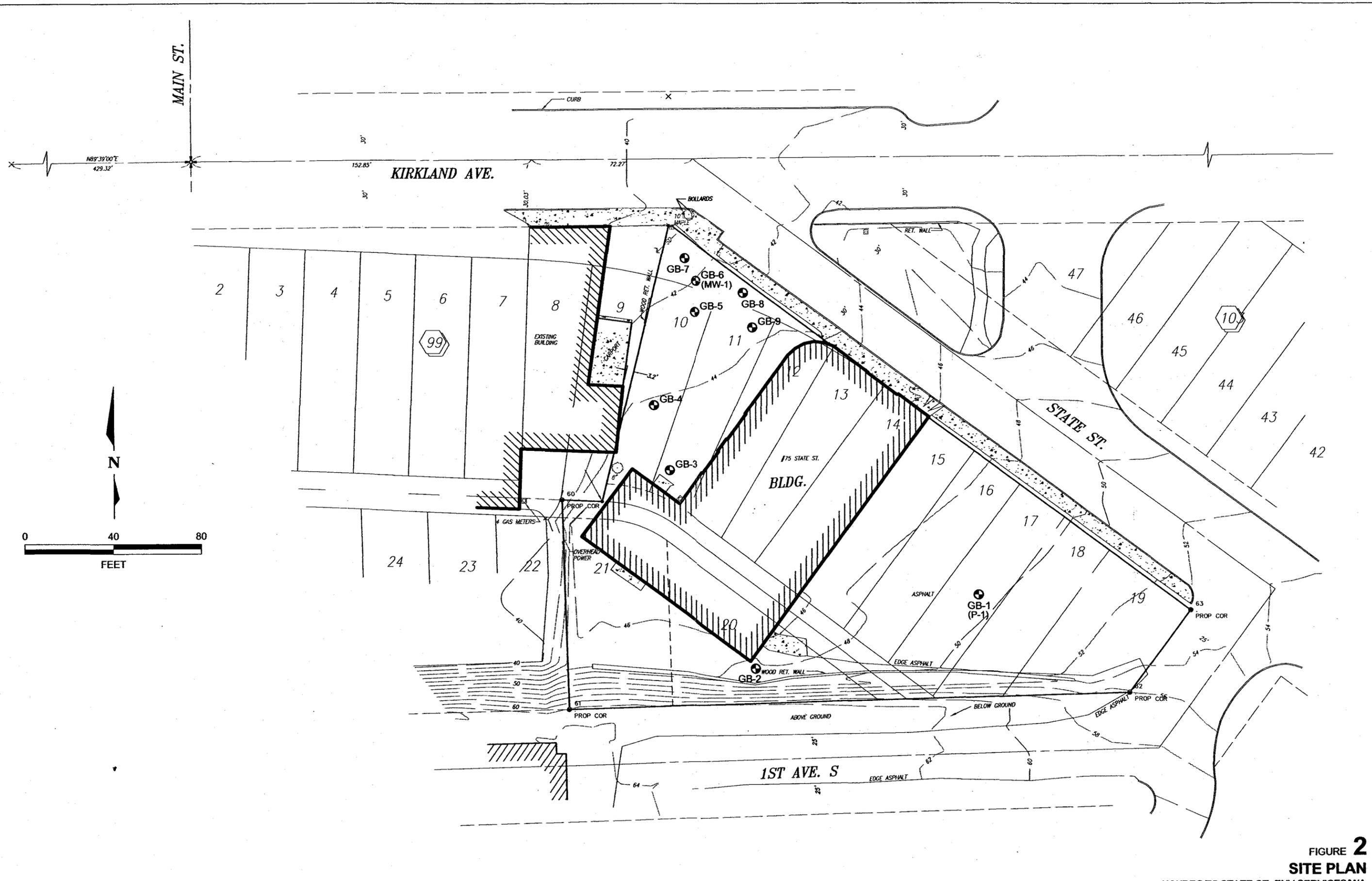


FIGURE 2
SITE PLAN
 WWREG/75 STATE ST. ENV SERVICESWA

RECORD OF BOREHOLE GB-1

SHEET 2 of 2
ELEVATION: 49.5
INCLINATION: -90

PROJECT: WWREG/75 State Street/WA DRILLING METHOD: Hollow Stem Auger (HSA) DATUM:
PROJECT NUMBER: 033-1562-100 DRILLING DATE: 2/17/03 AZIMUTH: N/A
LOCATION: 75 State Street, Kirkland, WA DRILL RIG: Mobile B-59 COORDINATES: not surveyed

