



ALASKA
Department of Transportation
And Public Facilities

GEOLOGY REPORT

Talkeetna Airport Improvements
Stage II

NOVEMBER 2003

Project# 54660



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Approved By:



Dave Stanley, C.P.G.
Chief Geologist

Approved By:



Mike San Angelo, P.E.

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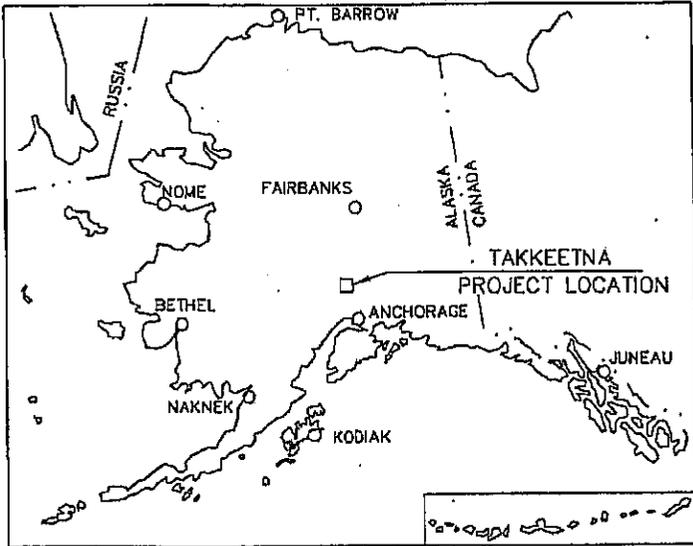
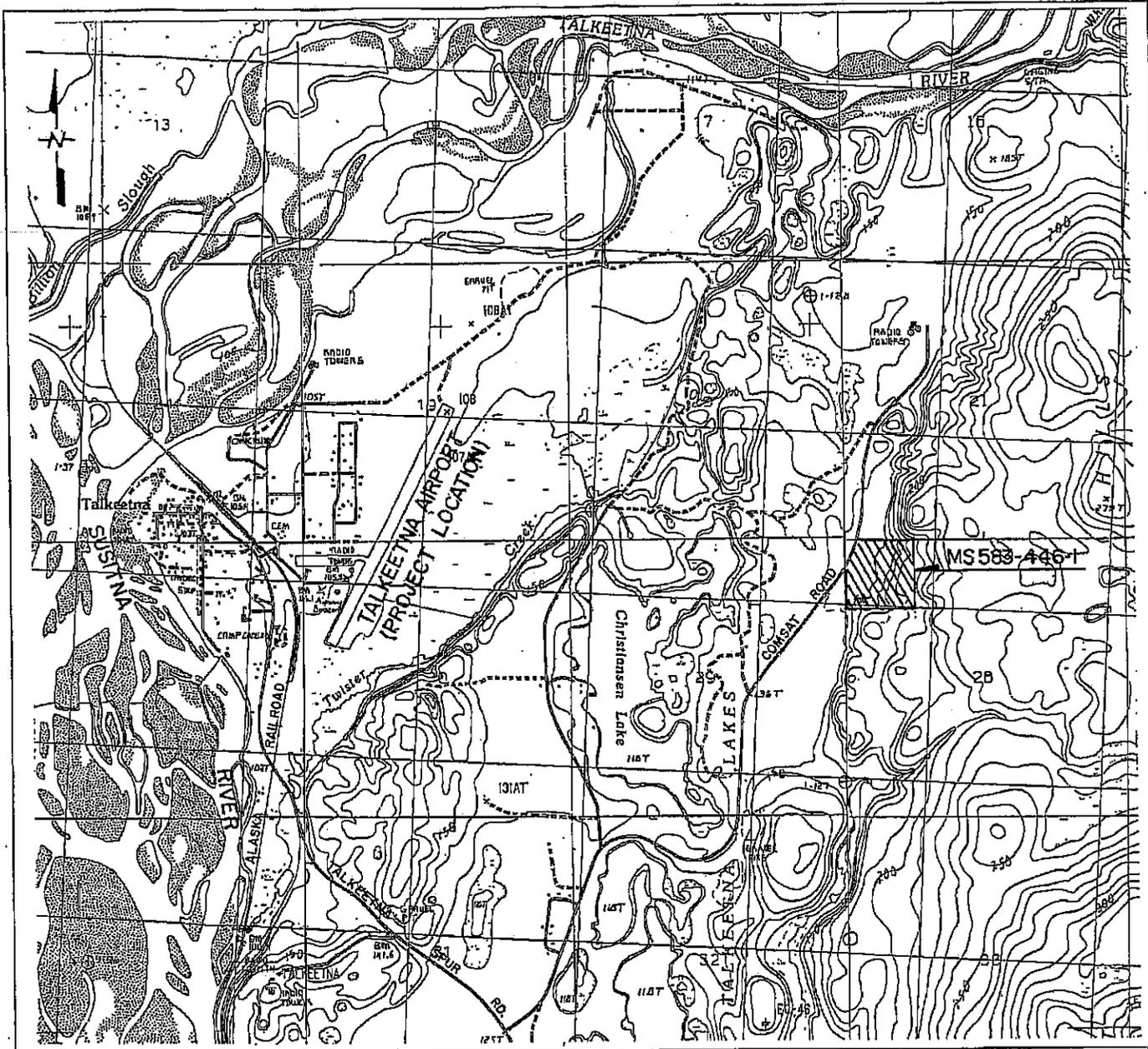
Figure 2 - 2002 and 2003 Test Hole Location Map

APPENDICES

- Appendix A – Proposed New M&O Access Road and Transient Apron –**
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- Appendix B - NE Runway Safety Area Site –**
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Test Hole Location Map, Test Hole Logs, Preconstruction Sample Summary
Photo Log

Keywords:

Talkeetna	54660	Airport Improvements
Material Site M.S. 583-446-1	Flood mitigation	Heliport
Tom Ottley	Craig Boeckman	November 2003



STATE OF ALASKA
 DEPARTMENT of TRANSPORTATION
 & PUBLIC FACILITIES

FIGURE 1

TALKEETNA AIRPORT
 IMPROVEMENTS—PHASE 2

PROJECT NO. 54660

LOCATION MAP

SCALE: NONE DATA: U.S.G.S.

TALKEETNA AIRPORT IMPROVEMENTS, PHASE II
Project No. 54660

SCOPE OF WORK

The Geology Section of Statewide Materials conducted a geotechnical investigation to determine the geotechnical conditions for proposed improvements at the Talkeetna Airport (Figure 1). The improvements are part of the *Talkeetna Airport Master Plan (AMP)* (ADOT&PF, 2001). The investigation included the following elements (Figure 2).

1. Investigate the proposed areas for a new commercial apron and associated apron access taxiway located at the southwest end of the runway.
2. Investigate two potential locations for a new heliport (Site C and E) as proposed in the Heliport Relocation Study (CH2M HILL, 2003a).
3. Investigate a new access road extending from the east end of Second Avenue to the existing ADOT&PF M&O station. Also investigate for proposed Transient Apron near the existing Flight Service Station.
4. Investigate the 150-foot x 300-foot runway safety area located at the northeast end of the runway for potential upgrades.

The fieldwork included drilling test holes and digging test pits. The work was conducted in February 2002. Test pits were also dug at a potential material site near the intersection of Comsat Road and Madison Street.

Additional drilling was conducted in August 2003 to determine the geotechnical conditions along two proposed alignments for flood mitigation dikes as proposed in the Incomplete Draft Hydrologic/Hydraulic Assessment for the airport (CH2M HILL, 2003b). The flood mitigation dikes that were investigated were the following.

1. Proposed flood mitigation dike (Option 1) that is located along Second Avenue.
2. Proposed flood mitigation dike (Option 2 and Option 2A) that is located along F Street and Beaver Street.

Previous work has also been performed in the area by ADOT&PF. These previous reports are referenced at the end of this report.

GEOLOGY AND TOPOGRAPHY

Talkeetna is located along the western flank of the Talkeetna Mountains that constitute a roughly circular mountain mass that lies north of the Knik Arm. The mountains are almost completely circled on the west, north and east by the Susitna River and its tributaries.

The Talkeetna Mountains differ from the coastal ranges in Alaska in that they were not elevated as a result of intense folding and faulting but as a massive uplift with comparatively little deformation. Following this uplift the surface of the Talkeetna Mountains was extensively

modified by glacial action. The recent lowland areas in the valleys of larger streams consist of quaternary moraine and outwash gravel, river terrace gravel and the deposits of present streams. The Talkeetna Airport is located on these recent alluvial deposits, mostly laid down by the nearby Susitna and Talkeetna Rivers.

Permafrost has been found in marshes in the Talkeetna Lowlands, but is an apparent remnant. Patchy areas of permafrost were encountered during the field investigation, in the low and wet areas to the east of the runway. West and north of the existing runway the vegetation consists of small to medium stands of spruce and birch with scattered stands of cottonwood and aspen. East and south of the existing runway the vegetation varies between swampy areas of scattered dwarf black spruce and areas of thick stands of small to medium birch and spruce.

FIELD METHODS

The first phase of the geotechnical field investigation took place in February 2002. The field work included drilling 34 test holes and digging 15 test pits on Airport property. An additional 10 test pits were excavated at a potential material site southeast of airport property near the corner of Comsat Road and Madison Street.

The second phase included drilling 10 test holes for proposed flood mitigation dikes on F Street, Beaver Street, and Second Avenue in the Talkeetna area. Fieldwork for this phase was conducted in August 2003.

Soil samples during both phases of fieldwork were collected as follows.

- Standard penetration tests (SPT) were performed at about 2.5 to 5 ft intervals using a standard split barrel sampler (1.4-in I. D. x 2-in O. D.) driven by a 140-lb automatic hammer with a 30-in drop. The number of blows required to drive the sampler into undisturbed soil for each 6-in increment was recorded. In some instances non-standard sized split spoon penetration tests (SS) were performed using a 2-in I. D. x 2.5-in O. D. split barrel sampler that was driven by a 340-lb automatic hammer.
- While drilling grab samples were collected from the auger cuttings from the near surface (0 to 5 feet).
- Grab sample from test pits were collected from the test pit sidewalls.
- The locations for the February 2002 test holes and test pits were located by reference to the Plan Sheets provided by CH2M HILL (dated 10-11-01), or by aerial photo coverage (photos had various dates). The test holes and test pits located by reference to Plan Sheets and aerial photographs are approximate. The 10 test pits at the potential material site off of Comsat Road were located with GPS in October 2003.
- The test holes drilled in August 2003 were located using GPS.

LABORATORY TESTING

The field geologist examined and visually classified soil samples in the field following the ADOT&PF Textural Soil Descriptions. Selected soil samples were submitted to the Central

Materials Laboratory in Anchorage for testing. The test results are shown on the Preconstruction Sample Summary sheets (included in the Appendices). Field and laboratory testing procedures followed the appropriate Alaska DOT&PF Geotechnical Procedures Manual, AASHTO or ASTM procedures.

GENERAL FIELD CONDITIONS

The following field conditions were noted along the project. For detailed soil conditions see the individual test hole logs, site location maps, and soil sample summary forms included in the Appendices for each site.

The generalized soil profile for the Talkeetna Airport property can be divided into two areas. Area 1 includes Airport property that lies to the west and north of the existing runway. The typical soil profile consists of about 1 to 4 feet (occasionally deeper) of organic material or organic silt. Below the organic soil are lenses of coarse gravel, sandy gravel and gravelly sand of undetermined depth. These granular soils are typically well drained and contain cobbles and boulders. The relatively flat topography and clean sand and gravel soil in the project vicinity are mostly derived from outwash laid down by the nearby Talkeetna River. The water table at the time of the field investigation in Area 1 ranged from about 3' to 15' below surface. Water table depths will vary depending on time of year and periods of high runoff.

Area 2 includes Airport property that lies to the east and south of the existing runway. The typical soil profile consist of 2.5' to 10.5' of organic soil or organic silt. Below the organic layer are silty sand, sandy gravel and silty gravel (till). The granular soils are well to poorly drained. A shallow water table was present and ranged from about 0.5' to 4.5' below ground surface. The granular soils contained cobbles and boulders. Remnant permafrost was encountered at depth in test hole T.H. 02-34, drilled near the proposed location for the new AWOS equipment.

The following tables give general soil conditions for the proposed commercial apron expansion, the rehab for the M&O access road, and the proposed heliport areas. The tables give ranges. See the individual test hole logs for site specific data.

Access Road to the State Maintenance (M&O) Station at the Airport

(Test Holes TH02-1 through TH02-7, TH02-10, TH02-11, TH02-12, and TH02-13)

See **Appendix A** for the Test Hole Location Map, Test Hole Logs, and Soil Sample Summary.

Material Type	Depth Below Surface	Approx. Layer Thickness	Approx. Moisture Content	Comments and Percentage Passing #200 Sieve
Silt Some organic	0 to 9 ft	0 to 9 ft	35 to 37%	TH03-4, 7, and 11 had granular fill above the silty soil layer. 78 to 84% P200
Sandy Gravel	Below silt layer, generally >3 to 9 ft	--	--	Contains cobbles Groundwater at about 3 to 15 ft P200 ranged from about 3 to 6%

NE Runway Safety Area

(Test Holes TH02-8 and TH02-9)

See **Appendix B** for the Test Hole Location Map, Test Hole Logs, and Soil Sample Summary.

Material Type	Depth Below Surface	Approx. Layer Thickness	Approx. Moisture Content	Comments and Percentage Passing #200 Sieve
Sandy Gravel	0 to 6 ft	6 ft	--	Fill contains cobbles P200 ranged from about 4 to 6%
Sandy Silt to Silty Sand	6 to 15 ft	4.5 to 9 ft	28 to 42%	P200 ranged from About 13 to 68%
Sandy Gravel	10.5 to 15 ft	--	--	Contains Cobbles Groundwater at about 11.5 ft in TH02-8

Proposed Commercial Apron Area

(Test Holes TH02-14 through TH02-22)

See **Appendix C** for the Test Hole Location Map, Test Hole Logs, and Soil Sample Summary.

Material Type	Depth Below Surface	Approx. Layer Thickness	Approx. Moisture Content	Comments and Percentage Passing #200 Sieve
Sandy Gravel	0 - 2 ft If fill has been imported	0 to 2 ft	NA	Geotextile fabric at base of fill in TH02-18 and TH02-19. P200 ranged from about 3 to 25%
Sandy Silt, Silt, or Silty Sand Layers	0 to 7.5 ft	2.5 to 6.5 ft	10 to 36%	Peat at about 3.5 to 4.5 ft in TH02-16 P200 ranged from about 10 to 88%
Gravelly Sand and/or Sandy Gravel	2.5 to 7.5 ft	--	--	Contains Cobbles Groundwater at about 7 to 10 ft P200 ranged from about 4 to 5%

Proposed Heliport (Site C), Access Road, and AWOS Location

(Test Holes TH02-24 through TH02-34)

See **Appendix D** for the Test Hole Location Map, Test Hole Logs, and Soil Sample Summary.

Material Type	Depth Below Surface	Approx. Layer Thickness	Approx. Moisture Content	Comments and Percentage Passing #200 Sieve
Peat, Silt, Silty Sand	0 to 10.5 ft	--	30 to 47%	Peat in test holes TH02-26 and 27 P200 ranged from 31 to 71%
Gravelly Sand and/or Sandy Gravel	4.5 to > 12ft	--	--	P200 ranged from about 3 to 7%
Silty Gravelly Sand	13.5 ft in TH02-34	--	--	TH02-34 had Intermittent Frozen Soil P200 in TH02-34 was 32.1%

Proposed Heliport (Site E)

(Test Pits TP02-35 through TP02-49)

See **Appendix E** for the Test Hole Location Map, Test Hole Logs, and Soil Sample Summary.

Material Type	Depth Below Surface	Approx. Layer Thickness	Approx. Moisture Content	Comments and Percentage Passing #200 Sieve
Peat, Silt, Sandy Silt	0 to 7.5 ft	1.5 to 7.5 ft	12 to 36%	Peat and slightly organic silt ranged from 0.5 ft to 5 ft P200 from about 22 to 77%
Gravelly Sand and/or Sandy Gravel	1.5 to 7.5 ft	--	--	Contains Cobbles Groundwater at about 4 to 12 ft P200 ranged from 1 to 2%

Material Site (MS) 583-446-1 Investigation

A potential materials site is located off of Comsat Road approximately 2.3 road miles from the intersection of Talkeetna Spur Road and Comsat Road. During the February 2002 field investigation 10 test pits were dug in this area (the property corners were not found during field work and the test pits were apparently dug across one or two different properties, see attached site location drawing). Approximately the eastern half of this area rises steeply to a high bench and may be unworkable. The materials in the higher bench were not investigated. Access to the area is available directly from Madison Street off of Comsat Road. The existing site has not been developed and is covered by stands of spruce and birch to 20" in diameter. Wetlands are also in the area.

A Kobelco 130-LC excavator was used to dig 10 test pits to depths that ranged from 7 to 18 ft. The test pits encountered from 2.5 to 6 ft of overburden soils consisting of organics, organic silts and sandy silts. The material underlying the overburden soils generally consisted of gravel, sandy gravel and gravelly sand. A water table was encountered in about half of the test pits at depths that ranged from about 3' to 10'. Because of the shallow groundwater table it is likely that some of the material at this site will require excavating sand and gravel from below the water table. See **Appendix F** for the Test Hole Location Map, Test Hole Logs, and Soil Sample Summary.

Where tested the granular material yielded P200 values ranging from 0 to 5 percent. Many large boulders (glacial erratics) were seen on the surface of the existing site and were encountered in approximately half of the test pits (see individual test pit logs for estimated percentages of oversized rock). Several boulders as large as 5 ft in diameter were observed on the surface. Bedrock may have been encountered in the bottom of test pits TP 02-01 and TP 02-02.

Select soil samples were analyzed for rock quality parameters with the following results.

- Degradation = 69 and 70,
- L.A.Abrasion = 18 and 24,
- Sodium Sulfate Soundness = Coarse 2, fine 3.

Reconnaissance Investigation For Flood Mitigation Dikes

A reconnaissance level field investigation was conducted to determine the soil type and relative density of soil for proposed flood mitigation dikes. The investigation was conducted in August 2003 and included 10 test holes along two of the preferred alignments for flood mitigation dikes.

The two preferred alignments for the flood mitigation dikes run along Second Avenue, and along portions of F Street and Beaver Road. The locations of the 10 test holes were selected by CH2M HILL. The drilling was performed by ADOT&PF crews and equipment. The 10 test holes were drilled through the existing road embankment to determine the thickness and soil type in the existing road structural section. See **Appendix G** for the Test Hole Location Map, Test Hole Logs, Photo Log, and Soil Sample Summary.

The generalized soil profile for the proposed paths of the flood stage mitigation consists of the following.

Proposed F Street and Beaver Street Flood Mitigation Dike

- about 1 to 3 ft of granular fill for the road,
- over about 1 to 6 ft of silt, silty sand, or sand,
- over granular soil (gravel and sand).
- groundwater ranged from about 5.5 to 9 ft below ground surface.

Proposed Second Avenue Flood Mitigation Dike

- about 2-inches of pavement, over
- about 3 ft of granular fill for the road, over
- granular soil in TH03-10 (gravel and sand). TH03-9 was advanced off the road embankment in original ground and had 2 ft of silt over granular soil.
- groundwater ranged from about 6 to 7 ft below ground surface.

