STATEWIDE MATERIAL SITE INVENTORY

MATERIAL SITE INSPECTION REPORT

Federal Project No. STP-000S(530)
AKSAS Project No. 76174

ALASKA HIGHWAY

MS 62-1-015-5
Mile 1281 Pit

August 23, 2007

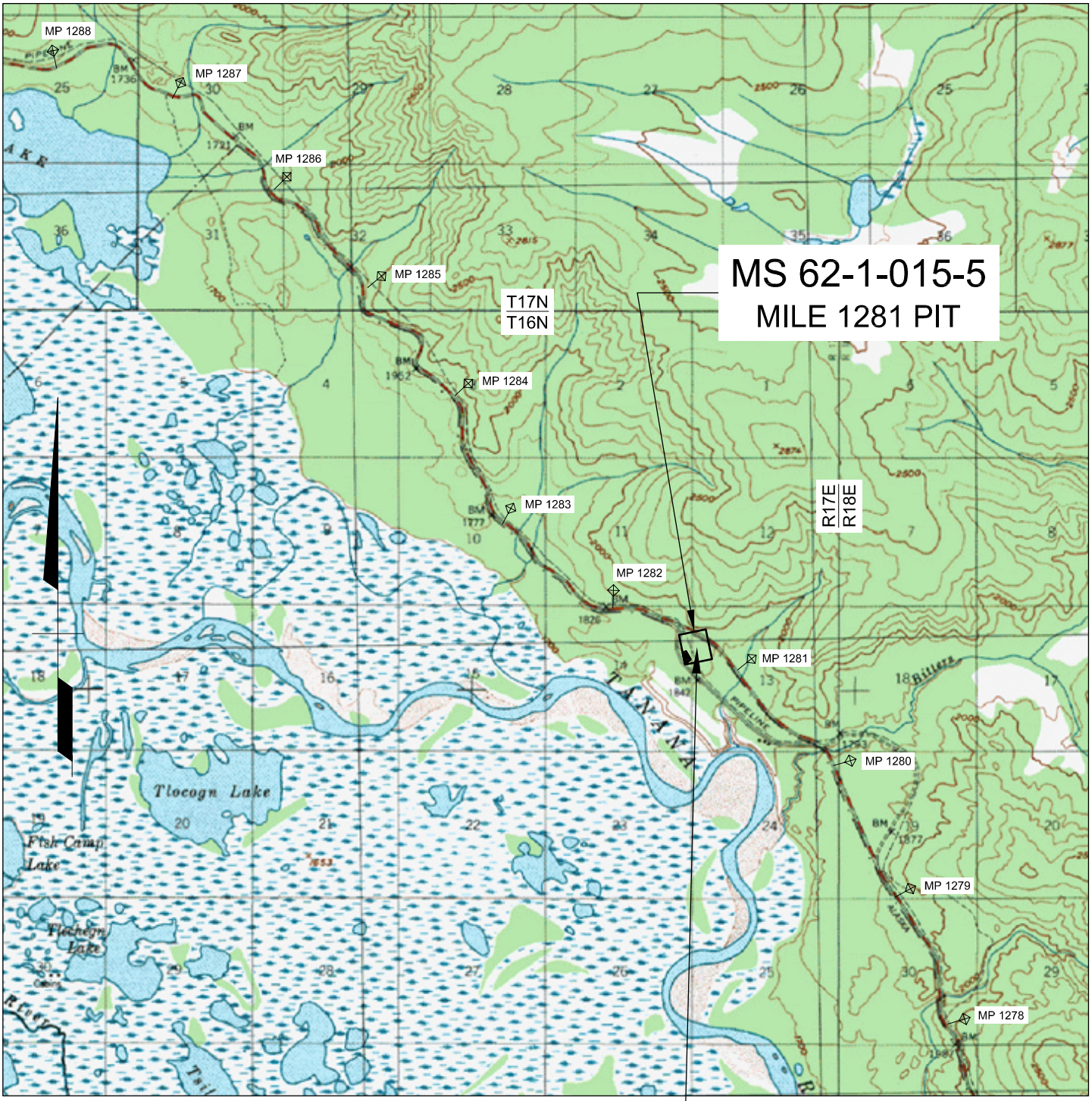
CONTENTS PAGE

CATEGORY:

ACTIVE – OPEN

According to information in the Northern Region Material Site files on July 20, 2007, this site lies on Northway Native Corporation land (Doyon subsurface) subject to a DOT&PF right-of-way grant. The right-of-way was granted in 1961 and surveyed in 1983. The present highway alignment appears to cross through the site, the old alignment being downhill to the south. The site appears to contain significant quantities of sand and weathered granite and should be retained by DOT&PF for future use.

LOCATION MAP



U.S.G.S. QUADRANGLE: TANACROSS (A-3)

GPS COORDINATES FROM GOOGLE EARTH

UTM (WGS84-METERS)
ZONE 7: N7,004,984 E443,454
AK STATE PLANE (NAD83-US SURVEY FT)
ZONE 2: N3,350,650 E1,620,103

ACTIVE - OPEN

0 0.5 1 2 3

GRAPHIC SCALE IN MILES

BASE MAP CREATED WITH TERRAIN NAVIGATOR PRO

Prepared By:
R&M CONSULTANTS, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

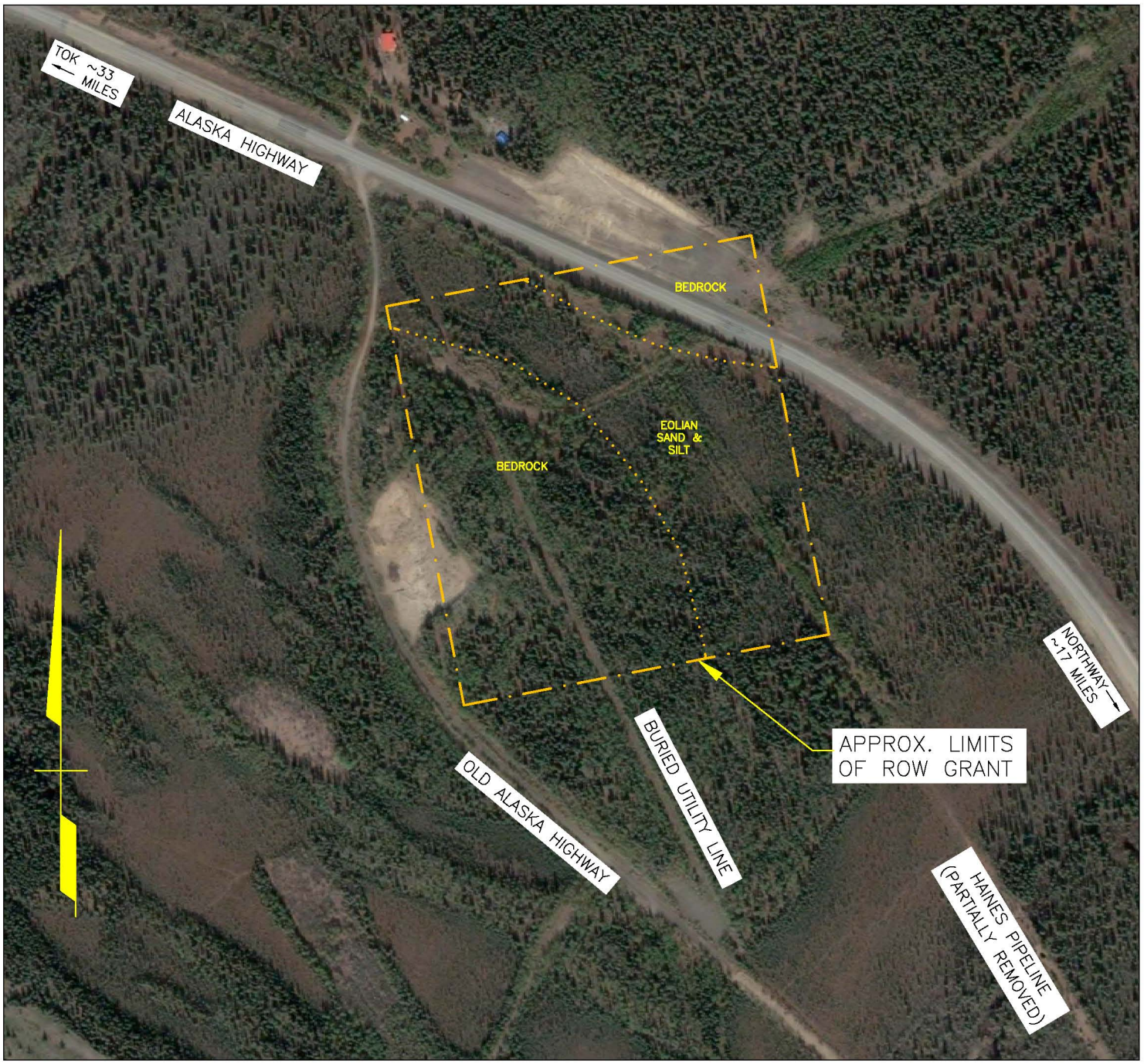
STATEWIDE MATERIAL SITE INVENTORY

MS 62-1-015-5

SCALE	DESIGNED	DRAWN		
AS SHOWN	P.K.H.	P.K.H.	PAGE	2
	CHECKED C.H.R.	DATE MAY 2007		

project\1443.01\MS 62-1-015-5\MS 62-1-015-5 Topo Map, 1=1, 06/01/07 at 11:15 by atb

SITE MAP



BASE MAP IS 2005 SATELLITE PHOTOGRAPHY.
THIS IS A PLANNING DOCUMENT ONLY. THE MATERIAL SITE BOUNDARIES SHOWN ON THIS DRAWING ARE APPROXIMATE. OWNERSHIP OF THE LANDS ADJACENT TO THIS SITE ARE UNKNOWN. THE ACCESS ROW SHOULD BE VERIFIED.

ACTIVE - OPEN

0 200 400 800 1200

GRAPHIC SCALE IN FEET

BASE MAP FROM GOOGLE EARTH PRO 8/17/07

Prepared By:
R&M CONSULTANTS, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

STATEWIDE MATERIAL SITE INVENTORY

MS 62-1-015-5

SCALE	DESIGNED	DRAWN		
AS SHOWN	P.K.H.	P.K.H.		PAGE 3
	CHECKED C.H.R.	DATE AUG. 2007		

project\1443.01\061-MS 62-2-025-5\MS 62-2-025-5 Site Map, 1=1, 08/16/07 at 15:47 by pkh

STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM

THIS REPORT IS BASED ON A REVIEW OF EXISTING DATA AND BRIEF FIELD INSPECTIONS. THUS THE DATA CONTAINED HEREIN SHOULD BE CONSIDERED PRELIMINARY AND USED FOR PLANNING PURPOSES ONLY. USERS OF THIS DATA SHOULD VERIFY THE INFORMATION PRIOR TO USING IT FOR DESIGN OR CONSTRUCTION PURPOSES.

IF OTHER IS SELECTED FOR A SECTION, EXPLAIN IT IN SECTION 44. NOTES.
IF AN ANSWER IS UNKNOWN SELECT "UNKNOWN" OR LEAVE BLANK

1. **MS_ID** **62-1-015-5**
   Enter the full material site number e.g.. 65-9-045-2
2. **DATE_INSPECT** 8/23/2007
   Date of field inspection
3. **FLD INSPEC_ORG** AARON BANKS/ R&M CONSULTANTS
   Name of inspector / Organization or Company

4. **REGION** NORTHERN
5. **LOCATION** ALASKA HIGHWAY
   Name of Highway
   Enter Name of Facility or Secondary Route Name (i.e.Kotzebue Airport, Nash Road, etc.)
6. **MILEPOST** 1281
   List the closest main highway milepost
7. **NAME** MILE 1281 PIT
   Enter commonly used name (s), e.g. Hess pit, Gobblers Knob, Midway. List all that apply separated by commas.
8. **MAINT_DIST/STAT** District INTERIOR Station TOK
   Highway Maintenance District and Station, for locations not on highways select other.
9. **QUAD** TANACROSS A-3
   U.S.G.S. Quad. Map
10. **TOWNSHIP /RANGE** T#S R#E T16N R17E Meridian CRM
    Section 13 and 14
11. **COOR_UTM**
    ZONE 7
    NORTHING 7,004,984
    EASTING 443,454
    UTM WGS84 - Meters
12. **COOR_STATE_PLANE**
    ZONE 2
    NORTHING 3,350,650
    EASTING 1,620,103
    Alaska State Plane NAD83 - Survey Feet
13. **BOROUGH** **TAX ID NO.**
14. **DNR_LAND_USE_PLAN** UPPER TANANA BASIN PLAN

15. **CATEGORY** (To be filled in the office)
15a. **CLASSIFICATION** ACTIVE
15b. **STATUS** OPEN

16. **POTENTIAL_STATUS** SIGNIFICANT

Estimated quantity of material in the site at the time of inspection.

NONE	There appeared to be no useable material in the site.
LIMITED	There appeared to be less than 25,000 c.y. available within the developed site.
SIGNIFICANT	There appeared to be greater than 25,000 c.y. available within the developed site.
EXPANDABLE	There was limited material within the developed site, but there appeared to be significant material outside existing site limits.
UNDEVELOPED	The pit has not been mined (used only for new sites).
CLOSED	There may be useable material left in the pit but it is not available.
UNKNOWN	
OTHER	The site does not fit any of the categories above. Explain in Section 44, Notes.

17. **PRESENT_USERS**

17a. **PRESENT_USER_1** DOT&PF CONSTRUCTION

17b. **PRESENT_USER_2**

17c. **PRESENT_USER_3**

18. **PERMITTED _ACREAGE** 24.5

Area within site permit or R.O.W. boundaries, from permit application or property plat.

19. **DEVELOPED_ACREAGE** 1

Area within an existing pit, excluding spoil berms lying outside the pit, access roads etc. Explain below.

Includes NE corner of existing pit along the old Alaska Highway. Excludes developed area within present highway right-of-way and in the existing pit outside the ROW grant.

20. **ACREAGE_COMP_METHOD** FROM MAP/PHOTO

Method used to determine developed acreage.

21. **EST_QUAN_AVAIL** 240,000 ROUGH ESTIMATE

Estimated quantity available (b.c.y.), may be based on acreage computed above plus expansion area. Explain computation assumptions and calculations below.

Most of the existing pit lies outside the site limits. For the purposes of estimating quantities we are assuming only the bedrock knob in the southwest portion of the site will be mined, an area of approx. 12 acres. Assuming 1.5 feet of silty overburden on the bedrock knob and an average 21.5-foot working depth there is approx. 240,000 c.y. of material available (12 acres x 20 feet x 1,000 c.y. per acre-foot). This would include a layer of fine eolian sand up to 6.5 feet deep lying on the bedrock. There may be significantly more material available if the buried telephone line that crosses the knob is moved. Limited quantities of weathered rock may be obtained by widening the highway cuts within the site limits.

STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM

22. **ACCESS_TYPE** EXISTING ROAD / REVEG

NONE	No access road has been built.
EXISTING ROAD / OPEN	Drivable. May have gate.
EXISTING ROAD / REVEG	Can be reopened with little effort.
EXISTING ROAD / CLOSED W/BERMS	Can be reopened with little effort.
EXISTING ACCESS / REMOVED	Can be reopened with much effort.
SNOW ROAD	Can only be accessed during winter.
ICE ROAD	Requires crossing river or lake ice in the winter.
BARGE	Material can only be moved by barge.
OTHER	The site does not fit any of the catagories above. Describe in Section 44, Notes.

23. **ACCESS_LENGTH** 1,200
Approx. length from edge of pit to highway/secondary route (ft.)

24. **VEGETATION**

The portion of the site underlain by eolian sand and silt was vegetated with moderately dense black spruce having a maximum height of about 20 feet, small alder, low brush, and a ground cover of moss. The organic mat was generally 0.5 ft. thick. The southeast area composed of the granite knob was covered by a moderately dense mixed spruce and aspen forest. Aspen predominated on the crest of the hill. The remaining triangular area in the southern portion of the site has dense vegetation consisting of spruce to 55 feet, scattered birch and aspen, with an understory of alder brush.

25. **TYPE_1** BORROW PIT 26. **TYPE_2** QUARRY

Dominant type Subordinate type
General Types of Materials Available Enter data in Type_2 only if two types of material site available

QUARRY	Bedrock sources requiring blasting
BORROW PIT	Soils or soft bedrock (rippable), above water table
BAILING	Requires production below the water table
RIVER BAR	Sand/gravel bars in active channels

27. **OB_CLASS_1** <3 FT. 28. **OB_CLASS_2** UNKNOWN
New Site or expansion Area Existing Pit (Spoil)
A site may have both. Data should be based on actual subsurface exploration, otherwise unknown.
Estimated average depth over the area.

NONE	3 TO 6 FT.	UNKNOWN
<3 FT.	>6 FT.	OTHER

29. **OB_TYPE_1** SILT 30. **OB_TYPE_2**
New Site or expansion Area Existing Pit (Spoil)
A site may have both.

