

Application for Administrative Site Plan Review

Municipality of Anchorage
 Planning Department
 PO Box 196650
 Anchorage, AK 99519-6650



PETITIONER*		PETITIONER REPRESENTATIVE (if any)	
Name (last name first) Ridge Equipment LLC		Name (last name first) Brandon Marcott	
Mailing Address 9600 Vanguard Drive		Mailing Address 1300 E 68th Ave, Suite 210	
Anchorage, AK., 99507		Anchorage, AK 99518	
Contact Phone – Day Evening 907-222-7518		Contact Phone – Day Evening 907-561-6537	
Fax		Fax	
E-mail Drew@ridgecontracting.org		E-mail brandonmarcott@triadak.com	

*Report additional petitioners or disclose other co-owners on supplemental form. Failure to divulge other beneficial interest owners may delay processing of this application.

PROPERTY INFORMATION			
Property Tax #(000-000-00-000): 016-291-20-000			
Site Street Address:			
Current legal description: (use additional sheet if necessary) T12N, R3W, Sec 18, Lot 5 Remnant			
Zoning: I-2	Acreage: 4.63	Grid #: SW2430	Underlying plat #:

SITE PLAN APPROVAL REQUESTED	
Use: Pad Construction	
<input checked="" type="checkbox"/> New SPR	<input type="checkbox"/> Amendment to approved site plan Original Case #:

I hereby certify that (I am)(I have been authorized to act for) owner of the property described above and that I petition for an administrative site plan review in conformance with Title 21 of the Anchorage Municipal Code of Ordinances. I understand that payment of the application fee is nonrefundable and is to cover the costs associated with processing this application, and that it does not assure approval of the site plan.

Brandon Marcott
 Signature Owner Representative Date: 8-24-17
(Representatives must provide written proof of authorization)

Brandon Marcott
 Print Name

Accepted by: <i>FM</i>	Poster & Affidavit: <i>NA</i>	Fee: <i>\$1,205.00</i>	Case Number: <i>2017-0122</i>
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COMPREHENSIVE PLAN INFORMATION

Anchorage 2020 Urban/Rural Services: Urban Rural

Anchorage 2020 Major Elements – site is within or abuts:

Major employment center Redevelopment/mixed use area Town center

Neighborhood commercial center Industrial center

Transit - supportive development corridor District/area plan area: _____

Chugiak-Eagle River Land Use Classification:

Commercial Industrial Parks/open space Public lands/institutions Town center

Transportation/community facility Alpine/slope affected Special study area Development reserve

Residential at _____ dwelling units per acre Environmentally sensitive area

Girdwood- Turnagain Arm Land Use Classification

Commercial Industrial Parks/open space Public lands/institutions Resort

Transportation/community facility Alpine/slope affected Special study area Reserve

Residential at _____ dwelling units per acre Mixed use Rural homestead

ENVIRONMENTAL INFORMATION (All or portion of site affected)

Wetland Classification: None "C" "B" "A"

Avalanche Zone: None Blue Zone Red Zone

Floodplain: None 100 year 500 year

Seismic Zone (Harding/Lawson): "1" "2" "3" "4" "5"

RECENT REGULATORY INFORMATION (Events that have occurred in last 5 years for all or portion of site)

Rezoning - Case Number: 2017-0070

Preliminary Plat Final Plat - Case Number(s):

Conditional Use - Case Number(s):

Zoning variance - Case Number(s):

Land Use Enforcement Action for

Building or Land Use Permit for Clearing Permit C17-1071, Fill & Grade Permit C17-1231

Wetland permit: Army Corp of Engineers Municipality of Anchorage

SUBMITTAL REQUIREMENTS

1 copy required: Signed application (original)

Watershed sign off form, completed

8 ½" by 11" copy of site plan/building plans submittal

26 copies required: Signed application (copies)

Project narrative explaining:

the project planning objectives

addressing the site plan review criteria on page 3 of this application

Site plan to scale depicting, with dimensions:

building footprints parking areas vehicle circulation and driveways

pedestrian facilities lighting grading

landscaping loading facilities freestanding sign location(s)

required open space drainage snow storage area or alternative strategy

trash receptacle location and screening detail fences

significant natural features easements project location

Building plans to scale depicting, with dimensions:

building elevations floor plans exterior colors and textures

Assembly Ordinance enacting zoning special limitations, if applicable

(Additional information may be required.)

SITE PLAN REVIEW STANDARDS (21.03.180)

The Planning Director may only approve a site plan if the director finds that **all** of the following standards are satisfied. Each standard must have a response in as much detail as it takes to explain how your project satisfies the standard. The burden of proof rests with you.

1. The site plan is consistent with any previously approved subdivision plat, planned development master plan, or any other precedent plan or land use approval;
2. The site plan complies with all applicable development and design standards set forth in this title, including but not limited to the provisions in chapter 21.04, *Zoning Districts*, chapter 21.05, *Use Regulations*, chapter 21.06, *Dimensional Standards and Measurements*, and chapter 21.07, *Development and Design Standards*;
3. The site plan addresses any significant adverse impacts that can reasonably be anticipated to result from the use, by mitigating or offsetting those impacts to the maximum extent feasible; and
4. The development proposed in the site plan is consistent with the goals, objectives, and policies of the comprehensive plan.



PHYSICAL

1300 E. 68th Ave., Suite 210
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MAILING

P.O. Box 110890
Anchorage, AK 99511

OFFICE

907-561-6537

September 11th, 2017

Land Reclamation Narrative for 92nd Ave & C Street

Project Description

Triad Engineering, on behalf of the property owner Ridge Contracting Inc., is requesting an approval of an administrative site plan review application for reclamation per Section 21.05.060E.5 of AMC. The proposed project is a 4.63 acre, I2 zoned lot located in the southwest quadrant of the intersection of C Street and 92nd Avenue in Anchorage, Alaska. The site's legal description is T12N R3W SEC 18 LT 5 REM. The intent of this development is to construct a gravel pad for further development in the future. Construction of the gravel pad requires the excavation of roughly 52,000 cubic yards of organic peat to be removed and taken off-site. This excavation will subsequently be filled with roughly 80,000 cubic yards of material to bring the pad to a finished grade elevation of approximately 88. A fill and grade permit to remove and replace the peat with usable material has already been submitted to the Municipality.

The majority of the parcel is zoned I2. The northern portion, currently zoned R2M, is pending rezone approval to I2 by the Assembly pursuant to the conditions set forth in PZC Case No 2017-0070. Adjacent properties to the west, east and south are also zoned I2. Property to the north, across 92nd Avenue, is zoned R5.

Planning Objectives

Per 21.05.060E.5 of AMC, this request for administrative site plan review is required because the estimated quantities discussed above exceed the minimum 5,000 cubic yard limit that defines the operation of Land Reclamation. Approval of this application is necessary in order to receive the fill and grade permit required to begin construction.

Site Plan Review Standards Per 21.03.180 F. Approval Criteria

- 1. The site plan is consistent with any previously approved subdivision plat, planned development master plan, or any other precedent plan or land use approval.**
The site plan is consistent with the current I2 zoning as well as the recent rezone PZC approval to I2 (heavy industrial use).
- 2. The site plan complies with all applicable development and design standards set forth in this title, including but not limited to the provisions in chapter 21.04, zoning districts, chapter 21.05, use regulations, chapter 21.06, dimensional standards and measurements and chapter 21.07, development and design standards.**
The site plan is in compliance with the applicable standards.

21.04.050.C I-2 Heavy Industrial District

2. District Specific Standards

- a. **I-2 zoned lands along the C Street corridor right-of-way south of 100th Avenue, which are located in the “interim existing allowed use area” depicted in the “interim existing allowed use area” map, shall remain, with regard to what uses are allowed, subject to the Title 21 land use regulations that existed prior to the implementation of the Title 21 Rewrite Project (2002-2012) and were current as of December 31, 2013, until the updated Anchorage Bowl Land Use Plan Map or an area-specific land use plan is adopted which reclassifies areas which are appropriate for rezoning to a commercial district.**
Not applicable.
- b. **I-2 zoned lands along the C Street corridor right-of-way north of 100th Avenue, which are located in the “interim existing allowed use area” depicted in the “interim existing allowed use area” map, shall remain, with regard to what uses are allowed, subject to the Title 21 Rewrite Project (2002-2012) and were current as of December 31, 2013 until a Planned Community District rezone is completed for the area or until December 31, 2019. In the event that no permits for Phase 1 development of the Planned Community Development have been obtained by that date, the area shall revert to a zoning of I-2, as defined in New Title 21.**
Not applicable.
- c. **Notwithstanding the allowed uses in the I-2 district in Table 21.05-1, all commercial and community uses that are permitted in the I-1 district in Table 21.05-1 shall also be permitted in the I-2 district, by the same approval method, until the updated Anchorage Bowl Land Use Plan Map or an area-specific land use plan is adopted which examines industrial land use designations.**
Not applicable to the land reclamation process.

21.05.060.E.5 Land Reclamation

a. Definition

An operation engaged primarily in increasing land-use capability by changing the land’s character or environment through fill or regarding. Land use reclamation shall include only operations at a scale involving 5,000 cubic yards or more of fill material. Site preparation as part of the development of a subdivision under a subdivision agreement is not included.

The proposed fill and grade plans illustrate an operation involving more than 5,000 cubic yards of fill material. This meets the definition of land reclamation.

b. Use-Specific Standards

- i. **If the land reclamation operation will be completed within one year, the review and approval procedure shall be an administrative site plan review. If the operation will continue for more than one year, the review and approval procedure shall be the conditional use process. If an operation was approved under the administrative site plan review process but is not completed within one year, the operator must then apply for a conditional use permit.**
The operation will be completed within one year.
- ii. **In addition to the submittal requirements in the user’s guide, an applicant for a land reclamation use shall submit the following:**

A. A site plan showing:

1. Drainage.

Sheet C2 of the plan set shows drainage arrows directing water to an onsite retention pond.

2. Existing and proposed topographical contours (ten-foot contour).

Sheet C2 of the plan set shows one foot contours.

3. Water table information.

A geotechnical investigation was completed by Northern Geotechnical Engineering in February of 2017. Results of the investigation showed that no ground water table was encountered. Soils logs are shown on sheet C3 of the plan set.

4. Points of vehicular access to the site.

Access to the site is provided at the NW corner directly off of 92nd Avenue.

B. An erosion and sediment control plan.

A storm water pollution prevention plan (SWPPP) has been submitted with the fill and grade permit. The SWPPP addresses erosion and sediment control.

C. A description of the soils types encountered on the site.

The following description is taken from NGE's report from February 2017

The project site is generally overlain by a thin (less than one foot thick) layer of forest duff (in the uplands) and marshy vegetation (in the wetlands). The forest duff is underlain by a layer of peat to approximately 5.5 to 9 feet bgs. Beneath the peat we observed a layer of silt with variable sand content to depths of 8.5 to 15 feet bgs. In some of the test pits (TP-1, TP-2, and TP-3) we observed a layer of silty gravel with sand to gravel with sand below the silt layer beginning approximately 8.5 to 11 feet bgs and extending to the bottom of the explorations. The groundwater table was not observed during our explorations. However, perched water was observed seeping into the test pits from the peat layer at approximately 3 to 4.5 feet bgs.

D. A landscaping plan for the period of the land reclamation operations and for final restoration of the site.

A landscaping plan is included with the plan set. As soon as construction activities are completed the site will be stabilized in accordance with the SWPPP.

E. A security plan to prevent casual trespass.

The site will be operated as a construction site with control/security implemented as needed during construction operations.

F. Proposed hours of operation.

Hours of operation will be between 6:00 AM to 10:00 PM, Monday through Saturday. Any work scheduled to occur outside these hours of operation will require a noise permit per AMC 15.07.070.