REFERENCES

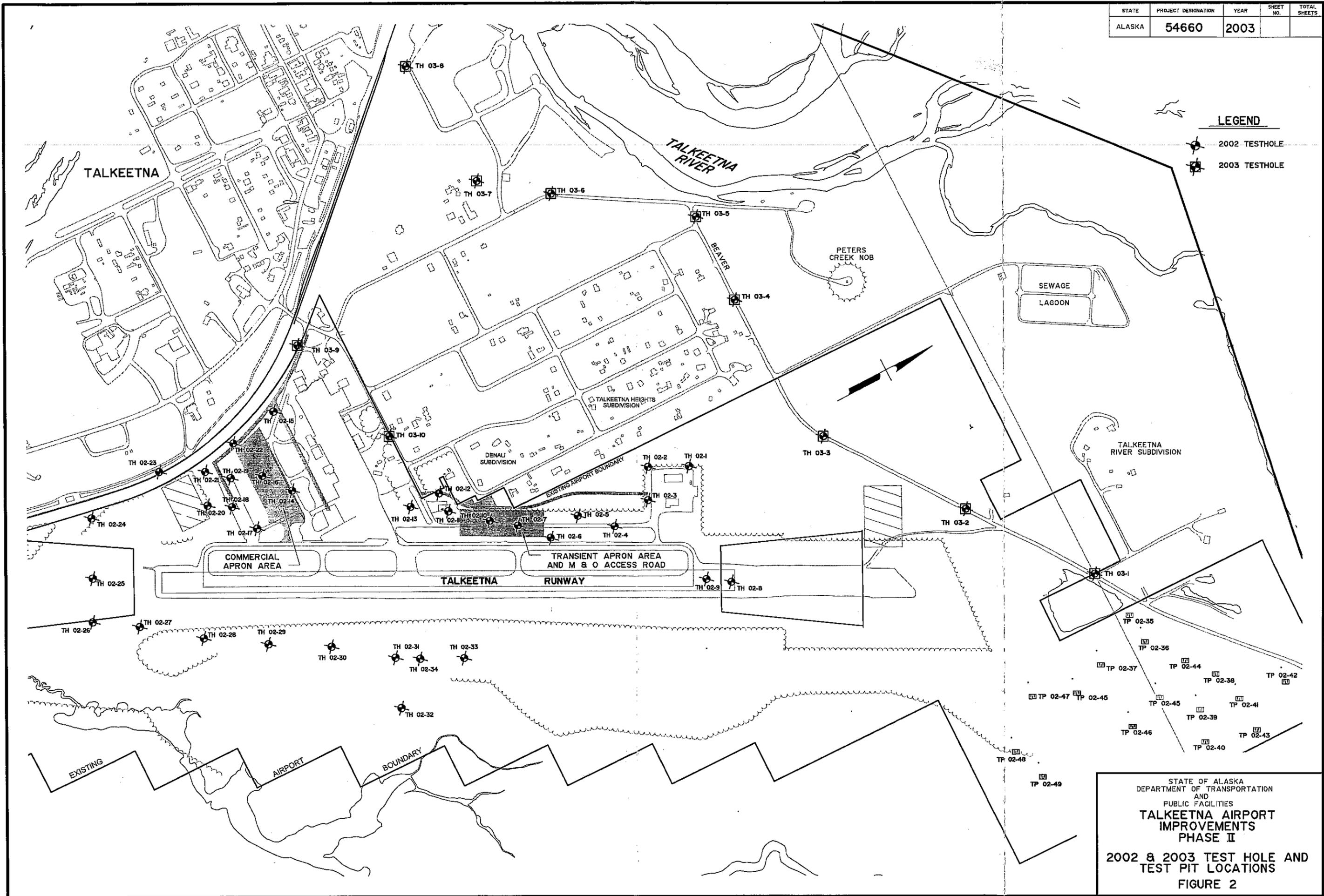
1. CH2M HILL, "*Talkeetna Airport Improvements, Phase II, Heliport Relocation Study*," State Project # 54660, January 2003a.
2. CH2M HILL, "*Talkeetna Airport Improvements, Phase II, Hydrologic/Hydraulic Assessment*," **Incomplete Draft**. State Project # 54660, URS Corp., January 2003b.
3. State of Alaska DOT&PF, "*Talkeetna Airport Master Plan*," USKH, Inc. 2001.
4. State of Alaska DOT&PF, Engineering Geology and Soils Report, *Talkeetna Materials Investigation, January 1980*.
5. State of Alaska DOT&PF, Engineering Geology and Soils Report, *Talkeetna Airport Paving*, Project Number; 54172, July 1986.
6. State of Alaska DOT&PF, Geotechnical Report, *Talkeetna Airport Improvements*, Project #60045, May 1996
7. State of Alaska DOT&PF, "*Engineering Geology & Geotechnical Exploration Procedures Manual*", May 1993.

FIGURES

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	54660	2003		

LEGEND

-  2002 TESTHOLE
-  2003 TESTHOLE

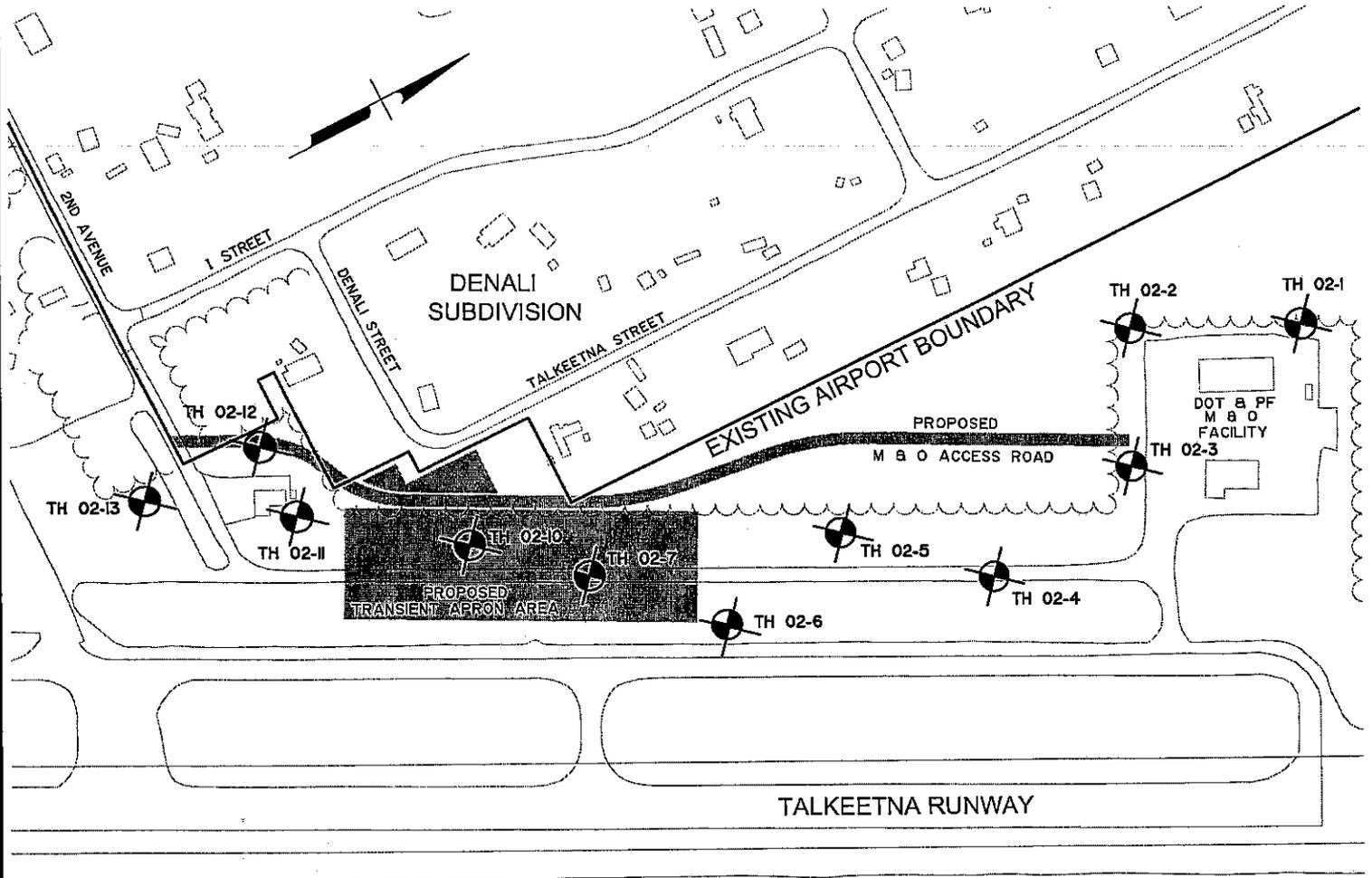


STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND
PUBLIC FACILITIES
**TALKEETNA AIRPORT
IMPROVEMENTS
PHASE II**
2002 & 2003 TEST HOLE AND
TEST PIT LOCATIONS
FIGURE 2

APPENDIX A
M&O ACCESS ROAD SITE

**TEST HOLE LOCATION MAP, TEST HOLE LOGS, PRECONSTRUCTION SAMPLE
SUMMARY**

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	54660	2003		



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND
PUBLIC FACILITIES
**TALKEETNA AIRPORT
IMPROVEMENTS
PHASE II**
2002 TEST HOLE
LOCATION MAP
M & O ACCESS ROAD
AND TRANSIENT APRON
APPENDIX A



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TH 02-01
Total Depth 17.0 feet
Date Begin 2-9-02
Date End 2-9-02

Station / Location See Test Hole Location Plan

Offset from Center Line _____

Elevation Reference _____

Equipment Type CME 850

Weather Pty. Cloudy, 10 deg.

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					N-Value	Frozen	Soil Graph	Ground Water Data							
			Method	Number	Blow Count	Loc. Sampled	Recovery				Depth in (ft.)	Time	Date	Symbol				
8" Hollow-Stem Auger	0										15.0							
	1																	
	2																	
	3																	
	4																	
	5				2													
	6				2													
	7				2													
	8				3													
	9																	
	10																	
	11				9													
	12				24													
	13				37													
	14				42													
	15																	
	16				10													
17				23														
				29														
				29														

SUBSURFACE MATERIAL

0 Brown, *Organic Silt*, contains roots

3 Brown, very loose, moist to wet, *Silty Sand & Sandy Silt interlayered*

5 M.C.=35.9%, p200=78.6, Gravel=0%, Sand=21%

9 Brown, *Sandy Gravel w/ Cobbles*, very dense; dry to 15', wet below 15'

17 BOH

Drilling Notes:
Classification Test for combined samples FS 02-02 thru FS 02-07:
A-1-a(0), Sandy Gravel
p200=4.2, Gravel=67%, Sand=29%

Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK DOT.GDT 5/24/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TH 02-02
Total Depth 12.0 feet
Date Begin 2-9-02
Date End 2-9-02

Station / Location See Test Hole Location Plan Offset from Center Line _____ Elevation Reference _____
Equipment Type CME 850 Weather Pty. Cloudy, 10 deg.
Geologist T. OTTILEY Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)
8" Hollow-Stem Auger	0								3.0	2.0	
	1										
	2										
	3										
	4										
	5			SS	02-04	9		120			
	6					120					
	7										
	8										
	9										
	10					7		30			
	11			SS	02-05	15					
12					15						
					16						

SUBSURFACE MATERIAL

0 - Brown, moist to wet, *Organic Silt*

3 - Brown, compact, wet, *Sandy Gravel w/ Cobbles*

5 - 120 blows for 0.3'

11 - 30

BOH

Drilling Notes:
Classification Test for combined samples FS 02-02 thru FS 02-07:
A-1-a(0), Sandy Gravel
p200=4.2, Gravel=67%, Sand=29%
Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK_DOT.GDT 5/24/02



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PP

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TH 02-03
Total Depth 12.0 feet
Date Begin 2-9-02
Date End 2-9-02

Station / Location See Test Hole Location Plan

Offset from Center Line _____

Elevation Reference _____

Equipment Type CME 850

Weather Pty. Cloudy, 20 deg.

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)
8" Hollow-Stem Auger	0								10.5		
	1										
	2										
	3										
	4										
	5				3						
	6			SS	02-06	13			31		
	7				18						
	8				15						
	9										
	10				11						
	11			SS	02-07	13			31		
12				18							
				15							

SUBSURFACE MATERIAL

0 - 1' Brown, *Organic Silt*, contains roots

5 - 12' Brown, dense, *Sandy Gravel w/ Cobbles*, dry to 10', wet below 10'

BOH
Drilling Notes:
Classification Test for combined samples FS 02-02 thru FS 02-07:
A-1-a(0), Sandy Gravel
p200=4.2, Gravel=67%, Sand=29%
Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE:GPJ_AK_DOT.GDT 5/24/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop.

CME Auto Hammer

Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials

Geology Section

Project Talkeetna Airport Improvements-Phase 2

Project Number 54660

Test Hole Number TH 02-06

Total Depth 12.0 feet

Date Begin 2-11-02

Date End 2-11-02

Station / Location See Test Hole Location Plan

Offset from Center Line _____

Elevation Reference _____

Equipment Type CME 850

Weather Cloudy, 20 deg., wind to 25 mph.

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data										
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth In (ft.)	Time	Date	Symbol						
8" Hollow-Stem Auger	0									10.0										
	1																			
	2																			
	3																			
	4																			
	5																			
	6			SS	02-13	8														
	7					12														
	8					18														
	9					18														
	10					18														
	11			SS	02-14	16														
	12					18														
					23															
					42															

SUBSURFACE MATERIAL

0 Orange brown, moist, *Silt*

1

2

3 Brown, dense, *Sandy Gravel w/ Cobbles*, dry to 5', moist to 10', wet below 10'

4

5

6

7

8

9

10

11

12 BOH

Drilling Notes:
 Classification Test for combined samples FS 02-10 thru FS 02-14:
 A-1-a(0), Sandy Gravel
 p200=2.7, Gravel=68%, Sand=29%

Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK_DOT.GDT 5/24/02



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials

Geology Section

Project Talkeetna Airport Improvements-Phase 2

Project Number 54660

Test Hole Number TH 02-07

Total Depth 12.0 feet

Date Begin 2-11-01

Date End 2-11-01

Station / Location See Test Hole Location Plan

Offset from Center Line

Elevation Reference

Equipment Type CME 850

Weather Cloudy, 20 deg.

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data		
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time
8" Hollow-Stem Auger	0		GS	02-15						SUBSURFACE MATERIAL		
	1									Brown, dry, <i>Sandy Gravel</i> , base course A-1-a(0), p200=11.2, LL=NV, PI=NP, Gravel=57%, Sand=32%		
	2									Brown, dry, <i>Sl. Silty Sandy Gravel w/Cobbles</i> , fill		
	3											
	4											
	5					63					Brown, very dense, dry, <i>Sandy Gravel w/ Cobbles</i>	
	6			SS	02-16	31			58			
	7					27						
	8					27					Gradation Test For Combined Samples FS 02-16 & 02-17: p200=5.7, Gravel=64%, Sand=30%	
	9											
	10					30						
	11			SS	02-17	36			71			
12					35							
					46							
										BOH		

Drilling Notes:
Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK DOT.GDT 5/24/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop.

CME Auto Hammer

Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TH 02-10
Total Depth 12.0 feet
Date Begin 2-12-02
Date End 2-12-02

Station / Location See Test Hole Location Plan Offset from Center Line _____ Elevation Reference _____
Equipment Type CME 850 Weather Cloudy, Wind to 35 mph.

Geologist T. OTTLEY Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data			
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time	Date
8" Hollow-Stem Auger	0									8.0			
	1												
	2												
	3												
	4												
	5					4							
	6			SS	02-25	14			34				
	7					20							
	8					23							
	9												
	10					14							
	11			SS	02-26	18			38				
12					20								
					18								

SUBSURFACE MATERIAL

0 Orange brown, moist, *Silt*, contains organics

4 Brown, dense, moist, *Sandy Gravel w/ Cobbles*

10 Gradation Test For Combined Samples FS 02-25 & 02-26:
p200=4.6, Gravel=70%, Sand=25%

BOH

Drilling Notes:
Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK_DOT.GDT 5/24/02



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials

Geology Section

Project Talkeetna Airport Improvements-Phase 2

Project Number 54660

Test Hole Number TH 02-11

Total Depth 12.0 feet

Date Begin 2-12-02

Date End 2-12-02

Station / Location See Test Hole Location Plan

Offset from Center Line

Elevation Reference

Equipment Type CME 850

Weather Cloudy, Wind to 35 mph.

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth In (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth In (ft.)
8" Hollow-Stem Auger	0								9.5		
	1										
	2										
	3										
	4										
	5				7						
	6			SS	02-27	23			48		
	7				25						
	8										
	9										
	10										
	11			SS	02-28	32			47		
	12				27						
				20							
				21							

SUBSURFACE MATERIAL

0 Brown, *Sandy Gravel*, fill; contains organics

1 Orange brown, moist, *Silt*

4 Brown, dense, *Sandy Gravel w/ Cobbles*, dry to 9.5', wet below 9.5'

11 Gradation Test For Combined Samples FS 02-27 & 02-28:
p200=4.7, Gravel=72%, Sand=23%

Drilling Notes:
Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK DOT.GDT 5/24/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TH 02-12
Total Depth 12.0 feet
Date Begin 2-13-02
Date End 2-13-02

Station / Location See Test Hole Location Plan Offset from Center Line _____ Elevation Reference _____
Equipment Type CME 850 Weather Cloudy, Snow, 22 deg. wind to 30 mph.

Geologist T. OTTLEY Field Crew Abbott, Nelson

Drilling Method	Depth in (feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data			
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time	Date
8" Hollow-Stem Auger	0								8.0				
	1												
	2												
	3												
	4												
	5												
	6			SS	02-29	3			30				
	7					14							
	8					16							
	9					21							
	10												
	11			SS	02-30	10			28				
12					12								
					16								
					23								

SUBSURFACE MATERIAL

0 - 4' Brown, moist to wet, *Organic Silt*, contains roots

4' - 8' Brown, compact, *Sandy Gravel w/ Cobbles*, dry to 8', wet below 8'

Gradation Test For Combined Samples FS 02-29 & 02-30:
p200=3.2, Gravel=71%, Sand=26%

Drilling Notes:
Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK DOT.GDT 5/24/02

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By T. Ottley

Centerline DOT M&O Access Road

Station							
Offset (feet)							
Depth (feet)		5'-7'	5'-17'	0'-2'	5'-7'	5'-12'	0'-1'
Test Hole No.		TH 02-01	TH 02-1 to 3	TH 02-04	TH 02-04	TH 02-4 to 6	TH 02-07
Field No.		FS-02-01	FS-02-2 TO 7	FS-02-08	FS-02-09	FS-02-10 TO 14	FS-02-15
Date Sampled		02/09/2002	02/09/2002	02/11/2002	02/11/2002	02/11/2002	02/11/2002
Lab No.		02A-0065	02A-0136	02A-0072	02A-0073	02A-0137	02A-0079
Percent Passing	3"						
	2"		100	100		100	100
	1"		91	96		83	96
	3/4"		79	92		73	94
	1/2"		65	84		59	85
Sieve Size	3/8"		58	76		54	77
	#4		44	59	100	41	58
	#10	100	33	44	100	32	43
Size	#40	98	17	24	99	14	24
	#80						
	#200	78.6	4.2	11.5	84.9	2.7	11.2
	.02mm						
	.002mm						
DOTSD			Sa Gr1	Sl Si Sa Gr1		Sa Gr1	Sl Si Sa Gr1
AASHTO Class			A-1-a(0)	A-1-a(0)		A-1-a(0)	A-1-a(0)
FSV Class							
Unified Class							
Liquid Limit			NV	NV		NV	NV
Plastic Index			NP	NP		NP	NP
Moisture Content %		35.9			37.0		
Organic Content %							
% Gravel			67	56		68	57
% Sand		21	29	32	15	29	32
% Silt & Clay		79	4	12	85	3	11
Max. Dry Density							
Opt. Moisture %							
Degradation Value							
L.A. Abrasion Loss							
Sulfate Soundness		/	/	/	/	/	/