SILT	PEAT	SOLID WASTE	OTHER
COLLUVIUM	SPOIL	UNKNOWN	

STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM

31. **MAT_TYPE_1** WEATHER. BEDROCK
Dominant type

32. **MAT_TYPE_2** BEDROCK
Subordinate type

BEDROCK	Bedrock sources requiring blasting
WEATHER. BEDROCK	Bedrock sources requiring ripping
FLUVIAL	Water deposited sand and gravel, includes glaciofluvial
GLACIAL	Glacial till
COLLUVIAL	Talus slopes, etc.
EOLIAN	Sand Dunes, etc.
SILT	Silt deposits, loess, fluvial, etc.

33. **PERMAFROST_1** DETECTED IN MOST TEST HOLES OR PITS
New Site or Expansion Area

34. **PERMAFROST_2** UNKNOWN
Existing Site

DETECTED IN MOST TEST HOLES
DETECTED IN SOME TEST HOLES
DETECTED IN IMMEDIATE VICINITY
DETECTED IN NO TEST HOLES
DATA OUTDATED
UNKNOWN
OTHER

35. **GROUNDWATER**

Drainage is surficial with no developed channels and is predominately to the east and south with the exception of the northwestern corner of the site which drains to the northwest. A water table has been reported near the northwest corner at a depth of 8 feet. During this inspection in August 2007 some ponding was noted in the poorly drained boggy area just south of the highway along the old Haines Pipeline right-of-way.

36. **LITHOLOGY_1** GRANITIC — Dominant type

37. **LITHOLOGY_2** EOLIAN — Subordinate type

IGNEOUS ROCK	Undifferentiated Igneous Rocks
GRANITIC	Granite/Monzonite/Granodiorite
DIORITE/GABBRO	Diorite/Gabbro
BASALT	Dark colored fine-grained Igneous Rocks
GREENSTONE	Altered Volcanic Rocks w/green tint
METAMORPHIC ROCK	Undifferentiated Metamorphic Rocks
SCHIST/PHYLLITE	Includes rocks ranging from slate to schist
GNEISS	Includes hard schistose rocks
MARBLE	
CATACLASTIC	Incl. Valdez Formation Rocks, Kenai Penn.
MÉLANGE	Incl. McHugh Formation Rocks, Kenai Penn.
SEDIMENTARY ROCK	Undifferentiated Sedimentary Rocks
CONGLOMERATE	
SANDSTONE	Includes greywacke, etc.
SHALE/MUDSTONE	
LIMESTONE	
FLUVIAL	River and stream deposits (floodplain), includes outwash.
ALLUVIAL	Alluvial / Debris Fan deposits
GLACIOFLUVIAL	Eskers, kames, etc.
GLACIAL	Till
COLLUVIAL	Talus, etc.
EOLIAN	Sand Dunes, etc.
SILT	Loess, fluvial silts, etc.
OTHER	Explain in Section 44.

38. **MATERIAL_CLASSIFICATION**

ASTM Classification, generally they should range from coarse to fine.

38a.	SP	38c.	ML	38e.		38g.	
38b.	SM	38d.		38f.		38h.	

39. COBBLES_AND_BOULDERS

Test Boring Callout / ASTM Classification, either a. or b. and c. (Can use ranges i.e. 0 to 20)

39a.	CONTAINS		
39b.	Est. % by VOL.		(Est. From Visual Observations)
39c.	MAX. SIZE (in.)		(Observed Size)

40. AGG_TEST_RESULTS

Year of test or report- Test result / Year of test or report- Test Results

40a. SG APP COARSE	
40b. SG APP FINE	1982- 2.63, 2.56, 2.65, 2.68, 2.58
40c. ABSORPTION CRSE	
40d. ABSORPTION FINE	1982- 0.9, 0.6
40e. NORDIC ABRASION	
40f. L.A. ABRASION	1982- 59, 19 / 2000- 63
40g. DEGRADATION (T-13)	1982- 69 / 2000- 46
40h. NASO4 LOSS COARSE	2000- 38.1
40i. NASO4 LOSS FINE	

41. POTENTIAL_USABILITY

TYPE C MATERIAL AVAILABLE

Best known potential use of the material, based on records, exploration and laboratory data.

CONCRETE AGGREGATE PRODUCED	The site has produced concrete aggregate
PAVING AGGREGATE PRODUCED	The site has produced paving aggregate
CRUSHED PRODUCTS PRODUCED	Base, Surface Coarse, Subbase, etc. has been produced.
TYPE A AND B MATERIAL AVAILABLE	0 to 10 percent passing 200
TYPE C AVAILABLE	Compactable material
TYPE C NOT AVAILABLE	Uncompactable material (Lower Kuskokwim and Yukon River, etc.)
UNKNOWN	
OTHER	Explain in Section 44.

42. SPECIAL_PROBLEMS

Special problems encountered or anticipated with use of the material, based on records, exploration and laboratory data.

ORGANIC CONTENT	The material is very difficult to compact.
HIGHLY WEATHERED GRAVEL	The gravel is highly weathered and may break down when handled.
BREAKS DOWN UNDER USE	Material breaks down on grade.
SENSITIVE TO WATER CONTENT	Material is sensitive to water content, i.e.. some glacial tills, soft bedrock.
VARIABLE MATERIAL	Deposit contains mixture of suitable and unsuitable material.
POSSIBLE CONTAMINATION	Site may be contaminated by petroleum products or hazardous materials.
UNKNOWN	
OTHER	Explain in Section 44, Notes.

43. **RIPRAP** OTHER

Class II or larger. Does not include production for erosion control riprap for ditches or culverts.

PREVIOUS PRODUCTION	There is a record of production.
POSSIBLE FURTHER INVESTIGATION NEEDED	The site is a bedrock quarry containing hard rock
NOT POSSIBLE	The site has soft rock or soil.
UNKNOWN	
OTHER	Explain in Section 44, Notes.

44. **NOTES**

Note number of item being discussed.

22. Access to the west side of the site can be gained along an old portion of the Alaska Highway. This portion is a single paved and gravel lane with alders overgrowing the road. Access to the east side can be gained from the Alaska Highway.

25., 26. Loose, granular material obscures much of the underlying bedrock within the pit, however, competent rock has been exposed in several small areas. The rock is a variant of the granite bedrock underlying the region and consists mainly of feldspar and quartz with very few dark minerals.

27. The granitic hill is overlain by surficial silts and eolian sands to an average depth of eight feet.

43. The mineral composition and texture of the granitic rock types in this area renders them susceptible to chemical and mechanical breakdown over an extended period of years.

STATEWIDE MATERIAL SITE INVENTORY

MATERIAL SITE INSPECTION REPORT

Federal Project No. STP-000S(530)
AKSAS Project No. 76174

ALASKA HIGHWAY

MS 62-1-024-5
Island Lake Quarry

September 18, 2007

CONTENTS PAGE

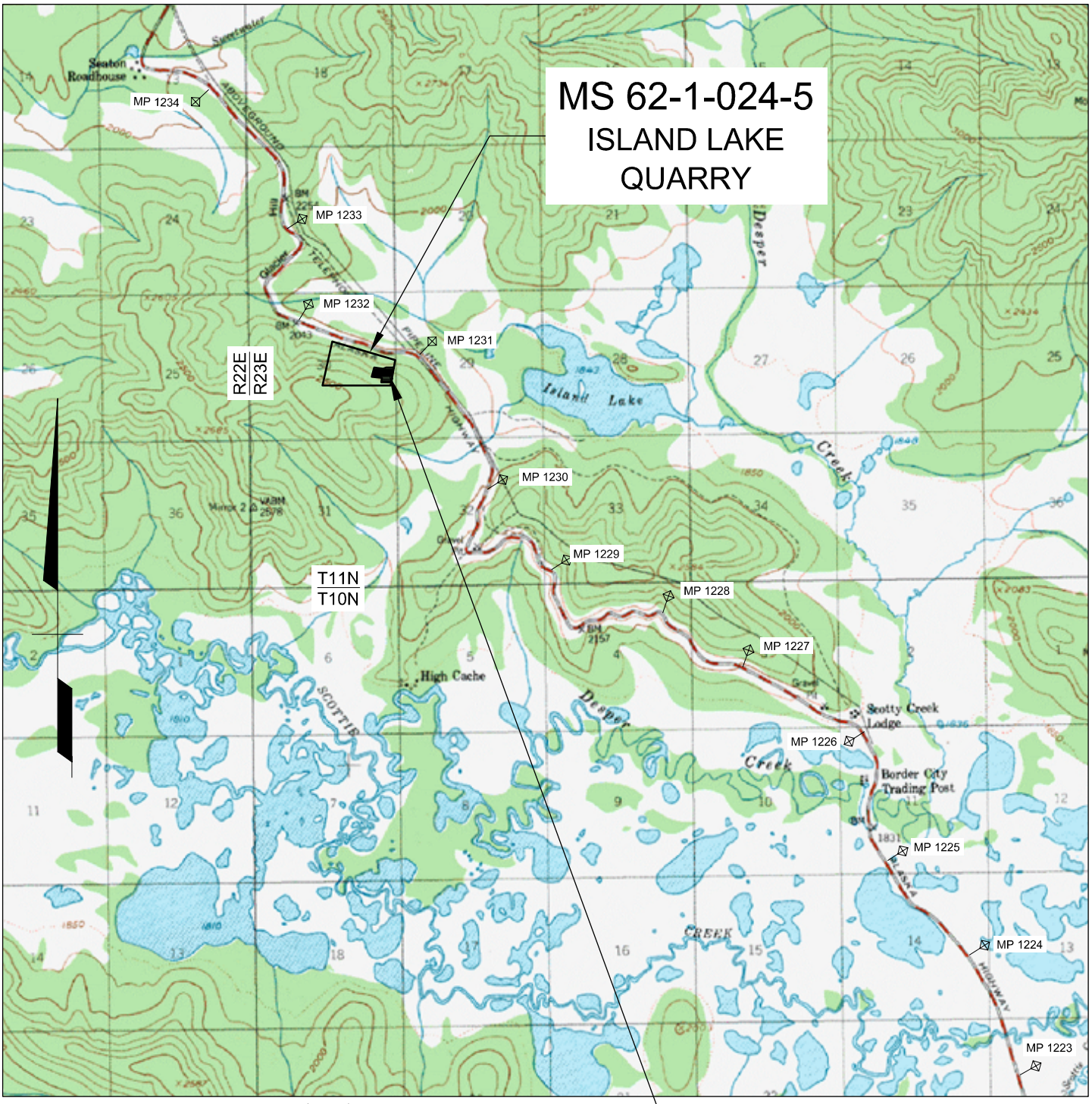
CATEGORY:

ACTIVE - OPEN

According to information in the Northern Region Material Site files on July 20, 2007, this site lies on Federal lands managed by USF&WS subject to a right-of-way grant to DOT&PF. The right-of-way was issued to DOT&PF in 1964. The last exploration program listed in the material site file occurred in 1993. Drilled locations of 2006 test borings were found at the site but the data were not available at the time of inspection. There are reportedly plans to use this site for future construction projects. The existing access road is steep and it is understood that it will be relocated. There are dikes of greenstone in the pit from which aggregates have been produced. The site appears to contain significant quantities of schist, phyllite, and greenstone and should be retained by DOT&PF for future use.

The site limits on the Site Map were based on a 1994 drawing in the material site file and hand-held GPS coordinates of corners acquired during this inspection. The north-south site dimensions shown on the 1994 drawing were shorter then those from the original 1983 right-of-way plat. Thus the area of the site (~72 acres) used in this report is less then that indicated on the 1983 drawing.

LOCATION MAP



U.S.G.S. QUADRANGLE: NABESNA (C-1)

GPS COORDINATES FROM GOOGLE EARTH

UTM (WGS84-METERS)
ZONE 7: N6,952,631 E491,903
AK STATE PLANE (NAD83-US SURVEY FT)
ZONE 2: N3,181,330 E1,781,754

ACTIVE - OPEN

0 0.5 1 2 3

GRAPHIC SCALE IN MILES

BASE MAP CREATED WITH TERRAIN NAVIGATOR PRO

Prepared By:
R&M CONSULTANTS, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

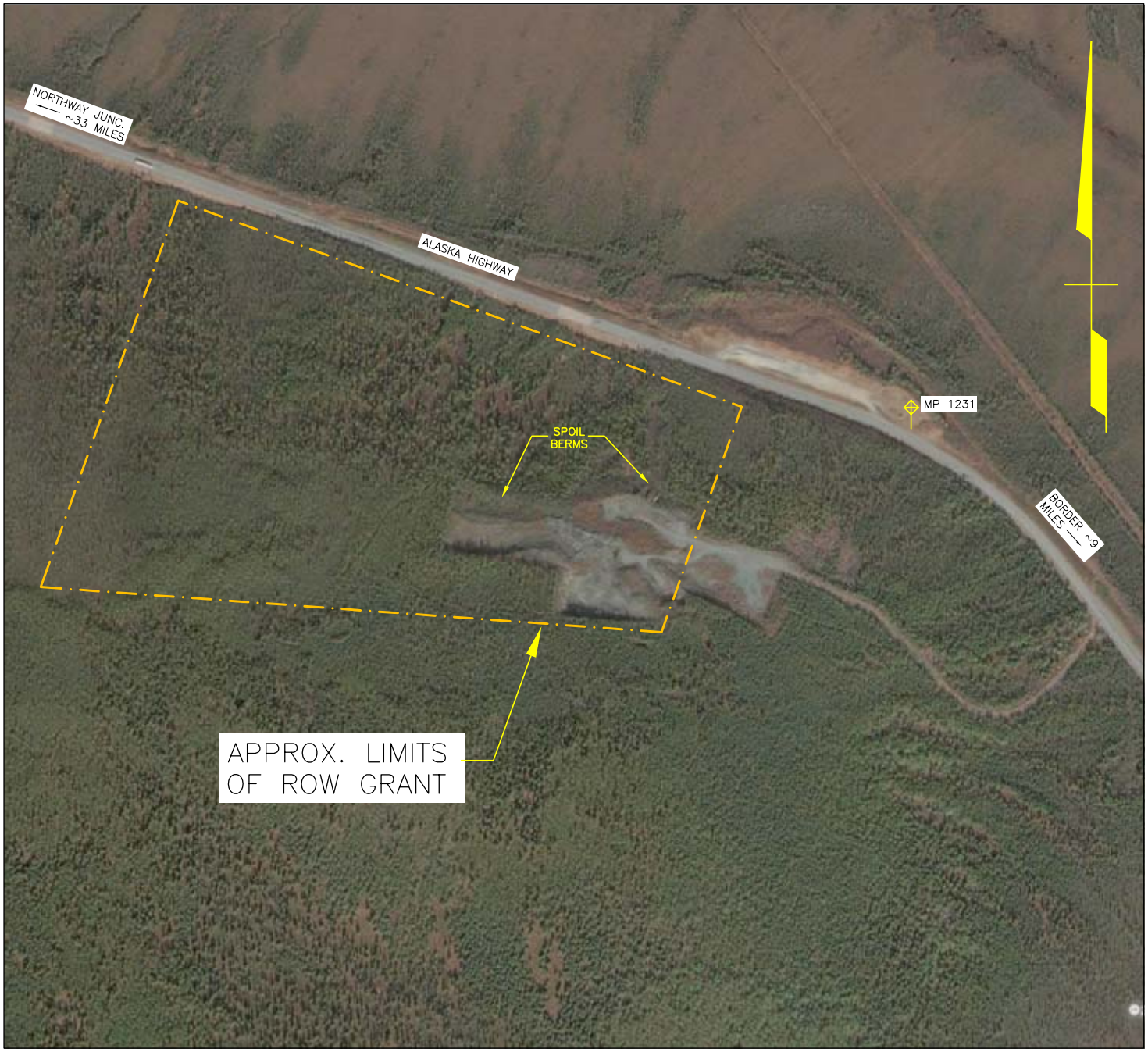
STATEWIDE MATERIAL SITE INVENTORY

MS 62-1-024-5

SCALE	DESIGNED	DRAWN		
AS SHOWN	P.K.H.	P.K.H.	PAGE	2
	CHECKED C.H.R.	DATE MAY 2007		

project\1443.01\MS 62-1-024-5\MS 62-1-024-5 Topo Map, 1=1, 06/01/07 at 11:35 by atb

SITE MAP



BASE MAP IS 2005 SATELLITE PHOTOGRAPHY.
THIS IS A PLANNING DOCUMENT ONLY. THE MATERIAL SITE BOUNDARIES SHOWN ON THIS DRAWING ARE APPROXIMATE. OWNERSHIP OF THE LANDS ADJACENT TO THIS SITE ARE UNKNOWN. THE ACCESS ROW SHOULD BE VERIFIED.