G. A description of the land reclamation and processing operations proposed for the site.

The land reclamation operation will create a structural pad suitable for future building construction. This process involves excavating and removing the existing organic peat down to competent in situ materials. These excavated soils will be replaced with structural, non-organic material capable of achieving 95% compaction. This operation will be closely monitored by a qualified geotechnical testing company that will provide at minimum; a bottom of hole inspection upon reaching the limits of organic soils, testing/inspection of fill placement to ensure 95% compaction, and coordinated inspection of the backfill process in conjunction with the Civil Engineer. Organic rich soils removed from the site are planned to be taken to Sand

Lake Pit via 92nd Avenue, to C Street, to Dimond Boulevard, to Sand Lake Road. Material hauled to the project site will be from an approved construction operation allowed to export material under their permit. Material hauled to the site will be via the Dimond Boulevard or O'Malley Road/Minnesota Drive corridor, to C Street, to 92nd Avenue to the project site.

H. Projected traffic counts for each point of vehicular access to the site.

Approximately 4,700 truck loads will be hauled to and from the site over a five month period.

I. An estimate of the quantity of material to be imported to the site and timetable, with supporting calculation conforming to generally accepted engineering principles.

The program AutoCAD Civil3D was used to create a surface elevation representing the estimated bottom of peat. This peat surface was analyzed against the existing ground surface to provide a total cut volume of organics of roughly 51,723 cubic yards. Likewise, the peat surface was analyzed against the proposed finished grade surface to provide a total fill volume of roughly 79,737 cubic yards. A cut/fill summary is provided on sheet C2 of the plan set.

J. A statement of the types of materials which will be accepted at the site.

Fill materials will consist of non-organic soils free of deleterious materials and capable of compaction to 95% maximum density.

K. Such materials as the director may require by regulation pursuant to AMC chapter 3.40.
Acknowledged.

iii. The site plan and erosion and sediment control plan required in subsection ii. above shall be subject to review and approval for drainage, erosion and sedimentation control; for conformance with the 208 Areawide Water Quality Management Plan; and for compliance with generally accepted sound engineering principles.

As previously addressed, the SWPPP has been submitted for review with the Fill and Grade permit associated with this development. Construction will not begin until the SWPPP has been approved.

iv. A building or land use permit is required for land reclamation.

Fill and grade permit C17-1231 has been submitted and is pending approval based on this administrative site plan review.

v. In addition to the conditional use standards of approval at 21.03.080D., the planning and zoning commission may approve a land reclamation use only if the commission finds that the use also meets the following standards;

A. Principal access to the site shall minimize the use of residential streets, and access roads shall be treated in a manner so as to make them dust free. Where access roads intersect arterials, suitable traffic controls shall be established.

Proposed access is addressed per item 21.05.060.E.5.ii.G above. 92nd Avenue is classified as a minor arterial road that provides access to residential homes (R-5 district) immediately adjacent to the north side of 92nd Avenue. Truck access is limited to the short section of 92nd Ave that immediately abuts C Street such that truck traffic along the residential homes to the north is limited to the maximum extent possible. The SWPPP that has been submitted with the Fill and Grade permit addresses street sweeping during hauling activities.

B. The site will not accept materials that are hazardous or flammable.

Acknowledged.

C. The site will not accept junk as defined in chapter 21.14.

Acknowledged.

D. The site will not accept soils contaminated with petroleum products or byproducts.

Acknowledged.

E. The reclamation operations will not pose a hazard to the public health and safety.

Acknowledged. The land reclamation process will follow standard construction practices and safety standards.

F. The reclamation operations will not generate noise, dust, surface water runoff, groundwater pollution, or traffic that will unduly impact surrounding land uses.

The land reclamation process will abide by Municipal ordinances regarding noise and hours of operations. The SWPPP identifies Best Management Practices (BMPs) to address erosion and sediment control.

G. The restoration plan for the site ensures that, after reclamation operations cease, the site will be left in a safe, stable, and aesthetically acceptable condition.

Once the land reclamation process is complete the ground will be stabilized in accordance with the SWPPP and the proposed landscaping will be installed.

H. The proposed use meets such additional standards for land reclamation conditional uses as the director may establish by regulation pursuant to AMC chapter 3.40.

Acknowledged.

vi. The planning and zoning commission may attach such conditions to the approval of the land reclamation conditional use as it finds are necessary to mitigate potential negative impacts on adjacent uses.

Acknowledged.

3. The site plan addresses any significant adverse impacts that can reasonably be anticipated to result from the use, by mitigating or offsetting those impacts to the maximum extent feasible.

Upon completion, the land reclamation process will create a level, gravel pad suitable for future development. Increased traffic and noise levels will be generated during the construction process, however these will be temporary in nature and experienced during acceptable times of the day.

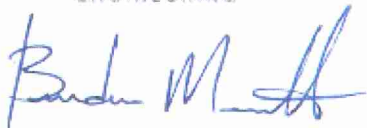
4. The development proposed in the site plan is consistent with the goals, objectives, and policies of the comprehensive plan.

Anchorage 2020 Plan - Policy #26 Key industrial lands, such as the Industrial Reserves designated on the Land Use Policy Map, shall be preserved for industrial purposes.

Land reclamation is consistent with industrial use. The completed gravel pad will be able to be further developed under the industrial use designation. Permitting land reclamation at this location will maintain Policy #26 established in the Anchorage 2020 Plan.

Submitted by:

TRIAD
ENGINEERING



Brandon Marcott, P.E.

WMS WATERCOURSE MAPPING SUMMARY

Per the requirements for watercourse verification outlined in Project Management and Engineering Operating Policy and Procedure #8 and Planning Department Operating Policy and Procedure #1 (effective June 18, 2007), MOA Watershed Management Services has inspected the following location for the presence or absence of stream channels or other watercourses, as defined in Anchorage Municipal Code (21.35).

- Project Case Number or Subdivision Name: _____
- Project Location, Tax ID, or Legal Description: parcel # 01629120
- Project Area (if different from the entire parcel or subdivision): _____

In accordance with the requirements and methods identified, WMS verifies that this parcel, project area, or application:

X KBC **DOES NOT** contain stream channels and/or drainageways, as identified in WMS field or archival mapping information.*

_____ **DOES** contain stream channels and/or drainageways AND these are located and identified on submittal documents in general congruence with WMS field and archival mapping information.
*New or additional mapping IS NOT REQUIRED.**

_____ Contains stream channels and/or drainageways BUT one or more streams or other watercourses:

- are NOT shown on submittal documents, or
- are NOT depicted adequately on submittal documents for verification, or
- are NOT located or identified on submittal documents in general congruence with WMS field and archival mapping information.

*New or additional mapping IS REQUIRED and must be re-submitted for further review and verification.**

_____ Presence of stream channels and/or drainageways is unknown AND field verification is not possible at this time. WMS will verify as soon as conditions and prioritized resources allow.

* Streams omitted in error by WMS or others remain subject to MOA Code and must be shown in new mapping upon identification of the error.

ADDITIONAL INFORMATION:

- Y N WMS written drainage recommendations are available. Preliminary Final
- Y N WMS written field inspection report or map is available. Preliminary Final
- Y N Field flagging and/or map-grade GPS data is available.

Inspection Certified By:

Date:

[Signature]

8/24/17



PHYSICAL

1300 E. 68th Ave., Suite 210
Anchorage, AK 99518

MAILING

P.O. Box 110890
Anchorage, AK 99511

OFFICE

907-561-6537

Letter of Authorization

Date: 8/25/2017

Current Project Legal: U.S. Govt. Lot 5, Section 18, T.12N., R.3W., Seward Meridian, Alaska

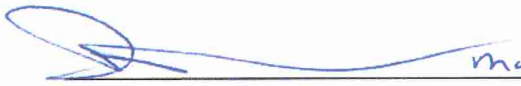
Proposed Legal: Same

Type of Authorization: Land Reclamation Application

Statement:

I hereby authorize Triad Engineering to represent me in the Municipality of Anchorage Land Reclamation Application of the above described property.

Thank you,

 *Managing member*

Ridge Equipment LLC: 9-5-17

Preliminary Determination of Wetlands & Waters

MOA Parcel 016-291-20-000

Grid SW2430

SEC 18, T12N, R3W, SM; LT 5 REM

N 61.136° W 149.886° (NAD83)

Prepared for

RIDGE EQUIPMENT LLC

9600 Vanguard Drive

Anchorage AK 99507

June 20, 2017

Prepared by

Restoration Science & Engineering, LLC

911 West 8th Ave.

Suite 100

Anchorage, Alaska 99501

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- Figure 2 - Potential Wetlands and Waters
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- Figure 4 - Field-Mapped Wetlands with MOA, NWI, and NRCS Soils on Topographic Base

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Introduction

This report summarizes a revised delineation of wetlands and waters performed by Pat Athey of Restoration Science and Engineering, LLC at a property located within the Campbell Creek watershed (HUC 1902040106) in Anchorage, Alaska. The property is described as MOA Parcel 016-291-20-000 (Grid SW2430); SEC 18, T12N, R3W, SM; LT 5 REM; N 61.136° W 149.886° (NAD83). The location is at the southwest corner of C Street and 92nd Avenue in the south part of Anchorage. The site is accessed from downtown Anchorage by travelling south on "C" Street southbound to 92nd Avenue. The property is located at the southwest corner.

This report includes figures, data, and photos taken during the inspection. The figures are provided in Attachment 1, and include the following:

Figure 1 – Site Location

Figure 2 – Potential Wetlands and Waters

Figure 3 – MOA, NWI, and NRCS Soil Mapping - Area

Figure 4 –MOA, NWI, and NRCS Soil Mapping - Site

Wetland data forms for the determination points are provided in Attachment 2. Selected photos of the property are provided in Attachment 3.

Methods

The property was inspected by Pat Athey on June 15 and 16, 2017, which is within the growing season in southcentral Alaska.

Determination of wetlands and the boundaries of wetlands with non-wetlands were based on the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Alaska Region (Version 2.0) dated September 2007 and the 1987 Corps of Engineers Wetland Delineation Manual. The primary tasks for the work included: 1) a review of existing maps and ecological data, 2) field inspection of the site and observations reported from geotechnical test pits to estimate the presence or absence of wetlands, 3) mapping of aquatic resources that are found including streams, ponds, and wetlands, and 4) field delineation of the estimated boundaries separating wetlands and uplands. Due to the snow cover and frozen soil, the field tasks were reduced and information about the soil and hydrology were limited to observations of geotechnical test pits.

Existing data that was reviewed as part of this work included, USGS Topographic Maps, Municipality of Anchorage Wetland Atlas data, National Wetlands Inventory (NWI) data, and NRCS *Soil Survey of Anchorage, Alaska*. Geographic data with high-resolution imagery and topographic data for Anchorage were used to prepare GIS maps for reviewing the data prior to the field inspection.

The methodology used for delineating wetlands is known as the triple parameter approach as described in the Alaska Regional Supplement. The premise of this approach is that the three essential characteristics of wetlands: hydrophytic (a term meaning *water-loving*) vegetation, hydric soils, and wetland hydrology must all be present to have a positive wetland determination. These methods were used to achieve accurate characterization of the wetland community at specific

observation points and to correlate the findings with existing aerial imagery and ground conditions to identify boundary points in the field. The determination points were numbered sequentially (e.g., "DP-1") for tracking on wetland determination data forms published in the Alaska Regional Manual.

Soils were evaluated by digging test pits approximately 20-inches in depth and removing an intact soil profile for inspection and documenting with photos. Inspections were made immediately upon removal of the soil profile from the ground as color and saturation changes may occur rapidly when exposed to the air. Correlation of the inspected soil profiles with published soil surveys by NRCS were evaluated. Soils were evaluated for hydric indicators by digging test pits and comparing the soil to the listed indicators provided in the Regional Guidance document. Soil colors were evaluated with a Munsell Soil Color Chart (Kollmogren, 1990) or a Globe Soil Color Book (Visual Color Systems) for soil matrix and redox colors along with comparison with listed hydric soil indicators in the Regional Manual, including histic soils, the presence of hydrogen sulfide, gleyed (depleted) soil color, redoximorphic characters, and other indications of prolonged soil saturation during the growing season.