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By T. Ottley

Centerline DOT M&O Access Road

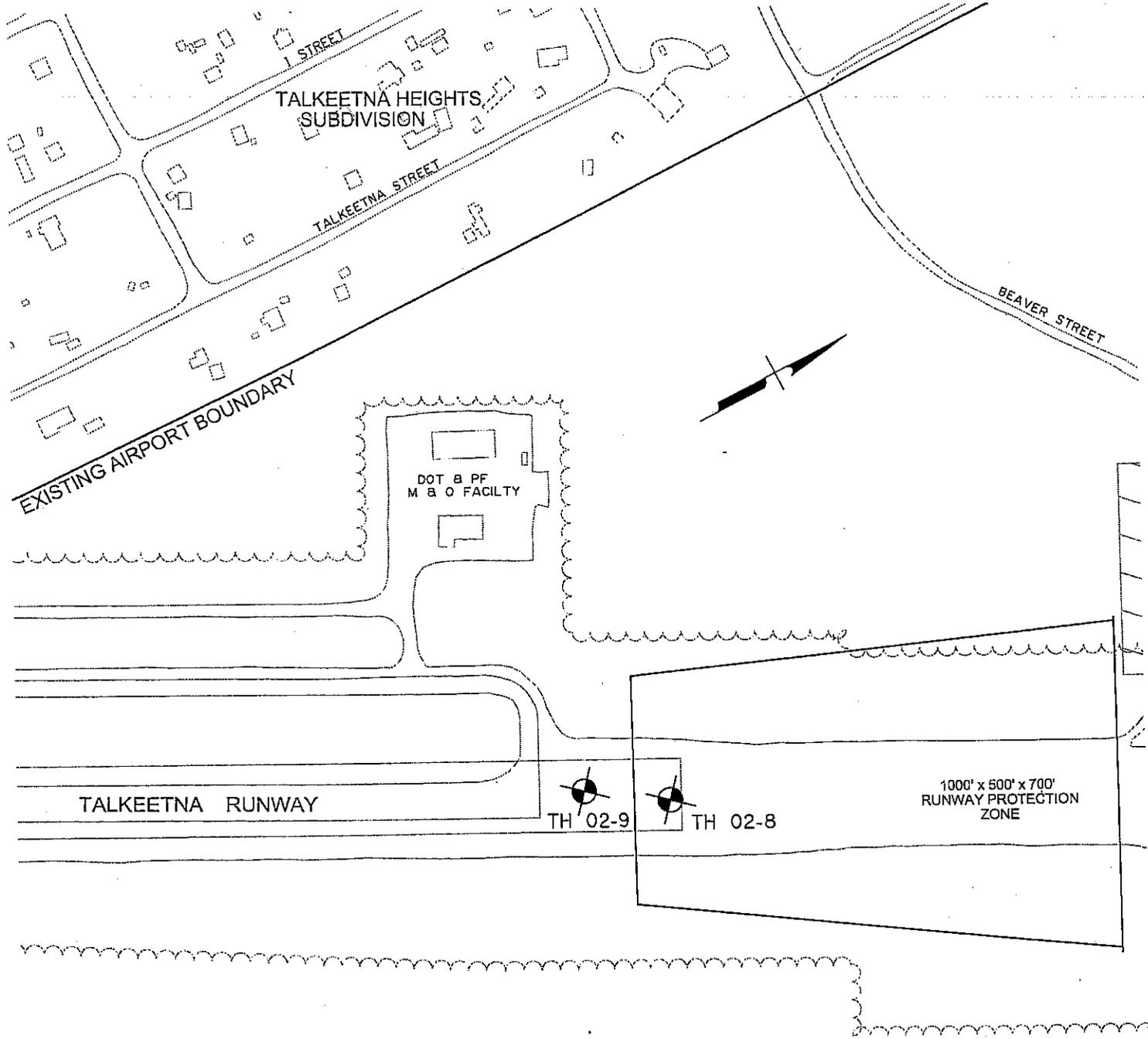
Station						
Offset (feet)						
Depth (feet)		5'-12'	5'-12'	5'-12'	5'-12'	0.0'-1.5'
Test Hole No.		TH 02-7	TH 02-10	TH 02-11	TH 02-13	TH 02-13
Field No.		FS-02-16 + 17	FS-02-25 + 26	FS-02-27 + 28	FS-02-29 + 30	FS-02-33
Date Sampled		02/11/2002	02/12/2002	02/12/2002	02/13/2002	02/13/2002
Lab No.		02A-0138	02A-0139	02A-0140	02A-0141	02A-0097
Percent	3"					
	2"	100	100	100	100	100
Passing	1"	84	86	76	83	99
	3/4"	77	77	65	76	96
	1/2"	64	67	55	60	86
Sieve	3/8"	58	58	49	52	77
	#4	46	42	37	39	57
	#10	36	30	28	29	43
Size	#40	17	15	13	11	23
	#80					
	#200	5.7	4.6	4.7	3.2	10.0
	.02mm					
	.002mm					
DOTTSD						S1 Si Sa Gr1
AASHTO Class						A-1-a(0)
FSV Class						
Unified Class						
Liquid Limit						NV
Plastic Index						NP
Moisture Content %						
Organic Content %						
% Gravel		64	70	72	71	57
% Sand		30	25	23	26	33
% Silt & Clay		6	5	5	3	10
Max. Dry Density						
Opt. Moisture %						
Degradation Value						
L.A. Abrasion Loss						
Sulfate Soundness		/	/	/	/	/

APPENDIX B

NE RUNWAY SAFETY AREA

**TEST HOLE LOCATION MAP, TEST HOLE LOGS, PRECONSTRUCTION SAMPLE
SUMMARY**

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	54660	2003		



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND
PUBLIC FACILITIES
**TALKEETNA AIRPORT
IMPROVEMENTS
PHASE II**
2002 TEST HOLE
MAP LOCATION
PROPOSED NE RUNWAY
SAFETY AREA REGRADING
APPENDIX B



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/IFP

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2

Project Number 54660

Test Hole Number TH 02-08

Total Depth 17 feet

Date Begin 2-12-02

Date End 2-12-02

Station / Location See Test Hole Location Plan

Offset from Center Line _____

Elevation Reference _____

Equipment Type CME 850

Weather Cloudy, heavy blowing snow, wind to 30 mph.

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					N-Value	Frozen	Soil Graph	Ground Water Data								
			Method	Number	Blow Count	Loc. Sampled	Recovery				Depth in (ft.)	Time	Date	Symbol					
8" Hollow-Stem Auger	0										11.5								
	1																		
	2		GS	02-20															
	3																		
	4																		
	5					4													
	6		SS	02-18		14			20										
	7					6													
	8					6													
	9																		
	10					3													
	11		SS	02-19		4			11										
	12					7													
	13					11													
	14																		
	15					16													
	16		SS	02-21		27			40										
17					13														
					18														

SUBSURFACE MATERIAL

0 Brown, dry, *Sandy Gravel w/ Cobbles*, fill; cobbles to 8"
A-1-a(0), p200=4.9, LL=NV, PI=NP, Gravel=69%, Sand=25%, +3=0

6 Brown, very stiff, *Sandy Silt*, frozen w/ ice crystals to 8', moist 8-10'
M.C.=42.1%, p200=68.4, Gravel=1%, Sand=31%

11 Orange brown, medium dense, *Silty Sand*, moist to 1.5, wet below 11.5
M.C.=28.0%, p200=13.2, Gravel=0%, Sand=87%

15 Brown, dense, wet, *Sandy Gravel*
Sample Not Tested

BOH

Drilling Notes:
Notes:
1. Samples taken with a 2" Sampler.
2. Drilling in overrun area at north end of runway

LOG OF TEST HOLE TESTHOLE.GPJ AK_DOT.GDT 11/13/03

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By T. Ottley Centerline NE Runway Safety Area

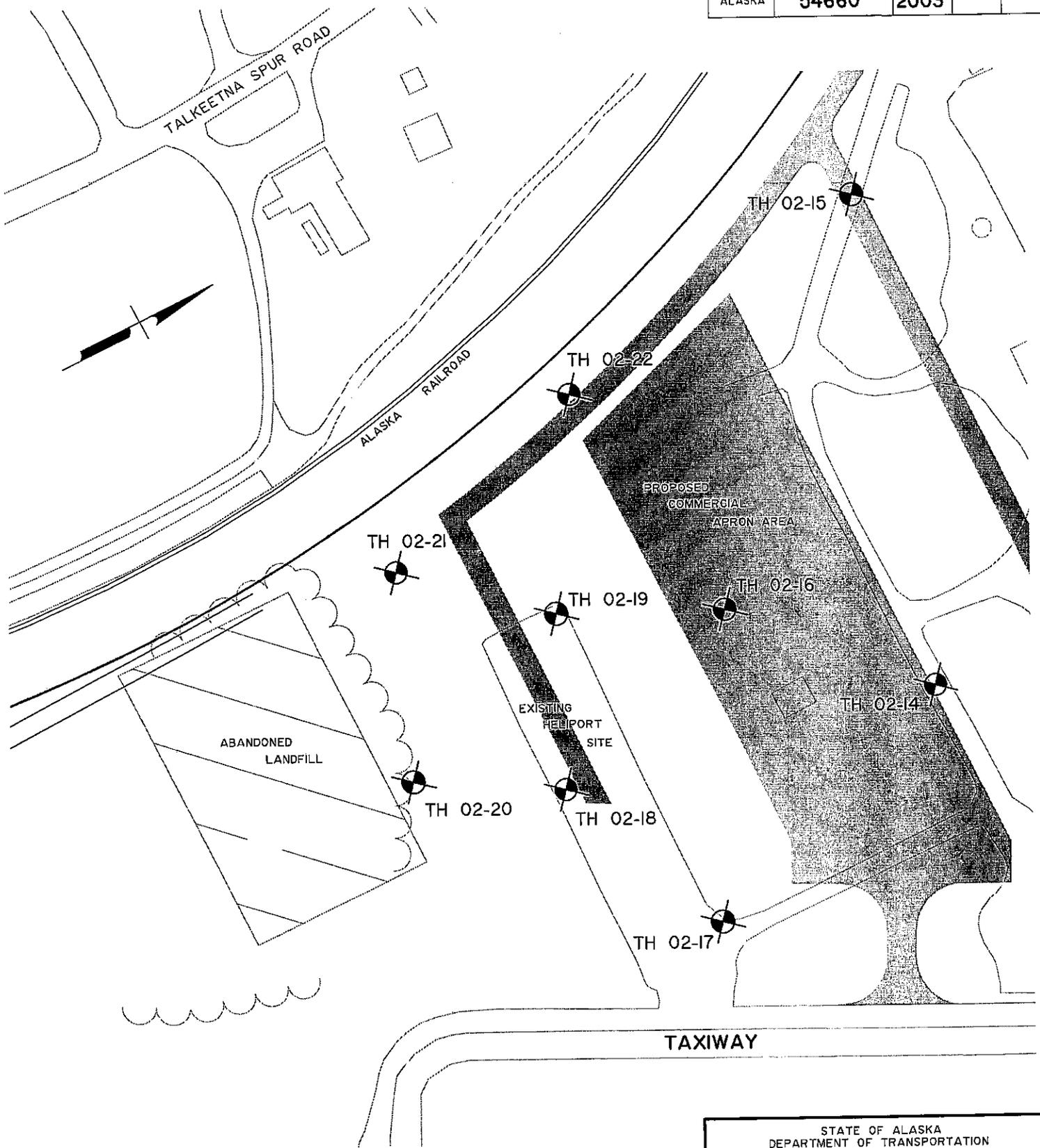
Station	6' - 7'	10.5' - 12.0'	0' - 3'	0.0' - 3.5'	6' - 7'
Offset (feet)	TH 02-08	TH 02-08	TH 02-08	TH 02-09	TH 02-09
Depth (feet)	FS-02-18	FS-02-19	FS-02-20	FS-02-22	FS-02-23
Test Hole No.	02/12/2002	02/12/2002	02/12/2002	02/12/2002	02/12/2002
Field No.	02A-0082	02A-0083	02A-0084	02A-0086	02A-0087
Date Sampled					
Lab No.					
Percent	100	100	100	100	100
Passing	95	95	95	97	99
Sieve	86	86	86	80	99
Size	77	77	77	74	99
	63	63	63	62	100
	55	55	55	55	99
	40	40	40	40	99
	31	31	31	32	99
	15	15	15	16	98
	4.9	4.9	4.9	5.9	50.5
	13.2	13.2	13.2		
DOTSD					
AASHTO Class			Sa Gr1	Sa Gr1	
FSV Class			A-1-a(0)	A-1-a(0)	
Unified Class					
Liquid Limit			NV	NV	
Plastic Index			NP	NP	
Moisture Content %	42.1	28.0			22.8
Organic Content %					
% Gravel	1		69	68	1
% Sand	31	87	26	26	48
% Silt & Clay	68	13	5	6	51
Max. Dry Density					
Opt. Moisture %					
Degradation Value					
L.A. Abrasion Loss					
Sulfate Soundness					

APPENDIX C

PROPOSED COMMERCIAL APRON SITE

**TEST HOLE LOCATION MAP, TEST HOLE LOGS, PRECONSTRUCTION SAMPLE
SUMMARY**

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	54660	2003		



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND
PUBLIC FACILITIES
**TALKEETNA AIRPORT
IMPROVEMENTS
PHASE II**
2002 TEST HOLE
LOCATION MAP
PROPOSED COMMERCIAL
APRON SITE
APPENDIX C



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TH 02-14
Total Depth 12.0 feet
Date Begin 2-13-02
Date End 2-13-02

Station / Location See Test Hole Location Plan

Offset from Center Line _____

Elevation Reference _____

Equipment Type CME 850

Weather Cloudy, Lt. Snow, 20 deg.

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows /ft. Depth	Sample Data						Frozen	Soil Graph	Ground Water Data								
			Method	Number	Blow Count	Loc. Sampled	Recovery	N-Value			Depth in (ft.)	Time	Date	Symbol					
8" Hollow-Stem Auger	0		GS	02-34							7.5								
	1																		
	2																		
	3																		
	4																		
	5			SS	02-35	5													
	6		7																
	7		6																
	8																		
	9																		
	10				SS	02-36	20												
	11			17															
11			26																
12			36																

SUBSURFACE MATERIAL

0 - 1.5 ft: Brown, dry, *Silty Sandy Gravel w/ Cobbles*, fill
A-1-b(0), p200=24.8, LL=NV, PI=NP, Gravel=43%, Sand=32%

1.5 - 3.5 ft: Brown, stiff, moist to wet, *Sandy Silt*

3.5 - 8.0 ft: M.C.=24.7%, p200=52.1, Gravel=0%, Sand=48%

8.0 - 10.0 ft: Brown, dense, wet, *Sandy Gravel w/ Cobbles*

10.0 - 12.0 ft: Sample Not Tested

Drilling Notes:
Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK DOT.GDT 5/24/02



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PP
 Central Region Materials
 Geology Section

Project Talkeetna Airport Improvements-Phase 2
 Project Number 54660

Test Hole Number TH 02-18
 Total Depth 12.0 feet
 Date Begin 2-14-02
 Date End 2-14-02

Station / Location See Test Hole Location Plan Offset from Center Line _____ Elevation Reference _____
 Equipment Type CMB 850 Weather Cloudy, 25 deg.
 Geologist T. OTTLEY Field Crew Abbott, Nelson

Drilling Method	Depth in (feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data			
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time	Date
8" Hollow-Stem Auger	0		GS	02-45						8.0		2/14/02	
	1												
	2												
	3												
	4												
	5			SS	02-46	6							
	6		23										
	7		17										
	8		29										
	9												
	10			SS	02-47	13							
	11		26										
12		20											
		18											

SUBSURFACE MATERIAL

0 - Brown, *Sandy Gravel w/ Cobbles*, fill, geotextile at base of fill
 A-1-a(0), p200=3.4, LL=NV, PI=NP, Gravel=75%, Sand=22%

1 - Brown, *Silt*, frozen, wet when thawed, contain ice crystals

2 -

3 -

4 - Brown, dense, *Sandy Gravel w/ Cobbles*, dry to 8', wet below 8'

5 -

6 -

7 -

8 -

9 -

10 - Gradation Test For Combined Samples FS 02-46 & 02-47:
 p200=4.0, Gravel=73%, Sand=23%

11 -

12 - BOH

Drilling Notes:
 Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK_DOT.GDT 5/24/02

Note: Unless otherwise noted all samples are taken with 1-3/8 Inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/IFP
 Central Region Materials
 Geology Section

Project Talkeetna Airport Improvements-Phase 2
 Project Number 54660

Test Hole Number TH 02-19
 Total Depth 12 feet
 Date Begin 2-14-02
 Date End 2-14-02

Station / Location See Test Hole Location Plan Offset from Center Line _____ Elevation Reference _____
 Equipment Type CME 850 Weather Cloudy, 25 deg.
 Geologist T. OTTLEY Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data			
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time	Data
8" Hollow-Stem Auger	0								10				
	1		GS	02-48									
	2												
	3												
	4												
	5					6							
	6			SS	02-49	14			30				
	7					16							
	8					40							
	9												
	10					22							
	11			SS	02-50	24			44				
12					20								
					19								

SUBSURFACE MATERIAL

0 Brown, dry, *Sandy Gravel w/ Cobbles*, fill, with black geotextile at base of fill
 A-1-a(0), p200=3.9, LL=NV, PI=NP, Gravel=71%, Sand=25%

2 Brown, *Silt*, frozen to 4.5', wet when thawed

6 Brown, dense, *Sandy Gravel w/ Cobbles*, dry to 10', wet below 10'

10 Gradation Test For Combined Samples FS 02-49 & 02-50:
 p200=5, Gravel=60%, Sand=35%

Drilling Notes:
 Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK_DOT.GDT 11/13/03



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials

Geology Section

Project Talkeetna Airport Improvements-Phase 2

Project Number 54660

Test Hole Number TH 02-20

Total Depth 12.0 feet

Date Begin 2-14-02

Date End 2-14-02

Station / Location See Test Hole Location Plan

Offset from Center Line _____

Elevation Reference _____

Equipment Type CME 850

Weather Cloudy, 25 deg.

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data		
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time
8" Hollow-Stem Auger	0								10.0			
	1											
	2											
	3											
	4											
	5											
	6											
	7											
	8											
	9											
	10											
	11											
	12											

SUBSURFACE MATERIAL

0 - 1.0 ft: Brown, *Silty Sand*, fill ?

1.0 - 3.0 ft: Brown, dense, *Sandy Gravel w/ Cobbles*, dry to 10', wet below 10'

3.0 - 12.0 ft: *Sandy Gravel w/ Cobbles*

10.0 - 11.0 ft: Gradation Test For Combined Samples FS 02-51 & 02-52:
p200=5.0, Gravel=50%, Sand=45%

12.0 ft: BOH

Drilling Notes:
Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK_DOT.GDT 5/24/02



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/DPF

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2

Project Number 54660

Test Hole Number TH 02-21

Total Depth 12 feet

Date Begin 2-14-02

Date End 2-14-02

Station / Location See Test Hole Location Plan

Offset from Center Line _____

Elevation Reference _____

Equipment Type CME 850

Weather Cloudy, 27 deg.

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data		
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time
8" Hollow-Stem Auger	0								SUBSURFACE MATERIAL			
	1								Brown, <i>Organic Silt</i> , frozen to 2', wet when thawed			
	2											
	3								Orange brown, dry, <i>Sl. Silty Sand</i>			
	4								Brown, <i>Sandy Gravel w/ Cobbles</i> , compact to dense; dry to 9.5, wet below 9.5			
	5				7				M.C.=3.3%, p200=5.4, Gravel=71%, Sand=24%			
	6		SS	02-53	18			36				
	7				18							
	8				19							
	9											
	10				36				rock in sampler. no sample			
	11		SS		36			73				
12				37								
				30								
								BOH				

Drilling Notes:
Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK_DOT.GDT 11/13/03

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By T. Ottley

Centerline Commercial Apron Area

Station						
Offset (feet)						
Depth (feet)		0.0' - 2.5'	5' - 7'	0' - 2'	5.5' - 7.0'	5' - 7'
Test Hole No.		TH 02-14	TH 02-14	TH 02-15	TH 02-15	TH 02-16
Field No.		FS-02-34	FS-02-35	FS-02-37	FS-02-38	FS-02-40
Date Sampled		02/13/2002	02/13/2002	02/13/2002	02/13/2002	02/13/2002
Lab No.		02A-0098	02A-0099	02A-0101	02A-0102	02A-0104
Percent Passing	3"					100
	2"	100		100	100	93
	1"	96		96	92	83
	3/4"	93		92	92	76
	1/2"	86		82	88	64
	3/8"	81		74	86	55
	#4	67		56	85	39
	#10	57	100	42	84	100
	#40	43	100	22	82	98
	#80					
Size	#200	24.8	52.1	9.9	42.2	88.3
	.02mm					
	.002mm					6.7
DOTTS		Si Sa Grl		Sl Si Sa Grl		Sl Si Sa Grl
AASHTO Class		A-1-b(0)		A-1-a(0)		A-1-a(0)
FSV Class						
Unified Class						
Liquid Limit		NV		NV		NV
Plastic Index		NP		NP		NP
Moisture Content %			24.7		20.6	35.8
Organic Content %						
% Gravel		43		58	16	70
% Sand		32	48	32	42	23
% Silt & Clay		25	52	10	42	7
Max. Dry Density						
Opt. Moisture %						
Degradation Value						
L.A. Abrasion Loss						
Sulfate Soundness		/	/	/	/	/

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By T. Ottley

Centerline Commercial Apron Area

Station							
Offset (feet)							
Depth (feet)		5.5'-6.8'	0.0'-1.5'	5'-12'	0'-2'	5.5'-12.0'	5'-12'
Test Hole No.		TH 02-17	TH 02-18	TH 02-18	TH 02-19	TH 02-19	TH 02-20
Field No.		FS-02-43	FS-02-45	FS-02-46 + 47	FS-02-48	FS-02-49 + 50	FS-02-51 + 52
Date Sampled		02/14/2002	02/14/2002	02/14/2002	02/14/2002	02/14/2002	02/14/2002
Lab No.		02A-0107	02A-0109	02A-0142	02A-0112	02A-0143	02A-0144
Percent	3"		100		100		
	2"		92	100	96	100	100
Passing	1"		71	87	79	87	84
	3/4"		63	74	70	80	77
Sieve	1/2"		51	58	55	68	70
	3/8"		44	50	48	62	63
Size	#4		32	35	35	49	55
	#10	100	25	27	29	40	50
Size	#40	95	11	15	13	22	25
	#80						
	#200	10.4	3.4	4.0	3.9	5.2	5.0
	.02mm						
	.002mm						
DOTSD			Sa Gr1		Sa Gr1		
AASHTO Class			A-1-a(0)		A-1-a(0)		
FSV Class							
Unified Class							
Liquid Limit			NV		NV		
Plastic Index			NP		NP		
Moisture Content %		10.5					
Organic Content %							
% Gravel			75	73	71	60	50
% Sand		90	22	23	25	35	45
% Silt & Clay		10	3	4	4	5	5
Max. Dry Density							
Opt. Moisture %							
Degradation Value							
L.A. Abrasion Loss							
Sulfate Soundness		/	/	/	/	/	/