ACTIVE - OPEN

0 300 600 1200 1800

GRAPHIC SCALE IN FEET

BASE MAP FROM GOOGLE EARTH PRO 8/21/07

Prepared By:
R&M CONSULTANTS, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

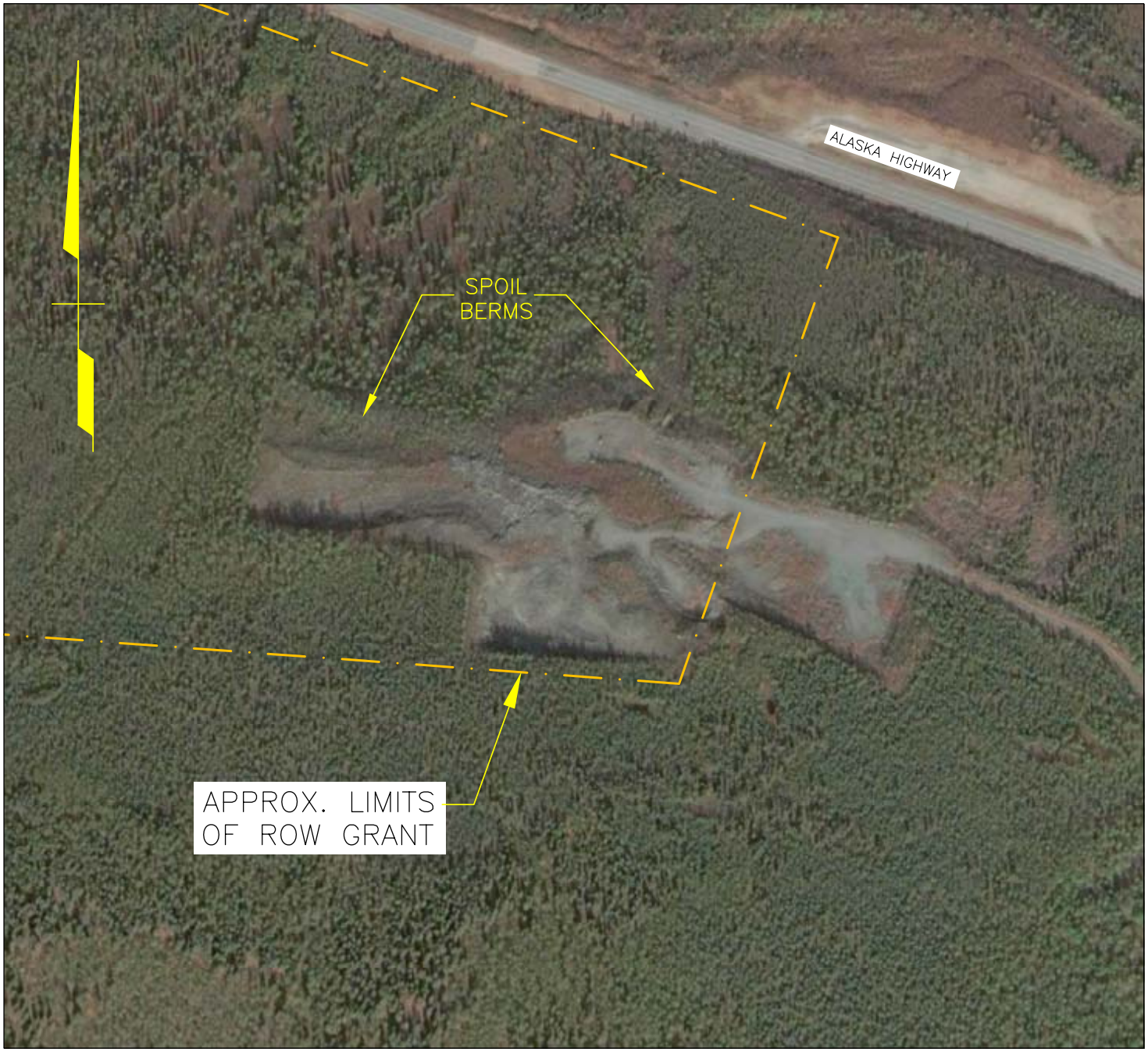
STATEWIDE MATERIAL SITE INVENTORY

MS 62-1-024-5

SCALE	DESIGNED	DRAWN		
AS SHOWN	P.K.H.	P.K.H.	PAGE	3A
	CHECKED C.H.R.	DATE AUG. 2007		

project\1443.01\024-MS 62-1-024-5\MS 62-1-024-5 Site Map, 1=1, 01/23/08 at 16:03 by pkh

SITE MAP



BASE MAP IS 2005 SATELLITE PHOTOGRAPHY.
THIS IS A PLANNING DOCUMENT ONLY. THE MATERIAL SITE BOUNDARIES SHOWN ON THIS DRAWING ARE APPROXIMATE. OWNERSHIP OF THE LANDS ADJACENT TO THIS SITE ARE UNKNOWN. THE ACCESS ROW SHOULD BE VERIFIED.

ACTIVE - OPEN

0 150 300 600 900

GRAPHIC SCALE IN FEET

BASE MAP FROM GOOGLE EARTH PRO 8/21/07

Prepared By:
R&M CONSULTANTS, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

STATEWIDE MATERIAL SITE INVENTORY

MS 62-1-024-5

SCALE	DESIGNED	DRAWN		
AS SHOWN	P.K.H.	P.K.H.	PAGE	3B
	CHECKED C.H.R.	DATE AUG. 2007		

project\1443.01\024-MS 62-1-024-5\MS 62-1-024-5 Site Map, 1=1, 01/23/08 at 16:03 by pkh

STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM

THIS REPORT IS BASED ON A REVIEW OF EXISTING DATA AND BRIEF FIELD INSPECTIONS. THUS THE DATA CONTAINED HEREIN SHOULD BE CONSIDERED PRELIMINARY AND USED FOR PLANNING PURPOSES ONLY. USERS OF THIS DATA SHOULD VERIFY THE INFORMATION PRIOR TO USING IT FOR DESIGN OR CONSTRUCTION PURPOSES.

IF OTHER IS SELECTED FOR A SECTION, EXPLAIN IT IN SECTION 44. NOTES.
IF AN ANSWER IS UNKNOWN SELECT "UNKNOWN" OR LEAVE BLANK

1. **MS_ID** **62-1-024-5**
   Enter the full material site number e.g.. 65-9-045-2
2. **DATE_INSPECT** 9/18/2007
   Date of field inspection
3. **FLD INSPEC_ORG** PENDERGAST / R&M CONSULTANTS
   Name of inspector / Organization or Company
4. **REGION** NORTHERN
5. **LOCATION** ALASKA HIGHWAY (Name of Highway) ____ (Enter Name of Facility or Secondary Route Name (i.e.Kotzebue Airport, Nash Road, etc.))
6. **MILEPOST** 1231
   List the closest main highway milepost
7. **NAME** ISLAND LAKE QUARRY
   Enter commonly used name (s), e.g. Hess pit, Gobblers Knob, Midway. List all that apply separated by commas.
8. **MAINT_DIST/STAT** District INTERIOR Station TOK
   Highway Maintenance District and Station, for locations not on highways select other.
9. **QUAD** NABESNA C-1
   U.S.G.S. Quad. Map
10. **TOWNSHIP /RANGE** T#S R#E T11N R23E Meridian CRM
    Section 30
11. **COOR_UTM**
    ZONE 7
    NORTHING 6,952,631
    EASTING 491,903
    UTM WGS84 - Meters
12. **COOR_STATE_PLANE**
    ZONE 2
    NORTHING 3,181,330
    EASTING 1,781,754
    Alaska State Plane NAD83 - Survey Feet
13. **BOROUGH** ____ **TAX ID NO.** ____
14. **DNR_LAND_USE_PLAN** UPPER TANANA BASIN PLAN
15. **CATEGORY** (To be filled in the office)
15a. **CLASSIFICATION** ACTIVE
15b. **STATUS** OPEN

16. **POTENTIAL_STATUS** SIGNIFICANT

Estimated quantity of material in the site at the time of inspection.

NONE	There appeared to be no useable material in the site.
LIMITED	There appeared to be less than 25,000 c.y. available within the developed site.
SIGNIFICANT	There appeared to be greater than 25,000 c.y. available within the developed site.
EXPANDABLE	There was limited material within the developed site, but there appeared to be significant material outside existing site limits.
UNDEVELOPED	The pit has not been mined (used only for new sites).
CLOSED	There may be useable material left in the pit but it is not available.
UNKNOWN	
OTHER	The site does not fit any of the categories above. Explain in Section 44, Notes.

17. **PRESENT_USERS**

17a. **PRESENT_USER_1** DOT&PF MAINTENANCE

17b. **PRESENT_USER_2** DOT&PF CONSTRUCTION

17c. **PRESENT_USER_3**

18. **PERMITTED _ACREAGE** 72

Area within site permit or R.O.W. boundaries, from permit application or property plat.

19. **DEVELOPED_ACREAGE** 10.5

Area within an existing pit, excluding spoil berms lying outside the pit, access roads etc. Explain below.

The approximate 10.5 acres includes only the part of the existing site that lies within the right-of-way grant and the access road (~2 acres). There is an additional 2 acres of existing pit outside the right-of-way.

20. **ACREAGE_COMP_METHOD** FROM MAP/PHOTO

Method used to determine developed acreage.

21. **EST_QUAN_AVAIL** 1,600,000 ROUGH ESTIMATE

Estimated quantity available (b.c.y.), may be based on acreage computed above plus expansion area. Explain computation assumptions and calculations below.

8.5 acres of the site has been mined and assuming that there is an average 3 feet of overburden. It is assumed that only the unmined area would be worked to an average depth of about 28 feet, there would be approx. 1,588,000 c.y. of material available at the site (63.5 acres x 25 feet x 1,000 c.y. per acre-foot).

STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM

22. **ACCESS_TYPE** EXISTING ROAD / OPEN

NONE	No access road has been built.
EXISTING ROAD / OPEN	Drivable. May have gate.
EXISTING ROAD / REVEG	Can be reopened with little effort.
EXISTING ROAD / CLOSED W/BERMS	Can be reopened with little effort.
EXISTING ACCESS / REMOVED	Can be reopened with much effort.
SNOW ROAD	Can only be accessed during winter.
ICE ROAD	Requires crossing river or lake ice in the winter.
BARGE	Material can only be moved by barge.
OTHER	The site does not fit any of the catagories above. Describe in Section 44, Notes.

23. **ACCESS_LENGTH** 1,600
Approx. length from edge of pit to highway/secondary route (ft.)

24. **VEGETATION**

The area outside the existing pit is covered with mixed stands of 1 to 8-inch diameter spruce and birch trees. There is alder brush on the waste berms in the pit.

25. **TYPE_1** QUARRY 26. **TYPE_2** BORROW PIT

Dominant type Subordinate type
General Types of Materials Available Enter data in Type_2 only if two types of material site available

QUARRY	Bedrock sources requiring blasting
BORROW PIT	Soils or soft bedrock (rippable), above water table
BAILING	Requires production below the water table
RIVER BAR	Sand/gravel bars in active channels

27. **OB_CLASS_1** <3 FT. 28. **OB_CLASS_2** OTHER
New Site or expansion Area Existing Pit (Spoil)
A site may have both. Data should be based on actual subsurface exploration, otherwise unknown.
Estimated average depth over the area.

NONE	3 TO 6 FT.	UNKNOWN
<3 FT.	>6 FT.	OTHER

29. **OB_TYPE_1** COLLUVIUM 30. **OB_TYPE_2** SPOIL
New Site or expansion Area Existing Pit (Spoil)
A site may have both.

SILT	PEAT	SOLID WASTE	OTHER
COLLUVIUM	SPOIL	UNKNOWN	

STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM

31. **MAT_TYPE_1** BEDROCK — Dominant type

32. **MAT_TYPE_2** WEATHER. BEDROCK — Subordinate type

BEDROCK	Bedrock sources requiring blasting
WEATHER. BEDROCK	Bedrock sources requiring ripping
FLUVIAL	Water deposited sand and gravel, includes glaciofluvial
GLACIAL	Glacial till
COLLUVIAL	Talus slopes, etc.
EOLIAN	Sand Dunes, etc.
SILT	Silt deposits, loess, fluvial, etc.

33. **PERMAFROST_1** DETECTED IN SOME TEST HOLES OR PITS
New Site or Expansion Area

34. **PERMAFROST_2** DATA OUTDATED
Existing Site

DETECTED IN MOST TEST HOLES
DETECTED IN SOME TEST HOLES
DETECTED IN IMMEDIATE VICINITY
DETECTED IN NO TEST HOLES
DATA OUTDATED
UNKNOWN
OTHER

35. **GROUNDWATER**

There was not evidence of groundwater noted in test trenches to 5 feet in depth.

36. **LITHOLOGY_1** SCHIST/PHYLLITE — Dominant type

37. **LITHOLOGY_2** GREENSTONE — Subordinate type

IGNEOUS ROCK	Undifferentiated Igneous Rocks
GRANITIC	Granite/Monzonite/Granodiorite
DIORITE/GABBRO	Diorite/Gabbro
BASALT	Dark colored fine-grained Igneous Rocks
GREENSTONE	Altered Volcanic Rocks w/green tint
METAMORPHIC ROCK	Undifferentiated Metamorphic Rocks
SCHIST/PHYLLITE	Includes rocks ranging from slate to schist
GNEISS	Includes hard schistose rocks
MARBLE	
CATACLASTIC	Incl. Valdez Formation Rocks, Kenai Penn.
MÉLANGE	Incl. McHugh Formation Rocks, Kenai Penn.
SEDIMENTARY ROCK	Undifferentiated Sedimentary Rocks
CONGLOMERATE	
SANDSTONE	Includes greywacke, etc.
SHALE/MUDSTONE	
LIMESTONE	
FLUVIAL	River and stream deposits (floodplain), includes outwash.
ALLUVIAL	Alluvial / Debris Fan deposits
GLACIOFLUVIAL	Eskers, kames, etc.
GLACIAL	Till
COLLUVIAL	Talus, etc.
EOLIAN	Sand Dunes, etc.
SILT	Loess, fluvial silts, etc.
OTHER	Explain in Section 44.

38. **MATERIAL_CLASSIFICATION**

ASTM Classification, generally they should range from coarse to fine.

38a.		38c.		38e.		38g.	
38b.		38d.		38f.		38h.	

39. COBBLES_AND_BOULDERS

Test Boring Callout / ASTM Classification, either a. or b. and c. (Can use ranges i.e. 0 to 20)

39a.	CONTAINS		
39b.	Est. % by VOL.		(Est. From Visual Observations)
39c.	MAX. SIZE (in.)		(Observed Size)

40. AGG_TEST_RESULTS

Year of test or report- Test result / Year of test or report- Test Results

40a. SG APP COARSE	1963- 2.92, 2.95 / 1993- 3.03
40b. SG APP FINE	1963- 2.90, 2.91 / 1974- 2.80, 2.76
40c. ABSORPTION CRSE	1963- 1.5, 0.9 / 1974- 1.6, 1.4
40d. ABSORPTION FINE	
40e. NORDIC ABRASION	
40f. L.A. ABRASION	1963- 29, 24 / 1966- 28, 39, 27, 32, 48, 39, 28, 38, 37, 25, 27, 28, 27, 25 / 1974- 26 / 1983- 16 / 1993- 17, 23 / 2002- 24
40g. DEGRADATION (T-13)	966- 38, 46, 40, 35, 46, 35, 39, 39, 45, 37, 52, 37, 70, 36, 60 / 1983- 59 / 1993- 46, 13, 12, 20 / 2002- 4
40h. NASO4 LOSS COARSE	1974- 2.9 / 1983- 2 / 1993- 1.6, 11.2 / 2002- 3.2
40i. NASO4 LOSS FINE	1983- 8 / 1993- 8.0, 18.2

41. POTENTIAL_USABILITY — PAVING AGGREGATE PRODUCED

Best known potential use of the material, based on records, exploration and laboratory data.

CONCRETE AGGREGATE PRODUCED	The site has produced concrete aggregate
PAVING AGGREGATE PRODUCED	The site has produced paving aggregate
CRUSHED PRODUCTS PRODUCED	Base, Surface Coarse, Subbase, etc. has been produced.
TYPE A AND B MATERIAL AVAILABLE	0 to 10 percent passing 200
TYPE C AVAILABLE	Compactable material
TYPE C NOT AVAILABLE	Uncompactable material (Lower Kuskokwim and Yukon River, etc.)
UNKNOWN	
OTHER	Explain in Section 44.

42. SPECIAL_PROBLEMS — OTHER

Special problems encountered or anticipated with use of the material, based on records, exploration and laboratory data.

ORGANIC CONTENT	The material is very difficult to compact.
HIGHLY WEATHERED GRAVEL	The gravel is highly weathered and may break down when handled.
BREAKS DOWN UNDER USE	Material breaks down on grade.
SENSITIVE TO WATER CONTENT	Material is sensitive to water content, i.e.. some glacial tills, soft bedrock.
VARIABLE MATERIAL	Deposit contains mixture of suitable and unsuitable material.
POSSIBLE CONTAMINATION	Site may be contaminated by petroleum products or hazardous materials.
UNKNOWN	
OTHER	Explain in Section 44, Notes.

43. **RIPRAP** POSSIBLE-FURTHER INVESTIGATION NEEDED

Class II or larger. Does not include production for erosion control riprap for ditches or culverts.

PREVIOUS PRODUCTION	There is a record of production.
POSSIBLE FURTHER INVESTIGATION NEEDED	The site is a bedrock quarry containing hard rock
NOT POSSIBLE	The site has soft rock or soil.
UNKNOWN	
OTHER	Explain in Section 44, Notes.

44. **NOTES**

Note number of item being discussed.