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES					PENETRATION RESISTANCE				NOTES	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	WATER CONTENT (PERCENT)				WATER LEVELS GRAPHIC	
											PENETRATION RESISTANCE BLOWS / R ■					
25		15.0 - 29.0 Stiff to very stiff, medium gray, massive, CLAYEY SILT, with steeply dipping, light gray, fine SAND laminae, damp. PID: 0 ppm (Continued) <i>(Same as above)</i>	ML/CL													
				20.5 29.0	9	SPT	4-11-14	25	1.5 1.5		■					
30		Boring completed at 29.0 ft.														
35																
40																
45																
50																

BOREHOLE RECORD BORE.GPJ GLDR WA.GDT 7/9/03

1 in to 3 ft
DRILLING CONTRACTOR: Holt Drilling
DRILLER: Mike Reynolds

LOGGED: T. Marshall
CHECKED: RDL
DATE: 7/9/03



RECORD OF BOREHOLE GB-2

SHEET 1 of 1
ELEVATION: 48
INCLINATION: -90

PROJECT: WWREG/75 State Street/WA DRILLING METHOD: Hollow Stem Auger (HSA) DATUM:
PROJECT NUMBER: 033-1562-100 DRILLING DATE: 2/18/03 AZIMUTH: N/A
LOCATION: 75 State Street, Kirkland, WA DRILL RIG: Mobile B-59 COORDINATES: not surveyed

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES					PENETRATION RESISTANCE				NOTES WATER LEVELS GRAPHIC			
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	WATER CONTENT (PERCENT)							
											BLOWS / ft ■					W _p	W _L	W _U
0	4.25-inch I.D. HSA with 140lb. Autohammer	0.0 - 1.0 CRUSHED ROCK (FILL) PID: 0 ppm			47.0													
		1.0 - 11.0 Very stiff, medium gray, massive, CLAYEY SILT to SILTY CLAY, with light gray fine sand and silt laminae, damp. PID: 0 ppm (TRANSITIONAL BEDS)			1.0													
5				CL/ML		1	SPT	6-12-13	25	1.5 1.5								
			Sample 2: Becomes olive gray with steeply dipping (75 degrees) fine sand and silt laminae.			2	SPT	4-8-12	20	1.5 1.5								
10			11.0 - 14.5 Very stiff, olive gray, massive, CLAYEY SILT interbedded with olive gray fine SAND and SILT. PID: 0 ppm			37.0												
			ML/CL/SM	11.0														
15		14.5 - 20.0 Very stiff, olive gray, massive, CLAYEY SILT, with steeply dipping (60 degrees) light gray, fine sand and silt laminae, damp.			33.5													
			CL/ML	14.5														
					3	SPT	7-10-15	25	1.5 1.5									
20		Boring completed at 20.0 ft.			28.0													
					20.0													
25																		

BOREHOLE RECORD BORE.GPJ GLDR WA.GDT 7/9/03

Bentonite Chips

1 in to 3 ft
DRILLING CONTRACTOR: Holt Drilling
DRILLER: Mike Reynolds

LOGGED: T. Marshall
CHECKED: RDL
DATE: 7/9/03



RECORD OF BOREHOLE GB-3

SHEET 1 of 1
ELEVATION: 45
INCLINATION: -90

PROJECT: WWREG/75 State Street/WA DRILLING METHOD: Hollow Stem Auger (HSA) DATUM:
PROJECT NUMBER: 033-1562-100 DRILLING DATE: 2/17/03 AZIMUTH: N/A
LOCATION: 75 State Street, Kirkland, WA DRILL RIG: Mobile B-59 COORDINATES: not surveyed