Water must be present for wetlands to exist; however, it does not need to be present throughout the entire year. Wetland hydrology is present when there is permanent or periodic inundation or soil saturation for a significant period during the growing season, which is specified as two weeks or more by Alaska Regional Guidance. Indicators of wetland hydrology include areas of ponding or soil saturation, evidence of previous water inundation such as dry algae on bare soil, watermarks on soils or leaves, and drainage patterns among others. Where positive indicators are observed, it is assumed that wetland hydrology occurs for a significant period of the growing season. Shallow soil pits were not possible due to the frozen conditions and hydrology inspections were limited to the deeper geotechnical test pit observations.

The regional climate data from the Anchorage National Weather Service office was reviewed for the cumulative precipitation for the period of the inspection to evaluate whether normal conditions were present. In cases of extreme low or high cumulative precipitation compared to historical averages, the potential impact to the evaluation of wetland hydrology is an important consideration in wetland determination.

Dominant plant species were characterized in an approximately 30-foot diameter circle centered at the soil pit. Within this circle, the total live aerial cover of each plant species was estimated visually. The vegetation cover of each species and its assigned wetland indicator status were used to calculate indices of hydrophytic vegetation as provided in the Wetland Data Forms. Plant species were identified using regional plant guides, including Collet (2002), Dickenson (1999), Hulten (1968), Johnson, et al. (1995), Pratt (1989), Tande and Lipkin (2003), Viereck and Little (1972), among others. Plant species names used on data forms followed the nomenclature of Lichvar (2012) which also provides the wetland indicator status of the plants.

Determination points (DPs) were flagged with a short piece of lime green flagging. Wetland boundary points, if present, were flagged in the field with pink flagging with a running "Wetland Delineation" printed in black letters and marked in the field with a unique identifier (e.g., A-1, B-2,

etc.) and the GPS waypoint number. The geographic coordinates of wetland Determination Points, wetland boundaries, and other features were recorded in the field with a handheld GPS unit.

Findings

Potential jurisdictional wetlands were identified on the property as indicated in Figure 2, which shows that nearly the entire property is wetland, with the slightly-elevated road prism of the C Street corridor determined as uplands. There is a consistent high water table within 12-inches of the surface throughout the site west of the mapped wetland boundary along the eastern property line. The presence of this water table in mid-June provides strong evidence that wetland hydrology has been consistent for more than two weeks of the growing season, which began more than four weeks prior and is likely to persist for several weeks or more. Table 1 summarizes the results of determination point data.

Conditions during the inspection of the property were considered normal with respect to climate and specifically the cumulative precipitation in the weeks and months prior to inspecting soil pits for wetland hydrology. The seasonal soil moisture regime prior to the test pit was normal based on the cumulative precipitation in Anchorage. The Anchorage AK Climate Summary for June 16, 2017 was retrieved from the National Weather Service¹. Since June 1, there was 0.27 inches of precipitation recorded, compared to a normal cumulative value of 0.48 inches, indicating a deficit of -0.21 inches. Since January 1, there has been 5.10 inches compared to a normal value of 3.72 inches cumulative precipitation, an increase from the normal value of 3.72 inches, which mostly represents snowfall during late winter and early spring. Therefore, based on these data the cumulative precipitation is considered normal for the season and the hydrology inspections made are expected to be representative of normal conditions at the site.

The wetlands on the property can be characterized generally as the NWI mapping indicates: the eastern portion of the property is open forest of paper birch and a mixture of white and black spruce trees, with saturated soil conditions (PFO1/4B); the central part consisting of a closed forest of black spruce trees and deciduous shrubs (PFO4/SS1B); and, the western part consisting of a dense thicket of low shrubs including sweet gale, swamp birch, shrubby cinquefoil, mixed with small and stunted black spruce saplings, along with scattered bluejoint grass and sedges, all in saturated and inundated, black, greasy, organic soil (PSS1/EM1B).

¹ Anchorage Weather Forecast Office, 6930 Sand Lake Road, Anchorage, AK 99502.
<http://w2.weather.gov/climate/index.php?wfo=paaf>; accessed June 20, 2017.

Table 1. Summary of Wetland Determination Data

Location	Vegetation Hydrophytic	Wetland Hydrology ¹	Soil Hydric	Wetland
DP-1	X	X	X	X
DP-2	X	X	X	X
DP-3	X	X	X	X
DP-4	X	X	X	X
DP-5	X	X	X	X
DP-6	X			
DP-7	X	X	X	X

X = Positive Result.

The wetlands on the property are identified in the Anchorage Wetlands Management Plan (AWMP; MOA, 2014) as **North - EAST OF MINNESOTA DRIVE TO C ST /NORTH OF WEST 100TH AVENUE TO 92ND** (150 acres; Public & Private Ownership) (Scores: Hydrology = 131; Habitat = 101; Species Occurrence = 46; Social Function = 39) with the following Management Strategies, Enforceable and Administrative Policies:

Values for stormwater and flood attenuation, water quality, size of contiguous habitat: moderate to high migratory habitat; and rare patterned ground wetlands. The site has enhancement possibilities, i.e., daylight the piped stream which is a tributary to Campbell Creek/Lake. Hydrology, habitat, and drainage pattern information shall be required in the permit and platting process. Must retain patterned ground wetlands and integrity of the larger bog to the maximum extent. Area has been problematic because lots exist as a paper plat only with no subdivision improvements. Laurel Acres Subdivision, Tract F is preserved as open space, plat #71-44. (Designation A/B)

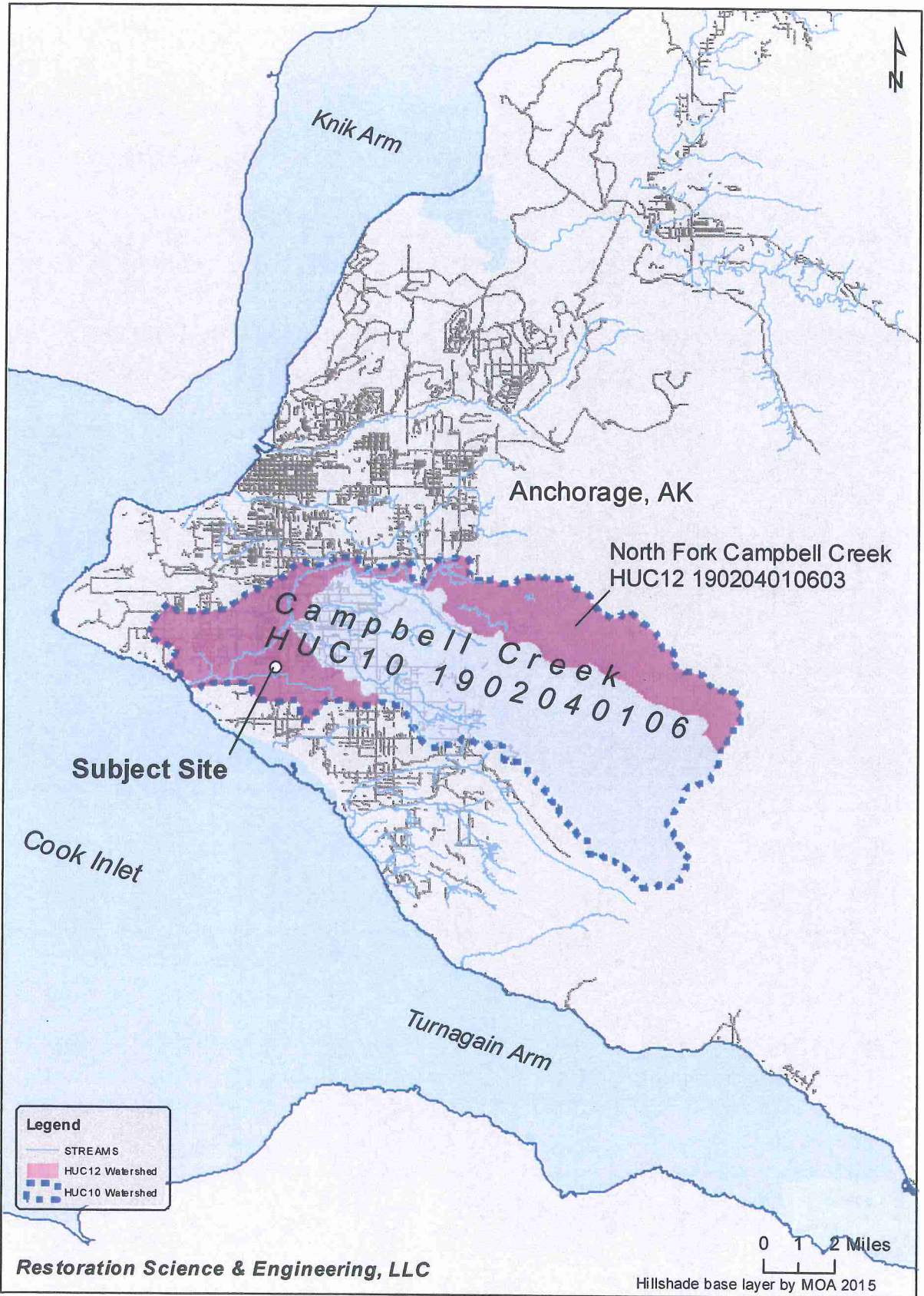
The wetlands on the subject property are believed to be connected to Turnagain Arm and Cook Inlet by intermittent flow through drainageways and ditches that discharge into Campbell Creek.

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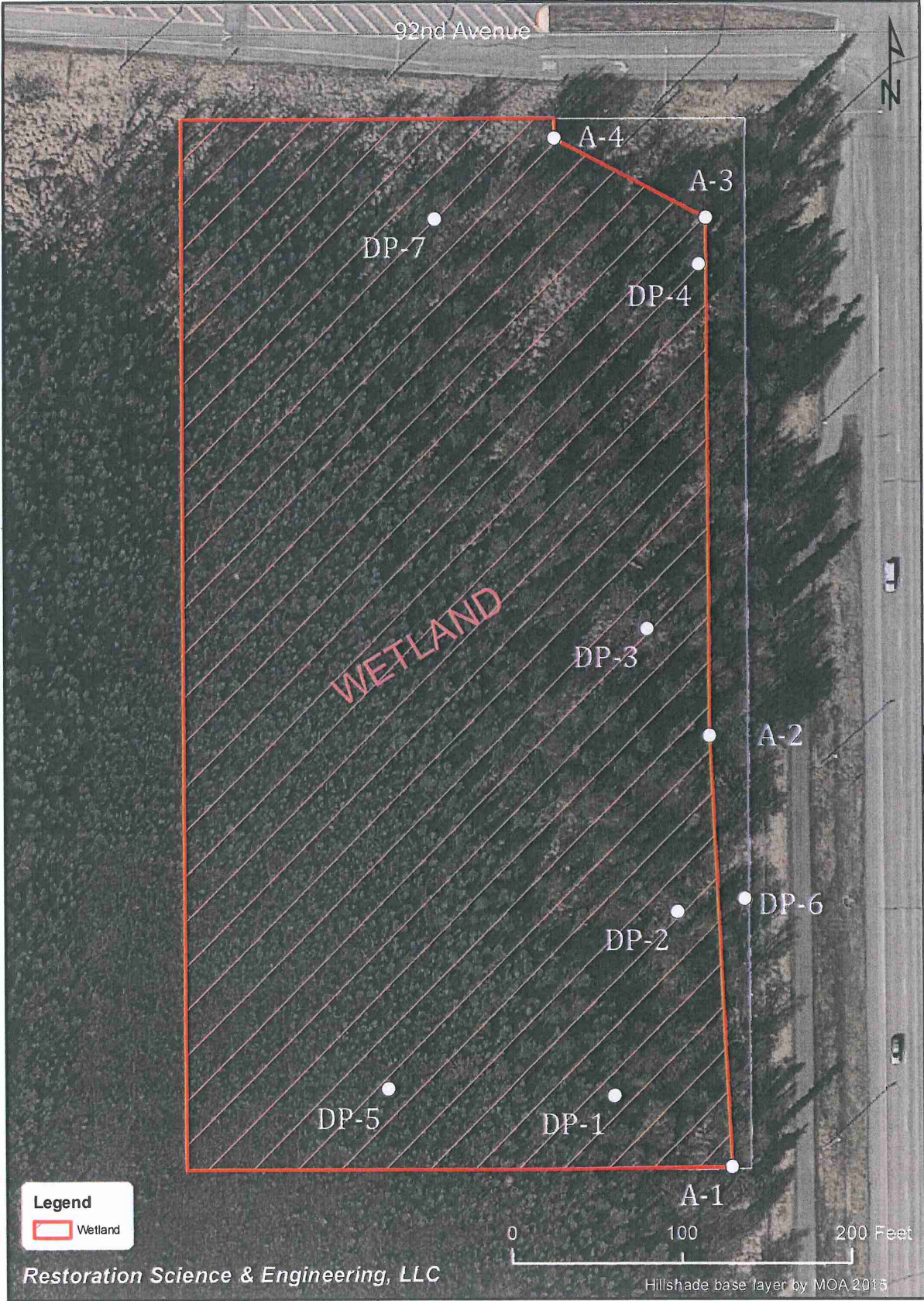
Attachment 1