28. Spoil had been pushed over the north edge of the existing pit.

36. The rock in the pit consisted of three rock types:
1. Greenstone/ hard, green hued on fresh surfaces, weathers to olive-gray; outcrops are sheer cliffs to blocky; typically jointed & closely fractured but large fragments to 8' dia. were noted.
2. Schist / highly fractured, green to steel gray, weathered to olive gray, thick veins (to 2' +) of quartzite; outcrops were shattered and benched. Looks similar to greenstone until closely inspected. Large fragments to 48" dia. Phyllitic areas steel gray to black, some bright green mineralization in fractures, platy, "greasy" when wet.
3. Volcanic (possibly same as greenstone but less weathered) / gray to black, slightly to moderately weathered, very hard; outcrops in rubbly ridges on quarry floor, rust stained on weathered surfaces, medium crystalline.

42. Due to the variability of the bedrock, producing aggregates will require selective mining.

43. There were large fragments to 8 feet in diameter strewn around the existing pit.

STATEWIDE MATERIAL SITE INVENTORY

MATERIAL SITE INSPECTION REPORT

Federal Project No. STP-000S(530)
AKSAS Project No. 76174

ALASKA HIGHWAY

MS 62-1-168-2
Granite Hill Pit

September 19, 2007

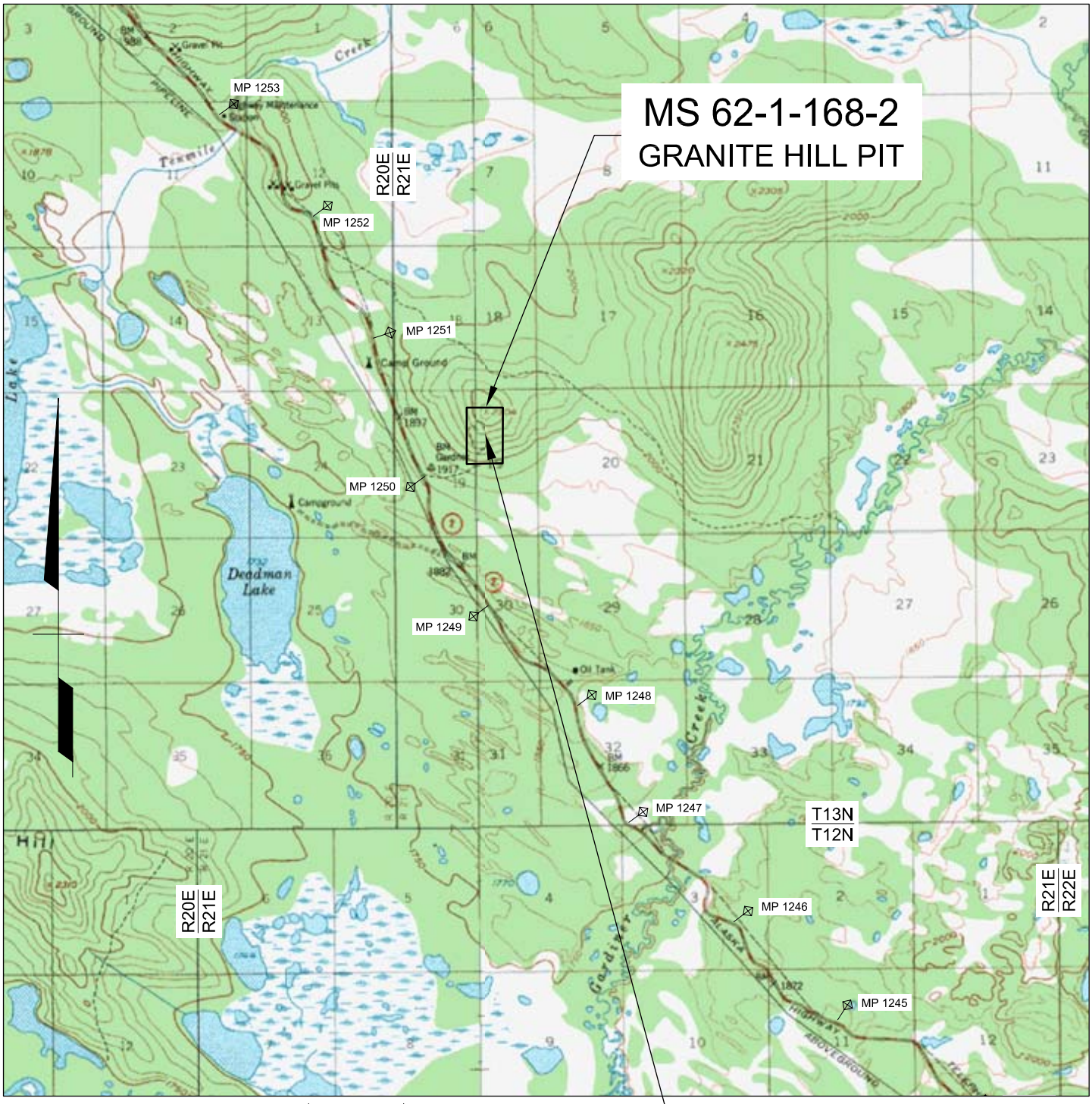
CONTENTS PAGE

CATEGORY:

ACTIVE - UNDEVELOPED

According to information in the Northern Region Material Site files on July 20, 2007, this site lies on State of Alaska lands managed by DNR. The expiration date of the Material Sale Contract in the file was July 31, 2007. A large exploration trench was reportedly made in the early 1980's and can been seen on the site map. There was no access road to the site, but two trails could be traversed on foot or ATV. The material site contract shows an existing 60-foot wide right-of-way to the site generally following the southern trail. The two trail alignments are quite steep (to 35 percent) and realignments and/or cuts and fills may be required to construct access roads along these trails. In places, the 60-foot right-of-way may not be wide enough to encompass all construction activities. The site appears to contain significant quantities of weathered granitic rock and should be retained by DOT&PF for future use. The rock appears to exhibit the same irregular weathering as other granitic sites in the area.

LOCATION MAP



U.S.G.S. QUADRANGLE: NABESNA (D-1, D-2)

GPS COORDINATES FROM GOOGLE EARTH

UTM (WGS84-METERS)
ZONE 7: N6,974,296 E474,556
AK STATE PLANE (NAD83-US SURVEY FT)
ZONE 2: N3,251,540 E1,723,726

ACTIVE - UNDEVELOPED

0 0.5 1 2 3

GRAPHIC SCALE IN MILES

BASE MAP CREATED WITH TERRAIN NAVIGATOR PRO

Prepared By:
R&M CONSULTANTS, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

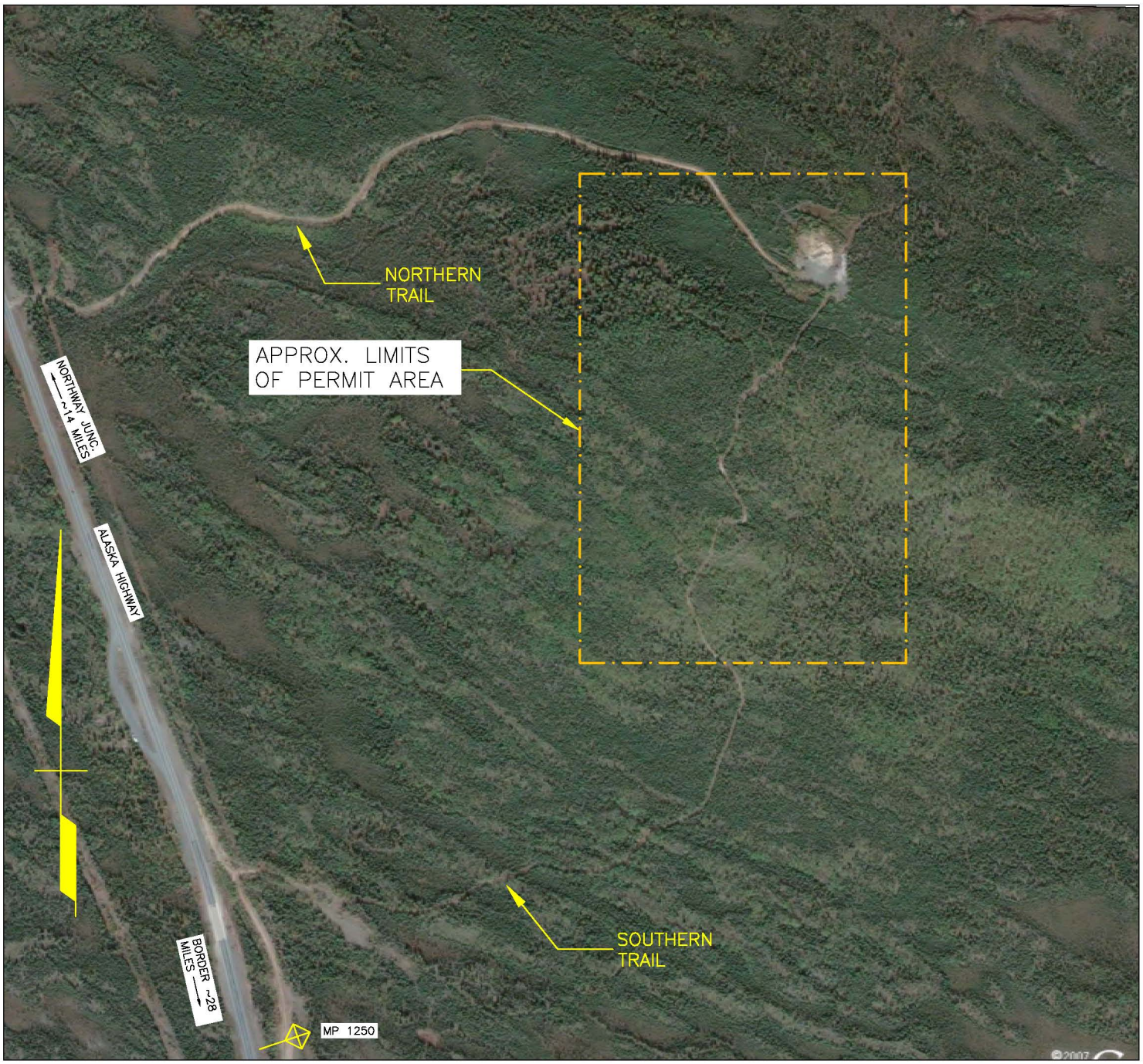
STATEWIDE MATERIAL SITE INVENTORY

MS 62-1-168-2

SCALE	DESIGNED	DRAWN	
AS SHOWN	P.K.H.	P.K.H.	PAGE 2
	CHECKED C.H.R.	DATE MAY 2007	

project\1443.01\MS 62-1-168-2\MS 62-1-168-2 Topo Map, 1=1, 06/27/07 at 15:45 by pkh

SITE MAP



BASE MAP IS 2005 SATELLITE PHOTOGRAPHY.
THIS IS A PLANNING DOCUMENT ONLY. THE MATERIAL SITE BOUNDARIES SHOWN ON THIS DRAWING ARE APPROXIMATE. OWNERSHIP OF THE LANDS ADJACENT TO THIS SITE ARE UNKNOWN. THE ACCESS ROW SHOULD BE VERIFIED.

ACTIVE - UNDEVELOPED

0 300 600 1200 1800

GRAPHIC SCALE IN FEET

BASE MAP FROM GOOGLE EARTH PRO 8/21/07

Prepared By:
R&M CONSULTANTS, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

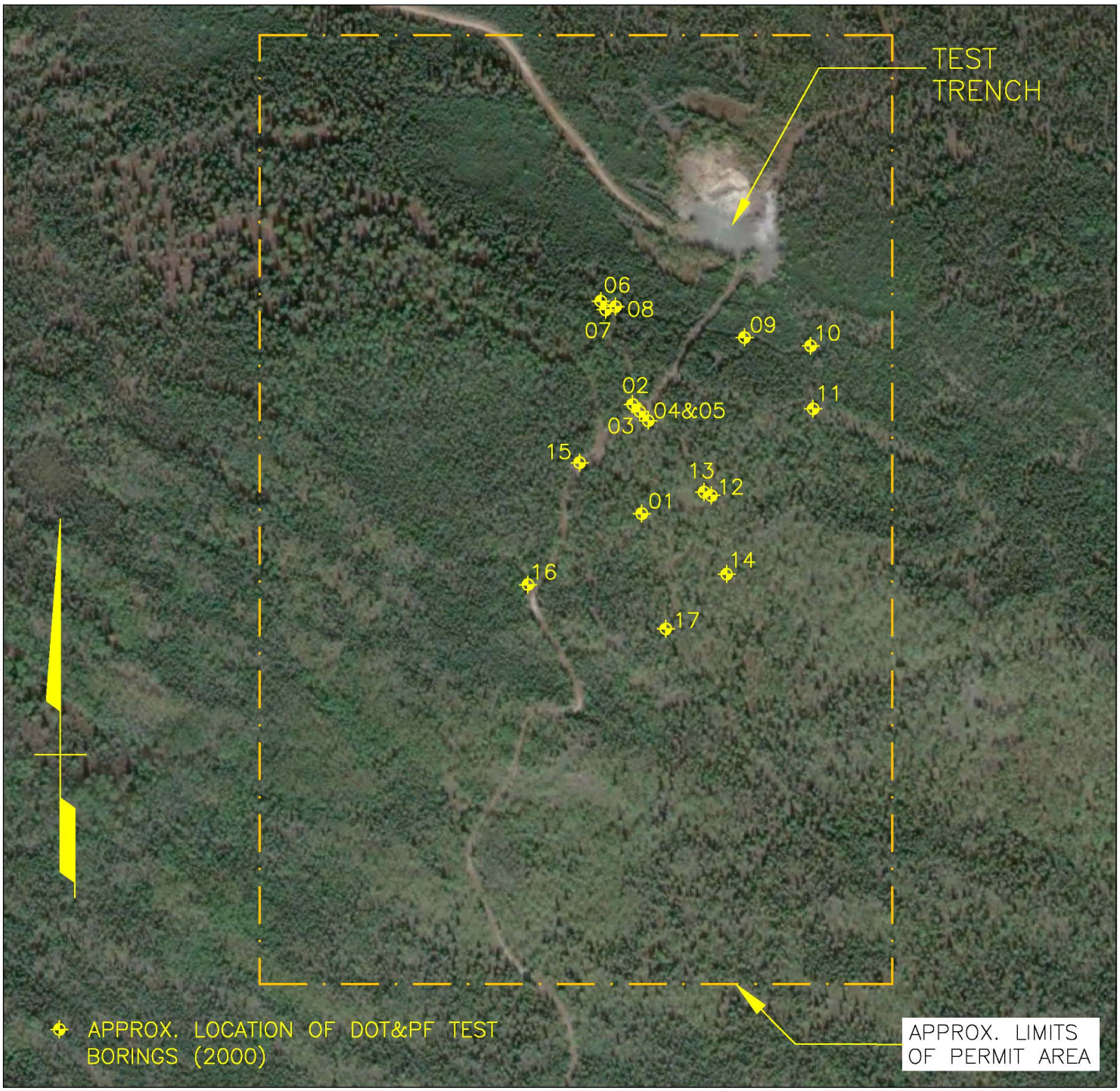
STATEWIDE MATERIAL SITE INVENTORY

MS 62-1-168-5

SCALE	DESIGNED	DRAWN	PAGE
AS SHOWN	P.K.H.	P.K.H.	3A
	CHECKED C.H.R.	DATE AUG. 2007	

project\1443.01\035-MS 62-1-168-2\MS 62-1-168-5 Site Map, 1=1, 10/05/07 at 16:56 by pkh

SITE MAP



BASE MAP IS 2005 SATELLITE PHOTOGRAPHY.
THIS IS A PLANNING DOCUMENT ONLY. THE MATERIAL SITE BOUNDARIES SHOWN ON THIS DRAWING ARE APPROXIMATE. OWNERSHIP OF THE LANDS ADJACENT TO THIS SITE ARE UNKNOWN. THE ACCESS ROW SHOULD BE VERIFIED.

ACTIVE - UNDEVELOPED

0 150 300 600 900

GRAPHIC SCALE IN FEET

BASE MAP FROM GOOGLE EARTH PRO 8/21/07

Prepared By:
R&M CONSULTANTS, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

STATEWIDE MATERIAL SITE INVENTORY

MS 62-1-168-5

SCALE	DESIGNED	DRAWN		
AS SHOWN	P.K.H.	P.K.H.	PAGE	3B
	CHECKED C.H.R.	DATE AUG. 2007		

project\1443.01\035-MS 62-1-168-2\MS 62-1-168-5 Site Map, 1=1, 10/05/07 at 16:56 by pkh

STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM

THIS REPORT IS BASED ON A REVIEW OF EXISTING DATA AND BRIEF FIELD INSPECTIONS. THUS THE DATA CONTAINED HEREIN SHOULD BE CONSIDERED PRELIMINARY AND USED FOR PLANNING PURPOSES ONLY. USERS OF THIS DATA SHOULD VERIFY THE INFORMATION PRIOR TO USING IT FOR DESIGN OR CONSTRUCTION PURPOSES.