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By T. Ottley

Centerline Commercial Apron Area

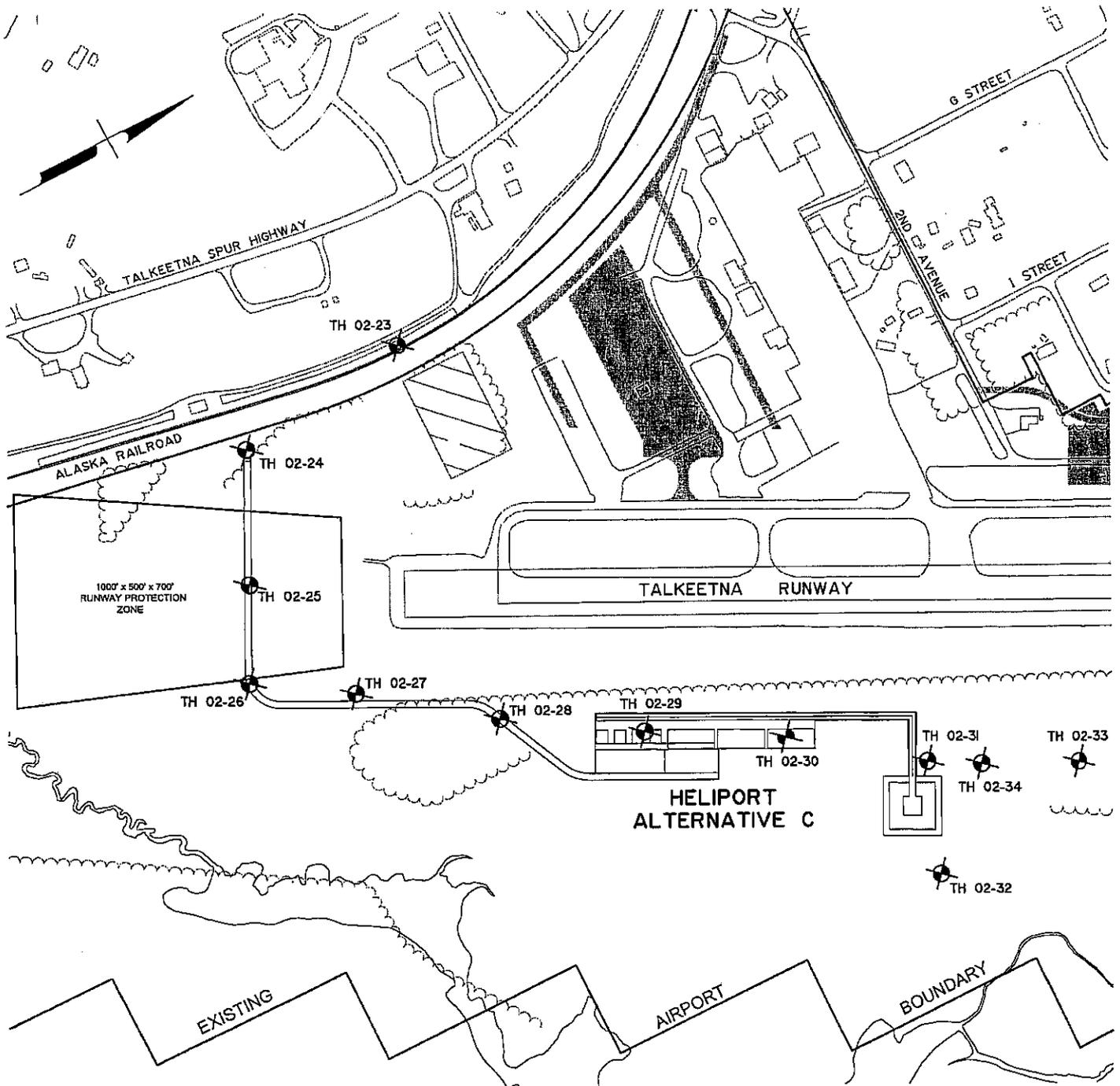
Station						
Offset (feet)						
Depth (feet)		5' - 7'	5' - 6'			
Test Hole No.		TH 02-21	TH 02-22			
Field No.		FS-02-53	FS-02-54			
Date Sampled		02/14/2002	02/14/2002			
Lab No.		02A-0117	02A-0118			
Percent	3"					
	2"	100				
Passing	1"	75				
	3/4"	66				
Sieve	1/2"	54				
	3/8"	47				
Size	#4	36				
	#10	29	100			
Size	#40	19	100			
	#80					
	#200	5.4	79.1			
	.02mm					
	.002mm					
DOTTSD						
AASHTO Class						
FSV Class						
Unified Class						
Liquid Limit						
Plastic Index						
Moisture Content %		3.3	35.3			
Organic Content %						
% Gravel		71				
% Sand		24	21			
% Silt & Clay		5	79			
Max. Dry Density						
Opt. Moisture %						
Degradation Value						
L.A. Abrasion Loss						
Sulfate Soundness		/	/	/	/	/

APPENDIX D

PROPOSED HELIPORT (SITE C), ACCESS ROAD, AND AWOS LOCATION

**TEST HOLE LOCATION MAP, TEST HOLE LOGS, PRECONSTRUCTION SAMPLE
SUMMARY**

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	54660	2003		



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND
PUBLIC FACILITIES
**TALKEETNA AIRPORT
IMPROVEMENTS
PHASE II**
2002 TEST HOLE
LOCATION MAP
PROPOSED HELIPORT
SITE C
APPENDIX D



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PT

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2

Project Number 54660

Test Hole Number TH 02-23

Total Depth 12.0 feet

Date Begin 2-15-02

Date End 2-15-02

Station / Location See Test Hole Location Plan

Offset from Center Line _____

Elevation Reference _____

Equipment Type CME 850

Weather Cloudy, Snow, 18 deg.

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data										
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth In (ft.)	Time	Date	Symbol						
8" Hollow-Stem Auger	0									9.0										
	1																			
	2																			
	3																			
	4																			
	5																			
	6					8														
	7					18														
	8					23														
	9					26														
	10																			
	11					37														
12					52															
					73															
					57															

SUBSURFACE MATERIAL

Brown, *Silt*

Brown, *Sandy Gravel w/ Cobbles*, dense to very dense; moist to 9', wet below 9'

Gradation Test For Combined Samples FS 02-56 & 02-57:
p200=4.1, Gravel=72%, Sand=24%

Drilling Notes:
Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK_DOT.GDT 5/24/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/FP

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TH 02-25
Total Depth 12.0 feet
Date Begin 2-15-02
Date End 2-15-02

Station / Location See Test Hole Location Plan

Offset from Center Line _____

Elevation Reference _____

Equipment Type CME 850

Weather Cloudy, 18 deg

Geologist I. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					N-Value	Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery				Depth in (ft.)	Time
8" Hollow-Stem Auger	0									SUBSURFACE MATERIAL		
	1									Brown, <i>Silty Organic w/ roots</i>		
	2									Brown, moist to wet, <i>Silt</i>		
	3											
	4									Orange brown, dry to moist, <i>Silty Sand</i>		
	5									Gray, dense, wet, <i>Sandy Gravel w/ Cobbles</i>		
	6			SS	02-60	14			52			
	7					26						
	8					26						
	9					27						
	10											
	11			SS	02-61	26			40		Gradation Test For Combined Samples FS 02-60 & 02-61: p200=4.1, Gravel=70%, Sand=26%	
12					20							
					20							
					28							
									BOH			

Drilling Notes:
Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK_DOT.GDT 5/24/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop.

CME Auto Hammer

Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials

Geology Section

Project Talkeetna Airport Improvements-Phase 2

Project Number 54660

Test Hole Number TH 02-26

Total Depth 12.0 feet

Date Begin 2-15-02

Date End 2-15-02

Station / Location See Test Hole Location Plan

Offset from Center Line _____

Elevation Reference _____

Equipment Type CME 850

Weather Cloudy, 22 deg.

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					N-Value	Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery				Depth in (ft.)	Time
8" Hollow-Stem Auger	0									4.0		
	1											
	2											
	3											
	4											
	5											
	6			SS	02-62	3			39			
	7					13						
	8					26						
	9					37						
	10					16						
	11			SS	02-63	31			68			
12					37							
					41							

SUBSURFACE MATERIAL

0 Dark brown, *Peat*, contains roots

1

2 Grayish brown, wet, *Silt*, contains organics

3

4 Gray, wet, *Gravelly Sand*

5

6 p200=5.1, Gravel=40%, Sand=55%

7 Gray, very dense, wet, *Sandy Gravel w/ Cobbles*

8

9

10 No recovery

11

12 BOH

Drilling Notes:
Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK DOT.GDT 5/24/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TH 02-28
Total Depth 12.0 feet
Date Begin 2-16-02
Date End 2-16-02

Station / Location See Test Hole Location Plan Offset from Center Line _____
Equipment Type CME 850 Weather Cloudy, 22 deg.
Elevation Reference _____

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data				N-Value	Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled				Recovery	Depth in (ft.)
8" Hollow-Stem Auger	0								4.0		
	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
	10										
	11										
12											

SUBSURFACE MATERIAL

0 - 4 ft: Grayish brown, moist to wet, *Silt*, contains organics

4 - 12 ft: Grayish brown, dense, moist to wet, *Sandy Gravel w/ Cobbles*

8 - 9 ft: Combined Test For Samples FS-66 & 67
 BU=4, Gravel=68%, Sand=28%

BOH

Drilling Notes:
Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK DOT.GDT 5/24/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials

Geology Section

Project Talkeetna Airport Improvements-Phase 2

Project Number 54660

Test Hole Number TH 02-29

Total Depth 12 feet

Date Begin 2-16-02

Date End 2-16-02

Station / Location See Test Hole Location Plan

Offset from Center Line

Elevation Reference

Equipment Type CME 850

Weather Cloudy, Snow

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data										
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time	Date	Symbol						
8" Hollow-Stem Auger	0									4										
	1																			
	2																			
	3																			
	4																			
	5																			
	6			SS	02-68	16														
	7					23														
	8					17														
	9					20														
	10																			
	11			SS	02-69	14														
	12					23														

SUBSURFACE MATERIAL

0 Brown, *Organic Silt*, contains roots

1 Brown, dense, wet, *Silt*, contains organics

3 Dark brown, dense, wet, *Sandy Gravel w/ Cobbles*, contains organic stringers

10 Gradation Test For Combined Samples FS 02-68 & 02-69:
p200=3.8, Gravel=70%, Sand=26%

BOH

Drilling Notes:
Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK DOT.GDT 11/13/03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



STATE OF ALASKA DOT&PF
 Central Region Materials
 Geology Section

LOG OF TEST HOLE

Sheet Number 1 of 1

Project Talkeetna Airport Improvements-Phase 2
 Project Number 54660

Test Hole Number TH 02-30
 Total Depth 12 feet
 Date Begin 2-16-02
 Date End 2-16-02

Station / Location See Test Hole Location Plan Offset from Center Line _____ Elevation Reference _____
 Equipment Type CME 850 Weather Cloudy, Snow
 Geologist T. OTTLEY Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					N-Value	Frozen	Soil Graph	Ground Water Data		SUBSURFACE MATERIAL	Depth (ft.)
			Method	Number	Blow Count	Loc. Sampled	Recovery				Depth in (ft.)	Time		
8" Hollow-Stem Auger	0										3	2	0	Dark brown, <i>Peat</i> , contains roots
	1												1	
	2												2	Gray, wet, <i>Silt</i> , contains sand
	3												3	
	4												4	Gray, wet, <i>Sl. Silty Gravelly Sand</i> , firm
	5			2									5	p200=7, Gravel=23%, Sand=70%
	6			3				12					6	Gray, wet, <i>Sandy Gravel w/ Cobbles</i> , firm
	7			9									7	
	8			15									8	
	9												9	
	10			9									10	Sample Not Tested
	11			11				20					11	
12			9									12		
			11											

Drilling Notes:
 Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK_DOT.GDT 11/13/03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Calhead Rope Method



STATE OF ALASKA DOT/PF
 Central Region Materials
 Geology Section

LOG OF TEST HOLE

Sheet Number 1 of 1

Project Talkeetna Airport Improvements-Phase 2
 Project Number 54660

Test Hole Number TH 02-31
 Total Depth 12.0 feet
 Date Begin 2-19-02
 Date End 2-19-02

Station / Location See Test Hole Location Plan Offset from Center Line _____
 Equipment Type CME 850 Weather Ptly. Cloudy, 8 deg.
 Geologist T. OTTLEY Field Crew Abbott, Nelson Elevation Reference _____

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					N-Value	Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery				Depth in (ft.)	Time
8" Hollow-Stem Auger	0									2.5		
	1											
	2											
	3											
	4											
	5											
	6				3							
	7				4							
	8				4							
	9				10							
	10				60							
	11				25							
12				29								

SUBSURFACE MATERIAL

0 - 1.5 ft: Dark brown, wet, *Peat*, contains roots

1.5 - 7 ft: Gray, loose, wet, *Silty Sand*
 M.C.=30.0%, p200=31.7, Gravel=1%, Sand=67%

7 - 12 ft: Gray, very dense, wet, *Silty Sandy Gravel w/ Cobbles*

10 ft: Sample Not Tested

BOH

Drilling Notes:
 Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK DOT.GDT 5/24/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF
Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TH 02-33
Total Depth 12.0 feet
Date Begin 2-19-02
Date End 2-19-02

Station / Location See Test Hole Location Plan Offset from Center Line _____
Equipment Type CME 850 Weather Clear, 5 deg.
Geologist T. OTTLEY Elevation Reference _____

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)
8" Hollow-Stem Auger	0									5.0	3.0
	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
	10										
	11										
12											

Field Crew Abbott, Nelson

Ground Water Data	
Depth in (ft.)	5.0 3.0
Time	
Date	2/19/02 2/19/02
Symbol	∇ ∇

SUBSURFACE MATERIAL

0 - Brown, *Peat*, contains roots

1 - Brown, loose, *Organic Silt*, moist to 2.5', wet below 2.5'; contains roots

3 - Gray, compact, wet, *Sandy Silt*

5 - A-4(0) (ML), p200=71, LL=Nv, PI=NP, Gravel=0%, Sand=29%

11 - Grayish brown, wet, *Sandy Gravel*
A-1-a(0), p200=3.6, LL=Nv, PI=NP, Gravel=68%, Sand=28%

Drilling Notes:
Classification Test for combined samples FS 02-75 and 02-77 thru 02-79:
A-1-a(0), (GW) Sandy Gravel
LL=Nv, PI=NP
p200=2.7, Gravel=68%, Sand=29%

Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK_DOT.GDT 5/24/02

Note: Unless otherwise noted all samples are taken with 1-3/8 Inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 2

STATE OF ALASKA DOT/PF

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TH 02-34
Total Depth 41.3 feet
Date Begin 2-20-02
Date End 2-20-02

Station / Location See Test Hole Location Plan Offset from Center Line _____ Elevation Reference _____
Equipment Type CME 850 Weather Clear, 10 deg.
Geologist T. OTTLEY Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data		SUBSURFACE MATERIAL	Depth (ft)
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)		
8" Hollow-Stem Auger	0								2.5		Dark brown, wet, <i>Peat</i> , contains roots	0	
	1											1	
	2										Gray, wet, <i>Silt</i> , firm	2	
	3											3	
	4										Gray, very dense, wet, <i>Sandy Gravel w/ Cobbles</i>	4	
	5			4									5
	6			7									6
	7			11				18					7
	8			16									8
	9												9
	10			10									10
	11			29				53					11
	12			24									12
	13			35									13
	14											Gray, very dense, wet, <i>Silty Gravelly Sand</i> , frozen and thawed zones below 13.5; clayey and slightly clayey areas below 20'	14
	15			19								M.C.=7.3%	15
	16			29				61					16
	17			32									17
	18			40									18
	19												19
	20			13								M.C.=7.9%	20
	21			22				50					21
	22			28									22
	23			56									23
	24												24
25												25	

LOG OF TEST HOLE TESTHOLE.GPJ AK_DOT.GDT 5/24/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 2 of 2

STATE OF ALASKA DOT/PF

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TH 02-34
Total Depth 41.3 feet
Date Begin 2-20-02
Date End 2-20-02

Station / Location See Test Hole Location Plan

Offset from Center Line _____

Elevation Reference _____

Equipment Type CME 850

Weather Clear, 10 deg.

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)
8" Hollow-Stem Auger	25		SS	02-82	11		62		2.5		
	26	24									
	27	38									
	28	39									
	29		SS	02-83	35		189				
	30	89									
	31	100									
	32										
	33		SS	02-84	97		100				
	34	100									
	35										
	36										
	37		SS	02-85	9		204				
	38	84									
	39										
40	120										
41											

SUBSURFACE MATERIAL

M.C.=9.9% 25

Silty Gravelly Sand 26

100 blows for 3", M.C.=10.0% 30

100 blows for 3", M.C.=5.9% 35

120 blows for 2", M.C.=6.2% 40

Drilling Notes:
 Classification Test For Combined Samples FS 02-75 And 02-77 Thru 02-79:
 A-1-a(0), (GW) Sandy Gravel
 LL=Nv, PI=NP
 p200=2.7, Gravel=68%, Sand=29%

Classification Test For Combined Samples FS 02-80 Thru 85:
 A-2-4(0), (SM), Silty Gravelly Sand
 LL=16, PI=NP
 p200=32.1, Gravel=33%, Sand=35%

Note: Samples taken with a 2" Sampler.

LOG OF TEST HOLE TESTHOLE.GPJ AK_DOT.GDT 5/24/02

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By T. Ottley

Centerline Access & Heliport (SiteC)

Station						
Offset (feet)						
Depth (feet)	5'-12'	5'-12'	5.5'-6.5'	5'- 6'	5'-12'	5'-12'
Test Hole No.	TH 02-23	TH 02-25	TH 02-26	TH 02-27	TH 02-28	TH 02-29
Field No.	FS-02-56 + 57	FS-02-60 + 61	FS-02-62	FS-02-64	FS-02-66 + 67	FS-02-68 + 69
Date Sampled	02/15/2002	02/15/2002	02/15/2002	02/15/2002	02/16/2002	02/16/2002
Lab No.	02A-0145	02A-0146	02A-0126	02A-0128	02A-0147	02A-0148
Percent	3"					
	2"	100	100	100	100	100
Passing	1"	71	91	88	93	78
	3/4"	65	73	87	78	73
	1/2"	53	61	77	62	59
Sieve	3/8"	47	52	72	54	54
	#4	37	39	65	41	41
	#10	28	30	60	98	30
	#40	15	16	45	86	12
Size	#80					
	#200	4.1	4.1	5.1	53.7	4.0
	.02mm					
.002mm						
DOTTSD						
AASHTO Class						
FSV Class						
Unified Class						
Liquid Limit						
Plastic Index						
Moisture Content %				47.5		
Organic Content %						
% Gravel	72	70	40	2	68	70
% Sand	24	26	55	44	28	26
% Silt & Clay	4	4	5	54	4	4
Max. Dry Density						
Opt. Moisture %						
Degradation Value						
L.A. Abrasion Loss						
Sulfate Soundness	/	/	/	/	/	/

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By T. Ottley

Centerline Access & Heliport (SiteC)

Station						
Offset (feet)						
Depth (feet)	5' - 7'	5.0' - 6.5'	5.0' - 6.5'	5' - 7'	5' - 12'	15' - 17'
Test Hole No.	TH 02-30	TH 02-31	TH 02-32	TH 02-33	TH 02-32, 33, 3	TH 02-34
Field No.	FS-02-70	FS-02-72	FS-02-74	FS-02-76	FS-02-75+77 TO	FS-02-80
Date Sampled	02/16/2002	02/19/2002	02/19/2002	02/19/2002	02/20/2002	02/20/2002
Lab No.	02A-0134	02A-0157	02A-0159	02A-0161	02A-0187	02A-0165
Percent Passing Sieve Size	3"					
	2"	100			100	
	1"	89			89	
	3/4"	89			80	
	1/2"	87	100		65	
	3/8"	84	100		58	
	#4	80	100	100	42	
	#10	77	99	100	100	32
	#40	56	97	97	100	15
	#80					
#200	6.6	31.7	40.9	70.9	3.6	
.02mm						
.002mm						
DOTTSD				Sa Si	Sa Gr1	
AASHTO Class				A-4(0)	A-1-a(0)	
FSV Class						
Unified Class				ML	GW	
Liquid Limit				NV	NV	
Plastic Index				NP	NP	
Moisture Content %		30.0	30.5			7.3
Organic Content %						
% Gravel	23	1			68	
% Sand	70	67	59	29	28	
% Silt & Clay	7	32	41	71	4	
Max. Dry Density						
Opt. Moisture %						
Degradation Value						
L.A. Abrasion Loss						
Sulfate Soundness	/	/	/	/	/	/