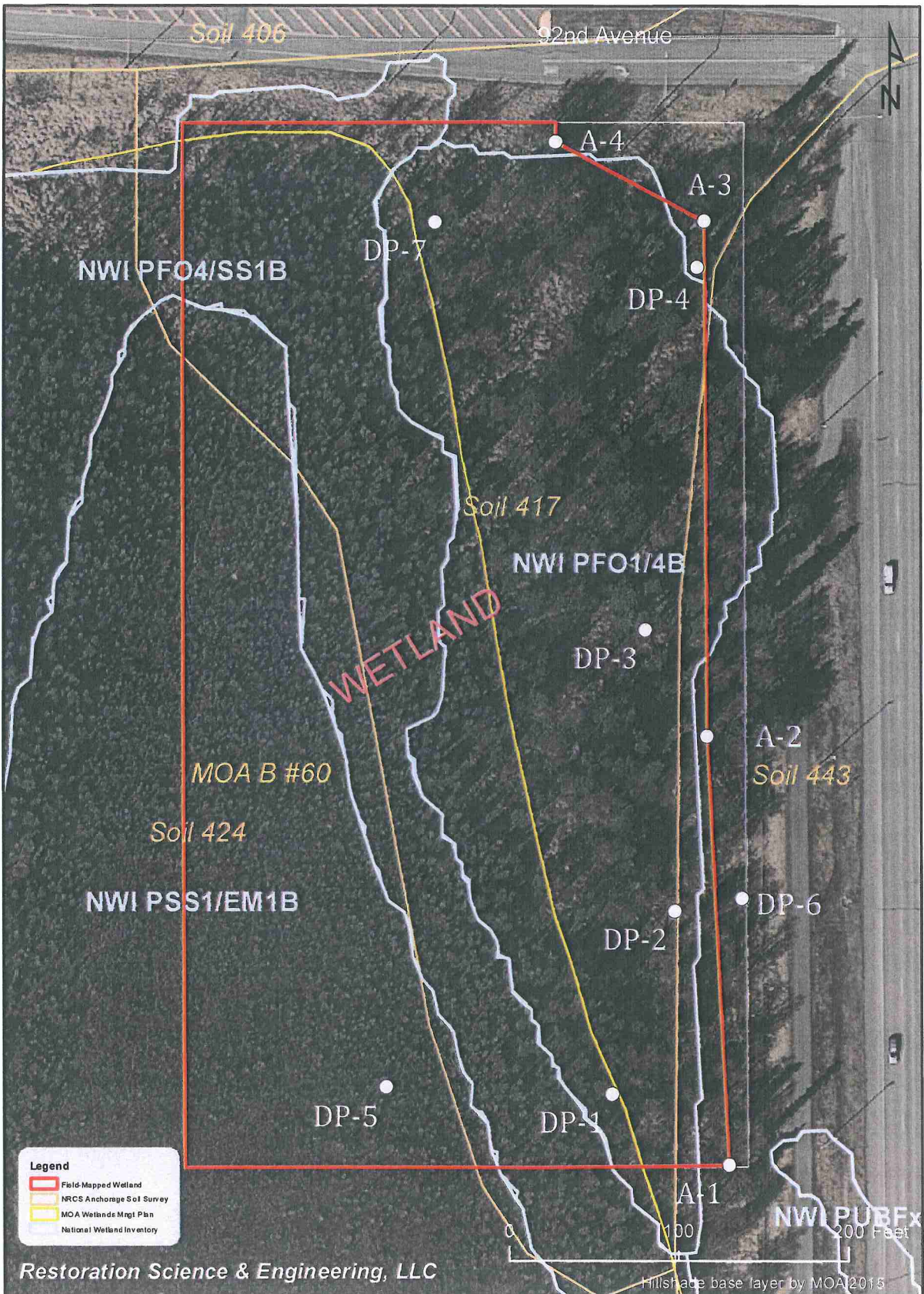
Figures



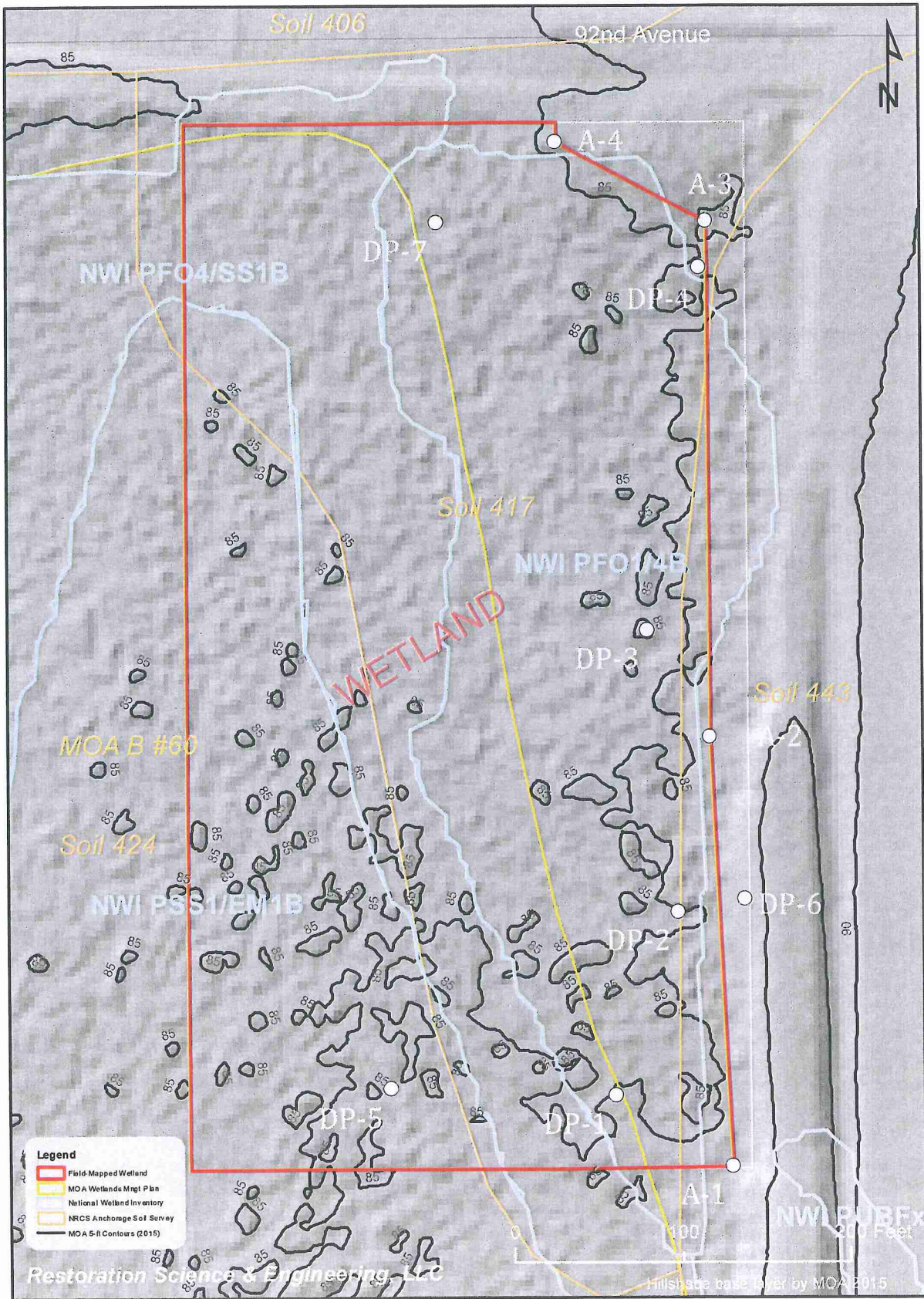
Restoration Science & Engineering, LLC

0 1 2 Miles
Hillshade base layer by MOA 2015





Restoration Science & Engineering, LLC



Attachment 2

Data Forms

WETLAND DETERMINATION DATA FORM – Alaska Region

MOA Parcel 016-291-20-000 (Grid SW2430); SEC 18,
 Project/Site: T12N, R3W, SM; LT 5 REM; "C" St. & 92nd Ave., Borough/City: Anchorage Sampling Date: 6/15/2017
 Applicant/Owner: RIDGE EQUIPMENT LLC Sampling Point: DP-1
 Investigator(s): Pat Athey/ RSE Landform (hillside, terrace, hummocks, etc.): Glacial plain
 Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion: Southcentral Lat: 61.135802 Long: -149.886808 Datum: NAD83
 Soil Map Unit Name: 417—Doroshin peat, 0 to 7 percent slopes NWI classification: PFO1/4B
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------

The site has been cleared by removal of trees and shrubs. Woody debris covers much of the the ground surface. The saturated, organic soils and high water table during the normal dry season for the region confirms there is hydric soil and wetland hydrology at the site. Vegetation prior to clearing was dominated by an open canopy of paper birch and white spruce trees with a groundcover of bluejoint grass.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u>No Trees</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)														
2. _____																		
3. _____																		
4. _____																		
Total Cover: <u>0</u> 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>57</u></td> <td>x 3 = <u>171</u></td> </tr> <tr> <td>FACU species <u>2</u></td> <td>x 4 = <u>8</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: <u>59</u> (A)</td> <td><u>179</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.03</u>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = <u>0</u>	FACW species _____	x 2 = <u>0</u>	FAC species <u>57</u>	x 3 = <u>171</u>	FACU species <u>2</u>	x 4 = <u>8</u>	UPL species _____	x 5 = _____	Column Totals: <u>59</u> (A)	<u>179</u> (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = <u>0</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species <u>57</u>	x 3 = <u>171</u>																	
FACU species <u>2</u>	x 4 = <u>8</u>																	
UPL species _____	x 5 = _____																	
Column Totals: <u>59</u> (A)	<u>179</u> (B)																	
Sapling/Shrub Stratum																		
1. <u>Rosa acicularis</u>	<u>1</u>	<u>X</u>	<u>FACU</u>															
2. <u>Prunus padus</u>	<u>1</u>	<u>X</u>	<u>FACU</u>															
3. <u>Salix scouleriana</u>	<u>1</u>	<u>X</u>	<u>FAC</u>															
4. <u>Rubus pedatus</u>	<u>1</u>	<u>X</u>	<u>FAC</u>															
5. _____																		
6. _____																		
Total Cover: <u>4</u> 50% of total cover: <u>2</u> 20% of total cover: <u>1</u>																		
Herb Stratum																		
1. <u>Equisetum arvense</u>	<u>50</u>	<u>X</u>	<u>FAC</u>															
2. <u>Calamagrostis canadensis</u>	<u>5</u>		<u>FAC</u>															
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
Total Cover: <u>55</u> 50% of total cover: <u>28</u> 20% of total cover: <u>11</u>																		
Plot size (radius, or length x width) <u>30-ft diameter</u> % Bare Ground <u>10</u> % Cover of Wetland Bryophytes <u>0</u> Total Cover of Bryophytes <u>0</u> (Where applicable)																		
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																		

Remarks: The site has been cleared by removal of trees and shrubs. Woody debris covers much of the the ground surface. Vegetation prior to clearing was likely dominated by an open canopy of paper birch and spruce trees, some showing white spruce characteristics and others showing black spruce characteristics. There was likely a groundcover dominated by bluejoint grass (FAC) and a variety of other FAC and FACU herbs; shrubs included Sitka alder (FAC) and prickly rose (FACU).