IF OTHER IS SELECTED FOR A SECTION, EXPLAIN IT IN SECTION 44. NOTES.
IF AN ANSWER IS UNKNOWN SELECT "UNKNOWN" OR LEAVE BLANK

1. **MS_ID** **62-1-168-2**
   Enter the full material site number e.g.. 65-9-045-2
2. **DATE_INSPECT** 9/19/2007
   Date of field inspection
3. **FLD INSPEC_ORG** PENDERGAST / R&M CONSULTANTS
   Name of inspector / Organization or Company

4. **REGION** NORTHERN
5. **LOCATION** ALASKA HIGHWAY
   Name of Highway
   Enter Name of Facility or Secondary Route Name (i.e.Kotzebue Airport, Nash Road, etc.)
6. **MILEPOST** 1250
   List the closest main highway milepost
7. **NAME** GRANITE HILL PIT
   Enter commonly used name (s), e.g. Hess pit, Gobblers Knob, Midway. List all that apply separated by commas.
8. **MAINT_DIST/STAT** District INTERIOR Station TOK
   Highway Maintenance District and Station, for locations not on highways select other.
9. **QUAD** NABESNA D-2
   U.S.G.S. Quad. Map
10. **TOWNSHIP /RANGE** T#S R#E T13N R21E Meridian CRM
    Section 19
11. **COOR_UTM**
    ZONE 7
    NORTHING 6,974,296
    EASTING 474,556
    UTM WGS84 - Meters
12. **COOR_STATE_PLANE**
    ZONE 2
    NORTHING 3,251,540
    EASTING 1,723,726
    Alaska State Plane NAD83 - Survey Feet
13. **BOROUGH** **TAX ID NO.**
14. **DNR_LAND_USE_PLAN** UPPER TANANA BASIN PLAN

15. **CATEGORY** (To be filled in the office)
15a. **CLASSIFICATION** ACTIVE
15b. **STATUS** UNDEVELOPED

STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM

16. **POTENTIAL_STATUS** SIGNIFICANT

Estimated quantity of material in the site at the time of inspection.

NONE	There appeared to be no useable material in the site.
LIMITED	There appeared to be less than 25,000 c.y. available within the developed site.
SIGNIFICANT	There appeared to be greater than 25,000 c.y. available within the developed site.
EXPANDABLE	There was limited material within the developed site, but there appeared to be significant material outside existing site limits.
UNDEVELOPED	The pit has not been mined (used only for new sites).
CLOSED	There may be useable material left in the pit but it is not available.
UNKNOWN	
OTHER	The site does not fit any of the categories above. Explain in Section 44, Notes.

17. **PRESENT_USERS**

17a. **PRESENT_USER_1** DOT&PF CONSTRUCTION

17b. **PRESENT_USER_2**

17c. **PRESENT_USER_3**

18. **PERMITTED _ACREAGE** 60

Area within site permit or R.O.W. boundaries, from permit application or property plat.

19. **DEVELOPED_ACREAGE** 0.4

Area within an existing pit, excluding spoil berms lying outside the pit, access roads etc. Explain below.

The disturbed area on top of the hill was reported to be a dozer trench and can be seen on the site map.

20. **ACREAGE_COMP_METHOD** FROM MAP/PHOTO

Method used to determine developed acreage.

21. **EST_QUAN_AVAIL** 1,000,000 ROUGH ESTIMATE

Estimated quantity available (b.c.y.), may be based on acreage computed above plus expansion area. Explain computation assumptions and calculations below.

Past exploration at this site has covered only a small portion of the area. For the purposes of estimating quantities, we are assuming 50 percent of the area (30 acres) can be mined. Assuming 35 feet of minable weathered rock there is approx. 1,050,000 c.y. of material available (30 acres x 35 feet x 1,000 c.y. per acre-foot).

STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM

22. **ACCESS_TYPE** OTHER

NONE	No access road has been built.
EXISTING ROAD / OPEN	Drivable. May have gate.
EXISTING ROAD / REVEG	Can be reopened with little effort.
EXISTING ROAD / CLOSED W/BERMS	Can be reopened with little effort.
EXISTING ACCESS / REMOVED	Can be reopened with much effort.
SNOW ROAD	Can only be accessed during winter.
ICE ROAD	Requires crossing river or lake ice in the winter.
BARGE	Material can only be moved by barge.
OTHER	The site does not fit any of the catagories above. Describe in Section 44, Notes.

23. **ACCESS_LENGTH** 3,000
Approx. length from edge of pit to highway/secondary route (ft.)

24. **VEGETATION**

On the south side of the hill, the vegetation varies from an open, grassy aspen forest to a dense mixed willow, alder and spruce forest. The north side is covered by dense spruce and scattered birch.

25. **TYPE_1** BORROW PIT 26. **TYPE_2** QUARRY

Dominant type Subordinate type
General Types of Materials Available Enter data in Type_2 only if two types of material site available

QUARRY	Bedrock sources requiring blasting
BORROW PIT	Soils or soft bedrock (rippable), above water table
BAILING	Requires production below the water table
RIVER BAR	Sand/gravel bars in active channels

27. **OB_CLASS_1** OTHER 28. **OB_CLASS_2**
New Site or expansion Area Existing Pit (Spoil)
A site may have both. Data should be based on actual subsurface exploration, otherwise unknown.
Estimated average depth over the area.

NONE	3 TO 6 FT.	UNKNOWN
<3 FT.	>6 FT.	OTHER

29. **OB_TYPE_1** OTHER 30. **OB_TYPE_2**
New Site or expansion Area Existing Pit (Spoil)
A site may have both.

SILT	PEAT	SOLID WASTE	OTHER
COLLUVIUM	SPOIL	UNKNOWN	

STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM

31. **MAT_TYPE_1** WEATHER. BEDROCK
Dominant type

32. **MAT_TYPE_2** BEDROCK
Subordinate type

BEDROCK	Bedrock sources requiring blasting
WEATHER. BEDROCK	Bedrock sources requiring ripping
FLUVIAL	Water deposited sand and gravel, includes glaciofluvial
GLACIAL	Glacial till
COLLUVIAL	Talus slopes, etc.
EOLIAN	Sand Dunes, etc.
SILT	Silt deposits, loess, fluvial, etc.

33. **PERMAFROST_1** DETECTED IN SOME TEST HOLES OR PITS
New Site or Expansion Area

34. **PERMAFROST_2**
Existing Site

DETECTED IN MOST TEST HOLES
DETECTED IN SOME TEST HOLES
DETECTED IN IMMEDIATE VICINITY
DETECTED IN NO TEST HOLES
DATA OUTDATED
UNKNOWN
OTHER

35. **GROUNDWATER**

No groundwater was noted in the test borings.

36. **LITHOLOGY_1** GRANITIC — Dominant type

37. **LITHOLOGY_2** _____ — Subordinate type

IGNEOUS ROCK	Undifferentiated Igneous Rocks
GRANITIC	Granite/Monzonite/Granodiorite
DIORITE/GABBRO	Diorite/Gabbro
BASALT	Dark colored fine-grained Igneous Rocks
GREENSTONE	Altered Volcanic Rocks w/green tint
METAMORPHIC ROCK	Undifferentiated Metamorphic Rocks
SCHIST/PHYLLITE	Includes rocks ranging from slate to schist
GNEISS	Includes hard schistose rocks
MARBLE	
CATACLASTIC	Incl. Valdez Formation Rocks, Kenai Penn.
MÉLANGE	Incl. McHugh Formation Rocks, Kenai Penn.
SEDIMENTARY ROCK	Undifferentiated Sedimentary Rocks
CONGLOMERATE	
SANDSTONE	Includes greywacke, etc.
SHALE/MUDSTONE	
LIMESTONE	
FLUVIAL	River and stream deposits (floodplain), includes outwash.
ALLUVIAL	Alluvial / Debris Fan deposits
GLACIOFLUVIAL	Eskers, kames, etc.
GLACIAL	Till
COLLUVIAL	Talus, etc.
EOLIAN	Sand Dunes, etc.
SILT	Loess, fluvial silts, etc.
OTHER	Explain in Section 44.

38. **MATERIAL_CLASSIFICATION**

ASTM Classification, generally they should range from coarse to fine.

38a.		38c.		38e.		38g.	
38b.		38d.		38f.		38h.	

39. **COBBLES_AND_BOULDERS**

Test Boring Callout / ASTM Classification, either a. or b. and c. (Can use ranges i.e. 0 to 20)

39a.	CONTAINS		
39b.	Est. % by VOL.		(Est. From Visual Observations)
39c.	MAX. SIZE (in.)		(Observed Size)

40. **AGG_TEST_RESULTS**

Year of test or report- Test result / Year of test or report- Test Results

40a. SG APP COARSE	1976- 2.64
40b. SG APP FINE	2000- 2.70, 2.63
40c. ABSORPTION CRSE	
40d. ABSORPTION FINE	
40e. NORDIC ABRASION	
40f. L.A. ABRASION	1976- 80 / 2000- 56, 58, 54
40g. DEGRADATION (T-13)	1976- 70 / 2000- 69, 57, 39
40h. NASO4 LOSS COARSE	2000- 1.9, 1.7, 6.4
40i. NASO4 LOSS FINE	

41. **POTENTIAL_USABILITY** TYPES A AND B MATERIAL AVAILABLE

Best known potential use of the material, based on records, exploration and laboratory data.

CONCRETE AGGREGATE PRODUCED	The site has produced concrete aggregate
PAVING AGGREGATE PRODUCED	The site has produced paving aggregate
CRUSHED PRODUCTS PRODUCED	Base, Surface Coarse, Subbase, etc. has been produced.
TYPE A AND B MATERIAL AVAILABLE	0 to 10 percent passing 200
TYPE C AVAILABLE	Compactable material
TYPE C NOT AVAILABLE	Uncompactable material (Lower Kuskokwim and Yukon River, etc.)
UNKNOWN	
OTHER	Explain in Section 44.

42. **SPECIAL_PROBLEMS** OTHER

Special problems encountered or anticipated with use of the material, based on records, exploration and laboratory data.

ORGANIC CONTENT	The material is very difficult to compact.
HIGHLY WEATHERED GRAVEL	The gravel is highly weathered and may break down when handled.
BREAKS DOWN UNDER USE	Material breaks down on grade.
SENSITIVE TO WATER CONTENT	Material is sensitive to water content, i.e.. some glacial tills, soft bedrock.
VARIABLE MATERIAL	Deposit contains mixture of suitable and unsuitable material.
POSSIBLE CONTAMINATION	Site may be contaminated by petroleum products or hazardous materials.
UNKNOWN	
OTHER	Explain in Section 44, Notes.

43. **RIPRAP** NOT POSSIBLE

Class II or larger. Does not include production for erosion control riprap for ditches or culverts.

PREVIOUS PRODUCTION	There is a record of production.
POSSIBLE FURTHER INVESTIGATION NEEDED	The site is a bedrock quarry containing hard rock
NOT POSSIBLE	The site has soft rock or soil.
UNKNOWN	
OTHER	Explain in Section 44, Notes.

44. **NOTES**

Note number of item being discussed.

22. There were no existing access roads to the site. Two trails are shown on the site map, a northern trail and a southern trail. Both were about 0.5 to 0.6 miles long and unimproved. The southern trail has a 60-foot right-of-way designated in the material sale contract. Grades on the northern trail range from 0 to 25 percent. Drainage was flowing down the tracks and creating ditches and sink holes. The trail was single lane. Grades on the southern trail were steeper and range from 0 to 35 percent. Side-hill grades in some places ranging from 0 - 35 percent. There were large boulders (5 feet dia. or larger) on the surface. Both routes will require significant improvement. Alignments may need to be shifted away from the existing trails and/or cuts and fills made to reduce grades.

27. & 29. Overburden at the site consisted of <3 feet of silt and organics. Below the silt was a layer of fine eolian sand that is generally acceptable only as Type C material if moisture contents allow compaction. Below that was up to 10 or more feet of sand (grus) which is also generally acceptable as Type C material. However, if only harder rock is desired, overburden depths can be assumed to range from 3 to 15 feet.

42. The irregular weathering of the granitic rocks may make selective mining necessary to produce crushed aggregates.

43. Existing laboratory data indicates that this rock would not make suitable riprap.

STATEWIDE MATERIAL SITE INVENTORY

MATERIAL SITE INSPECTION REPORT

Federal Project No. STP-000S(530)
AKSAS Project No. 76174

ALASKA HIGHWAY

MS 62-2-171-2
Pump Station Pit

August 27, 2007

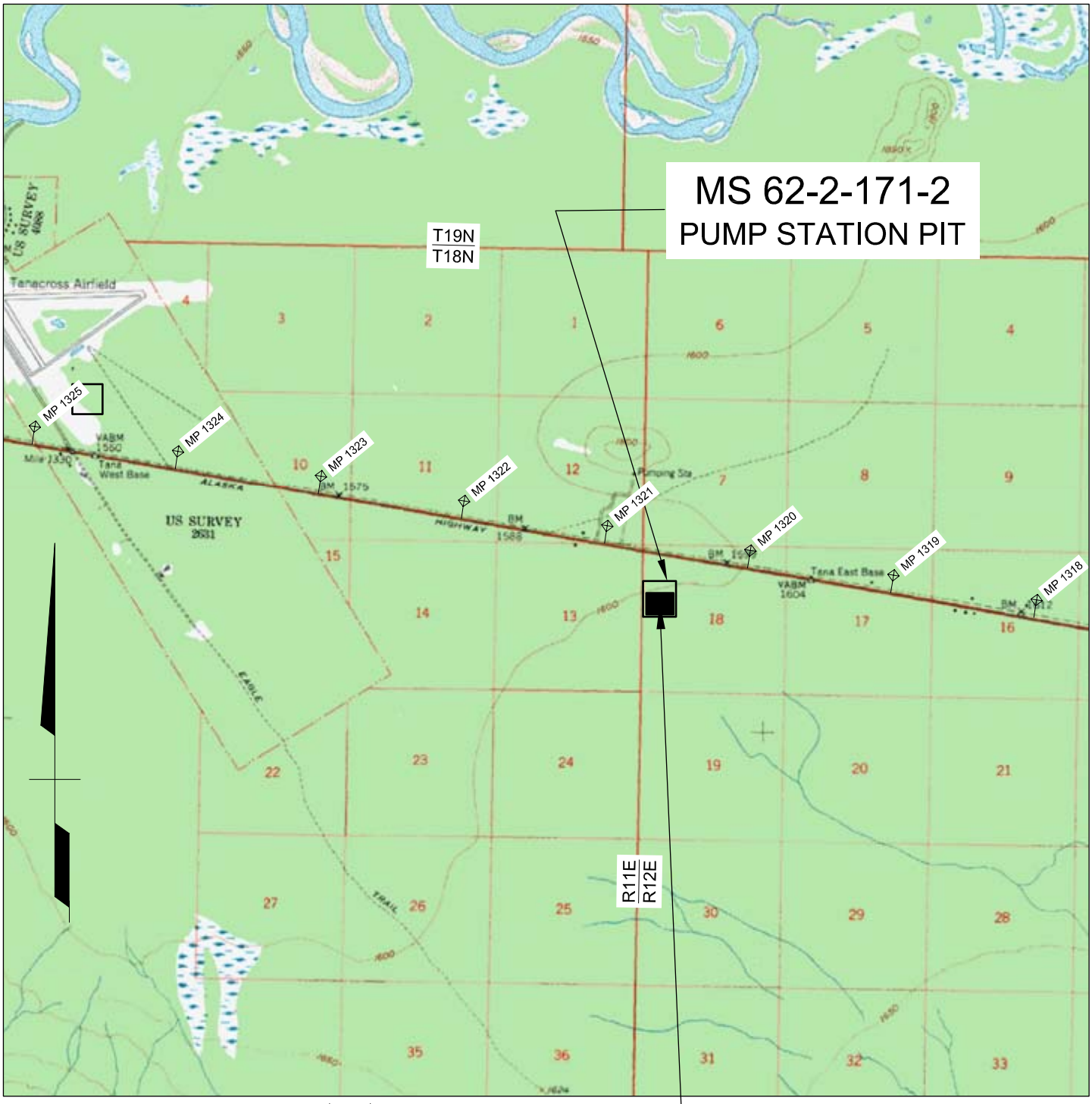
CONTENTS PAGE

CATEGORY:

ACTIVE - OPEN

According to information in the Northern Region Material Site files on July 20, 2007, this site lies on State of Alaska lands managed by DNR. The material sale contract for MS 62-2-170-2 expires August 31, 2008. This site appears to contain significant quantities of material and should be retained by DOT&PF for future use. The site may be expandable.