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By T. Ottley

Centerline Access & Heliport (SiteC)

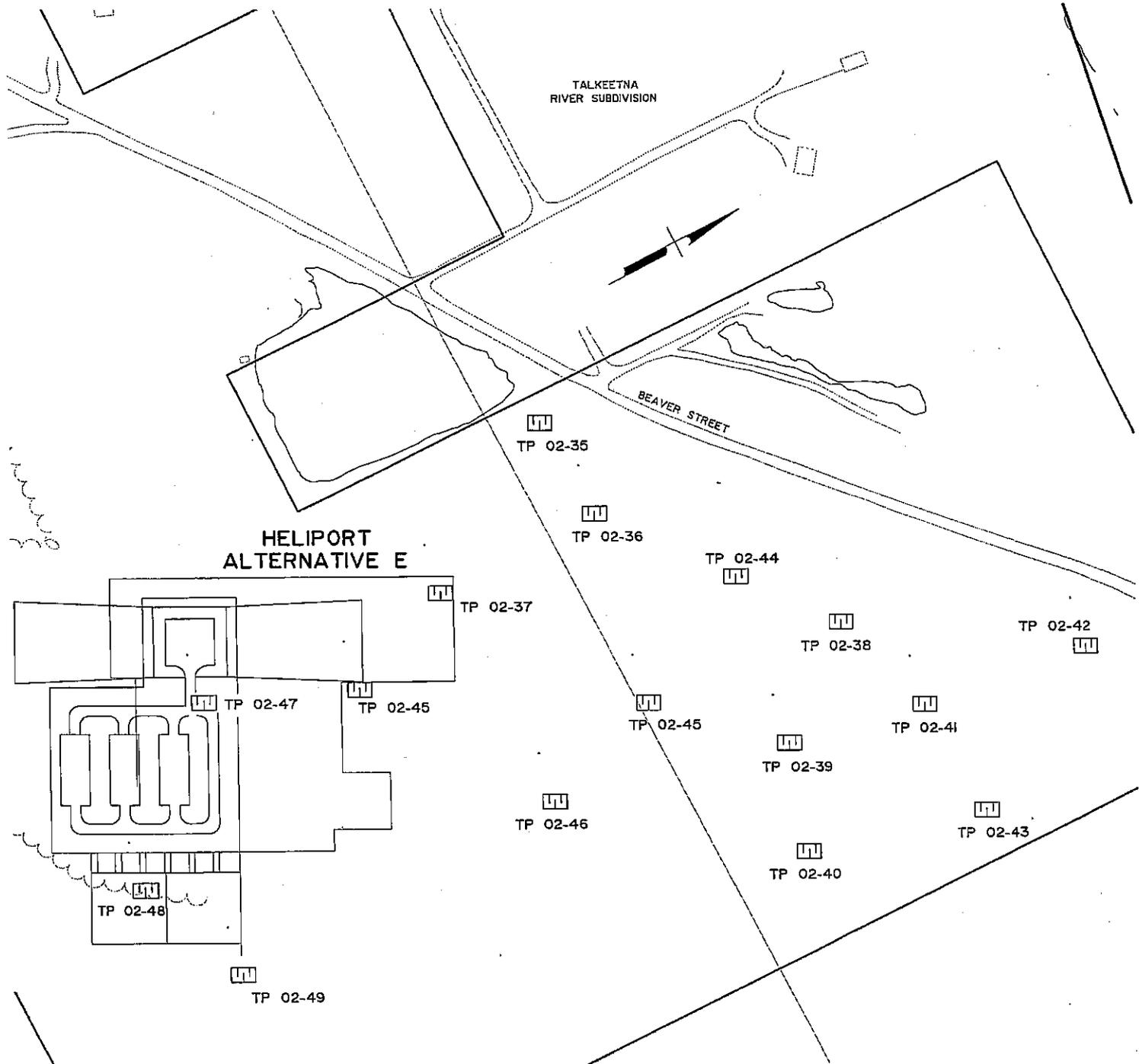
Station						
Offset (feet)						
Depth (feet)	20'-22'	25'-27'	30.0'-31.3'	35.0'-36.2'	40.00'-41.25'	15.00'-41.25'
Test Hole No.	TH 02-34	TH 02-34	TH 02-34	TH 02-34	TH 02-34	TH 02-34
Field No.	FS-02-81	FS-02-82	FS-02-83	FS-02-84	FS-02-85	FS-02-80 TO 85
Date Sampled	02/20/2002	02/20/2002	02/20/2002	02/20/2002	02/20/2002	02/20/2002
Lab No.	02A-0166	02A-0167	02A-0168	02A-0169	02A-0170	02A-0188
Percent Passing Sieve Size	3"					
	2"					100
	1"					93
	3/4"					89
	1/2"					83
	3/8"					80
	#4					73
	#10					67
	#40					55
	#80					
#200					32.1	
.02mm						
.002mm						
DOTTSD						Si Gr1 Sa
AASHTO Class						A-2-4(0)
FSV Class						
Unified Class						SM
Liquid Limit						16
Plastic Index						NP
Moisture Content %	7.9	9.9	10.0	5.9	6.2	
Organic Content %						
% Gravel						33
% Sand						35
% Silt & Clay						32
Max. Dry Density						
Opt. Moisture %						
Degradation Value						
L.A. Abrasion Loss						
Sulfate Soundness	/	/	/	/	/	/

APPENDIX E

PROPOSED HELIPORT (SITE E)

**TEST PIT LOCATION MAP, TEST PIT LOGS, PRECONSTRUCTION SAMPLE
SUMMARY**

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	54660	2003		



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND
PUBLIC FACILITIES
**TALKEETNA AIRPORT
IMPROVEMENTS
PHASE II**
2002 TESHOLE
LOCATION MAP
PROPOSED HELIPORT
SITE E
APPENDIX E



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TP 02-35
Total Depth 9.0 feet
Date Begin 2-21-02
Date End 2-21-02

Station / Location See Test Pit Location Plan

Offset from Center Line _____

Elevation Reference Original Ground

Equipment Type Excavator

Weather Clear, -20 deg.

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	Dug Pit Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data					
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time	Date		
Excavator	0		GS	02-86						6.5					
	1														
	2														
	3														
	4														
	5					GS	02-87								
	6														
	7														
	8														
	9														

SUBSURFACE MATERIAL

0 Brown, *Organic w/ Silt*, contains roots

1 Brown, moist, *Sandy Silt*, contains roots
M.C.=28.8%, p200=75.6, Gravel=1%, Sand=23%

2 *Sandy Gravel w/ Cobbles*, dry to 6.5', wet below 6.5'; mostly 3" minus, largest seen 6"

4 A-1-a(0) (GW), p200=0.3, LL=NV, PI=NP, Gravel=75%, Sand=25%

9 BOH

Drilling Notes:
Quality Test For Combined Samples FS-02-87, 91, 98 & 99:
Sulfate Soundness = 0% Coarse, 2% Fine
L.A. Abrasion Loss = 17%
Degradation = 79

LOG OF TEST HOLE TESTPITS.GPJ_AK_DOT.GDT 5/23/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials

Geology Section

Project Talkeetna Airport Improvements-Phase 2

Project Number 54660

Test Hole Number TP 02-36

Total Depth 10.0 feet

Date Begin 2-21-02

Date End 2-21-02

Station / Location See Test Pit Location Plan

Offset from Center Line

Elevation Reference Original Ground

Equipment Type Excavator

Weather Clear, -5 deg.

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	Dug Pit Blows / ft. Depth	Sample Data						Frozen	Soil Graph	Ground Water Data					
			Method	Number	Blow Count	Loc. Sampled	Recovery	N-Value			Depth in (ft.)	Time	Date	Symbol		
Excavator	0		GS	02-88							7.5					
	1															
	2															
	3															
	4															
	5															
	6															
	7															
	8					GS	02-89									
	9															
	10															

SUBSURFACE MATERIAL

0 **Brown, Peat, contains roots**

Brown, moist, Silty Sand, contains roots to 2'

M.C.=17.9%, p200=32.7, Gravel=0%, Sand=67%

8 **wet, Sandy Gravel w/ Cobbles, mostly 4" minus, largest seen 6"**
 A-1-a(0) (GW), p200=0.8, LL=NV, PI=NP, Gravel=75%, Sand=24%, +3=4

BOH

Drilling Notes:
 Quality Test For Combined Samples FS-02-89, 93, 94 & 96:
 Sulfate Soundness = 0% Coarse, 2% Fine
 L.A. Abrasion Loss = 18%
 Degradation = 77

LOG OF TEST HOLE TESTPITS.GPJ AK DOT.GDT 5/23/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials

Geology Section

Project Talkeetna Airport Improvements-Phase 2

Project Number 54660

Test Hole Number TP 02-37

Total Depth 8.0 feet

Date Begin 2-21-02

Date End 2-21-02

Station / Location See Test Pit Location Plan

Offset from Center Line _____

Elevation Reference Original Ground

Equipment Type Excavator

Weather Clear, -5 deg.

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	Dug Pit Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data		
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time
Excavator	0		GS	02-90						5.0		
	1											
	2											
	3											
	4											
	5											
	6											
	7											
	8											

SUBSURFACE MATERIAL

0 Dark brown, moist to wet, *Organic w/ roots* 0

1 Brown, moist to wet, *Silt*, contains roots 1

4 moist to wet, *Sandy Silt*
M.C.=35.8%, p200=77.3, Gravel=0%, Sand=23% 4

5 Brown, loose, wet, *Sandy Gravel w/ Cobbles*, mostly 4" minus, largest seen 9" 5

Drilling Notes:

LOG OF TEST HOLE TESTPITS.GPJ AK_DOT.GDT 5/24/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Calhead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials

Geology Section

Project Talkeetna Airport Improvements-Phase 2

Project Number 54660

Test Hole Number TP 02-38

Total Depth 11.0 feet

Date Begin 2-22-02

Date End 2-22-02

Station / Location See Test Pit Location Plan

Offset from Center Line _____

Elevation Reference Original Ground

Equipment Type Excavator

Weather Mostly Cloudy

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	Dug Pit Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)
Excavator	0									8.5	
	1										
	2										
	3									2/22/02	
	4									▼	
	5										
	6										
	7										
	8										
	9										
	10										
	11										

SUBSURFACE MATERIAL

0 **Brown, Organic w/ roots**

Orange brown, moist, *Silt*, contains sand, organics & roots

2 **Brown, loose, Sandy Gravel, mostly 3" minus, contains cobbles, largest seen 6"; dry to 8.5', wet below 8.5'**

3 **A-1-a(0) (GP), p200=.03, LL=NV, PI=NP, Gravel=69%, Sand=31%, +3=4**

Drilling Notes:
 Quality Test For Combined Samples FS-02-87, 91, 98 & 99:
 Sulfate Soundness = 0% Coarse, 2% Fine
 L.A. Abrasion Loss = 17%
 Degradation = 79

LOG OF TEST HOLE TESTPITS.GPJ AK DOT.GDT 5/23/02

Note: Unless otherwise noted all samples are taken with 1-3/8 Inch Standard Penetration Sampler driven with 140 lb. hammer with 30-Inch drop. CME Auto Hammer Calhead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials

Geology Section

Project Talkeetna Airport Improvements-Phase 2

Project Number 54660

Test Hole Number TP 02-39

Total Depth 9.0 feet

Date Begin 2-22-02

Date End 2-22-02

Station / Location See Test Pit Location Plan

Offset from Center Line

Elevation Reference Original Ground

Equipment Type Excavator

Weather Mostly Cloudy

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	Dug Pit Blows / ft. Depth	Sample Data						Frozen	Soil Graph	Ground Water Data					
			Method	Number	Blow Count	Loc. Sampled	Recovery	N-Value			Depth in (ft.)	Time	Date	Symbol		
Excavator	0									5.5						
	1															
	2															
	3															
	4															
	5		GS	02-92												
	6															
	7															
	8		GS	02-93												
	9															

SUBSURFACE MATERIAL

0 Dark brown, Organics w/ roots

1 Brown, moist to wet, Silt, contains organics & roots

3 Brown, loose, Sand, dry to 5.5', wet below 5.5'

M.C.=14.6%, p200=0.4, Gravel=1%, Sand=99%

7 Brown, loose, wet, Sandy Gravel, approx. 10-20% +3", largest seen 9"
A-1-a(0) (GP), p200=0.7, LL=NV, PI=NP, Gravel=62%, Sand=37%, +3=7

8 abandoned pit at 9' due to caving

BOH
Drilling Notes:
Quality Test For Combined Samples FS-02-89, 93, 94 & 96:
Sulfate Soundness = 0% Coarse, 2% Fine
L.A. Abrasion Loss = 18%
Degradation = 77

LOG OF TEST HOLE TESTPITS.GPJ_AK_DOT.GDT 5/23/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TP 02-40
Total Depth 9.0 feet
Date Begin 2-22-02
Date End 2-22-02

Station / Location See Test Pit Location Plan Offset from Center Line _____
Equipment Type Excavator Weather Cloudy, 5 deg. Elevation Reference Original Ground
Geologist T. OTTLEY Field Crew Abbott

Drilling Method	Depth in (Feet)	Dug Pit Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data			
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time	Date
Excavator	0									5.0			
	1												
	2												
	3												
	4												
	5												
	6			GS	02-94								
	7												
	8												
	9												

SUBSURFACE MATERIAL

0 Dark brown, *Organic w/ roots*

1 Brown, moist to wet, *Silt*, contains roots to 2'

3 Tan, moist, *Sandy Silt*, grading to Silty Sand

5 Tan, wet, approx. 10-20% +3"; contains cobbles, largest seen 7"
A-1-a(0) (GP), p200=0.6, LL=Nv, PI=NP, Gravel=78%, Sand=21%

9 BOR

Drilling Notes:
Quality Test For Combined Samples FS-02-89, 93, 94 & 96:
Sulfate Soundness = 0% Coarse, 2% Fine
L.A. Abrasion Loss = 18%
Degradation = 77

LOG OF TEST HOLE TESTPITS.GPJ AK DOT.GDT 5/23/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TP 02-42
Total Depth 10.0 feet
Date Begin 2-22-02
Date End 2-22-02

Station / Location See Test Pit Location Plan Offset from Center Line _____
Equipment Type Excavator Weather Cloudy, 10 deg.
Geologist T. OTTLEY Field Crew Abbott Elevation Reference Original Ground

Drilling Method	Depth In (Feet)	Dug Pit Blows / ft. Depth	Sample Data					N-Value	Frozen	Soil Graph	Ground Water Data			
			Method	Number	Blow Count	Loc. Sampled	Recovery				Depth In (ft.)	Time	Date	Symbol
Excavator	0										SUBSURFACE MATERIAL			
	0										Brown, <i>Organic w/ roots</i>			
	1										Brown, moist, <i>Silt</i> , contains roots			
	2			GS	02-97							Tan, loose, dry, <i>Silty Sand</i> M.C.=12.6%, p200=31.0, Gravel=0%, Sand=69%		
	3											Tan, loose, <i>Sandy Gravel w/ Cobbles</i> , approx. 3-8% +3": largest seen 5"; dry to 8', wet below 8'		
	4			GS	02-98							A-1-a(0) (GP), p200=1.4, LL=NV, PI=NP, Gravel=83%, Sand=16%		
	5													
	6													
	7													
	8													
	10													

Drilling Notes:
Quality Test For Combined Samples FS-02-87, 91, 98 & 99:
Sulfate Soundness = 0% Coarse, 2% Fine
L.A. Abrasion Loss = 17%
Degradation = 79

LOG OF TEST HOLE TESTPITS.GPJ AK_DOT.GDT 6/24/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Calhead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TP 02-43
Total Depth 9.0 feet
Date Begin 2-23-02
Date End 2-23-02

Station / Location See Test Pit Location Plan Offset from Center Line _____ Elevation Reference Original Ground
Equipment Type Excavator Weather Cloudy, 5 deg.
Geologist T. OTTLEY Field Crew Abbott, Nelson

Drilling Method	Depth in (feet)	Dug Pit Blows / ft. Depth	Sample Data					N-Value	Frozen	Soil Graph	Ground Water Data								
			Method	Number	Blow Count	Loc. Sampled	Recovery				Depth in (ft.)	Time	Date	Symbol					
Excavator	0									6.5									
	1																		
	2																		
	3																		
	4																		
	5																		
	6																		
	7																		
	8																		
	9																		

SUBSURFACE MATERIAL

0 *Brown, Organic w/ roots*

1 *Brown, Silt, contains organics & roots; wet below 4'*

7 *Brown, loose, wet, Sandy Gravel w/ Cobbles*

BOH

Drilling Notes:
No sample taken due to mixing of silt overburden with gravel

LOG OF TEST HOLE TESTPITS.GPJ AK DOT.GDT 5/23/02

Note: Unless otherwise noted all samples are taken with 1-3/8 Inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials

Geology Section

Project Talkeetna Airport Improvements-Phase 2

Project Number 54660

Test Hole Number TP 02-44

Total Depth 10.0 feet

Date Begin 2-23-02

Date End 2-23-02

Station / Location See Test Pit Location Plan

Offset from Center Line

Elevation Reference Original Ground

Equipment Type Excavator

Weather Cloudy, 5 deg.

Geologist T. OTTLEY

Field Crew Abbott, Nelson

Drilling Method	Depth in (Feet)	Dug Pit Blows / ft. Depth	Sample Data					N-Value	Frozen	Soil Graph	Ground Water Data		
			Method	Number	Blow Count	Loc. Sampled	Recovery				Depth in (ft.)	Time	Date
Excavator	0										SUBSURFACE MATERIAL		
	0										Brown, <i>Organic w/ roots</i> Brown, moist, <i>Silt</i> , contains organics & roots		
	1												
	2										Tan, <i>Sandy Gravel w/ Cobbles</i> , approx. 3-5% +3", largest seen 5"; dry to 8.5', wet below 8.5' A-1-a(0) (GP), p200=0.4, LL=NV, PI=NP, Gravel=76%		
	3			GS	02-99								
	4												
	5												
	6												
	7												
	8												
	10										BOH		

Drilling Notes:

LOG OF TEST HOLE TESTPITS.GPJ AK_DOT.GDT 6/23/02

Note: Unless otherwise noted all samples are taken with 1-3/8 Inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



STATE OF ALASKA DOT/PF

Central Region Materials
Geology Section

LOG OF TEST HOLE

Sheet Number 1 of 1

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TP 02-45
Total Depth 9.5 feet
Date Begin 2-23-02
Date End 2-23-02

Station / Location See Test Pit Location Plan Offset from Center Line _____
Equipment Type Excavator Weather Cloudy, 5 deg.
Geologist T. OTTLEY Field Crew Abbott, Nelson Elevation Reference Original Ground

Drilling Method	Depth in (Feet)	Dug Pit Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data			
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time	
Excavator	0		GS	02-100						7.0			
	1												
	2												
	3												
	4												
	5												
	6												
	7												
	8					GS	02-101						
	9												

SUBSURFACE MATERIAL

0 Dark brown, *Organic w/ roots*

1 Brown, wet, *Silt*

4 Tan, *Sandy Silt*, moist to 6', wet below 6'
M.C.=28.5%, p200=42.1, Gravel=0%, Sand=58%

7 Tan, *Sandy Gravel w/ Cobbles*, approx. 8-15% +3", largest seen 6"
A-1-a(0) (GP), p200=1.8, LL=NV, PI=NP, Gravel=79%, Sand=19%

9 abandoned pit at 9.5' due to caveins

Drilling Notes:

LOG OF TEST HOLE TESTPITS.GPJ AK_DOT.GDT 5/23/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



STATE OF ALASKA DOT/PF

Central Region Materials
Geology Section

LOG OF TEST HOLE

Sheet Number 1 of 1

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TP 02-46
Total Depth 10.0 feet
Date Begin 2-25-02
Date End 2-25-02

Station / Location See Test Pit Location Plan Offset from Center Line _____
Equipment Type Excavator Weather Mostly Cloudy, 20 deg.
Elevation Reference Original Ground

Geologist T. OTTLEY Field Crew Abbott

Drilling Method	Depth in (Feet)	Dug Pit Blows / ft. Depth	Sample Data					N-Value	Frozen	Soil Graph	Ground Water Data			
			Method	Number	Blow Count	Loc. Sampled	Recovery				Depth in (ft.)	Time	Date	Symbol
Excavator	0										SUBSURFACE MATERIAL			
	0										Dark brown, <i>Organic w/ roots</i>			
	1										Brown, wet, <i>Silt</i> , contains organics & roots			
	2													
	3													
	4											Tan, <i>Silty Sand</i> p200=15.3, Gravel=0%, Sand=85%		
	5											Tan, loose, wet, <i>Gravel</i> A-1-a(0), p200=1.9, LL=NV, PI=NP, Gravel=79%, Sand=19%		
	6													
	7													
	8													
	9													
10														
											BOH			

Drilling Notes:

LOG OF TEST HOLE TESTPITS.GPJ AK_DOT.GDT 5/24/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Calhead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/PF

Central Region Materials
Geology Section

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TP 02-47
Total Depth 9.0 feet
Date Begin 2-25-02
Date End 2-25-02

Station / Location See Test Pit Location Plan Offset from Center Line _____ Elevation Reference Original Ground
Equipment Type Excavator Weather Cloudy, 20 deg.
Geologist T. OTTLEY Field Crew Abbott

Drilling Method	Depth in (Feet)	Dug Pit Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data										
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time	Date	Symbol						
Excavator	0									5.0										
		1																		
		2																		
		3																		
		4																		
		5																		
		6																		
		7																		
		8																		
	9																			

SUBSURFACE MATERIAL

0 **Dark brown, Organics w/ roots**
Brown, wet, Silt, contains organics & roots

2 **Tan, loose, moist to wet, Silty Sand, grading to Sandy Silt**

6 **Tan, wet, Sandy Gravel w/ Cobbles, approx. 10-15% +3", largest seen 6"**
A-1-a(0) (GW), p200=1.4, LL=NV, PI=NP, Gravel=76%, Sand=23%

9 **abandoned pit at 9' due to caving**

Drilling Notes:

LOG OF TEST HOLE TESTPITS.GPJ AK_DOT.GDT 5/23/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



STATE OF ALASKA DOT/PF

Central Region Materials
Geology Section

LOG OF TEST HOLE

Sheet Number 1 of 1

Project Talkeetna Airport Improvements-Phase 2
Project Number 54660

Test Hole Number TP 02-48
Total Depth 8.0 feet
Date Begin 2-25-02
Date End 2-25-02

Station / Location See Test Pit Location Plan

Offset from Center Line _____

Elevation Reference Original Ground

Equipment Type Excavator

Weather Cloudy, 20 deg.