SOIL

Sampling Point: DP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
+20-0	7.5YR 2.5/1	100						Black muck (histic) with bits of wood and debris mixed within. Saturated below 2-in.,

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

- | | | |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks). |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

Restrictive Layer (if present):

Type: High water table
 Depth (inches): 8

Hydric Soil Present? Yes No

Remarks: Histic soil that is commonly found in black spruce wetlands in the region.

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | |
|-----------------------------------------------------------|--------------------------------------------------------------------|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | |
| <input type="checkbox"/> Iron Deposits (B5) | |
| <input type="checkbox"/> Surface Soil Cracks (B6) | |

- | |
|------------------------------------------------------------------------|
| <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 8
 Saturation Present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: A high water table during the regional dry season coupled with saturation within 12 inches confirms wetland hydrology.

WETLAND DETERMINATION DATA FORM – Alaska Region

MOA Parcel 016-291-20-000 (Grid SW2430); SEC 18,
 Project/Site: T12N, R3W, SM; LT 5 REM; "C" St. & 92nd Ave., Borough/City: Anchorage Sampling Date: 6/15/2017
 Applicant/Owner: RIDGE EQUIPMENT LLC Sampling Point: DP-2
 Investigator(s): Pat Athey/ RSE Landform (hillside, terrace, hummocks, etc.): Glacial plain
 Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion: Southcentral Lat: 61.136096 Long: -149.886593 Datum: NAD83
 Soil Map Unit Name: 417—Doroshin peat, 0 to 7 percent slopes NWI classification: PFO1/4B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

The site has been cleared by removal of trees and shrubs. Woody debris covers much of the the ground surface. The saturated, organic soils and high water table during the normal dry season for the region confirms there is hydric soil and wetland hydrology at the site. Vegetation prior to clearing was dominated by an open canopy of paper birch and white spruce trees with a groundcover of bluejoint grass.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>No Trees</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u>	(A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u>	(B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.329</u>	(A/B)
4. _____				Prevalence Index worksheet:	
Total Cover: <u>0</u>				Total % Cover of:	Multiply by:
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				OBL species	x 1 = <u>0</u>
Sapling/Shrub Stratum				FACW species	x 2 = <u>0</u>
1. <u>Rosa acicularis</u>	<u>10</u>	<u>X</u>	<u>FACU</u>	FAC species	x 3 = <u>240</u>
2. <u>Cornus canadensis</u>	<u>5</u>	<u>X</u>	<u>FACU</u>	FACU species	x 4 = <u>68</u>
3. <u>Oplopanax horridus</u>	<u>1</u>		<u>FACU</u>	UPL species	x 5 = _____
4. _____				Column Totals:	<u>97</u> (A) <u>308</u> (B)
5. _____				Prevalence Index = B/A = <u>3.17</u>	
6. _____				Hydrophytic Vegetation Indicators:	
Total Cover: <u>16</u>				<u>No</u> Dominance Test is >50%	
50% of total cover: <u>8</u> 20% of total cover: <u>3</u>				<u>No</u> Prevalence Index is ≤3.0	
Herb Stratum				____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
1. <u>Equisetum arvense</u>	<u>75</u>	<u>X</u>	<u>FAC</u>	____ Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Calamagrostis canadensis</u>	<u>5</u>		<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.	
3. <u>Streptopus amplexifolius</u>	<u>1</u>		<u>FACU</u>		
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
Total Cover: <u>81</u>				Hydrophytic Vegetation Present?	
50% of total cover: <u>41</u> 20% of total cover: <u>16</u>				Yes <u>X</u>	No _____
Plot size (radius, or length x width) <u>30-ft diameter</u>			% Bare Ground <u>5</u>		
% Cover of Wetland Bryophytes <u>0</u>		Total Cover of Bryophytes <u>0</u>			
(Where applicable)					

Remarks: The site has been cleared by removal of trees and shrubs. Woody debris covers much of the the ground surface. Vegetation prior to clearing was likley dominated by an open canopy of paper birch and spruce trees, some showing white spruce characteristics and others showing black spruce characteristics. There was likely a groundcover dominated by bluejoint grass (FAC) and a variety of other FAC and FACU herbs; shrubs included Sitka alder (FAC) and prickly rose (FACU).

WETLAND DETERMINATION DATA FORM – Alaska Region

MOA Parcel 016-291-20-000 (Grid SW2430); SEC 18,
 Project/Site: T12N, R3W, SM; LT 5 REM; "C" St. & 92nd Ave., Borough/City: Anchorage Sampling Date: 6/15/2017
 Applicant/Owner: RIDGE EQUIPMENT LLC Sampling Point: DP-3
 Investigator(s): Pat Athey/ RSE Landform (hillside, terrace, hummocks, etc.): Glacial plain
 Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion: Southcentral Lat: 61.136549 Long: -149.88669 Datum: NAD83
 Soil Map Unit Name: 417—Doroshin peat, 0 to 7 percent slopes NWI classification: PFO1/4B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

The site has been cleared by removal of trees and shrubs. Woody debris covers much of the the ground surface. The saturated, organic soils and high water table during the normal dry season for the region confirms there is hydric soil and wetland hydrology at the site. Vegetation prior to clearing was dominated by an open canopy of paper birch and white spruce trees with a groundcover of bluejoint grass.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>No Trees</u>	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u>	(A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u>	(B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.670</u>	(A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:	
Total Cover: <u>0</u>				Total % Cover of:	
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				OBL species	x 1 = <u>0</u>
Sapling/Shrub Stratum				FACW species	x 2 = <u>0</u>
1. <u>Cornus canadensis</u>	<u>5</u>	<u>X</u>	<u>FACU</u>	FAC species	x 3 = <u>300</u>
2. _____	_____	_____	_____	FACU species	x 4 = <u>40</u>
3. _____	_____	_____	_____	UPL species	x 5 = _____
4. _____	_____	_____	_____	Column Totals:	<u>110</u> (A) <u>340</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.09</u>	
6. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:	
Total Cover: <u>5</u>				Yes Dominance Test is >50%	
50% of total cover: <u>3</u> 20% of total cover: <u>1</u>				No Prevalence Index is ≤3.0	
Herb Stratum				Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
1. <u>Equisetum arvense</u>	<u>75</u>	<u>X</u>	<u>FAC</u>	Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Calamagrostis canadensis</u>	<u>25</u>	<u>X</u>	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.	
3. <u>Streptopus amplexifolius</u>	<u>5</u>	_____	<u>FACU</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
Total Cover: <u>105</u>				Hydrophytic Vegetation Present?	
50% of total cover: <u>53</u> 20% of total cover: <u>21</u>				Yes <u>X</u> No _____	
Plot size (radius, or length x width) <u>30-ft diameter</u> % Bare Ground <u>5</u>					
% Cover of Wetland Bryophytes <u>0</u> Total Cover of Bryophytes <u>0</u>					
(Where applicable)					

Remarks: The site has been cleared by removal of trees and shrubs. Woody debris covers much of the the ground surface. Vegetation prior to clearing was likley dominated by an open canopy of paper birch and spruce trees, some showing white spruce characteristics and others showing black spruce characteristics. There was likely a groundcover dominated by bluejoint grass (FAC) and a variety of other FAC and FACU herbs; shrubs included Sitka alder (FAC) and prickly rose (FACU).

WETLAND DETERMINATION DATA FORM – Alaska Region

MOA Parcel 016-291-20-000 (Grid SW2430); SEC 18,
 Project/Site: T12N, R3W, SM; LT 5 REM; "C" St. & 92nd Ave., Borough/City: Anchorage Sampling Date: 6/15/2017
 Applicant/Owner: RIDGE EQUIPMENT LLC Sampling Point: DP-4
 Investigator(s): Pat Athey/ RSE Landform (hillside, terrace, hummocks, etc.): Glacial plain
 Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion: Southcentral Lat: 61.137132 Long: -149.886512 Datum: NAD83
 Soil Map Unit Name: 417—Doroshin peat, 0 to 7 percent slopes NWI classification: PFO1/4B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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The site has been cleared by removal of trees and shrubs. Woody debris covers much of the the ground surface. The saturated, organic soils and high water table during the normal dry season for the region confirms there is hydric soil and wetland hydrology at the site. Vegetation prior to clearing was dominated by an open canopy of paper birch and white spruce trees with a groundcover of bluejoint grass.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>No Trees</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.670</u> (A/B)
4. _____				Prevalence Index worksheet:
Total Cover: <u>0</u>				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				OBL species _____ x 1 = <u>0</u>
				FACW species _____ x 2 = <u>0</u>
Sapling/Shrub Stratum				FAC species <u>115</u> x 3 = <u>345</u>
1. <u>Prunus padus</u>	<u>5</u>	<u>X</u>	<u>FACU</u>	FACU species <u>11</u> x 4 = <u>44</u>
2. <u>Cornus canadensis</u>	<u>1</u>	<u>X</u>	<u>FACU</u>	UPL species _____ x 5 = _____
3. _____				Column Totals: <u>126</u> (A) <u>389</u> (B)
4. _____				Prevalence Index = B/A = <u>3.08</u>
5. _____				Hydrophytic Vegetation Indicators:
6. _____				
Total Cover: <u>6</u>				<u>No</u> Prevalence Index is ≤3.0
50% of total cover: <u>3</u> 20% of total cover: <u>1</u>				____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Herb Stratum				____ Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Equisetum arvense</u>	<u>90</u>	<u>X</u>	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.
2. <u>Calamagrostis canadensis</u>	<u>25</u>	<u>X</u>	<u>FAC</u>	
3. <u>Streptopus amplexifolius</u>	<u>5</u>		<u>FACU</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
Total Cover: <u>120</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
50% of total cover: <u>60</u> 20% of total cover: <u>24</u>				
Plot size (radius, or length x width) <u>30-ft diameter</u> % Bare Ground <u>1</u>				
% Cover of Wetland Bryophytes <u>0</u> Total Cover of Bryophytes <u>0</u>				
(Where applicable)				

Remarks: The site has been cleared by removal of trees and shrubs. Woody debris covers much of the the ground surface. Vegetation prior to clearing was likely dominated by an open canopy of paper birch and spruce trees, some showing white spruce characteristics and others showing black spruce characteristics. There was likely a groundcover dominated by bluejoint grass (FAC) and a variety of other FAC and FACU herbs; shrubs included Sitka alder (FAC) and prickly rose (FACU).