LOCATION MAP



U.S.G.S. QUADRANGLE: TANACROSS (B-5)

GPS COORDINATES FROM GOOGLE EARTH

UTM (WGS84-METERS)
ZONE 7: N7,025,951 E390,281
AK STATE PLANE (NAD83-US SURVEY FT)
ZONE 2: N3,416,727 E1,444,560

ACTIVE - OPEN

0 0.5 1 2 3

GRAPHIC SCALE IN MILES

BASE MAP CREATED WITH TERRAIN NAVIGATOR PRO

Prepared By:
R&M CONSULTANTS, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

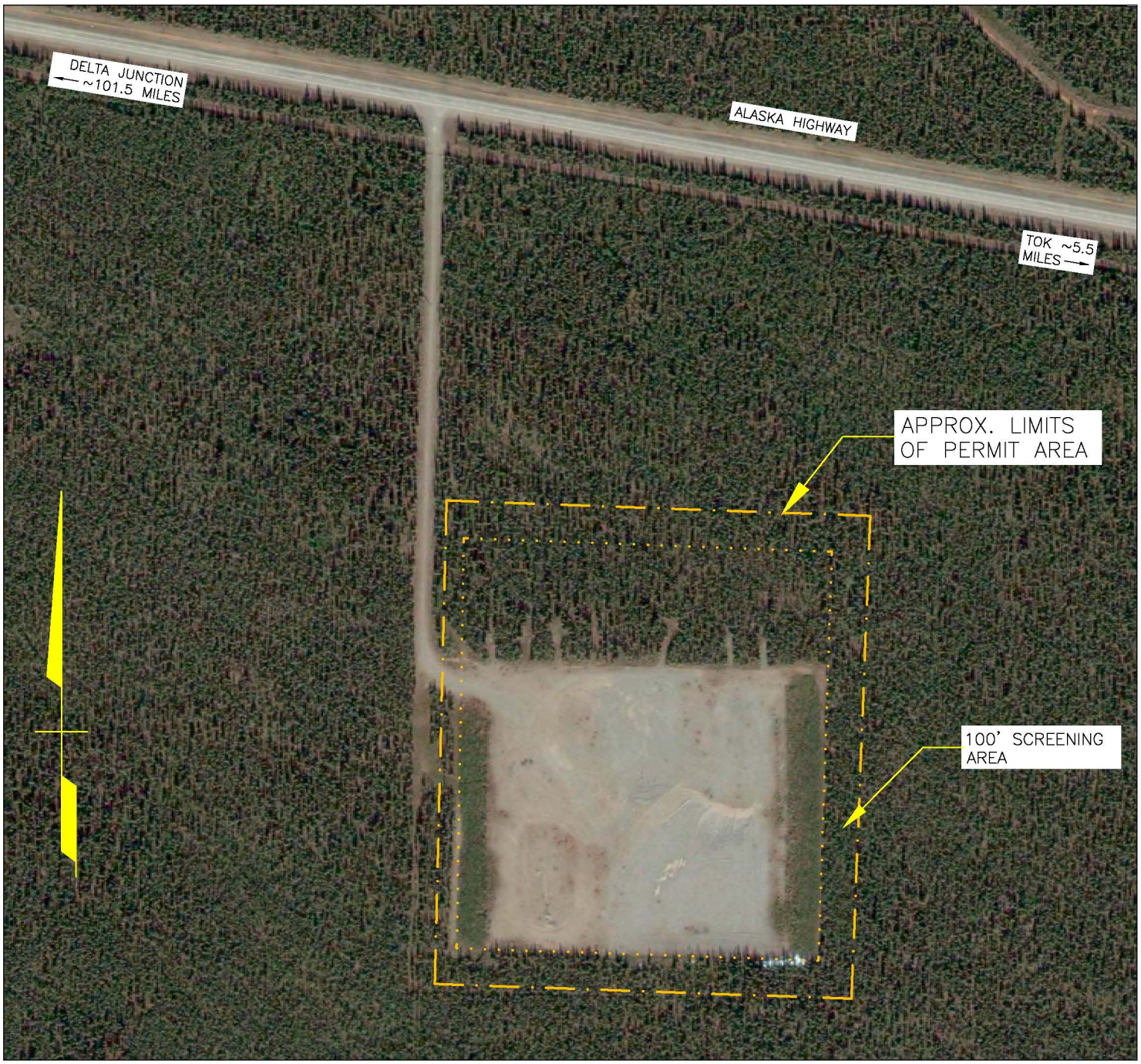
STATEWIDE MATERIAL SITE INVENTORY

MS 62-2-171-2

SCALE	DESIGNED	DRAWN		
AS SHOWN	P.K.H.	P.K.H.		
	CHECKED C.H.R.	DATE MAY 2007	PAGE	2

project\1443.01\076-MS 62-2-171-2\MS 62-2-171-2 Topo Map, 1=1, 10/15/07 at 15:04 by pkh

SITE MAP



BASE MAP IS 2005 SATELLITE PHOTOGRAPHY.
THIS IS A PLANNING DOCUMENT ONLY. THE MATERIAL SITE BOUNDARIES SHOWN ON THIS DRAWING ARE APPROXIMATE. OWNERSHIP OF THE LANDS ADJACENT TO THIS SITE ARE UNKNOWN. THE ACCESS ROW SHOULD BE VERIFIED.

ACTIVE - OPEN

0 200 400 800 1200

GRAPHIC SCALE IN FEET

BASE MAP FROM GOOGLE EARTH PRO 8/14/07

Prepared By:
R&M CONSULTANTS, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

STATEWIDE MATERIAL SITE INVENTORY

MS 62-2-171-2

SCALE	DESIGNED	DRAWN	PAGE
AS SHOWN	P.K.H.	P.K.H.	3
	CHECKED C.H.R.	DATE AUG. 2007	

project\1443.01\076-MS 62-2-171-2\MS 62-2-171-2 Site Map, 1=1, 10/18/07 at 11:33 by pkh

STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM

THIS REPORT IS BASED ON A REVIEW OF EXISTING DATA AND BRIEF FIELD INSPECTIONS. THUS THE DATA CONTAINED HEREIN SHOULD BE CONSIDERED PRELIMINARY AND USED FOR PLANNING PURPOSES ONLY. USERS OF THIS DATA SHOULD VERIFY THE INFORMATION PRIOR TO USING IT FOR DESIGN OR CONSTRUCTION PURPOSES.

IF OTHER IS SELECTED FOR A SECTION, EXPLAIN IT IN SECTION 44. NOTES.
IF AN ANSWER IS UNKNOWN SELECT "UNKNOWN" OR LEAVE BLANK

1. **MS_ID** **62-2-171-2**
   Enter the full material site number e.g.. 65-9-045-2
2. **DATE_INSPECT** 8/27/2007
   Date of field inspection
3. **FLD INSPEC_ORG** AARON BANKS / R&M CONSULTANTS
   Name of inspector / Organization or Company

4. **REGION** NORTHERN
5. **LOCATION** ALASKA HIGHWAY
   Name of Highway
   Enter Name of Facility or Secondary Route Name (i.e.Kotzebue Airport, Nash Road, etc.)
6. **MILEPOST** 1321
   List the closest main highway milepost
7. **NAME** PUMP STATION PIT
   Enter commonly used name (s), e.g. Hess pit, Gobblers Knob, Midway. List all that apply separated by commas.
8. **MAINT_DIST/STAT** District INTERIOR Station TOK
   Highway Maintenance District and Station, for locations not on highways select other.
9. **QUAD** TANACROSS B-5
   U.S.G.S. Quad. Map
10. **TOWNSHIP /RANGE** T#S R#E T18N R12E Meridian CRM
    Section 18
11. **COOR_UTM**
    ZONE 7
    NORTHING 7,025,951
    EASTING 390,281
    UTM WGS84 - Meters
12. **COOR_STATE_PLANE**
    ZONE 2
    NORTHING 3,416,727
    EASTING 1,444,560
    Alaska State Plane NAD83 - Survey Feet
13. **BOROUGH** **TAX ID NO.**
14. **DNR_LAND_USE_PLAN** UPPER TANANA BASIN PLAN

15. **CATEGORY** (To be filled in the office)
15a. **CLASSIFICATION** ACTIVE
15b. **STATUS** OPEN

16. **POTENTIAL_STATUS** SIGNIFICANT

Estimated quantity of material in the site at the time of inspection.

NONE	There appeared to be no useable material in the site.
LIMITED	There appeared to be less than 25,000 c.y. available within the developed site.
SIGNIFICANT	There appeared to be greater than 25,000 c.y. available within the developed site.
EXPANDABLE	There was limited material within the developed site, but there appeared to be significant material outside existing site limits.
UNDEVELOPED	The pit has not been mined (used only for new sites).
CLOSED	There may be useable material left in the pit but it is not available.
UNKNOWN	
OTHER	The site does not fit any of the categories above. Explain in Section 44, Notes.

17. **PRESENT_USERS**

17a. **PRESENT_USER_1** DOT&PF MAINTENANCE

17b. **PRESENT_USER_2**

17c. **PRESENT_USER_3**

18. **PERMITTED _ACREAGE** 34

Area within site permit or R.O.W. boundaries, from permit application or property plat.

19. **DEVELOPED_ACREAGE** 18.3

Area within an existing pit, excluding spoil berms lying outside the pit, access roads etc. Explain below.

Includes waste berms and existing pit within the site limits.

20. **ACREAGE_COMP_METHOD** FROM MAP/PHOTO

Method used to determine developed acreage.

21. **EST_QUAN_AVAIL** 310,000 ROUGH ESTIMATE

Estimated quantity available (b.c.y.), may be based on acreage computed above plus expansion area. Explain computation assumptions and calculations below.

Excluding the section line easement the site covers about 34 acres. There is approx. 25 acres within the vegetative screening, of which approx. 18.3 acres is developed. Assuming that the developed area was deepened an average of 10 feet approx. 183,000 c.y. would be available (18.3 acres x 10 feet x 1,000 c.y. per acre-foot). This may require moving the waste berms. Assuming an average of 1.5 feet of overburden, mining the undeveloped acreage may provide an additional 124,000 c.y. of material (6.7 acres x 18.5 feet x 1,000 c.y. per acre-foot).

22. **ACCESS_TYPE** EXISTING ROAD / OPEN

NONE	No access road has been built.
EXISTING ROAD / OPEN	Drivable. May have gate.
EXISTING ROAD / REVEG	Can be reopened with little effort.
EXISTING ROAD / CLOSED W/BERMS	Can be reopened with little effort.
EXISTING ACCESS / REMOVED	Can be reopened with much effort.
SNOW ROAD	Can only be accessed during winter.
ICE ROAD	Requires crossing river or lake ice in the winter.
BARGE	Material can only be moved by barge.
OTHER	The site does not fit any of the catagories above. Describe in Section 44, Notes.

23. **ACCESS_LENGTH** 1,500
Approx. length from edge of pit to highway/secondary route (ft.)

24. **VEGETATION**

The majority of the existing site had been cleared. Surrounding vegetation consisted of spruce to 40 ft. high by 10 in. diameter. The spoil piles along the west and east edges of the pit had revegetated with aspen and willow brush.

25. **TYPE_1** BORROW PIT 26. **TYPE_2**

Dominant type Subordinate type
General Types of Materials Available Enter data in Type_2 only if two types of material site available

QUARRY	Bedrock sources requiring blasting
BORROW PIT	Soils or soft bedrock (rippable), above water table
BAILING	Requires production below the water table
RIVER BAR	Sand/gravel bars in active channels

27. **OB_CLASS_1** <3 FT. 28. **OB_CLASS_2** <3 FT.
New Site or expansion Area Existing Pit (Spoil)
A site may have both. Data should be based on actual subsurface exploration, otherwise unknown.
Estimated average depth over the area.

NONE	3 TO 6 FT.	UNKNOWN
<3 FT.	>6 FT.	OTHER

29. **OB_TYPE_1** SILT 30. **OB_TYPE_2** SPOIL
New Site or expansion Area Existing Pit (Spoil)
A site may have both.

SILT	PEAT	SOLID WASTE	OTHER
COLLUVIUM	SPOIL	UNKNOWN	

STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM

31. **MAT_TYPE_1** FLUVIAL — Dominant type

32. **MAT_TYPE_2** _____ — Subordinate type

BEDROCK	Bedrock sources requiring blasting
WEATHER. BEDROCK	Bedrock sources requiring ripping
FLUVIAL	Water deposited sand and gravel, includes glaciofluvial
GLACIAL	Glacial till
COLLUVIAL	Talus slopes, etc.
EOLIAN	Sand Dunes, etc.
SILT	Silt deposits, loess, fluvial, etc.

33. **PERMAFROST_1** UNKNOWN
New Site or Expansion Area

34. **PERMAFROST_2** UNKNOWN
Existing Site

DETECTED IN MOST TEST HOLES
DETECTED IN SOME TEST HOLES
DETECTED IN IMMEDIATE VICINITY
DETECTED IN NO TEST HOLES
DATA OUTDATED
UNKNOWN
OTHER

35. **GROUNDWATER**

No evidence of groundwater or ponding was observed within the pit floor, approximately 20 ft. below the original ground surface.

STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM

36. **LITHOLOGY_1** ALLUVIAL — Dominant type

37. **LITHOLOGY_2** _____ — Subordinate type

IGNEOUS ROCK	Undifferentiated Igneous Rocks
GRANITIC	Granite/Monzonite/Granodiorite
DIORITE/GABBRO	Diorite/Gabbro
BASALT	Dark colored fine-grained Igneous Rocks
GREENSTONE	Altered Volcanic Rocks w/green tint
METAMORPHIC ROCK	Undifferentiated Metamorphic Rocks
SCHIST/PHYLLITE	Includes rocks ranging from slate to schist
GNEISS	Includes hard schistose rocks
MARBLE	
CATACLASTIC	Incl. Valdez Formation Rocks, Kenai Penn.
MÉLANGE	Incl. McHugh Formation Rocks, Kenai Penn.
SEDIMENTARY ROCK	Undifferentiated Sedimentary Rocks
CONGLOMERATE	
SANDSTONE	Includes greywacke, etc.
SHALE/MUDSTONE	
LIMESTONE	
FLUVIAL	River and stream deposits (floodplain), includes outwash.
ALLUVIAL	Alluvial / Debris Fan deposits
GLACIOFLUVIAL	Eskers, kames, etc.
GLACIAL	Till
COLLUVIAL	Talus, etc.
EOLIAN	Sand Dunes, etc.
SILT	Loess, fluvial silts, etc.
OTHER	Explain in Section 44.

38. **MATERIAL_CLASSIFICATION**
ASTM Classification, generally they should range from coarse to fine.

38a.	GW	38c.	SW	38e.		38g.	
38b.	GP	38d.	SP	38f.		38h.	

39. COBBLES_AND_BOULDERS

Test Boring Callout / ASTM Classification, either a. or b. and c. (Can use ranges i.e. 0 to 20)

39a.	CONTAINS		
39b.	Est. % by VOL.	5	(Est. From Visual Observations)
39c.	MAX. SIZE (in.)	8	(Observed Size)

40. AGG_TEST_RESULTS

Year of test or report- Test result / Year of test or report- Test Results

40a. SG APP COARSE	
40b. SG APP FINE	1982- 2.74, 2.73
40c. ABSORPTION CRSE	1982- 1.08, 1.00
40d. ABSORPTION FINE	
40e. NORDIC ABRASION	
40f. L.A. ABRASION	1982- 18
40g. DEGRADATION (T-13)	1982- 81
40h. NASO4 LOSS COARSE	1982- 1.10
40i. NASO4 LOSS FINE	1982- 2.68

41. POTENTIAL_USABILITY

CRUSHED PRODUCTS PRODUCED

Best known potential use of the material, based on records, exploration and laboratory data.

CONCRETE AGGREGATE PRODUCED	The site has produced concrete aggregate
PAVING AGGREGATE PRODUCED	The site has produced paving aggregate
CRUSHED PRODUCTS PRODUCED	Base, Surface Coarse, Subbase, etc. has been produced.
TYPE A AND B MATERIAL AVAILABLE	0 to 10 percent passing 200
TYPE C AVAILABLE	Compactable material
TYPE C NOT AVAILABLE	Uncompactable material (Lower Kuskokwim and Yukon River, etc.)
UNKNOWN	
OTHER	Explain in Section 44.

42. SPECIAL_PROBLEMS

Special problems encountered or anticipated with use of the material, based on records, exploration and laboratory data.

ORGANIC CONTENT	The material is very difficult to compact.
HIGHLY WEATHERED GRAVEL	The gravel is highly weathered and may break down when handled.
BREAKS DOWN UNDER USE	Material breaks down on grade.
SENSITIVE TO WATER CONTENT	Material is sensitive to water content, i.e.. some glacial tills, soft bedrock.
VARIABLE MATERIAL	Deposit contains mixture of suitable and unsuitable material.
POSSIBLE CONTAMINATION	Site may be contaminated by petroleum products or hazardous materials.
UNKNOWN	
OTHER	Explain in Section 44, Notes.

43. **RIPRAP** NOT POSSIBLE

Class II or larger. Does not include production for erosion control riprap for ditches or culverts.

PREVIOUS PRODUCTION	There is a record of production.
POSSIBLE FURTHER INVESTIGATION NEEDED	The site is a bedrock quarry containing hard rock
NOT POSSIBLE	The site has soft rock or soil.
UNKNOWN	
OTHER	Explain in Section 44, Notes.

44. **NOTES**

Note number of item being discussed.

41. The site was being used to produce road sand during the inspection in August 2007.

STATEWIDE MATERIAL SITE INVENTORY

MATERIAL SITE INSPECTION REPORT

Federal Project No. STP-000S(823)
AKSAS Project No. 76149

TAYLOR HIGHWAY

MS 785-002-2
7 Mile Pit

June 21, 2014

CONTENTS PAGE

CATEGORY:

ACTIVE – POTENTIAL

According to information found in the DOT&PF EDMS system in January 2009 and BLM and DNR case file abstracts, this site lies on State of Alaska lands managed by DNR. The site lies within Sections 33 & 34, T19N, R15E, CRM.