Geologist T. OTTLEY

Field Crew Abbott

Drilling Method	Depth in (Feet)	Dug Pit Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data		
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time
Excavator	0									3.8		
	1											
	2											
	3											
	4											
	5											
	6											
	7											
	8											

SUBSURFACE MATERIAL

0 Dark brown, *Organics w/ roots*

1 Dark brown, wet, *Silt*, contains organics

4 Tan, loose, wet, *Sandy Gravel w/ Cobbles*, approx. 5-15% +3", largest seen 8"
A-1-a(0) (GW), p200=1.4, LL=Nv, PI=NP, Gravel=79%, Sand=20%

8 abandoned pit at 8' due to caving

BOH

Drilling Notes:

LOG OF TEST HOLE TESTPITS.GPJ AK DOT.GDT 5/24/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



STATE OF ALASKA DOT/PF
 Central Region Materials
 Geology Section

LOG OF TEST HOLE

Sheet Number 1 of 1

Project Talkeetna Airport Improvements-Phase 2
 Project Number 54660

Test Hole Number TP 02-49
 Total Depth 8.0 feet
 Date Begin 2-25-02
 Date End 2-25-02

Station / Location See Test Pit Location Plan Offset from Center Line _____
 Equipment Type Excavator Weather Cloudy, 23 deg. Elevation Reference Original Ground
 Geologist T. OTTLEY Field Crew Abbott

Drilling Method	Depth in (Feet)	Dug Pit Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data				
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time	Date	Symbol
Excavator	0									5.0				
	1													
	2													
	3													
	4													
	5													
	6													
	7													
	8													

SUBSURFACE MATERIAL

0 Dark brown, *Organics w/ roots*

1 Brown, wet, *Silt*, contains organics & roots

5 Tan, *Gravel*, contains a 6" orange brown silt lense

7 Tan, loose, wet, *Sandy Gravel w/ Cobbles*, approx. 5-15% +3", largest seen 8"
 A-1-a(0) (GP), p200=2.3, LL=NV, PI=NP, Gravel=69%, Sand=29%

8 BOH

Drilling Notes:

LOG OF TEST HOLE TESTPITS.GPJ AK_DOT.GDT 5/23/02

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By T. Ottley

Centerline Heliport Site E

Station							
Offset (feet)							
Depth (feet)		0.5'-2.5'	4'-6'	1'-4'	7.5'-9.0'	4'-5'	3'-5'
Test Hole No.		TH 02-35	TH 02-35	TH 02-36	TH 02-36	TH 02-37	TH 02-38
Field No.		FS-02-86	FS-02-87	FS-02-88	FS-02-89	FS-02-90	FS-02-91
Date Sampled		02/21/2002	02/21/2002	02/21/2002	02/21/2002	02/21/2002	02/22/2002
Lab No.		02A-0171	02A-0172	02A-0173	02A-0174	02A-0175	02A-0176
Percent Passing Sieve Size	3"		100		100		100
	2"		95		93		90
	1"		73		74		66
	3/4"		62		64		57
	1/2"	100	50		50		48
	3/8"	100	43		44		44
	#4	99	30		32	100	36
	#10	99	25	100	25	100	31
	#40	98	4	100	6	100	6
	#80						
#200	75.6	0.3	32.7	0.8	77.3	0.3	
.02mm							
.002mm							
DOTTSD			Sa Gr1		Sa Gr1		Sa Gr1
AASHTO Class			A-1-a(0)		A-1-a(0)		A-1-a(0)
FSV Class							
Unified Class			GW		GW		GP
Liquid Limit			NV		NV		NV
Plastic Index			NP		NP		NP
Moisture Content %		28.8		17.9		35.8	
Organic Content %							
% Gravel		1	75		75		69
% Sand		23	25	67	24	23	31
% Silt & Clay		76	0	33	1	77	0
Max. Dry Density							
Opt. Moisture %							
Degradation Value							
L.A. Abrasion Loss							
Sulfate Soundness		/	/	/	/	/	/

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By T. Ottley

Centerline Heliport Site E

Station						
Offset (feet)						
Depth (feet)	4.5'-5.5'	7'-9'	5.0'-6.5'	4.5'-5.5'	8.0'-9.5'	5.0'-9.5'
Test Hole No.	TH 02-39	TH 02-39	TH 02-40	TH 02-41	TH 02-41	TP 02-36, 39, 4
Field No.	FS-02-92	FS-02-93	FS-02-94	FS-02-95	FS-02-96	FS-02-89+93+94+
Date Sampled	02/22/2002	02/22/2002	02/22/2002	02/22/2002	02/22/2002	02/22/2002
Lab No.	02A-0177	02A-0178	02A-0179	02A-0180	02A-0181	02A-0190
Percent Passing	3"	100	100		100	
	2"	80	91		96	
	1"	59	59		75	
	3/4"	54	49		66	
	1/2"	47	38		52	
	3/8"	100	45	33	100	46
	#4	100	40	26	99	35
	#10	99	38	22	99	30
	#40	18	13	8	92	8
	#80					
Sieve Size	#200	0.4	0.8	0.6	22.8	0.4
	.02mm					
	.002mm					
DOTTSD		Sa Gr1	Sa Gr1	Si Sa	Sa Gr1	
AASHTO Class		A-1-a(0)	A-1-a(0)	A-2-4(0)	A-1-a(0)	
FSV Class						
Unified Class		GP	GP	SM	GP	
Liquid Limit		NV	NV	NV	NV	
Plastic Index		NP	NP	NP	NP	
Moisture Content %	14.6			12.2		
Organic Content %						
% Gravel	1	62	78	1	70	
% Sand	99	37	21	76	30	
% Silt & Clay	0	1	1	23	0	
Max. Dry Density						
Opt. Moisture %						
Degradation Value						77
L.A. Abrasion Loss						18
Sulfate Soundness	/	/	/	/	/	0 / 2

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By T. Ottley

Centerline Heliport Site E

Station						
Offset (feet)						
Depth (feet)	1.5'-2.5'	3'-5'	2'-4'	3'-6'	4.0'-5.5'	7.0'-8.5'
Test Hole No.	TH 02-42	TH 02-42	TH 02-44	TP 02-35, 38, 4	TH 02-45	TH 02-45
Field No.	FS-02-97	FS-02-98	FS-02-99	FS-02-87+91+98+	FS-02-100	FS-02-101
Date Sampled	02/22/2002	02/22/2002	02/23/2002	02/22/2002	02/23/2002	02/23/2002
Lab No.	02A-0182	02A-0183	02A-0184	02A-0189	02A-0185	02A-0186
Percent	3"	100	100			100
	2"	95	96			98
Passing	1"	65	72			67
	3/4"	54	59			55
	1/2"	41	46			42
Sieve	3/8"	34	39			36
	#4	100	23			26
	#10	100	17		100	21
Size	#40	96	5	11	100	14
	#80					
	#200	31.0	1.4	0.4	42.1	1.8
	.02mm					
	.002mm					
DOTTSD		Grl	Sa Grl			Grl
AASHTO Class		A-1-a(0)	A-1-a(0)			A-1-a(0)
FSV Class						
Unified Class		GP	GP			GP
Liquid Limit		NV	NV			NV
Plastic Index		NP	NP			NP
Moisture Content %	12.6				28.5	
Organic Content %						
% Gravel		83	76			79
% Sand	69	16	24		58	19
% Silt & Clay	31	1	0		42	2
Max. Dry Density						
Opt. Moisture %						
Degradation Value				79		
L.A. Abrasion Loss				17		
Sulfate Soundness	/	/	/	0 / 2	/	/

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By T. Ottley

Centerline Heliport Site E

Station						
Offset (feet)						
Depth (feet)		4'-5'	5.0'-6.5'	6.5'-8.0'	4.0'-6.0'	6.5'-8.0'
Test Hole No.		TP 02-46	TP 02-46	TP 02-47	TP 02-48	TP 02-49
Field No.		FS-02-102	FS-02-103	FS-02-104	FS-02-105	FS-02-106
Date Sampled		02/25/2002	02/25/2002	02/25/2002	02/25/2002	02/25/2002
Lab No.		02A-0230	02A-0231	02A-0232	02A-0233	02A-0234
Percent	3"		100	100	100	100
	2"		96	94	95	95
Passing	1"		84	69	67	72
	3/4"		73	60	57	62
	1/2"		58	46	44	51
Sieve	3/8"		49	39	38	45
	#4	100	30	29	27	36
	#10	100	21	24	21	31
Size	#40	87	9	8	7	15
	#80					
	#200	15.3	1.9	1.0	1.4	2.3
	.02mm					
	.002mm					
DOTTSD			Grl	Sa Grl	Grl	Sa Grl
AASHTO Class			A-1-a(0)	A-1-a(0)	A-1-a(0)	A-1-a(0)
FSV Class						
Unified Class			GP	GW	GW	GP
Liquid Limit			NV	NV	NV	NV
Plastic Index			NP	NP	NP	NP
Moisture Content %		30.1				
Organic Content %						
% Gravel			79	76	79	69
% Sand		85	19	23	20	29
% Silt & Clay		15	2	1	1	2
Max. Dry Density						
Opt. Moisture %						
Degradation Value						
L.A. Abrasion Loss						
Sulfate Soundness		/	/	/	/	/

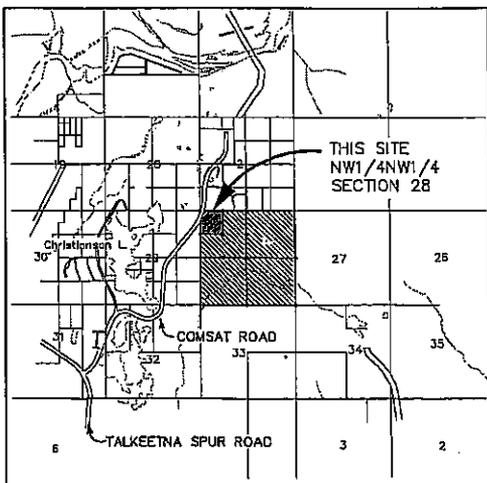
APPENDIX F

MATERIAL SITE (MS 583-446-1)

**TEST PIT LOCATION MAP, TEST PIT LOGS, PRECONSTRUCTION SAMPLE
SUMMARY**

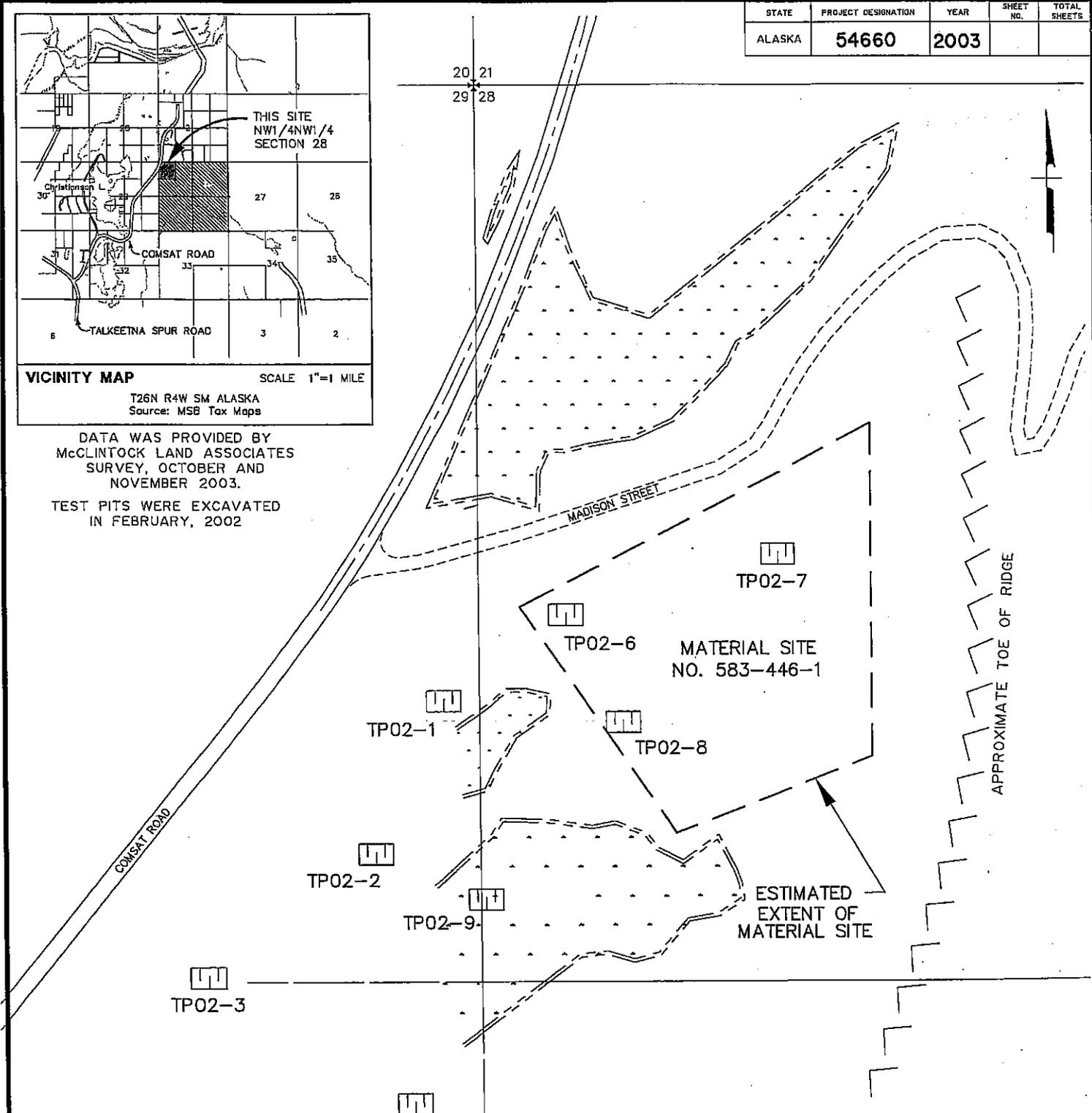
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	54660	2003		

20 21
29 28



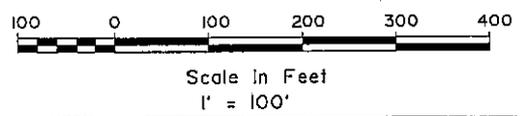
VICINITY MAP SCALE 1"=1 MILE
T26N R4W SM ALASKA
Source: MSB Tax Maps

DATA WAS PROVIDED BY
McCLINTOCK LAND ASSOCIATES
SURVEY, OCTOBER AND
NOVEMBER 2003.
TEST PITS WERE EXCAVATED
IN FEBRUARY, 2002



LEGEND

- APPROXIMATE TEST PIT LOCATION
- AREA DELINEATED AS WETLANDS BY OTHERS



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND
PUBLIC FACILITIES
**TALKEETNA AIRPORT
IMPROVEMENTS
PHASE II**

**MATERIAL SITE 583-446-1
LOCATED WITHIN
THE NW1/4, NW1/4, SEC 28, T26N, R4W, SM**

**2002 TEST PIT
LOCATION PLAN**

APPENDIX F



STATE OF ALASKA DOT&PF
 Statewide Materials
 Geology Section

LOG OF TEST HOLE

Sheet Number 1 of 1

Project M.S. 583-446-1
 Project Number 54660

Test Hole Number TP 02-01
 Total Depth 9.5 feet
 Date Begin 2-26-02
 Date End 2-26-02

Station / Location See TP Location Plan Equipment Type Excavator Elevation Reference Original Ground
 Offset _____ Weather Mostly Cloudy, 28 deg.
 Geologist T. OTTLEY Field Crew Nelson, Abbott

Drilling Method	Depth in (Feet)	Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)
Excavator	0								7.0		
	1										
	2								2-26-02		
	3										
	4		GS	02-601							
	5										
	6		GS	02-602							
	7										
	8										
	9										

SUBSURFACE MATERIAL

0 Dark brown, *Peat*, contains roots

1 Brown, moist, *Silt*, contains organics, roots & boulders

2 Tan, loose, *Sandy Gravel w/ Cobbles & Boulders*, dry to 7', wet below 7'; approx. 20-30% +3", approx. 20-30% + 12", largest seen 4' x 6' x 8'

3 M.C.=2.5%

4

5 (GP), p200=3.4, LL=Nv, PI=NP, Gravel=70%, Sand=26%, +3=6

6 Quality Test for Combined Samples FS 02-602, 603 & 609:
 Sulfate Soundness Loss = Coarse 2%, Fine 3%
 L.A. Abrasion Loss = 18%
 Degradation = 70

7

8

9 abandoned pit at 9.5' due to large boulder or bedrock

BOH
 Drilling Notes:
 Large glacial erratics (boulders) seen scattered on surface of site. Some boulders are the size of small cars.

LOG OF TEST HOLE MAT.SITE:GPJ AK DOT.GDT 5-14-03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



STATE OF ALASKA DOT&PF
 Statewide Materials
 Geology Section

LOG OF TEST HOLE

Sheet Number 1 of 1

Project M.S. 583-446-1
 Project Number 54660

Test Hole Number TP 02-02
 Total Depth 7.5 feet
 Date Begin 2-26-02
 Date End 2-26-02

Station / Location See TP Location Plan Equipment Type Excavator
 Offset _____ Weather Cloudy, 30 deg.
 Geologist T. OTTLEY Field Crew Nelson, Abbott
 Elevation Reference Original Ground

Drilling Method	Depth in (Feet)	Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth In (ft.)
Excavator	0									6.0	
	1										
	2										
	3									2-26-02	
	4										▼
	5										
	6										
	7										
SUBSURFACE MATERIAL											
	0										Dark brown, <i>Peat</i> , contains roots
	1										Brown, moist, <i>Silt</i> , contains roots & boulders
	2										
	3										Tan, loose, <i>Sandy Gravel w/ Cobbles & Boulders</i> , dry to 6', wet below 6'. Approx. 20-30% +3", approx. 15-20% +12", largest seen 1' x 1.5' x 1.5'
	4										A-1-a(0) (GP), p200=2.4, LL=Nv, PI=NP, Gravel=68%, Sand=29%, +3=4
	5										Quality Test for Combined Samples FS 02-602, 603 & 609: Sulfate Soundness Loss = Coarse 2%, Fine 3% L.A. Abrasion Loss = 18% Degradation = 70
	6										
	7										abandoned pit due to large boulder or bedrock
BOH											
Drilling Notes: Medium to thick stands of spruce and birch to 20" in diameter.											