DEPTH (ft)	BORING METHOD	SOIL PROFILE			SAMPLES					PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS GRAPHIC				
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	WATER CONTENT (PERCENT)							
											<div style="display: flex; justify-content: space-between; align-items: center;"> 10 20 30 40 </div> <div style="display: flex; justify-content: space-between; align-items: center;"> W_p W_L </div>							
0	4.25-inch I.D. HSA with 140lb. Autohammer	0.0 - 0.2 ASPHALT (SURFACING)			0.3													
		0.2 - 0.3 CRUSHED ROCK (SUBBASE)			44.0													
		0.3 - 1.0 Loose, yellow brown, gravelly SAND. (FILL)			1.0													
		1.0 - 19.0 Compact, medium gray, massive, SILT, trace fine sand, with fine sand and silt laminae, damp. PID: 0 ppm (TRANSITIONAL BEDS)																
5						1	SPT	6-8-9	17	$\frac{1.5}{1.5}$								
						2	SPT	4-8-13	21	$\frac{1.5}{1.5}$								
						3	SPT	5-9-14	23	$\frac{1.5}{1.5}$								
10		At 9 feet: 1-inch thick lense of fine to medium SAND.	ML															
					4	SPT	3-6-8	14	$\frac{1.5}{1.5}$									
					5	SPT	2-5-10	15	$\frac{1.5}{1.5}$									
15		At 14.5 feet: slightly fractured.																
		At 16 feet: Becomes dark gray, SILT, little fine sand, steeply dipping (60 degrees) laminae of fine sand.			6	SPT	4-7-12	19	$\frac{1.5}{1.5}$									
					7	SPT	8-7-9	16	$\frac{1.5}{1.5}$									
20		19.0 - 20.0 Very stiff, medium gray, massive, SILTY CLAY, trace fine sand, damp. PID: 0 ppm	ML/CL		26.0 19.0													
		Boring completed at 20.0 ft.			25.0 20.0													

BOREHOLE RECORD BORE.GPJ GLDR.WA.GDT. 7/9/03

1 in to 3 ft
DRILLING CONTRACTOR: Holt Drilling
DRILLER: Mike Reynolds

LOGGED: T. Marshall
CHECKED: RDL
DATE: 7/9/03



RECORD OF BOREHOLE GB-4

SHEET 1 of 1
ELEVATION: 44
INCLINATION: -90

PROJECT: WWREG/75 State Street/WA DRILLING METHOD: Hollow Stem Auger (HSA) DATUM:
PROJECT NUMBER: 033-1562-100 DRILLING DATE: 2/17/03 AZIMUTH: N/A
LOCATION: 75 State Street, Kirkland, WA DRILL RIG: Mobile B-59 COORDINATES: not surveyed

DEPTH (ft)	BORING METHOD	SOIL PROFILE			SAMPLES					PENETRATION RESISTANCE				NOTES WATER LEVELS GRAPHIC	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	BLOWS / ft ■				
											WATER CONTENT (PERCENT)				
0	4.25-inch I.D. HSA with 140lb. Autohammer	0.0 - 0.1 ASPHALT (SURFACING)	SW		0.2										Bentonite Chips 
		0.1 - 0.2 CRUSHED ROCK (SUBBASE)			43.0										
		0.2 - 1.0 Loose, yellow brown, gravelly SAND. PID: 1.8 ppm (FILL)		1.0											
		1.0 - 7.1 Soft to very stiff, yellow brown to medium gray, massive, CLAYEY SILT, with fine sand laminae, trace fine roots in upper 6 inches, moist. PID: 0 ppm (TRANSITIONAL BEDS)	CL/ML		1	SPT	1-5-8	13	$\frac{1.5}{1.5}$						
5		At 7 feet: 1-inch thick lense of fine to medium SAND.			36.9										
		7.1 - 10.0 Compact, dark gray, massive, SILT, trace fine sand, damp. PID: 0 ppm	ML		7.1	2	SPT	3-9-14	23	$\frac{1.5}{1.5}$					
		At 9 feet: Light gray fine SAND laminae and occasional fractures observed.			34.0	3	SPT	5-9-13	22	$\frac{1.5}{1.5}$					
10		Boring completed at 10.0 ft.			10.0										

BOREHOLE RECORD BORE.GPJ GLDR WA.GDT 7/9/03

1 in to 3 ft
DRILLING CONTRACTOR: Holt Drilling
DRILLER: Mike Reynolds

LOGGED: T. Marshall
CHECKED: RDL
DATE: 7/9/03



RECORD OF BOREHOLE GB-6

SHEET 2 of 2

PROJECT: WWREG/75 State Street/WA
 PROJECT NUMBER: 033-1562-100
 LOCATION: 75 State Street, Kirkland, WA

DRILLING METHOD: Hollow Stem Auger (HSA)
 DRILLING DATE: 2/18/03
 DRILL RIG: Mobile B-59