SOIL

Sampling Point: DP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type ¹			
+11- +8	7.5YR 5/2	100					Organics and roots with silt, dry	
+8-0	7.5YR 2.5/1	100					Black muck (histic) with bits of wood and debris mixed within. Saturated at 8-in. depth.	
0-8	7.5YR 6/2	50	10R 5/8 7.5YR 7/3	25 25	C/M		clayey silt loam, saturated	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input checked="" type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue	
<input type="checkbox"/> Thick Dark Surface (A12)		
<input type="checkbox"/> Alaska Gleyed (A13)	³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present.	
<input type="checkbox"/> Alaska Redox (A14)	⁴ Give details of color change in Remarks.	
<input type="checkbox"/> Alaska Gleyed Pores (A15)		

Restrictive Layer (if present): Type: <u>Suspected water table within 24-in.</u> Depth (inches): <u>24?</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks: Histic soil that is commonly found in black spruce wetlands in the region.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: <u>Saturation is near the depth limit but the presence of faint hydrogen sulfide confirms there is wetland hydrology.</u>	

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: MOA Parcel 016-291-20-000 (Grid SW2430); SEC 18, T12N, R3W, SM; LT 5 REM; "C" St. & 92nd Ave., Borough/City: Anchorage Sampling Date: 6/16/2017
 Applicant/Owner: RIDGE EQUIPMENT LLC Sampling Point: DP-5
 Investigator(s): Pat Athey/ RSE Landform (hillside, terrace, hummocks, etc.): Glacial plain
 Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion: Southcentral Lat: 61.135813 Long: -149.887562 Datum: NAD83
 Soil Map Unit Name: 424—Icknuun peat, 0 to 3 percent slopes NWI classification: PSS1/EM1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	

The site has not been cleared. Native vegetation occupies the area. Soil is organic and saturated. A high water table was encountered. The vegetation is characteristic of wetlands in the region.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Picea mariana</u>	<u>10</u>	<u>X</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u>	(A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u>	(B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u>	(A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:	
Total Cover: <u>10</u>				Total % Cover of:	
50% of total cover: <u>5</u> 20% of total cover: <u>2</u>				OBL species <u>10</u>	x 1 = <u>10</u>
Sapling/Shrub Stratum				FACW species <u>35</u>	x 2 = <u>70</u>
1. <u>Betula nana</u>	<u>50</u>	<u>X</u>	<u>FAC</u>	FAC species <u>110</u>	x 3 = <u>330</u>
2. <u>Dasiphora fruticosa</u>	<u>50</u>	<u>X</u>	<u>FAC</u>	FACU species _____	x 4 = <u>0</u>
3. <u>Picea mariana</u>	<u>25</u>	_____	<u>FACW</u>	UPL species _____	x 5 = _____
4. <u>Myrica gale</u>	<u>10</u>	_____	<u>OBL</u>	Column Totals: <u>155</u>	(A) <u>410</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.64</u>	
6. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:	
Total Cover: <u>135</u>				<u>Yes</u> Dominance Test is >50%	
50% of total cover: <u>68</u> 20% of total cover: <u>27</u>				<u>Yes</u> Prevalence Index is ≤3.0	
Herb Stratum				____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
1. <u>Calamagrostis canadensis</u>	<u>10</u>	<u>x</u>	<u>FAC</u>	____ Problematic Hydrophytic Vegetation ¹ (Explain)	
2. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
Total Cover: <u>10</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
50% of total cover: <u>5</u> 20% of total cover: <u>2</u>					
Plot size (radius, or length x width) <u>30-ft diameter</u>			% Bare Ground <u>0</u>		
% Cover of Wetland Bryophytes <u>95</u>		Total Cover of Bryophytes <u>95</u>			
(Where applicable)					

Remarks: Vegetation is typical for black spruce-dominated wetlands in the region.

SOIL

Sampling Point: DP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
+16- +13	7.5YR 5/2	50					Moss and organics, roots.
	7.5YR 5/8	50					
+13 - 0	7.5YR 2.5/1	100					Black muck (histic) with bits of wood and debris mixed within. Saturated at 2-in. depth.
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix.							
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:					
<input checked="" type="checkbox"/> Histosol or Histel (A1)			<input type="checkbox"/> Alaska Color Change (TA4) ⁴	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer			
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Alaska Redox With 2.5Y Hue				
<input type="checkbox"/> Thick Dark Surface (A12)			³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present.				
<input type="checkbox"/> Alaska Gleyed (A13)			⁴ Give details of color change in Remarks.				
<input type="checkbox"/> Alaska Redox (A14)							
<input type="checkbox"/> Alaska Gleyed Pores (A15)							
Restrictive Layer (if present):							
Type: <u>High water table</u>							
Depth (inches): <u>7</u>				Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Remarks: Histic soil that is commonly found in black spruce wetlands in the region.							

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water-stained Leaves (B9)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Salt Deposits (C5)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>7</u>		
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: A high water table during the regional dry season coupled with saturation within 12 inches confirms wetland hydrology.			

WETLAND DETERMINATION DATA FORM – Alaska Region

MOA Parcel 016-291-20-000 (Grid SW2430); SEC 18,
 Project/Site: T12N, R3W, SM; LT 5 REM; "C" St. & 92nd Ave., Borough/City: Anchorage Sampling Date: 6/16/2017
 Applicant/Owner: RIDGE EQUIPMENT LLC Sampling Point: DP-6
 Investigator(s): Pat Athey/ RSE Landform (hillside, terrace, hummocks, etc.): Road Prism
 Local relief (concave, convex, none): Convex Slope (%): 15
 Subregion: Southcentral Lat: 61.136117 Long: -149.886367 Datum: NAD83
 Soil Map Unit Name: 443—Pits, gravel NWI classification: PFO1/4B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

The site is elevated approximately 3-ft above most of the site on a fill prism for the adjacent C Street corridor. Soil is dry, silty gravel. There are no hydric soil indicators present. The vegetation is dominated by non-wetland species of shrubs and field horsetail.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>No Trees</u>	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u>	(A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u>	(B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u>	(A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:	
Total Cover: <u>0</u>				Total % Cover of:	Multiply by:
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				OBL species _____	x 1 = <u>0</u>
Sapling/Shrub Stratum				FACW species _____	x 2 = <u>0</u>
1. <u>Rubus idaeus</u>	<u>5</u>	<u>X</u>	<u>FACU</u>	FAC species <u>125</u>	x 3 = <u>375</u>
2. <u>Ribes triste</u>	<u>5</u>	<u>X</u>	<u>FAC</u>	FACU species <u>11</u>	x 4 = <u>44</u>
3. <u>Rosa acicularis</u>	<u>1</u>	_____	_____	UPL species _____	x 5 = _____
4. _____	_____	_____	_____	Column Totals: <u>136</u>	(A) <u>419</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.08</u>	
6. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:	
Total Cover: <u>11</u>				<u>Yes</u> Dominance Test is >50%	
50% of total cover: <u>6</u> 20% of total cover: <u>2</u>				<u>No</u> Prevalence Index is ≤3.0	
Herb Stratum				____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
1. <u>Equisetum arvense</u>	<u>95</u>	<u>X</u>	<u>FAC</u>	____ Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Calamagrostis canadensis</u>	<u>25</u>	<u>X</u>	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.	
3. <u>Taraxacum officinale</u>	<u>5</u>	_____	<u>FACU</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
Total Cover: <u>125</u>				Hydrophytic Vegetation Present?	
50% of total cover: <u>63</u> 20% of total cover: <u>25</u>				Yes <u>X</u> No _____	
Plot size (radius, or length x width) <u>30-ft diameter</u>			% Bare Ground <u>5</u>		
% Cover of Wetland Bryophytes <u>0</u>		Total Cover of Bryophytes <u>0</u>			
(Where applicable)					

Remarks: Common native groundcover species found in open areas of the region, including uplands and wetlands.

SOIL

Sampling Point: DP-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
+2-0	7.5YR 4/3	50					Silt loam with roots and organics
	7.5YR 4/4	50					
0-19	7.5YR 4/3	100					Silt loam with gravels
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix.							
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:					
<input type="checkbox"/> Histosol or Histel (A1)			<input type="checkbox"/> Alaska Color Change (TA4) ⁴			<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder	
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Alaska Alpine Swales (TA5)			<input type="checkbox"/> Underlying Layer	
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Alaska Redox With 2.5Y Hue			<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Thick Dark Surface (A12)							
<input type="checkbox"/> Alaska Gleyed (A13)			³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology,				
<input type="checkbox"/> Alaska Redox (A14)			and an appropriate landscape position must be present.				
<input type="checkbox"/> Alaska Gleyed Pores (A15)			⁴ Give details of color change in Remarks.				
Restrictive Layer (if present):							
Type: <u>None</u>							
Depth (inches): _____						Hydric Soil Present? Yes _____ No <u>X</u>	
Remarks: <u>Histic soil overlying depleted mineral soil with redox concentrations.</u>							

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water-stained Leaves (B9)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Salt Deposits (C5)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present?	Yes _____ No <u>X</u> Depth (inches): _____		
Water Table Present?	Yes _____ No <u>X</u> Depth (inches): _____		
Saturation Present? (includes capillary fringe)	Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: <u>No indications of wetland hydrology present.</u>			

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: MOA Parcel 016-291-20-000 (Grid SW2430); SEC 18, T12N, R3W, SM; LT 5 REM; "C" St. & 92nd Ave., Borough/City: Anchorage Sampling Date: 6/16/2017
 Applicant/Owner: RIDGE EQUIPMENT LLC Sampling Point: DP-7
 Investigator(s): Pat Athey/ RSE Landform (hillside, terrace, hummocks, etc.): Glacial plain
 Local relief (concave, convex, none): Flat Slope (%): 0
 Subregion: Southcentral Lat: 61.137204612 Long: -149.88739141 Datum: NAD83
 Soil Map Unit Name: 417—Doroshin peat, 0 to 7 percent slopes NWI classification: PFO4/SS1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No	
Wetland Hydrology Present?	Yes <u>X</u>	No	

The site has not been cleared. Native vegetation occupies the area. Soil is organic and surface water is present. The vegetation is characteristic of wetlands in the region.

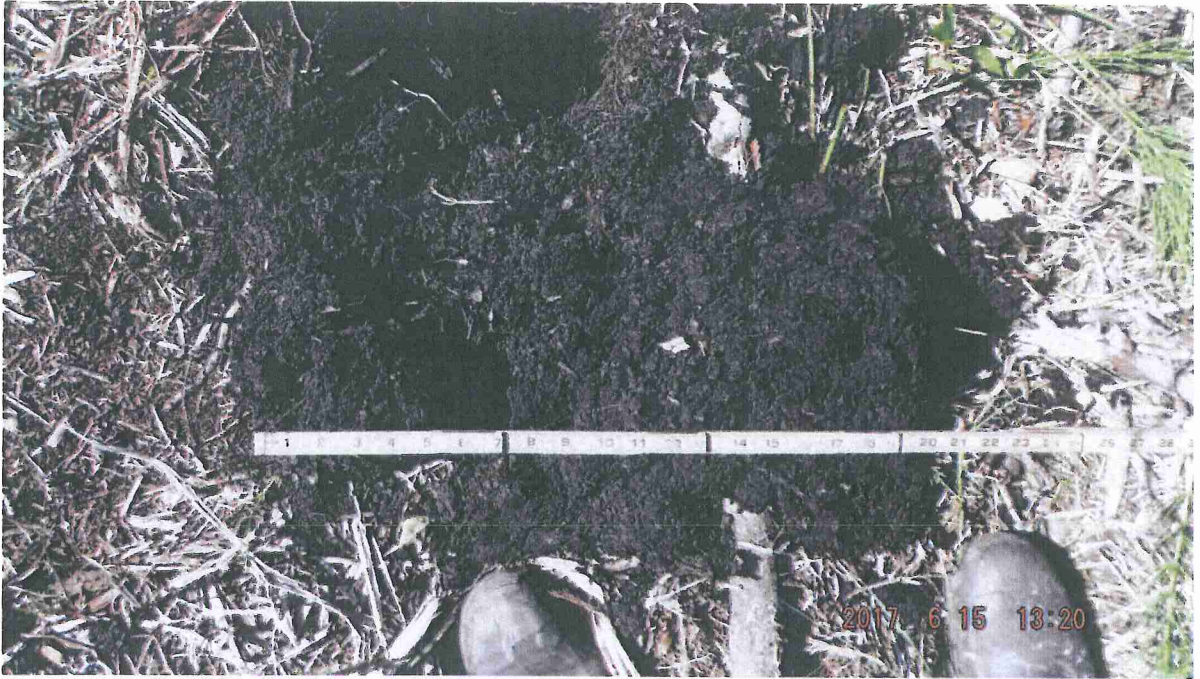
VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u>Salix scouleriana</u>	<u>50</u>	<u>X</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)														
2. <u>Alnus viridis</u>	<u>25</u>	<u>X</u>	<u>FAC</u>															
3. _____																		
4. _____																		
Total Cover: <u>75</u>				Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>75</u></td> <td>x 1 = <u>75</u></td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>135</u></td> <td>x 3 = <u>405</u></td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: <u>210</u></td> <td>(A) <u>480</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.28</u>	Total % Cover of:	Multiply by:	OBL species <u>75</u>	x 1 = <u>75</u>	FACW species _____	x 2 = <u>0</u>	FAC species <u>135</u>	x 3 = <u>405</u>	FACU species _____	x 4 = <u>0</u>	UPL species _____	x 5 = _____	Column Totals: <u>210</u>	(A) <u>480</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>75</u>	x 1 = <u>75</u>																	
FACW species _____	x 2 = <u>0</u>																	
FAC species <u>135</u>	x 3 = <u>405</u>																	
FACU species _____	x 4 = <u>0</u>																	
UPL species _____	x 5 = _____																	
Column Totals: <u>210</u>	(A) <u>480</u> (B)																	
50% of total cover: <u>38</u> 20% of total cover: <u>15</u>																		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Salix scouleriana</u>	<u>25</u>	<u>X</u>	<u>FAC</u>															
2. <u>Alnus viridis</u>	<u>10</u>	<u>X</u>	<u>FAC</u>															
3. _____																		
4. _____																		
5. _____																		
6. _____																		
Total Cover: <u>35</u>																		
50% of total cover: <u>18</u> 20% of total cover: <u>7</u>																		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Comarum palustre</u>	<u>50</u>	<u>X</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: Yes Dominance Test is >50% Yes Prevalence Index is ≤3.0 ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.														
2. <u>Calamagrostis canadensis</u>	<u>25</u>	<u>X</u>	<u>FAC</u>															
3. <u>Equisetum fluviatile</u>	<u>25</u>	<u>X</u>	<u>OBL</u>															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
Total Cover: <u>100</u>																		
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>																		
Plot size (radius, or length x width) <u>30-ft diameter</u> % Bare Ground <u>5</u>																		
% Cover of Wetland Bryophytes <u>50</u> Total Cover of Bryophytes <u>50</u> (Where applicable)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____														