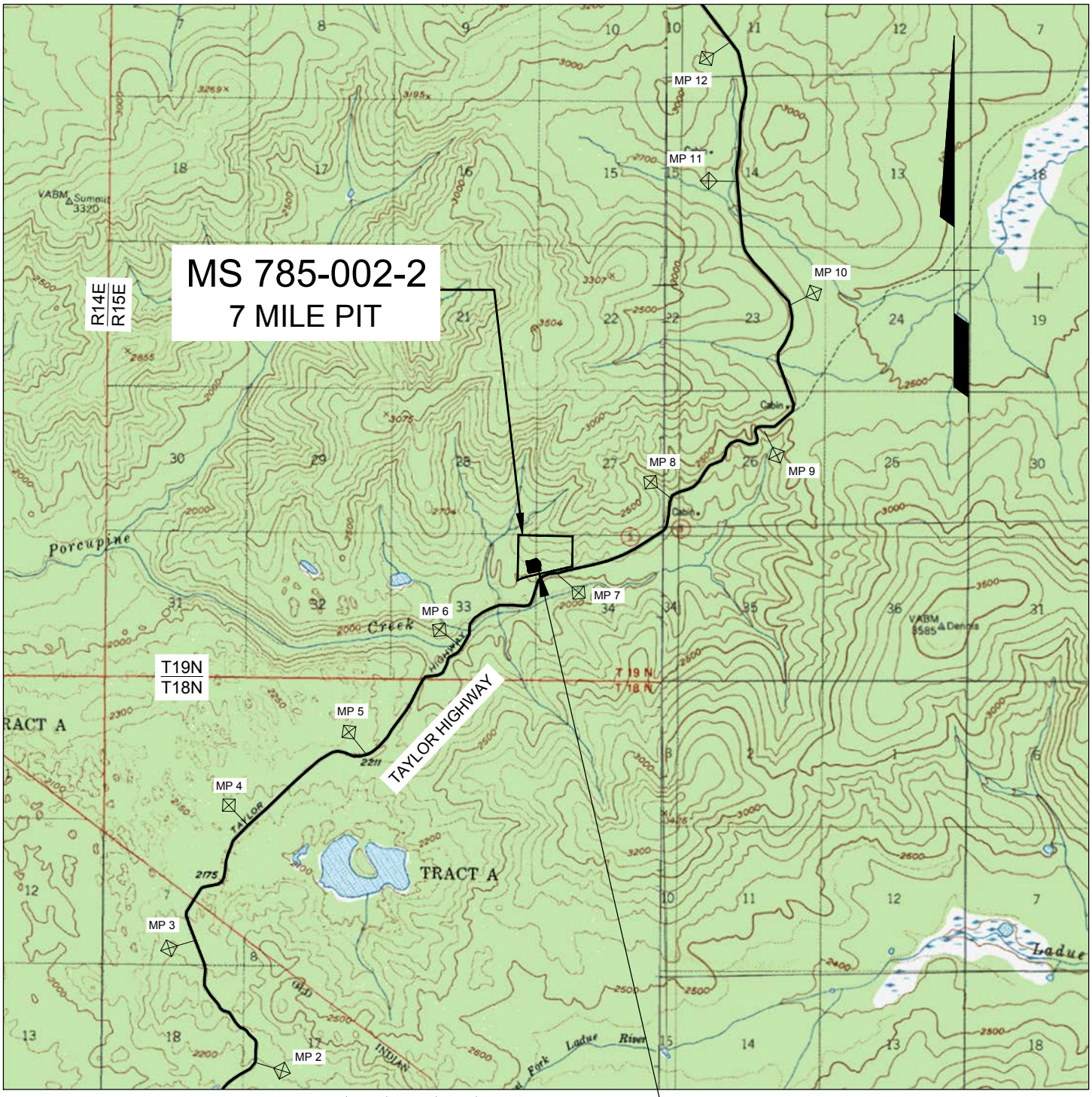
The land was patented to the State of Alaska in 1985 (F-28268 / PA 50-85-0224 / GS 912). DOT&PF had a material sale contract from DNR that expired in 2011 (ADL 63696). The case abstract shows it was closed on June 13, 2014.

The site is within the Tanana Valley State Forest (AS 41.12.400).

The site is currently a DMLW Northern Region Office (NRO) Designated Master Material Site (ADL 419791) under AS 38.05.550(b) for the use and operation for the long-term sale and extraction of materials until closed by DNR. It was on the November 29, 2012 list of sites selected for the DNR program.

The site adjoins the Taylor Highway right-of-way and there is an existing access road into the pit. The site appears to contain significant quantities of weathered bedrock and should be retained by DOT&PF for future use.

LOCATION MAP



U.S.G.S. QUADRANGLE: TANACROSS (B–3) & (B–4)

GPS COORDINATES FROM GOOGLE EARTH

UTM (WGS84–METERS)
ZONE 7: N 7,029,690 E 423,535
AK STATE PLANE (NAD83–US SURVEY FT)
ZONE 2: N 3,430,699 E 1,553,478

ACTIVE - POTENTIAL

0 0.5 1 2 3

GRAPHIC SCALE IN MILES

BASE MAP CREATED WITH TERRAIN NAVIGATOR PRO

Prepared By:
R&M CONSULTANTS, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

STATEWIDE MATERIAL SITE INVENTORY
MS 785-002-2

SCALE	DESIGNED	DRAWN	PAGE
AS SHOWN	T.G.H.	T.G.H.	2
	CHECKED C.H.R.	DATE APR. 2014	

Plotted 7/24/2015 12:59 PM by Pete Hardcastle
Z:\project\1443.03\785 Taylor Highway\MS 785-002-2-A\acad\MS_Topo_Map_785-002-2.dwg

SITE MAP

BASE MAP IS JULY 28 2009 DIGITALGLOBE SATELLITE IMAGERY.
THIS IS A PLANNING DOCUMENT ONLY. THE MATERIAL SITE BOUNDARIES SHOWN ON THIS DRAWING ARE APPROXIMATE. OWNERSHIP OF THE LANDS ADJACENT TO THIS SITE ARE UNKNOWN. THE ACCESS ROW SHOULD BE VERIFIED.

ACTIVE - POTENTIAL

0 300 600 1200 1800

GRAPHIC SCALE IN FEET

BASE MAP FROM GOOGLE EARTH PRO 5/7/14

Prepared By:
R&M CONSULTANTS, INC.

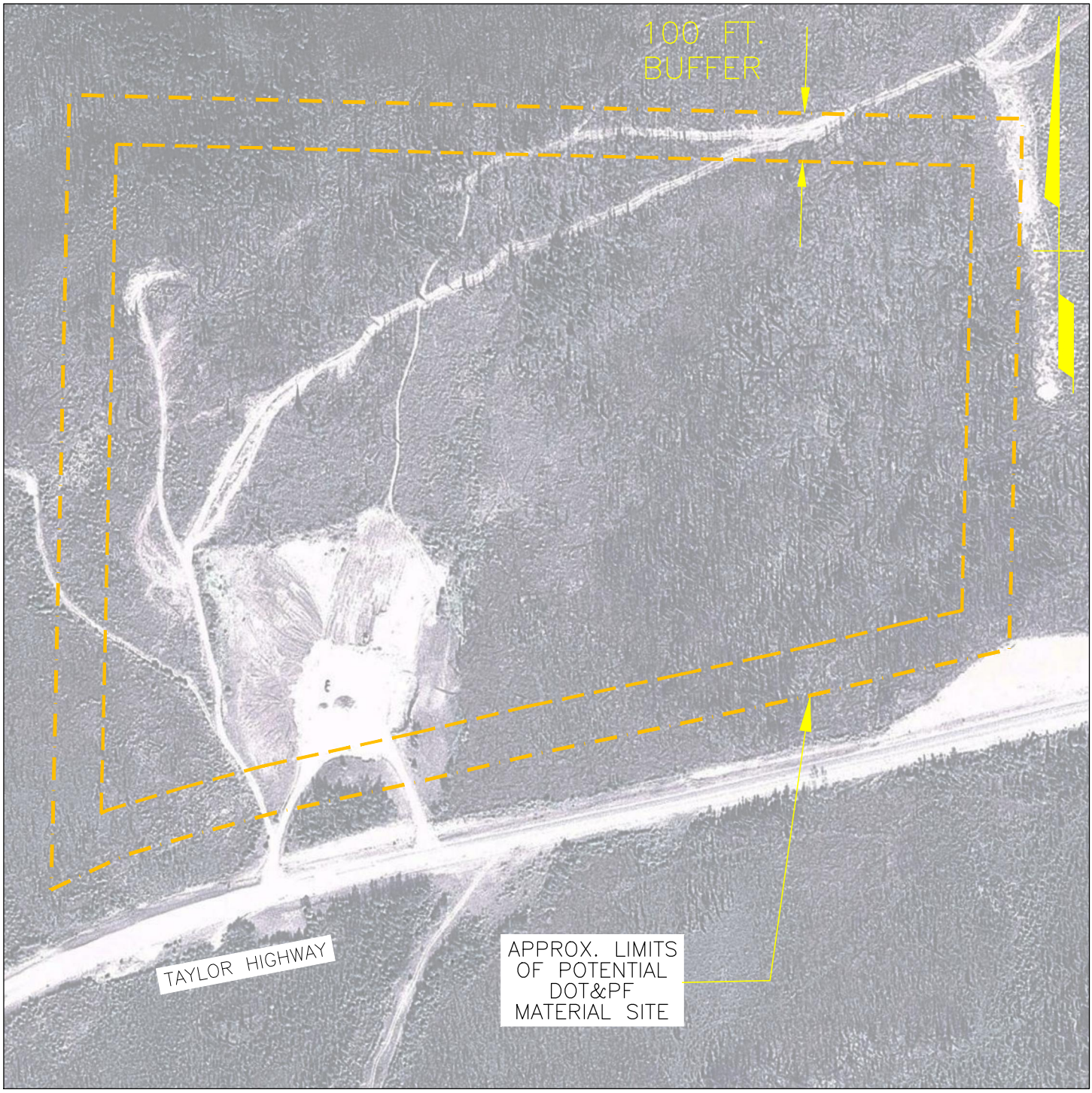
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

STATEWIDE MATERIAL SITE INVENTORY
MS 785-002-2

SCALE	DESIGNED	DRAWN	
AS SHOWN	T.G.H.	T.G.H.	PAGE 3A
	CHECKED C.H.R.	DATE MAY 2014	

Plotted 7/31/2015 10:05 AM by Tatyana Benko Z:\project\1443.03\785 Taylor Highway\MS 785-002-2-A\acad\MS_Site_Map_785-002-2.dwg

SITE MAP



BASE MAP IS JULY 28, 2009 DIGITALGLOBE SATELLITE IMAGERY.
THIS IS A PLANNING DOCUMENT ONLY. THE MATERIAL SITE BOUNDARIES SHOWN ON THIS DRAWING ARE APPROXIMATE. OWNERSHIP OF THE LANDS ADJACENT TO THIS SITE ARE UNKNOWN. THE ACCESS ROW SHOULD BE VERIFIED.

ACTIVE - POTENTIAL

0 150 300 600 900

GRAPHIC SCALE IN FEET

BASE MAP FROM GOOGLE EARTH PRO 5/7/14

Prepared By:
R&M CONSULTANTS, INC.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

STATEWIDE MATERIAL SITE INVENTORY
MS 785-002-2

SCALE	DESIGNED	DRAWN	
AS SHOWN	T.G.H.	T.G.H.	PAGE 3B
	CHECKED C.H.R.	DATE MAY 2014	

Plotted 7/31/2015 10:06 AM by Tatyana Benko
Z:\project\1443.03\785 Taylor Highway\MS 785-002-2-A\acad\MS_Site_Map_785-002-2.dwg

STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM

THIS REPORT IS BASED ON A REVIEW OF EXISTING DATA AND BRIEF FIELD INSPECTIONS. THUS THE DATA CONTAINED HEREIN SHOULD BE CONSIDERED PRELIMINARY AND USED FOR PLANNING PURPOSES ONLY. USERS OF THIS DATA SHOULD VERIFY THE INFORMATION PRIOR TO USING IT FOR DESIGN OR CONSTRUCTION PURPOSES.

IF OTHER IS SELECTED FOR A SECTION, EXPLAIN IT IN SECTION 44. NOTES.
IF AN ANSWER IS UNKNOWN SELECT "UNKNOWN" OR LEAVE BLANK

1. **MS_ID** **785-002-2**
   Enter the full material site number e.g.. 31-3-045-2
2. **DATE_INSPECT** 7/26/2014
   Date of field inspection
3. **FLD INSPEC_ORG** TREVOR HUDSON / R&M CONSULTANTS
   Name of inspector / Organization or Company
4. **REGION** NORTHERN
5. **LOCATION** TAYLOR HIGHWAY (Name of Highway) ____ (Enter Name of Facility or Secondary Route Name (i.e.Kotzebue Airport, Nash Road, etc.))
6. **MILEPOST** 7
   List the closest main highway milepost
7. **NAME** 7 MILE PIT
   Enter commonly used name (s), e.g. Hess pit, Gobblers Knob, Midway. List all that apply separated by commas.
8. **MAINT_DIST/STAT** District TOK Station TOK
   Highway Maintenance District and Station, for locations not on highways select other.
9. **QUAD** TANACROSS B-4
   U.S.G.S. Quad. Map
10. **TOWNSHIP/RANGE** T#S R#E T19N R15E & ____ Meridian CRM
    Section 33 & 34 ____
11. **COOR_UTM**

ZONE	7
NORTHING	7,029,690
EASTING	423,535

UTM WGS84 - **Meters**

12. **COOR_STATE_PLANE**

ZONE	2
NORTHING	3,430,699
EASTING	1,553,478

Alaska State Plane NAD83 - **Survey Feet**

13. **BOROUGH/CITY** UNORGANIZED **TAX ID NO.** ____
14. **DNR_LAND_USE_PLAN** EASTERN TANANA BASIN PLAN
15. **CATEGORY** (To be filled in the office)
15a. **CLASSIFICATION** ACTIVE
15b. **STATUS** POTENTIAL

16. **POTENTIAL_STATUS** SIGNIFICANT

Estimated quantity of material in the site at the time of inspection.

NONE	There appeared to be no useable material in the site.
LIMITED	There appeared to be less than 25,000 c.y. available within the developed site.
SIGNIFICANT	There appeared to be greater than 25,000 c.y. available within the developed site.
EXPANDABLE	There was limited material within the developed site, but there appeared to be significant material outside existing site limits.
UNDEVELOPED	The pit has not been mined/explored (used only for proposed sites).
CLOSED	There may be useable material left in the pit but it is not available.
UNKNOWN	
OTHER	The site does not fit any of the categories above. Explain in Section 44, Notes.

17. **PRESENT_USERS**

17a. **PRESENT_USER_1** NONE

17b. **PRESENT_USER_2** NONE

17c. **PRESENT_USER_3**

18. **PERMITTED _ACREAGE** 61.4

Area within site permit or R.O.W. boundaries, from permit application or property plat.

19. **DEVELOPED_ACREAGE** 5.6

Area within an existing pit, excluding spoil berms lying outside the pit, access roads etc. Explain below.

20. **ACREAGE_COMP_METHOD** FROM MAP/PHOTO

Method used to determine developed acreage.

21. **EST_QUAN_AVAIL** 1,600,000 ROUGH ESTIMATE

Estimated quantity available (b.c.y.), may be based on acreage computed above plus expansion area. Explain computation assumptions and calculations below.

Area	Existing Pit	Undeveloped Area	
Acres	5.2	41.3	0.0
Est. Depth (ft.)	10	37	
Factor (b.c.y. / acre-foot)	1,000	1,000	1,000
Est. Quant. (c.y.)	52,000	1,528,000	0

The estimate assumes that there is still material remaining in the pit and it could be deepened an average of depth of 10 feet with 0 feet of overburden. For expansion of the pit north and into the ridgeline average working depth of 40 feet was used with 3 feet of overburden. A 100 foot buffer was left around the site. There is no subsurface investigation data available for the eastern portion of the site.

22. **ACCESS_TYPE** EXISTING ROAD / OPEN

NONE	No access road has been built.
EXISTING ROAD / OPEN	Drivable. May have gate.
EXISTING ROAD / REVEG	Can be reopened with little effort.
EXISTING ROAD / CLOSED W/BERMS	Can be reopened with little effort.
EXISTING ACCESS / REMOVED	Can be reopened with much effort.
SNOW ROAD	Can only be accessed during winter.
ICE ROAD	Requires crossing river or lake ice in the winter.
BARGE	Material can only be moved by barge.
OTHER	The site does not fit any of the catagories above. Describe in Section 44, Notes.

23. **ACCESS_LENGTH** 200
Approx. length from edge of pit to highway/secondary route (ft.)

24. **VEGETATION**

During the July 2014 inspection, vegetation surrounding the pit consisted mostly of aspen and black spruce 5 to 10 inches in diameter on 5 to 10-foot centers with heights up to 50 feet. There was no vegetation observed in the pit.