LOG OF TEST HOLE MAT.SITE.GPJ AK_DOT.GDT 5-14-03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



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 Statewide Materials
 Geology Section

LOG OF TEST HOLE

Sheet Number 1 of 1

Project M.S. 583-446-1
 Project Number 54660

Test Hole Number TP 02-03
 Total Depth 15.0 feet
 Date Begin 2-26-02
 Date End 2-26-02

Station / Location See TP Location Plan
 Offset _____
 Equipment Type Excavator
 Weather Cloudy, 30 deg.
 Geologist T. OTTLEY
 Field Crew Nelson, Abbott
 Elevation Reference Original Ground

Drilling Method	Depth in (Feet)	Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)
Excavator	0								SUBSURFACE MATERIAL		
	0								Dark brown, <i>Peat</i> , contains roots		
	1								Brown, moist, <i>Silt</i> , contains roots		
	2										
	3								Tan, loose, dry, <i>Sandy Gravel w/ Cobbles & Boulders</i> , approx. 5-15% +3" and 1-2% +12", largest seen 1' x 1' x 1.5'		
	4								A-1-a(0) (GP), p200=0.3, LL=NV, PI=NP, Gravel=69%, Sand=31%		
	5										
	6								Quality Test for Combined Samples FS 02-604,606, 608, 611, 612 & 614		
	7								Sulfate Soundness Loss = Coarse 2%, Fine 3%		
	8								L.A. Abrasion Loss = 24%		
	9								Degradation = 69		
	10										
	11										
	12										
	13										
14											
15								BOH			
								Drilling Notes:			

LOG OF TEST HOLE MAT.SITE.GFJ AK.DOT.GDT 5-14-03

Note: Unless otherwise noted all samples are taken with 1-3/8 Inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



STATE OF ALASKA DOT&PF
 Statewide Materials
 Geology Section

LOG OF TEST HOLE

Sheet Number 1 of 1

Project M.S. 583-446-1
 Project Number 54660

Test Hole Number TP 02-04
 Total Depth 18.0 feet
 Date Begin 2-27-02
 Date End 2-27-02

Station / Location See TP Location Plan
 Equipment Type Excavator
 Offset _____
 Weather Cloudy, Snow, 30 deg.
 Geologist T. OTTLEY
 Field Crew Nelson, Abbott
 Elevation Reference Original Ground

Drilling Method	Depth in (Feet)	Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)
Excavator	0									SUBSURFACE MATERIAL	
	0									Dark brown, Peat, contains roots	
	1									Dark brown, moist, Silt, contains roots	
	2									Tan, loose, dry, Gravel w/ Cobbles & Boulders, approx. .08-15% +3" & 1-3% +12%, largest seen 1' x 1' x 1.5'	
	3									M.C.=3.9%	
	4		GS	02-605							
	5										
	6										
	7										Quality Test for Combined Samples FS 02-604,606, 608, 611, 612 & 614 Sulfate Soundness Loss = Coarse 2%, Fine 3% L.A. Abrasion Loss = 24% Degradation = 69 A-1-a(0) (GW), p200=0.7, LL=NV, PI=NP, Gravel=82%, Sand=17%, +3=6
	8		GS	02-606							
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
17											
18											

BOH
 Drilling Notes:

LOG OF TEST HOLE MAT.SITE.GPJ AK.DOT.GDT 5-14-03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



STATE OF ALASKA DOT&PF
 Statewide Materials
 Geology Section

LOG OF TEST HOLE

Sheet Number 1 of 1

Project M.S. 583-446-1
 Project Number 54660

Test Hole Number TP 02-05
 Total Depth 15.0 feet
 Date Begin 2-27-02
 Date End 2-27-02

Station / Location See TP Location Plan
 Offset _____
 Equipment Type Excavator
 Weather Cloudy, Snow, 30 deg.
 Elevation Reference Original Ground
 Geologist T. OTTLEY
 Field Crew Nelson, Abbott

Drilling Method	Depth in (Feet)	Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data			
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time	Date
Excavator	0								SUBSURFACE MATERIAL				
	0-1								Dark brown, Peat, contains roots				
	1-2								Orange brown, moist, Silt, contains roots				
	2-3								Orange brown, moist, Sandy Silt, grading to silty sand p200=54, Sand=46%				
	3-4								Tan, dry to moist, Silty Sand, grading to slightly silty sand at 5-6'				
	4-6								Tan, loose, dry, Gravelly Sand, grading to a sandy gravel with depth, mostly 1" minus				
	6-9								Quality Test for Combined Samples FS 02-604,606, 608, 611, 612 & 614 Sulfate Soundness Loss = Coarse 2%, Fine 3% L.A. Abrasion Loss = 24% Degradation = 69 A-1-a(0) (GW), p200=1, LL=Nv, PI=NP, Gravel=75%, Sand=24%				
	9-12								Brown, loose, dry, Sandy Gravel w/ Cobbles & Boulders, approx. 10-20% +3" & 8-15% +12", largest seen 1' x 1.5' x 2'				
	12-15								BOH				
									Drilling Notes:				

LOG OF TEST HOLE MAT.SITE.GPJ AK.DOT.GDT 5-14-03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT&PF

Statewide Materials
Geology Section

Project M.S. 583-446-1
Project Number 54660

Test Hole Number TP 02-06
Total Depth 9.0 feet
Date Begin 2-27-02
Date End 2-27-02

Station / Location See TP Location Plan
Equipment Type Excavator
Offset _____ Weather Cloudy, Snow, 32 deg.
Geologist T. OTTLEY
Field Crew Nelson, Abbott
Elevation Reference Original Ground

Drilling Method	Depth in (Feet)	Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data		
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time
Excavator	0									5.5		2-27-02
	1											
	2											
	3											
	4											
	5											
	6											
	7											
	8											
	9											

SUBSURFACE MATERIAL

0 Dark brown, *Peat*, contains roots

1 Brown, moist to wet, *Silt*, contains organics, boulders & roots

3 Brown, loose, moist, *Gravel w/ Cobbles & Boulders*, approx. 25-35% +3" & 15-25% +12", largest seen 1.5' x 2' x 2'

5 A-1-a(0) (GW), p200=2.4, LL=NV, PI=NP, Gravel=80%, Sand=18%

6 Quality Test for Combined Samples FS 02-602, 603 & 609:
Sulfate Soundness Loss = Coarse 2%, Fine 3%
L.A. Abrasion Loss = 18%
Degradation = 70

9 abandoned pit at 9' due to boulders

Drilling Notes:

LOG OF TEST HOLE MAT.SITE.GPJ AK_DOT.GDT 5-14-03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-Inch drop. CME Auto Hammer Cathead Rope Method



STATE OF ALASKA DOT&PF
 Statewide Materials
 Geology Section

LOG OF TEST HOLE

Sheet Number 1 of 1

Project M.S. 583-446-1
 Project Number 54660

Test Hole Number TP 02-08
 Total Depth 12.0 feet
 Date Begin 2-27-02
 Date End 2-27-02

Station / Location See TP Location Plan Equipment Type Excavator Elevation Reference Original Ground
 Offset _____ Weather Ptly. Cloudy, 35 deg.
 Geologist T. OTTLEY Field Crew Nelson, Abbott.

Drilling Method	Depth in (Feet)	Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)
Excavator	0									10.5	
	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
	10										
	12										

SUBSURFACE MATERIAL

0 - Dark brown, *Peat*, contains roots

1 - Brown, moist, *Silt*, contains roots

3 - Brown, loose, *Sandy Gravel w/ Cobbles & Boulders*, moist to 10.5', wet 10.5-12'; approx. 10-20% +3" & 5-10% +12", largest seen 2' x 3' x 3'

7 - A-1-a(0) (GP), p₂₀₀=3.3, LL=NV, PI=NP, Gravel=62%, Sand=35%

9 - Quality Test for Combined Samples FS 02-604,606, 608, 611, 612 & 614
 Sulfate Soundness Loss = Coarse 2%, Fine 3%
 L.A. Abrasion Loss = 24%
 Degradation = 69

12 - BOH

Drilling Notes:

LOG OF TEST HOLE, MAT.SITE.GPJ AK_DOT.GDT 5-14-03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT&PF

Statewide Materials

Geology Section

Project M.S. 583-446-1

Project Number 54660

Test Hole Number TP 02-09

Total Depth 7.0 feet

Date Begin 2-27-02

Date End 2-27-02

Station / Location See TP Location Plan

Equipment Type Excavator

Elevation Reference Original Ground

Offset

Weather Cloudy, 26 deg.

Geologist T. OTTLEY

Field Crew Nelson, Abbott

Drilling Method	Depth in (Feet)	Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)
Excavator	0								3.0		
	1										
	2										
	3								2-27-02		
	4								▼		
	5										
	6										
	7										

SUBSURFACE MATERIAL

Dark brown, wet, *Organic Silt*, contains roots, cobbles & boulders, largest boulder seen 2' x 2.5' x 3'

Brown, wet, *Silty Sandy Gravel w/ Cobbles & Boulders*, approx. 50-60% +3", approx. 30-40% +12", largest seen 3' x 3' x 5'

abandoned pit at 7' due to boulders & water table

BOH

Drilling Notes:

LOG OF TEST HOLE MAT.SITE.GPJ AK_DOT.GDT 5-14-03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop.

CME Auto Hammer

Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT&PF

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Geology Section

Project M.S. 583-446-1

Project Number 54660

Test Hole Number TP 02-10

Total Depth 13.0 feet

Date Begin 2-27-02

Date End 2-27-02

Station / Location See TP Location Plan

Equipment Type Excavator

Elevation Reference Original Ground

Offset

Weather Cloudy, 28 deg.

Geologist T. OTTLEY

Field Crew Nelson, Abbott

Drilling Method	Depth in (Feet)	Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)
Excavator	0										
									SUBSURFACE MATERIAL		
									Dark brown, <i>Peat</i> , contains roots		0
									Orange brown, moist, <i>Silt</i> , contains roots		
		1		GS	02-613					M.C.=45.9%	1
		2									
									Brown, loose, dry, <i>Sandy Gravel w/ Cobbles & Boulders</i> , approx. 15-25% +3" & 1-3% +12", largest seen 6" x 1' x 1.3'		2
		3									
		4								A-1-a(0) (GW), p200=1.3, LL=NV, PI=NP, Gravel=76%, Sand=23%, +3=6	4
				GS	02-614					Quality Test for Combined Samples FS 02-604,606, 608, 611, 612 & 614	
		5								Sulfate Soundness Loss = Coarse 2%, Fine 3%	5
		6								L.A. Abrasion Loss = 24%	6
		7								Degradation = 69	7
	8									8	
	9									9	
	10									10	
	11									11	
	12									12	
	13									13	
									BOH		
									Drilling Notes:		

LOG OF TEST HOLE MAT.SITE.GPJ AK.DOT.GDT 5-14-03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By T. Ottley

Materials Site M.S. 583-446-1

Station						
Offset (feet)						
Depth (feet)	3.0'-4.0'	5.0'-7.0'	4.0'-5.5'	3.5'-5.5'	3.0'-5.0'	7.0'-10.0'
Test Hole No.	TP 02-01	TP 02-01	TP 02-02	TP 02-03	TP 02-04	TP 02-04
Field No.	FS-02-601	FS-02-602	FS-02-603	FS-02-604	FS-02-605	FS-02-606
Date Sampled	02/26/2002	02/26/2002	02/26/2002	02/26/2002	02/27/2002	02/27/2002
Lab No.	02A-0235	02A-0236	02A-0237	02A-0238	02A-0239	02A-0240
Percent Passing Sieve Size	3"	100	100	100		100
	2"	96	92	90		95
	1"	72	70	73		61
	3/4"	65	61	66		49
	1/2"	54	54	58		37
	3/8"	49	50	53		33
	#4	38	41	43		24
	#10	30	32	31		18
	#40	12	10	3		3
	#80					
#200	3.6	2.5	0.3		0.7	
.02mm						
.002mm						
DOTSD		Sa Gr1	Sa Gr1	Sa Gr1		Gr1
AASHTO Class		A-1-a(0)	A-1-a(0)	A-1-a(0)		A-1-a(0)
FSV Class						
Unified Class		GP	GP	GP		GW
Liquid Limit		NV	NV	NV		NV
Plastic Index		NP	NP	NP		NP
Moisture Content %	2.5				3.9	
Organic Content %						
% Gravel		70	68	69		82
% Sand		26	29	31		17
% Silt & Clay		4	3	0		1
Max. Dry Density						
Opt. Moisture %						
Degradation Value						
L.A. Abrasion Loss						
Sulfate Soundness	/	/	/	/	/	/

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By T. Ottley

Materials Site M.S. 583-446-1

Station							
Offset (feet)							
Depth (feet)		2.0'-4.0'	9.0'-11.0'	5.0'-6.5'	4.0'-7.0'	2.0'-4.0'	8.0'-10.0'
Test Hole No.		TP 02-05	TP 02-05	TP 02-06	TP 02-01, 02-02	TP 02-07	TP 02-07
Field No.		FS-02-607	FS-02-608	FS-02-609	602+603+609	FS-02-610	FS-02-611
Date Sampled		02/27/2002	02/27/2002	02/27/2002	02/27/2002	02/27/2002	02/27/2002
Lab No.		02A-0241	02A-0242	02A-0243	02A-0249	02A-0244	02A-0245
Percent Passing Sieve Size	3"		100	100			100
	2"		92	90			86
	1"		75	63			67
	3/4"		69	54			60
	1/2"		60	44			53
	3/8"		55	39		100	48
	#4		41	29		99	39
	#10	100	25	20		98	34
	#40	98	9	10		85	24
	#80						
	#200	54.4	0.6	2.4		10.6	5.3
	.02mm						
	.002mm						
DOTSD			Sa Gr1	Gr1			Sa Gr1
AASHTO Class			A-1-a(0)	A-1-a(0)			A-1-a(0)
FSV Class							
Unified Class			GW	GW			GP-GM
Liquid Limit			NV	NV			NV
Plastic Index			NP	NP			NP
Moisture Content %		33.1				4.7	
Organic Content %							
% Gravel			75	80		2	66
% Sand		46	24	18		87	29
% Silt & Clay		54	1	2		11	5
Max. Dry Density							
Opt. Moisture %							
Degradation Value					70		
L.A. Abrasion Loss					18		
Sulfate Soundness		/	/	/	2 / 3	/	/

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By T. Ottley

Materials Site M.S. 583-446-1

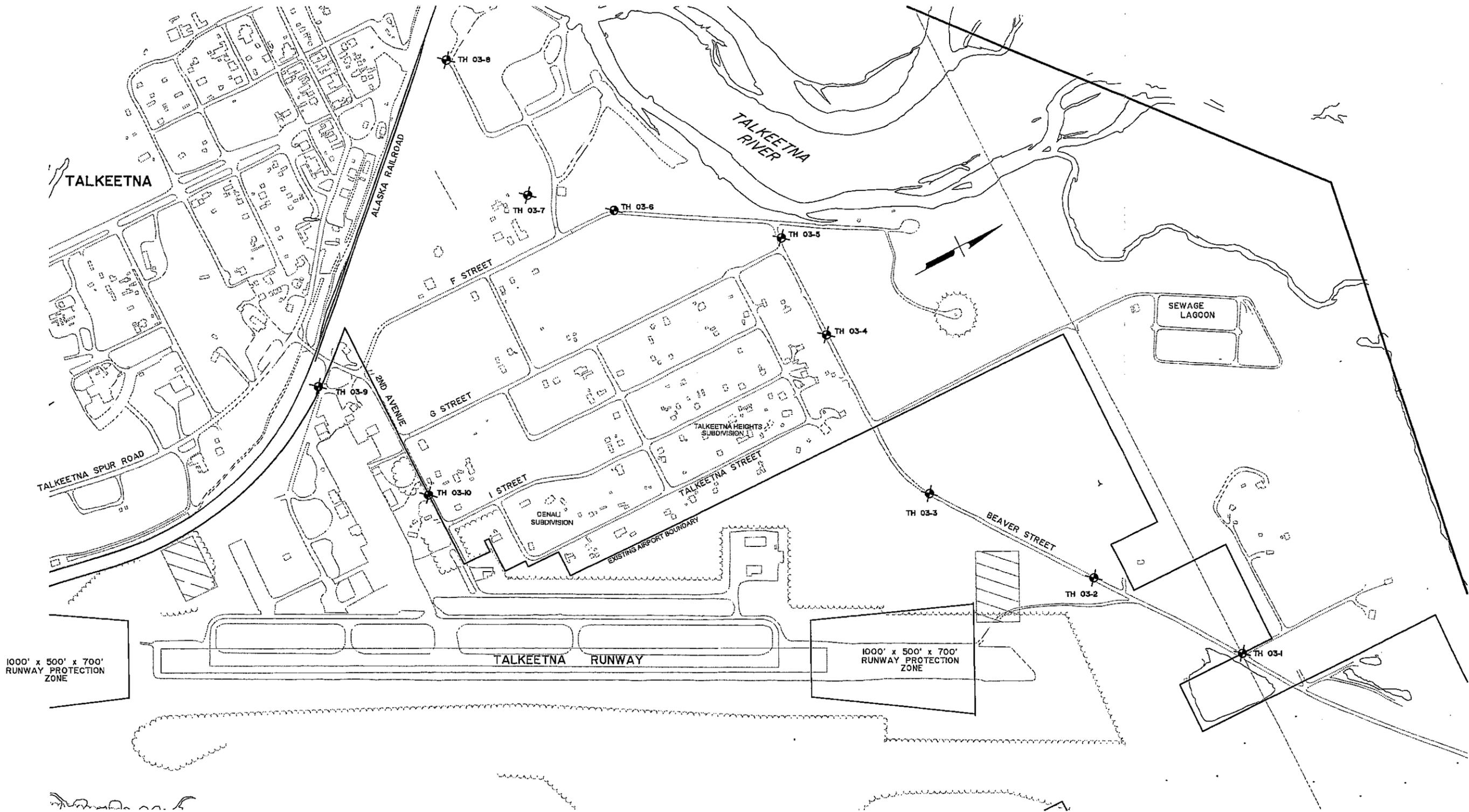
Station						
Offset (feet)						
Depth (feet)		7.0'-9.0'	1.0'-2.0'	4.0'-6.0'	3.5'-11.0'	
Test Hole No.		TP 02-08	TP 02-10	TP 02-10	TP 02-03, 02-04	
Field No.		FS-02-612	FS-02-613	FS-02-614	604+6+8+11+12+1	
Date Sampled		02/27/2002	02/27/2002	02/27/2002	02/27/2002	
Lab No.		02A-0246	02A-0247	02A-0248	02A-0250	
Percent Passing Sieve Size	3"	100		100		
	2"	98		89		
	1"	79		70		
	3/4"	71		62		
	1/2"	61		51		
	3/8"	56		45		
	#4	46		33		
	#10	38		24		
	#40	16		10		
	#80					
#200	3.3		1.4			
.02mm						
.002mm						
DOTTSD		Sa Gr1		Sa Gr1		
AASHTO Class		A-1-a(0)		A-1-a(0)		
FSV Class						
Unified Class		GP		GW		
Liquid Limit		NV		NV		
Plastic Index		NP		NP		
Moisture Content %			45.9			
Organic Content %						
% Gravel		62		76		
% Sand		35		23		
% Silt & Clay		3		1		
Max. Dry Density						
Opt. Moisture %						
Degradation Value					69	
L.A. Abrasion Loss					24	
Sulfate Soundness		/	/	/	2 / 3	/

APPENDIX G

PROPOSED FLOOD MITIGATION DIKES

**TEST HOLE LOCATION MAP, TEST HOLE LOGS, PRECONSTRUCTION SAMPLE
SUMMARY, PHOTO LOG**

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	54660	2003		



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND
PUBLIC FACILITIES
**TALKEETNA AIRPORT
IMPROVEMENTS
PHASE II**
TESTHOLE LOCATION MAP
PROPOSED FLOOD
MITIGATION DIKES
APPENDIX G



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT&PF
Central Region Materials
Geology Section

Project Talkeetna Flood Stage Berms
Project Number 54660

Test Hole Number TH03-01
Total Depth 16 feet
Date Begin 8-29-03
Date End 8-29-03

Station / Location _____ Offset from Center Line _____ Elevation Reference Original Ground
Equipment Type CME 55 Weather _____
Geologist C. BOECKMAN Field Crew Hamrik, Abbott

Drilling Method	Depth in (feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data		
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time
Hollow-Stem Auger	0		SPT	FS-1	7		18		9			
	1	8										
	2	10										
	3	8										
	4		SPT	FS-2	12		61					
	5	31										
	6	30										
	7	40										
	8		SPT	FS-3	5		24					
	9	8										
	10	16										
	11	12										
	12		SPT	FS-3	20		58					
	13	30										
	14	28										
	15	32										
16												

SUBSURFACE MATERIAL

0
Brown, medium dense, moist, *Sl. Silty Gravelly Sand w/Cobbles*
M.C.=10.9%

3
Gray, moist to wet, *Sandy Gravel w/ Cobbles*, medium dense to very dense
M.C.=1.6%, p200=5.7, Gravel=60%, Sand=34%

9
p200=5.2, Gravel=50%, Sand=45%

Drilling Notes:

LOG OF TEST HOLE BERM THS.GPJ AK_DOT.GDT 9/30/03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



STATE OF ALASKA DOT&PF
 Central Region Materials
 Geology Section

LOG OF TEST HOLE

Sheet Number 1 of 1

Project Talkeetna Flood Stage Berms
 Project Number 54660

Test Hole Number TH03-02
 Total Depth 21 feet
 Date Begin 8-29-03
 Date End 8-29-03