DATUM:
 AZIMUTH: N/A
 COORDINATES: not surveyed

ELEVATION: 42.5
 INCLINATION: -90

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES				PENETRATION RESISTANCE				NOTES		
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	BLOWS / ft ■				WATER LEVELS	
											WATER CONTENT (PERCENT)				GRAPHIC	
25		15.8 - 30.0 Stiff to very stiff, olive gray, massive, CLAYEY SILT, trace fine sand, moist. PID: 3 - 5 ppm (Continued) <i>(same as above)</i>	MLCL	[Hatched Box]							■					[Hatched Box]
30		Boring completed at 30.0 ft.			12.5 30.0	9	SPT	3-6-10	16	1.5 1.5						
35																
40																
45																
50																

BOREHOLE RECORD BORE.GPJ GLDR WA.GDT 7/9/03

1 in to 3 ft
 DRILLING CONTRACTOR: Holt Drilling
 DRILLER: Mike Reynolds

LOGGED: T. Marshall
 CHECKED: RDL
 DATE: 7/9/03



RECORD OF BOREHOLE GB-7

SHEET 1 of 1
ELEVATION: 41.5
INCLINATION: -90

PROJECT: WWREG/75 State Street/WA DRILLING METHOD: Hollow Stem Auger (HSA) DATUM:
PROJECT NUMBER: 033-1562-100 DRILLING DATE: 2/18/03 AZIMUTH: N/A
LOCATION: 75 State Street, Kirkland, WA DRILL RIG: Mobile B-59 COORDINATES: not surveyed

DEPTH (ft)	BORING METHOD	SOIL PROFILE			SAMPLES				PENETRATION RESISTANCE BLOWS / R ■			NOTES WATER LEVELS GRAPHIC			
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	WATER CONTENT (PERCENT)				
											w _p		w _L	w _u	
0	4.25-inch I.D. HSA with 140lb. Autohammer	0.0 - 0.2 ASPHALT (SURFACING)	ML/CL		0.3										
		0.2 - 0.3 CRUSHED ROCK. PID: 5 ppm (SUBBASE)													
		0.3 - 12.5 Stiff, medium gray to olive gray, massive, CLAYEY SILT, trace fine sand, with steeply dipping (60 degrees) light gray fine sand and silt laminae, damp. (TRANSITIONAL BEDS)													
		At 3.5 feet, PID: 2 ppm From 4 feet to 4.5 feet, PID: 0 ppm					1	SPT	3-4-4	8	1.5 1.5				
5		At 6 feet, PID: 0 ppm Becomes medium gray.					2	SPT	2-3-7	10	1.5 1.5				
	Becomes very stiff. PID: 0 ppm Occasional fine gravel.			3	SPT	3-5-9	14	1.5 1.5							
10		From 10.5 feet to 12 feet, PID: 0 ppm			4	SPT	3-4-9	13	1.5 1.5						
		12.5 - 14.5 Compact, dark gray, fine to medium SAND, some silt, interbedded with medium gray, CLAYEY SILT, moist. PID: 0 ppm	SP		29.0 12.5										
		Boring completed at 14.5 ft.			27.0 14.5										
15															
20															
25															

BOREHOLE RECORD BORE.GPJ GLDR WA.GDT 7/9/03

1 in to 3 ft
DRILLING CONTRACTOR: Holt Drilling
DRILLER: Mike Reynolds

LOGGED: T. Marshall
CHECKED: RDL
DATE: 7/9/03



RECORD OF BOREHOLE GB-8

SHEET 1 of 1

PROJECT: WWREG/75 State Street/WA DRILLING METHOD: Hollow Stem Auger (HSA) DATUM:
 PROJECT NUMBER: 033-1562-100 DRILLING DATE: 2/18/03 AZIMUTH: N/A
 LOCATION: 75 State Street, Kirkland, WA DRILL RIG: Mobile B-59 COORDINATES: not surveyed