25. **TYPE_1** BORROW PIT 26. **TYPE_2** QUARRY

Dominant type Subordinate type

General Types of Materials Available Enter data in Type_2 only if two types of material site available

QUARRY	Bedrock sources requiring blasting
BORROW PIT	Soils or soft bedrock (rippable), above water table
BAILING	Requires production below the water table
RIVER BAR	Sand/gravel bars in active channels

27. **OB_CLASS_1** 3 TO 6 FT. 28. **OB_CLASS_2** <3 FT.

New Site or expansion Area Existing Pit (Spoil)

A site may have both. Data should be based on actual subsurface exploration, otherwise unknown.

Estimated average depth over the area.

NONE	3 TO 6 FT.	UNKNOWN
<3 FT.	>6 FT.	OTHER

29. **OB_TYPE_1** SILT 30. **OB_TYPE_2** SPOIL

New Site or expansion Area Existing Pit (Spoil)

A site may have both.

SILT	PEAT	SOLID WASTE	OTHER
COLLUVIUM	SPOIL	UNKNOWN	

STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM

31. **MAT_TYPE_1** WEATHER. BEDROCK
Dominant type

32. **MAT_TYPE_2** BEDROCK
Subordinate type

BEDROCK	Bedrock sources requiring blasting
WEATHER. BEDROCK	Bedrock sources requiring ripping
FLUVIAL	Water deposited sand and gravel, includes glaciofluvial
GLACIAL	Glacial till
COLLUVIAL	Talus slopes, etc.
EOLIAN	Sand Dunes, etc.
SILT	Silt deposits, loess, fluvial, etc.

33. **PERMAFROST_1** DETECTED IN MOST TEST HOLES OR PITS
New Site or Expansion Area

34. **PERMAFROST_2** DATA OUTDATED
Existing Site

DETECTED IN MOST TEST HOLES
DETECTED IN SOME TEST HOLES
DETECTED IN IMMEDIATE VICINITY
DETECTED IN NO TEST HOLES
DATA OUTDATED
UNKNOWN
OTHER

35. **GROUNDWATER**

During the July 2014 inspection, there was no groundwater observed within the material site.

36. **LITHOLOGY_1** SCHIST/PHYLLITE — Dominant type

37. **LITHOLOGY_2** _____ — Subordinate type

IGNEOUS ROCK	Undifferentiated Igneous Rocks
GRANITIC	Granite/Monzonite/Granodiorite
DIORITE/GABBRO	Diorite/Gabbro
BASALT	Dark colored fine-grained Igneous Rocks
GREENSTONE	Altered Volcanic Rocks w/green tint
METAMORPHIC ROCK	Undifferentiated Metamorphic Rocks
SCHIST/PHYLLITE	Includes rocks ranging from slate to schist
GNEISS	Includes hard schistose rocks
MARBLE	
CATACLASTIC	Incl. Valdez Formation Rocks, Kenai Penn.
MÉLANGE	Incl. McHugh Formation Rocks, Kenai Penn.
SEDIMENTARY ROCK	Undifferentiated Sedimentary Rocks
CONGLOMERATE	
SANDSTONE	Includes greywacke, etc.
SHALE/MUDSTONE	
LIMESTONE	
FLUVIAL	River and stream deposits (floodplain), includes outwash.
ALLUVIAL	Alluvial / Debris Fan deposits
GLACIOFLUVIAL	Eskers, kames, etc.
GLACIAL	Till
COLLUVIAL	Talus, etc.
EOLIAN	Sand Dunes, etc.
SILT	Loess, fluvial silts, etc.
OTHER	Explain in Section 44.

38. **MATERIAL_CLASSIFICATION**

ASTM Classification, generally they should range from coarse to fine.

38a. _____	38c. _____	38e. _____	38g. _____
38b. _____	38d. _____	38f. _____	38h. _____

39. COBBLES_AND_BOULDERS

Test Boring Callout / ASTM Classification, either a. or b. and c. not both (Can use ranges i.e. 0 to 20)

39a.	CONTAINS		
39b.	Est. % by VOL.		(Est. From Visual Observations)
39c.	MAX. SIZE (in.)		(Observed Size)

40. AGG_TEST_RESULTS

Year of test or report- Test result / Year of test or report- Test Results

40a. SG APP COARSE	
40b. SG APP FINE	
40c. ABSORPTION CRSE	
40d. ABSORPTION FINE	
40e. NORDIC ABRASION	
40f. L.A. ABRASION	1987- 25
40g. DEGRADATION (T-13)	1987- 30, 61, 60, 32
40h. NASO4 LOSS COARSE	
40i. NASO4 LOSS FINE	

41. POTENTIAL_USABILITY TYPES A AND B MATERIAL AVAILABLE

Best known potential use of the material, based on records, exploration and laboratory data.

CONCRETE AGGREGATE PRODUCED	The site has produced concrete aggregate
PAVING AGGREGATE PRODUCED	The site has produced paving aggregate
CRUSHED PRODUCTS PRODUCED	Base, Surface Coarse, Subbase, etc. has been produced.
TYPE A AND B MATERIAL AVAILABLE	0 to 10 percent passing 200
TYPE C AVAILABLE	Compactable material
TYPE C NOT AVAILABLE	Uncompactable material (Lower Kuskokwim and Yukon River, etc.)
UNKNOWN	
OTHER	Explain in Section 44.

42. SPECIAL_PROBLEMS

Special problems encountered or anticipated with use of the material, based on records, exploration and laboratory data.

ORGANIC CONTENT	The material is very difficult to compact.
HIGHLY WEATHERED GRAVEL	The gravel is highly weathered and may break down when handled.
BREAKS DOWN UNDER USE	Material breaks down on grade.
SENSITIVE TO WATER CONTENT	Material is sensitive to water content, i.e.. some glacial tills, soft bedrock.
VARIABLE MATERIAL	Deposit contains mixture of suitable and unsuitable material.
POSSIBLE CONTAMINATION	Site may be contaminated by petroleum products or hazardous materials.
CONTAINS ASBESTOS	Site contains naturally occurring asbestos.
POTENTIAL ASBESTOS	Site in area where naturally occurring asbestos is mapped.
ACID ROCK DRAINAGE	Site contains rock susceptible to producing acid rock drainage.
OTHER	Explain in Section 44, Notes.

43. **RIPRAP** NOT POSSIBLE

Class II or larger. Does not include production for erosion control riprap for ditches or culverts.

PREVIOUS PRODUCTION	There is a record of production.
POSSIBLE FURTHER INVESTIGATION NEEDED	The site is a bedrock quarry containing hard rock
NOT POSSIBLE	The site has soft rock or soil.
UNKNOWN	
OTHER	Explain in Section 44, Notes.

44. **NOTES**

Note number of item being discussed.

APPLICANT'S CERTIFICATE

This is to certify that WILLIAM B. McMULLEN who subscribed the statement hereon is the person employed by the undersigned applicant to supervise the preparation of this plat, which has been adopted by the applicant as the approximate final location of the project thereby shown; and that this plat is filed as part of the complete application; and in order that the applicant may obtain the benefits of the act of October 21, 1976 (90 Statute 2776, 43 U.S.C. 1761) and I further certify that the right of way herein described is desired for Alaska Project No. F-062-1(10)

Director _____

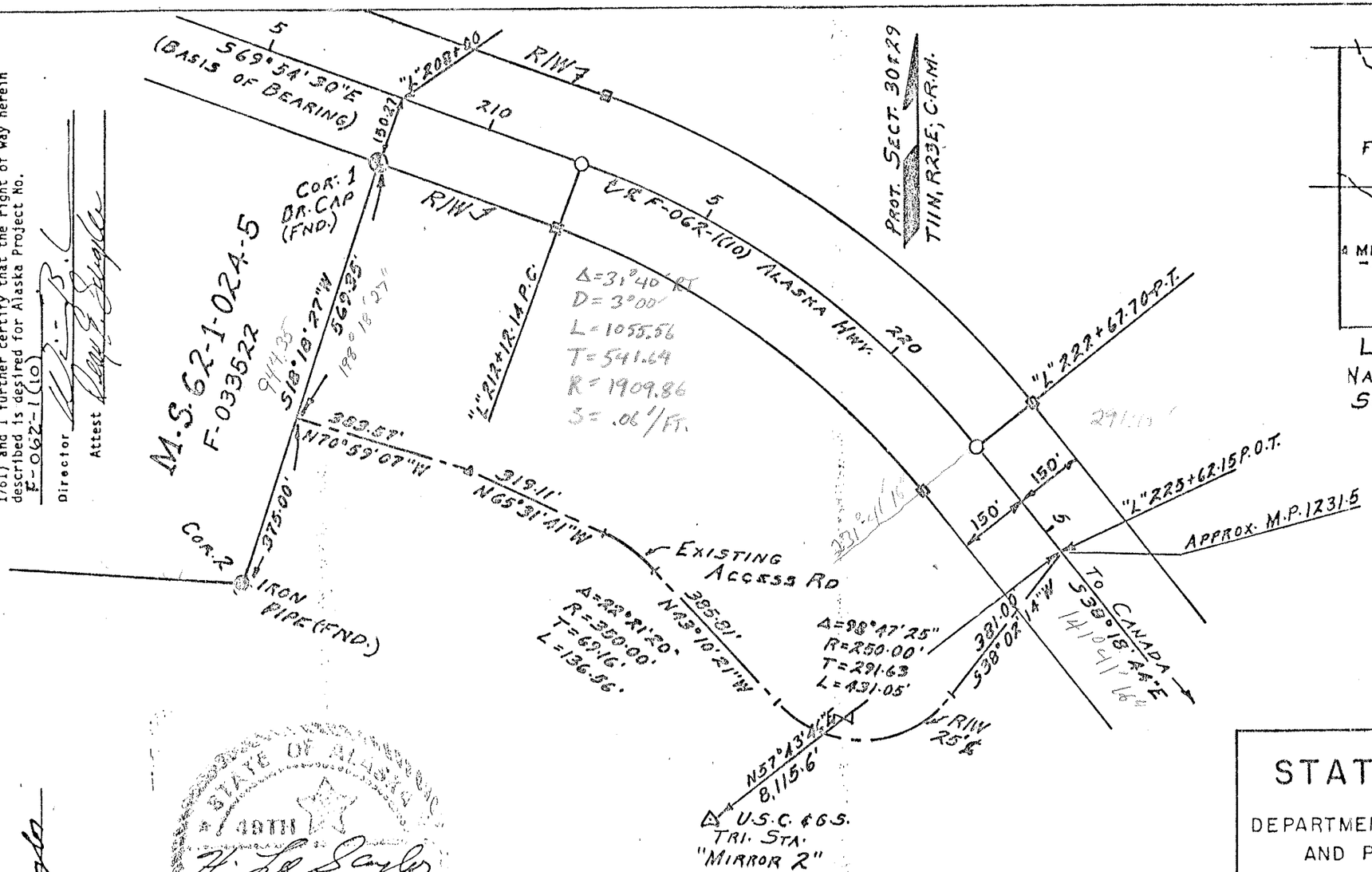
Attest _____

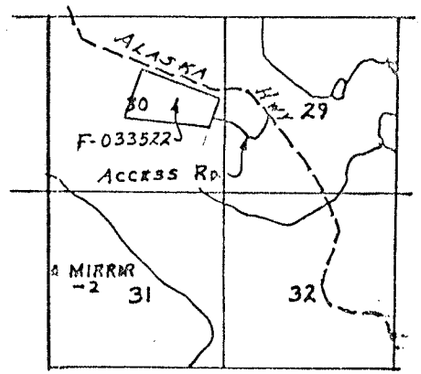
ENGINEER'S STATEMENT

LEE SAYLOR states that he is by occupation a land surveyor employed by Alaska Department of Transportation and Public Facilities to supervise the survey of Highway Project No. F-062-1(10) as shown on this plat; that the survey of said project was made under his supervision and under authority, that this parcel was surveyed during the survey of this highway project which was conducted in 1983; and that such survey is accurately represented upon this plat.

Engineer _____

STATE OF ALASKA
49TH
H. L. SAYLOR
NO. LS-4922
REGISTERED LAND SURVEYOR





LOCATION MAP
NABESNA (C-1) QUAD.
SCALE 1" = 1 MILE

CONCRETE R/W MONUMENT □
DEPT. OF HIGHWAYS, 1965

BOUNDARIES OF M.S. 62-1-024-5 RETRACED AUG. 1983, BRASS CAPS ON IRON PIPES AT CORNERS, SET 1964 FIELD DIMENSIONS DIFFERENT FROM PLAT

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

PLAT SHOWING R.O.W. REQUIRED FOR

ALASKA PROJECT NO. F-062-1(10)

PARCEL NO. ACCESS RD. FOR M.S. 62-1-024-2	
NORTHERN REGION	DATE Nov. 28, 1983
SCALE 1" = 300'	SQ. FT.
DRAWN BY L.S.	2.16 ± ACRES

BOOK 174 PAGE 234 Serial No. Fairbanks 033522

Fairbanks Recording District

Description: Project No. F-062-1(10) SR-2, from Canadian Border NW, Parcel No. M.S. 621-024-5, 23-2505

MATERIAL SITE STIPULATIONS

The Grantee, by accepting this material site under the Federal Highway Act, agrees and consents to comply with all of the provisions under 43 CFR, Part 244.9, and to the following terms and conditions, unless specifically authorized in writing:

1. All of the provisions of this material site protecting the government or third parties shall remain in effect until revocation or termination by the authorized officer.

2. The Grantee shall promptly notify the Bureau of Land Management when the material site is no longer needed.

3. The responsibility of identifying the boundaries of the material site and the protection of the survey monuments shall be the duty of the Grantee.

4. The Grantee shall post the number of this material site on the land and in such a fashion that it may be readily seen by the general public. Such posting will serve as notice that the land is under authorized use.

5. The Grantee shall not cause damage or defacement of adjacent lands and shall save the government harmless of all liability and expense arising from, or consequential to, such damage. The Grantee shall contact the officer in charge immediately after such damage.

6. All borrow pits and clearings must be screened from the highway by leaving an untouched strip of vegetative cover 50 feet wide between the edge of the borrow pit clearing and the nearest edge of the road clearing. Necessary access roads are authorized through the above reserve strip.

7. All brush and timber, standing or down, necessarily removed to expose materials must be buried or burned.

8. The Grantee shall take adequate measures for the prevention and suppression of fire on the material site area and adjacent land, as prescribed by the authorized officer.

9. Before revocation or termination of this material site, the area must be graded to blend with the existing landscape so that the pit will not present an unsightly appearance.

10. The Grantee shall submit to the Bureau of Land Management the kind, quantity, and uses made of the materials extracted during each fiscal year.

BOOK 174 PAGE 232
Fairbanks Recording District

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Fairbanks District ~~Fairbanks Land Office~~ and Land Office
P.O. Box 1150
Fairbanks, Alaska

Serial number below

adian

FAIRBANKS
Serial No. 65-24

DEC 24 1964

DECISION

RIGHT-OF-WAY GRANTED

621-024-5

Details of Grant

Serial number of grant Fairbanks 033522

Name of grantee State of Alaska, Department of Highways, Box 1841, Juneau, Alaska

Map showing the location and dimensions of grant:

Map designations Department of Highways Plat, Project No. F-062-1(10), SR-2, from Canadian Border NW., Parcel No. M.S. 621-024-5, 23-2505
Date filed November 13, 1964

Permitted use by grantee Material Site

Authority for grant Federal Aid Highway Act of November 9, 1921

Regulations applicable to grant: 43 CFR 2234.1-1 and 2234.2-4 (formerly 43 CFR Part 244, Subparts "A" and "G")
Code reference (23 U.S.C. 317) as amended

Circular number 2161

Date of grant DEC 24 1964

Expiration date of grant None

Rental:

Amount None

~~When payable by grantee~~

RECORDED ☑ FILED ☐
FAIRBANKS RECORDING DISTRICT
Date JAN 4 1965 Time 2:34 P M
Requested by Dept of Hwys
Address Box 7
Valdez

Mp 1230.349±

(021-014-5

Terms and Conditions of Gra...

Pursuant to the authority vested in the undersigned by Order No. 701 of the Director, Bureau of Land Management, dated July 28, 1964 (29 F.R. 10526), as amended, a right-of-way, the details of which are shown above, is hereby granted for the public lands involved 1/, subject to the following terms and conditions:

1. All valid rights existing on the date of the grant.

2. All regulations in the circulars specified herein.

3. Filing of proof of construction within 7 years from date of the grant.

4. All trees 12 inches in diameter or larger at a point 4½ feet above the ground shall be cut into log lengths of 16 1/3 feet or in the next 2 foot longer lengths (i.e. 18 1/3, 20 1/3 etc.). The logs shall be decked adjacent to the right-of-way and the authorized officer shall be notified of the volume and location of the logdecks.

5. Subject to the attached material site stipulations which are made a part hereof by reference.

Assistant Manager
Lands Branch

cc:
Director with map
State of Alaska
Department of Highways
Box 1841
Juneau, Alaska

1/ For the purpose of this grant, public domain lands include those reserved or withdrawn for specific purposes, entered, selected, occupied and/or settled, and leased.

FLO 201
Dec. 1964