Remarks: Vegetation is typical for black spruce-dominated wetlands in the region.

Attachment 3

Photos



DP-1



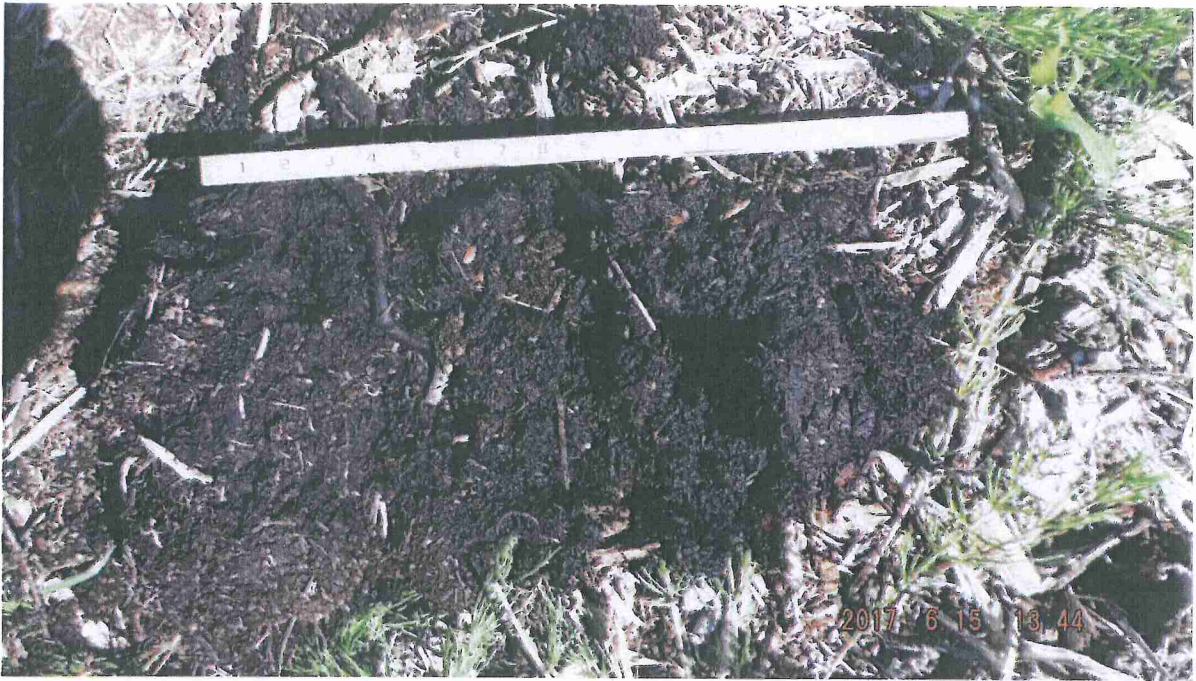
DP-1



DP-1



DP-1



DP-2



DP-2



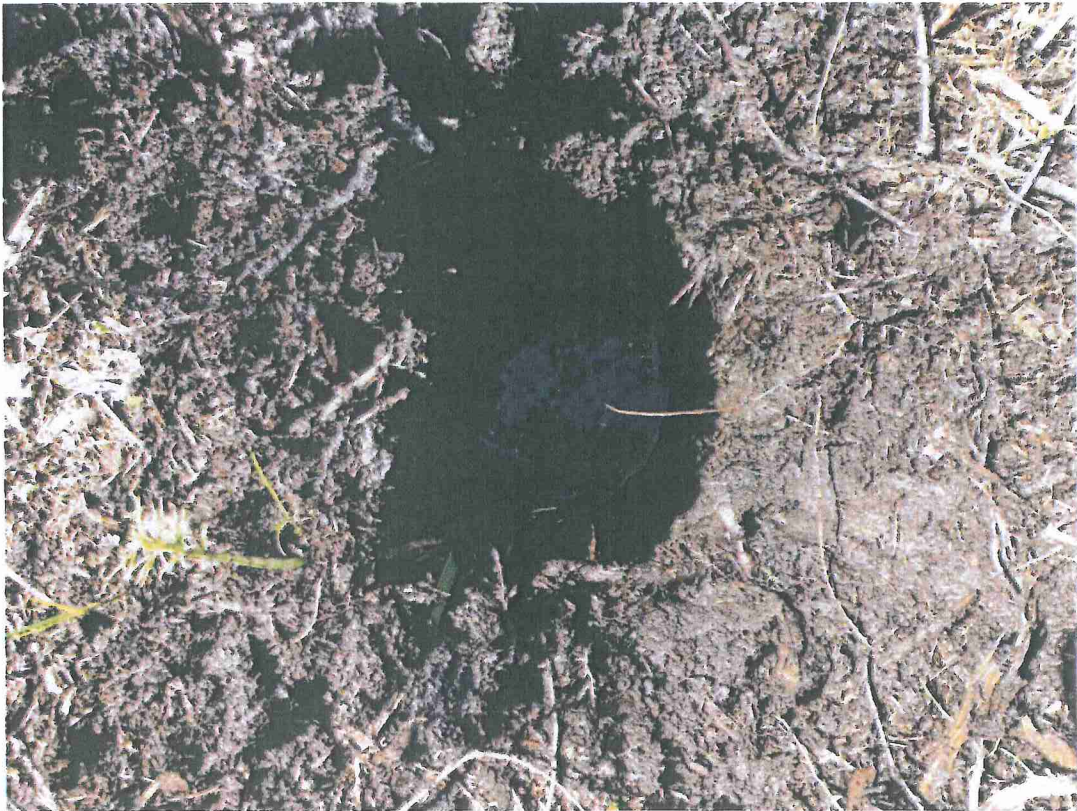
DP-2



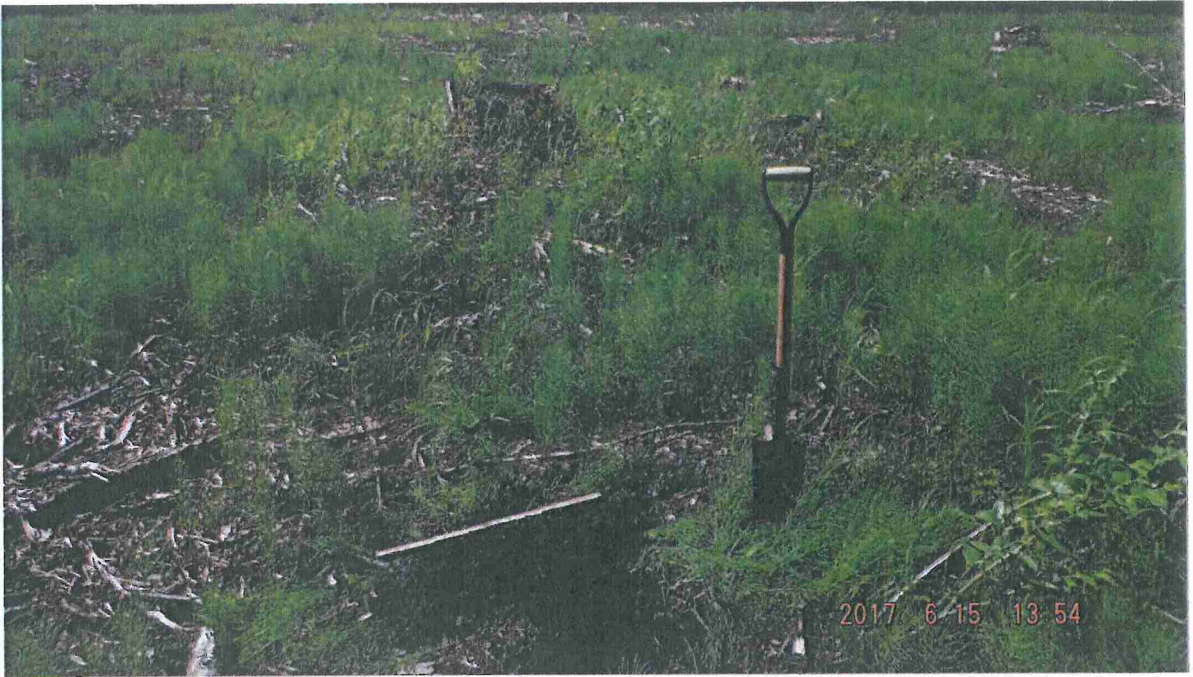
DP-2



DP-3



DP-3



DP-3



DP-3



DP-4



DP-4



DP-4



DP-4



DP-5



DP-5



DP-5



DP-5



DP-6



DP-6



DP-6



DP-6



DP-7



DP-7



Cleared portion of site (left) and remaining forested portion (right). Surface water accumulation in foreground with water horsetail (*Equisetum fluviatile*; OBL).



Forested and shrub-scrub wetland in the central and eastern portion of property (e.g., DP-5).

Attachment 4

Climate Data

These data are preliminary and have not undergone final quality control by the National Climatic Data Center (NCDC). Therefore, these data are subject to revision. Final and certified climate data can be accessed at the NCDC - <http://www.ncdc.noaa.gov>.

Climatological Report (Daily)

217
CDAK48 PAFC 171308
CLIANC

CLIMATE REPORT
NATIONAL WEATHER SERVICE ANCHORAGE, AK
506 AM AKDT SAT JUN 17 2017

...THE ANCHORAGE AK CLIMATE SUMMARY FOR JUNE 16 2017...