ELEVATION: 43.5
 INCLINATION: -90

DEPTH (ft)	BORING METHOD	SOIL PROFILE			SAMPLES				PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS GRAPHIC			
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	WATER CONTENT (PERCENT)					
											W _p ———— W _L					
				DEPTH (ft)					10 20 30 40							
0	4.25-inch I.D. HSA with 140lb. Autohammer	0.0 - 0.1 ASPHALT (SURFACING)		[Hatched]	42.9											
		0.1 - 0.3 CONCRETE		[Hatched]	0.6											
		0.3 - 0.6 CRUSHED ROCK (SUBBASE) PID: 14 ppm		[Hatched]												
		0.6 - 10.0 Stiff, medium gray, massive, CLAYEY SILT, with light gray, fine sand laminae, damp. PID: 0 ppm (TRANSITIONAL BEDS)	ML/CL	[Hatched]		1	SPT	2-4-5	9	$\frac{1.5}{1.5}$						
5			At 6 feet: Becomes very stiff. PID: 0 ppm		[Hatched]											
					[Hatched]											
10		10.0 - 12.8 Compact, medium gray, massive, fine to medium SAND and SILT, moist. PID: 0 ppm	SP/ML	[Dotted]	33.5											
				[Dotted]	10.0	4	SPT	4-10-12	22	$\frac{1.5}{1.5}$						
				[Dotted]	30.8											
		12.8 - 14.5 Very stiff, olive gray, massive, CLAYEY SILT, trace fine sand, with light gray, fine sand laminae, moist, 1-inch gravel at 14 ft. PID: 0 ppm	ML/CL	[Hatched]	12.8	5	SPT	3-5-9	14	$\frac{1.5}{1.5}$						
15		Boring completed at 14.5 ft.		[Hatched]	29.0											
				[Hatched]	14.5											

Bentonite Chips

BOREHOLE RECORD BORE.GPJ GLDR WA.GDT 7/9/03

1 in to 3 ft
 DRILLING CONTRACTOR: Holt Drilling
 DRILLER: Mike Reynolds

LOGGED: T. Marshall
 CHECKED: RDL
 DATE: 7/9/03



RECORD OF BOREHOLE GB-9

SHEET 1 of 1
ELEVATION: 44
INCLINATION: -90

PROJECT: WWREG/75 State Street/WA DRILLING METHOD: Hollow Stem Auger (HSA) DATUM:
PROJECT NUMBER: 033-1562-100 DRILLING DATE: 2/18/03 AZIMUTH: N/A
LOCATION: 75 State Street, Kirkland, WA DRILL RIG: Mobile B-59 COORDINATES: not surveyed

DEPTH (ft)	BORING METHOD	SOIL PROFILE			SAMPLES				PENETRATION RESISTANCE BLOWS / R			NOTES WATER LEVELS GRAPHIC		
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	WATER CONTENT (PERCENT)			
											10		20	30
0	4.25-inch I.D. HSA with 140lb. Autohammer	0.0 - 0.2 ASPHALT (SURFACING)	ML		0.3									
		0.2 - 0.3 CRUSHED ROCK (SUBBASE)												
		0.3 - 5.5 Soft, olive gray, SILT, trace fine sand, moist. (TRANSITIONAL BEDS)												
5		At 4.5 feet: Becomes stiff, medium gray, SILT, trace fine sand, with steeply dipping, light gray, fine sand and silt laminae. PID: 2.5 ppm	ML		38.5	1	SPT	0-0-2	2	0.7 / 1.5				
		5.5 - 13.0 Very stiff, medium gray, massive, CLAYEY SILT, with light gray, fine sand and silt laminae, damp. PID: 0 ppm												
10		At 9 feet: interbeds of light gray to olive gray, fine to medium sand. PID: 0 ppm	ML/CL			3	SPT	4-8-13	21	1.5 / 1.5				
		13.0 - 14.5 Compact, olive gray, fine to medium SAND, some silt, moist. PID: 0 ppm	SP/SM		31.0									
		14.5 - 20.0 Very stiff, olive gray, massive, CLAYEY SILT, with steeply dipping, light gray fine sand and silt laminae. PID: 0 ppm	ML/CL		29.5	5	SPT	9-9-9	18	1.5 / 1.5				
15														
				24.0	6	SPT	4-7-12	19	1.5 / 1.5					
20				20.0	7	SPT	3-5-9	14	1.5 / 1.5					
		Boring completed at 20.0 ft.												

Bentonite Chips

BOREHOLE RECORD BORE.GPJ GLDR.WA.GDT 7/9/03

1 in to 3 ft
DRILLING CONTRACTOR: Holt Drilling
DRILLER: Mike Reynolds

LOGGED: T. Marshall
CHECKED: RDL
DATE: 7/9/03