Station / Location _____ Offset from Center Line _____
 Equipment Type CME 55 Weather _____
 Geologist C. BOECKMAN Field Crew Hamrik, Abbott

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)
Hollow-Stem Auger	0									9	
	1		SPT	FS-4	7			18			
	2				10						
	3				8						
	4				5						
	5		SPT	FS-5	11			41			
	6				20						
	7				21						
	8				20						
	9										
	10		SPT	NA	8			12			
	11				8						
	12				4						
	13				5						
	14		SPT	NA	10			50R			
	15				50R						
	16										
	17										
	18										
	19				10						
	20		SPT	NA	33			64			
21				31							
				40							

SUBSURFACE MATERIAL

0 - 1 ft: Dark brown, medium dense, moist, *Gravelly Sand*
 M.C.=4.6%

1 - 2 ft: Brown, loose, moist, *Silt*

4 - 6 ft: moist to wet, *Sandy Gravel w/ Cobbles*, medium dense to very dense
 M.C.=3.5%

BOH

Drilling Notes:

LOG OF TEST HOLE BERM THS.GPJ AK_DOT.GDT 9/30/03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



STATE OF ALASKA DOT&PF
Central Region Materials
Geology Section

LOG OF TEST HOLE

Sheet Number 1 of 1

Project Talkeetna Flood Stage Berms
Project Number 54660

Test Hole Number TH03-03
Total Depth 16 feet
Date Begin 8-28-03
Date End 8-28-03

Station / Location _____ Offset from Center Line _____ Elevation Reference Original Ground
Equipment Type CME 55 Weather _____
Geologist C. BOECKMAN Field Crew Hamrik, Abbott

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)
Hollow-Stem Auger	0								7		
	1		SPT	FS-6	8						
	2				10						
	3		GS	FS-7	8						
	4				5						
	5		SPT	FS-8	1						
	6				2						
	7				2						
	8				2						
	9		SPT	FS-9	21						
	10				50R						
	11										
	12										
	13										
	14										
	15		SPT	FS-9	10						
16				15							
				20							
				26							

SUBSURFACE MATERIAL

0 - 1: Brown, medium dense, moist, *Silty Sandy Gravel w/ Cobbles*
M.C.=5.4%, p200=10.2, Gravel=55%, Sand=35%

1 - 2: Brown, loose, moist, *Sandy Silt*
M.C.=19.8%

2 - 4: *Sandy Silt*
M.C.=28.7% A-4(0), p200=62.4, Gravel=1%, Sand=37%

4 - 7: *Sandy Silt*
M.C.=28.7% A-4(0), p200=62.4, Gravel=1%, Sand=37%

7 - 9: Gray, dense, moist to wet, *Sandy Gravel w/ Cobbles*
p200=5, Gravel=64%, Sand=31%

9 - 16: *Sandy Gravel w/ Cobbles*
p200=5, Gravel=64%, Sand=31%

Drilling Notes:

LOG OF TEST HOLE BERM THS.GPJ AK_DOT.GDT 9/30/03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



STATE OF ALASKA DOT&PF
Central Region Materials
Geology Section

LOG OF TEST HOLE

Sheet Number 1 of 1

Project Talkeetna Flood Stage Berms
Project Number 54660

Test Hole Number TH03-04
Total Depth 21 feet
Date Begin 8-28-03
Date End 8-28-03

Station / Location _____ Offset from Center Line _____ Elevation Reference Original Ground
Equipment Type CME 55 Weather _____
Geologist C. BOECKMAN Field Crew Hamrik, Abbott

Drilling Method	Depth in (feet)	8" Hollow Auger Blows / ft. Depth	Sample Data				N-Value	Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled				Recovery	Depth in (ft.)
	0				6				8		
	1		SPT	FS-10	9		19				
	2				10						
	3				5						
	4										
	5		SPT	FS-11	6		18				
	6				8						
	7				10						
	8				14						
	9										
	10		SPT	NA	9		30				
	11				17						
	12				13						
	13				13						
	14										
	15		SPT	NA	10		50R				
	16				50R						
	17										
	18										
	19										
	20		SPT	NA	18		37				
	21				19						
					18						
					17						

SUBSURFACE MATERIAL

0 - 1: Brown, medium dense, moist, *Silty Sandy Gravel w/ Cobbles*
M.C.=6.6%

1 - 2: Brown, loose, moist, *Silt*

2 - 3: _____

3 - 4: Gray, moist to wet, *Sandy Gravel w/ Cobbles*, medium dense to dense

4 - 5: M.C.=2.9%

5 - 6: _____

6 - 7: _____

7 - 8: _____

8 - 9: _____

9 - 10: _____

10 - 11: _____

11 - 12: _____

12 - 13: _____

13 - 14: _____

14 - 15: _____

15 - 16: _____

16 - 17: _____

17 - 18: _____

18 - 19: _____

19 - 20: _____

20 - 21: _____

Hollow-Stem Auger

LOG OF TEST HOLE BERM THS.GPJ AK_DOT.GDT 9/30/03

Drilling Notes:

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/IFP

Central Region Materials
Geology Section

Project Talkeetna Flood Stage Berms
Project Number 54660

Test Hole Number TH03-05
Total Depth 15.5 feet
Date Begin 8-28-03
Date End 8-28-03

Station / Location _____ Offset from Center Line _____
Equipment Type CME 55 Weather _____
Geologist C. BOECKMAN Field Crew Hamrik, Abbott

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)
Hollow-Stem Auger	0									7	
	1		SPT	FS-12	8						
					7						
	2				5			12			
					4						
	3		GS	FS-13							
	4				4						
	5		SPT	FS-14	5			9			
					4						
	6				5						
	7										
	8										
	9		SPT	FS-15	11			50R			
	10				50R						
	11										
12											
13											
14				15							
15		SPT	FS-15	12			27				
				15							

SUBSURFACE MATERIAL

0 - 1: Brown, medium dense, moist, *Sl. Silty Sandy Gravel*
M.C.=3.7%, p200=7.5, Gravel=72%, Sand=20%, +3=0

1 - 2: Brown, loose, moist, *Sandy Silt*
M.C.=40.4%, p200=67.1, Gravel=12%, Sand=21%

2 - 4: Gray, loose, moist, *Sand*
M.C.=7.1%, p200=6.3, Gravel=0%, Sand=94%

4 - 6: Gray, dense, moist to wet, *Sandy Gravel w/ Cobbles*

6 - 9: p200=6.5, Gravel=58%, Sand=35%

Drilling Notes:

LOG OF TEST HOLE BERM THS.GPJ AK_DOT.GDT 9/30/03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT&PF
 Central Region Materials
 Geology Section

Project Talkeetna Flood Stage Berms
 Project Number 54660

Test Hole Number TH03-06
 Total Depth 21 feet
 Date Begin 8-27-03
 Date End 8-27-03

Station / Location _____ Offset from Center Line _____ Elevation Reference Original Ground
 Equipment Type CME 55 Weather _____
 Geologist C. BOECKMAN Field Crew Hamrik, Abbott

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data												
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time	Date									
Hollow-Stem Auger	0								7.5													
	1		SPT	FS-16	6																	
	1				12																	
	1				13																	
	2				7																	
	2																					
	3																					
	3																					
	4			SPT	FS-17	12																
	4					17																
	5					22																
	5					30																
	6																					
	7																					
	7																					
	8																					
	8																					
	9					20																
	9			SPT	NA	21																
	10					21																
	10					30																
11																						
11																						
12																						
12																						
13																						
13																						
14					7																	
14			SPT	NA	3																	
15					4																	
15					6																	
16																						
16																						
17																						
17																						
18																						
18																						
19					2																	
19			SPT	NA	19																	
20					19																	
20					25																	
21																						
21																						

Drilling Notes:

LOG OF TEST HOLE - BERM THS.GPJ - AK_DOT.GDT - 9/30/03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT&PF

Central Region Materials
Geology Section

Project Talkeetna Flood Stage Berms
Project Number 54660

Test Hole Number TH03-07
Total Depth 21 feet
Date Begin 8-28-03
Date End 8-28-03

Station / Location _____ Offset from Center Line _____ Elevation Reference Original Ground
Equipment Type CME 55 Weather _____
Geologist C. BOECKMAN Field Crew Hamrik, Abbott

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data		
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	
Hollow-Stem Auger	0		SPT	FS-18	2			5		8	5.5	
	1	2										
	2	3										
	3	4										
	4		SPT	FS-19	12			28				
	5	15										
	6	13										
	7	12										
	8		SPT	NA	5			18				
	9	9										
	10	9										
	11	7										
	12		SPT	NA	4			25				
	13	7										
	14	18										
	15	21										
	16		SPT	NA	5			30				
	17	12										
	18	18										
	19	18										
	20											
21												

Drilling Notes:
Installed 1-inch PVC standpipe for groundwater level measurements.

LOG OF TEST HOLE BERM THS.GPJ AK_DOT.GDT 9/30/03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT/IFP

Central Region Materials
Geology Section

Project Talkeetna Flood Stage Berms
Project Number 54660

Test Hole Number TH03-08
Total Depth 21 feet
Date Begin 8-27-03
Date End 8-27-03

Station / Location _____ Offset from Center Line _____ Elevation Reference Original Ground
Equipment Type CME 55 Weather _____
Geologist C. BOECKMAN Field Crew Hamrik, Abbott

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data				N-Value	Frozen	Soil Graph	Ground Water Data	
			Method	Number	Blow Count	Loc. Sampled				Recovery	Depth in (ft.)
Hollow-Stem Auger	0		SPT	FS-20	2					6.5	5.7
	1				2		6				
	2				4						
	3				8						
	4			SPT	FS-21	3					
	5					4		8			
	6					4					
	7					4					
	8					7					
	9										
	10			SPT	NA	7					
	11					9		20			
	12					11					
	13					13					
	14										
	15			SPT	FS-22	12					
	16					18		43			
	17					25					
	18					25					
	19										
	20			SPT	FS-22	7					
21					19		40				
					21						
					25						

SUBSURFACE MATERIAL

0 Brown, loose, moist, *Sl. Organic Silty Sandy Gravel*
M.C.=18.4%, p200=24.8, Gravel=40%, Sand=35%

1 Brown, loose, moist, *Silty Gravelly Sand w/ Cobbles & Boulders*

3 Gray, loose, moist, *Silty Sandy Gravel*
M.C.=16.2%, p200=31.5, Gravel=36%, Sand=32%

5 Gray, moist to wet, *Sandy Gravel w/ Cobbles*, medium dense to dense

14 p200=4.1, Gravel=57%, Sand=39%

21 BOH

Drilling Notes:
Installed 1-inch PVC standpipe for groundwater level measurements.



LOG OF TEST HOLE

Sheet Number 1 of 1

STATE OF ALASKA DOT&PF

Central Region Materials
Geology Section

Project Talkeetna Flood Stage Berms
Project Number 54660

Test Hole Number TH03-09
Total Depth 16 feet
Date Begin 8-27-03
Date End 8-27-03

Station / Location _____ Offset from Center Line _____ Elevation Reference Original Ground
Equipment Type CME 55 Weather _____
Geologist C. BOECKMAN Field Crew Hamrik, Abbott

Drilling Method	Depth in (Feet)	8" Hollow Auger Blows / ft. Depth	Sample Data					Frozen	Soil Graph	Ground Water Data		
			Method	Number	Blow Count	Loc. Sampled	Recovery			N-Value	Depth in (ft.)	Time
Hollow-Stem Auger	0		GS	FS-23						7	6.6	
	1											
	2											
	3		SPT	FS-24						8/27/03	8/30/03	
	4				15							
	5				17							
	6				14			31				
	7			SPT	FS-25							
	8											
	9		6									
	10		7					19				
	11			SPT	FS-25							
	12											
	13		12									
	14		12									
	15			SPT	FS-25							
16		10					24					

SUBSURFACE MATERIAL

0 - 3 ft: Brown, loose, moist, *Silty Sand*
M.C.=20.3%, p200=27.6, Gravel=2%, Sand=70%

3 - 9 ft: Brown, medium dense, moist to wet, *Sandy Gravel w/ Cobbles*
M.C.=3.8%

9 - 16 ft: p200=5.6, Gravel=64%, Sand=30%

BOH

Drilling Notes:
Installed 1-inch PVC standpipe for groundwater level measurements.

LOG OF TEST HOLE BERM THS.GPJ AK DOT.GDT 9/30/03

Note: Unless otherwise noted all samples are taken with 1-3/8 inch Standard Penetration Sampler driven with 140 lb. hammer with 30-inch drop. CME Auto Hammer Cathead Rope Method

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By C. Boeckman

Centerline Flood Stage Dikes

Station						
Offset (feet)						
Depth (feet)	0.0' - 2.0'	4.0' - 6.0'		0.0' - 2.0'		0.0' - 2.0'
Test Hole No.	TH 03-1	TH 03-1	TH 03-1, Depth	TH 03-2		TH 03-3
Field No.	FS-1	FS-2	FS-3	FS-4		FS-6
Date Sampled	08/29/2003	08/29/2003	08/29/2003	08/29/2003		08/28/2003
Lab No.	03A-2199	03A-2200	03A-2201	03A-2202	03A-2003	03A-2204
Percent Passing Sieve Size	3"					
	2"		100	100		100
	1"		97	94		87
	3/4"		81	90		80
	1/2"		67	79		69
	3/8"		60	73		63
	#4		49	62		52
	#10		40	50		45
	#40		22	19		30
	#80					
#200		5.7	5.2		10.2	
.02mm						
.002mm						
DOTTSD						
AASHTO Class						
FSV Class						
Unified Class						
Liquid Limit						
Plastic Index						
Moisture Content %	10.9	1.6		4.6		5.4
Organic Content %						
% Gravel		60	50			55
% Sand		34	45			35
% Silt & Clay		6	5			10
Max. Dry Density						
Opt. Moisture %						
Degradation Value						
L.A. Abrasion Loss						
Sulfate Soundness	/	/	/	/	/	/

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By C. Boeckman

Centerline Flood Stage Dikes

Station						
Offset (feet)						
Depth (feet)	2.0'-4.0'	4.0'-6.0'		0.0'-1.5'	4.0'-6.0'	0.0'-2.0'
Test Hole No.	TH 03-3	TH 03-3	TH 03-3, Depth	TH 03-4	TH 03-4	TH 03-5
Field No.	FS-7	FS-8	FS-9	FS-10	FS-11	FS-12
Date Sampled	08/28/2003	08/28/2003	08/28/2003	08/28/2003	08/28/2003	08/28/2003
Lab No.	03A-2205	03A-2206	03A-2207	03A-2208	03A-2209	03A-2210
Percent Passing Sieve Size	3"					100
	2"			100		81
	1"			89		62
	3/4"		100	85		53
	1/2"		100	71		46
	3/8"		99	65		42
	#4		99	49		34
	#10		99	36		28
	#40		98	18		18
	#80					
#200		62.4	5.0			7.5
.02mm						
.002mm						
DOTTSD		Sa Si				
AASHTO Class		A-4(0)				
FSV Class						
Unified Class						
Liquid Limit		NV				
Plastic Index		NP				
Moisture Content %	19.8	28.7		6.6	2.9	3.7
Organic Content %						
% Gravel		1	64			72
% Sand		37	31			20
% Silt & Clay		62	5			8
Max. Dry Density						
Opt. Moisture %						
Degradation Value						
L.A. Abrasion Loss						
Sulfate Soundness	/	/	/	/	/	/

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By C. Boeckman

Centerline Flood Stage Dikes

Station							
Offset (feet)							
Depth (feet)		2.0'-4.0'	4.0'-6.0'	TH 03-5, Depth	0.0'-2.0'	4.0'-6.0'	0.0'-3.0'
Test Hole No.		TH 03-5	TH 03-5	TH 03-5, Depth	TH 03-6	TH 03-6	TH 03-7
Field No.		FS-13	FS-14	FS-15	FS-16	FS-17	FS-18
Date Sampled		08/28/2003	08/28/2003	08/28/2003	08/27/2003	08/27/2003	08/28/2003
Lab No.		03A-2211	03A-2212	03A-2213	03A-2214	03A-2215	03A-2216
Percent Passing Sieve Size	3"						
	2"	100		100			
	1"	94		93			100
	3/4"	94		87			98
	1/2"	94		75			97
	3/8"	93	100	68			96
	#4	90	100	53			95
	#10	88	100	42			94
	#40	79	82	24			92
	#80						
	#200	67.1	6.3	6.5			62.6
	.02mm						
	.002mm						
DOTTSD							Sa Si
AASHTO Class							A-4(0)
FSV Class							
Unified Class							
Liquid Limit							NV
Plastic Index							NP
Moisture Content %		40.4	7.1		11.6	2.8	28.2
Organic Content %							
% Gravel		12		58			6
% Sand		21	94	35			31
% Silt & Clay		67	6	7			63
Max. Dry Density							
Opt. Moisture %							
Degradation Value							
L.A. Abrasion Loss							
Sulfate Soundness		/	/	/	/	/	/

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By C. Boeckman

Centerline Flood Stage Dikes

Station						
Offset (feet)						
Depth (feet)		4.0'-6.0'	0.0'-2.0'	4.0'-6.0'	0.0'-2.0'	4.0'-6.0'
Test Hole No.		TH 03-7	TH 03-8	TH 03-8	TH 03-8, Depth	TH 03-9
Field No.		FS-19	FS-20	FS-21	FS-22	FS-23
Date Sampled		08/28/2003	08/27/2003	08/27/2003	08/27/2003	08/27/2003
Lab No.		03A-2217	03A-2218	03A-2219	03A-2220	03A-2221
Percent Passing	3"					
	2"	100	100	100	100	
	1"	97	89	90	91	
	3/4"	85	83	87	87	
	1/2"	69	73	81	73	100
	3/8"	61	68	76	67	100
	#4	46	63	68	54	99
	#10	36	60	64	43	98
	#40	20	49	51	23	94
	#80					
Size	#200	6.5	24.8	31.5	4.1	27.6
	.02mm					
	.002mm					
DOTSD						
AASHTO Class						
FSV Class						
Unified Class						
Liquid Limit						
Plastic Index						
Moisture Content %		6.2	18.4	16.2	20.3	3.8
Organic Content %						
% Gravel		64	40	36	57	2
% Sand		29	35	32	39	70
% Silt & Clay		7	25	32	4	28
Max. Dry Density						
Opt. Moisture %						
Degradation Value						
L.A. Abrasion Loss						
Sulfate Soundness		/	/	/	/	/

PRECONSTRUCTION SAMPLE SUMMARY

Project Name Talkeetna Airport Imp. Stage 2

Project No. 54660 Sampled By C. Boeckman

Centerline Flood Stage Dikes

Station						
Offset (feet)						
Depth (feet)			0.1' - 2.0'	4.0' - 6.0'	9.0' - 11.0'	
Test Hole No.		TH 03-9, Depth	TH 03-10	TH 03-10	TH 03-10	
Field No.		FS-25	FS-26	FS-27	FS-28	
Date Sampled		08/27/2003	08/27/2003	08/27/2003	08/27/2003	
Lab No.		03A-2223	03A-2224	03A-2225	03A-2226	03A-2227 03A-2228
Percent Passing	3"					
	2"	100	100			
	1"	87	87		100	
	3/4"	77	78	100	88	
	1/2"	65	63	98	81	
	3/8"	59	54	98	75	
	#4	46	38	95	62	
	#10	36	29	93	54	
	#40	21	15	86	42	
	#80					
Size	#200	5.6	6.3	61.4	13.1	
	.02mm					
	.002mm					
DOTTSD						
AASHTO Class						
FSV Class						
Unified Class						
Liquid Limit						
Plastic Index						
Moisture Content %			2.9	20.7		
Organic Content %						
% Gravel		64	71	7	46	
% Sand		30	23	32	41	
% Silt & Clay		6	6	61	13	
Max. Dry Density						
Opt. Moisture %						
Degradation Value						
L.A. Abrasion Loss						
Sulfate Soundness		/	/	/	/	/



Photo 1 - View north at TH03-1 on Beaver Road . The orange paint is from utility locates personnel.



Photo 2 - View northeast along Beaver Road at the location for test hole TH03-2. On the previous day the road had been bladed with a grader.



Photo 3 - View southwest along Beaver Road at the location for test hole TH03-3. Orange paint is from utility locates personnel.



Photo 4 - View west along Beaver Road at the location for test hole TH03-4.



Photo 5 - View northeast along F Street at the location for test hole TH03-5, located near the intersection of Beaver Road and F Street.



Photo 6 - View north along F Street Road at the location for test hole TH03-6. Note overhead utility is present.



Photo 7 - View west at the location of test hole TH03-7. Located in an easement for a water utility corridor.



Photo 8 - View west at the location for test hole TH03-8. This is located along the access road to Mahay's boat launch area.



Photo 9 - View north along the airport access road at the location for TH03-9. The railroad crossing at Second Street is in the background of the photo.



Photo 10 - View east along Second Street at the location for test hole TH03-10. The airstrip is in the background of the photo.