CLIMATE NORMAL PERIOD 1981 TO 2010
CLIMATE RECORD PERIOD 1952 TO 2017

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
--------------	----------------	------------	--------------	------	--------------	-----------------------	-----------

.....
TEMPERATURE (F)

YESTERDAY							
MAXIMUM	66	613 PM	83	2016	63	3	78
				2015			
MINIMUM	48	313 AM	40	1966	48	0	52
AVERAGE	57				56	1	65

PRECIPITATION (IN)

YESTERDAY	0.00		0.76	1958	0.03	-0.03	
MONTH TO DATE	0.27				0.48	-0.21	
SINCE JUN 1	0.27				0.48	-0.21	
SINCE JAN 1	5.10				3.72	1.38	

SNOWFALL (IN)

YESTERDAY	0.0		0.0	MM	0.0	0.0	0.0
MONTH TO DATE	0.0				0.0	0.0	0.0
SINCE JUN 1	0.0				0.0	0.0	0.0
SINCE JUL 1	82.4				74.5	7.9	38.3
SNOW DEPTH	0						

DEGREE DAYS

HEATING							
YESTERDAY	8					-2	
MONTH TO DATE	153					-24	
SINCE JUN 1	153					-24	
SINCE JUL 1	9856					-221	

COOLING

YESTERDAY	0					0	
MONTH TO DATE	0					0	
SINCE JUN 1	0					0	
SINCE JAN 1	0					0	

WIND (MPH)

HIGHEST WIND SPEED	22	HIGHEST WIND DIRECTION	SE (150)
HIGHEST GUST SPEED	31	HIGHEST GUST DIRECTION	SE (150)
AVERAGE WIND SPEED	8.9		

RELATIVE HUMIDITY (PERCENT)

HIGHEST	80
LOWEST	48
AVERAGE	64

.....

THE ANCHORAGE AK CLIMATE NORMALS FOR TODAY

	NORMAL	RECORD	YEAR
MAXIMUM TEMPERATURE (F)	63	80	2015
MINIMUM TEMPERATURE (F)	48	39	2013 1985

SUNRISE AND SUNSET

JUNE 17 2017.....	SUNRISE	421 AM AKDT	SUNSET	1141 PM AKDT
JUNE 18 2017.....	SUNRISE	421 AM AKDT	SUNSET	1142 PM AKDT

CIVIL TWILIGHT

JUNE 17 2017	START	**.** GMT	END	**.** GMT
JUNE 18 2017	START	**.** GMT	END	**.** GMT

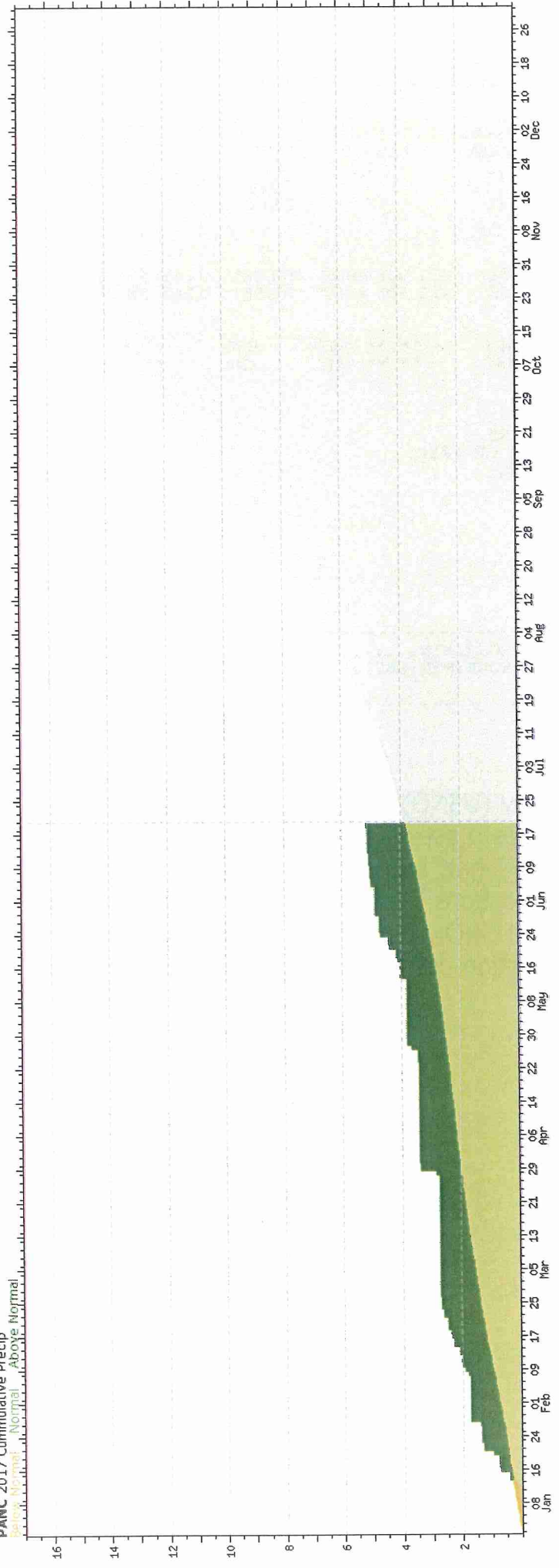
- INDICATES NEGATIVE NUMBERS.
R INDICATES RECORD WAS SET OR TIED.
MM INDICATES DATA IS MISSING.
T INDICATES TRACE AMOUNT.

&&

AMOUNT OF DAYLIGHT TODAY (HOUR:MIN).....19:20
GAIN/LOSS SINCE YESTERDAY (HOUR:MIN:SEC)....+0:00:46

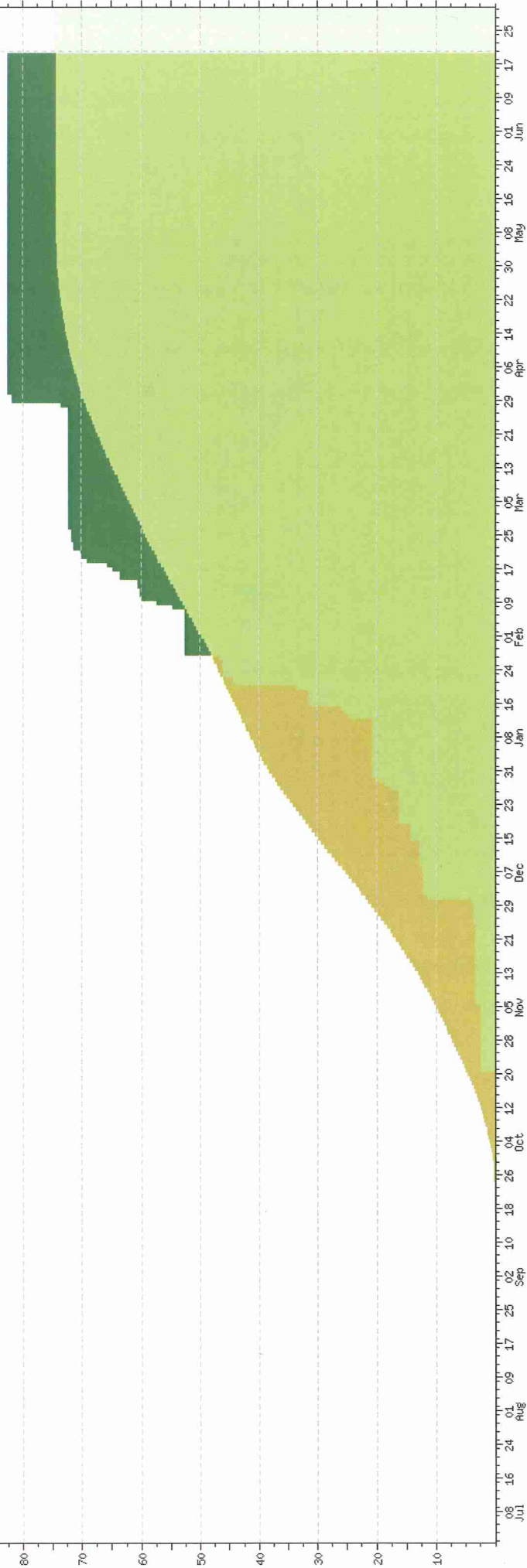
The U.S. Naval Observatory (USNO) computes astronomical data. Therefore, the NWS does not record, certify, or authenticate astronomical data. Computed times of sunrise, sunset, moonrise, moonset; and twilight, moon phases and other astronomical data are available from USNO's Astronomical Applications Department (<http://www.usno.navy.mil>). See <http://www.usno.navy.mil/USNO/astronomical-applications/astronomical-information-center/litigation> for information on using these data for legal purposes.

PANC 2017 Cumulative Precip



PANC 2016-2017 Cumulative Snow

Below Normal, Normal, Above Normal





RECORD DRAWING
 BY: DATE: _____
 CHECKED BY: DATE: _____
 1. DATA TRANSMITTED: _____
 2. DATA TRANSMITTED: _____
 3. DATA TRANSMITTED: _____

NOTES & GRADING PLAN
 C STREET & 92ND AVENUE

NO.	DATE	REVISIONS
1	05-17-17	REVISED PER PLAN COMMENTS
2	05-17-17	REVISED PER PLAN COMMENTS
3	05-17-17	REVISED PER PLAN COMMENTS

SPECIAL INSPECTION NOTES
 1. THE INSPECTION BY A SPECIAL INSPECTOR.
 2. TESTING AND INSPECTION REPORTS SHALL BE SUBMITTED TO THE ARCHITECT-ENGINEER, BUILDING OFFICIAL, OWNER AND CONTRACTOR.

SPECIAL SOIL INSPECTION & TESTING SCHEDULE (IBC 1704.7 & TABLE 1704.7)

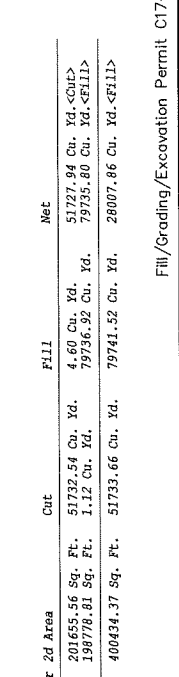
VERIFICATION AND INSPECTION TASK	PERIODIC INSPECTION	CONTINUOUS INSPECTION
1. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	X	
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	X	
3. PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS.		X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.		X
5. VERIFY CONTROLLED FILL HAS BEEN PREPARED PROPERLY.		X

FILL & GRADING NOTES
 1. ALL FILL SHALL BE PLACED IN ONE FOOT LIFTS, MAXIMUM, AND COMPACTED TO 85% MINIMUM AND IN COMPLIANCE WITH THE SOILS ENGINEER'S RECOMMENDATIONS. NO ROCK OR SUB-IRREDUCIBLE MATERIAL WITH DIAMETERS EXCEEDING 4 INCHES SHALL BE PLACED IN ANY LIFT.
 2. PRIOR TO PLACING FILL MATERIAL, THE GRADING SURFACE SHALL BE PREPARED TO RECEIVE FILL BY REMOVING ALL EXISTING MATERIALS AND WEEDS. ALL EXISTING MATERIALS SHALL BE REMOVED TO A MINIMUM THICKNESS OF 6 INCHES. SOILS MAY BE SPREAD OVER FINISHED SLOPES AND PROTECTED LOTS AT A MAXIMUM THICKNESS OF 6 INCHES.
 3. TOPSOIL AT LEAST 2 INCHES SHALL BE SPREAD OVER EXISTING GRASS OR BARE SOIL. TOPSOIL SHALL BE SPREAD AT A MINIMUM THICKNESS OF 2 INCHES.
 4. PER AMOR 23.105111.3, THE TOP OF FILL SLOPES SHALL BE MADE NOT NEARER TO THE SITE BOUNDARY LINE THAN 5 FEET. HALF THE HEIGHT OF THE SLOPE WITH A MINIMUM OF TWO (2) FEET AND A MAXIMUM OF THIRTY (30) FEET.
 5. PER AMOR 23.105111.2, THE TOP OF CUT SLOPES SHALL NOT BE MADE NEARER TO A SITE BOUNDARY LINE THAN 5 FEET. HALF THE HEIGHT OF THE SLOPE WITH A MINIMUM OF TWO (2) FEET AND A MAXIMUM OF TEN (10) FEET. THE SETBACK MAY NEED TO BE INCREASED FOR ANY REQUIRED INTERCEPT DRAINS.
 6. BOTTOM-OF-HOLE INSPECTION AND EXTENT-OF-EXCAVATION INSPECTION SHALL BE PERFORMED FOR ALL EXCAVATIONS DEEPER THAN 4 FEET. THE TOP OF EXCAVATIONS SHALL BE AT LEAST 2 FEET BELOW 25,000 C.Y. OF PORTION THEREOF OF GRADING BEYOND 50,000 C.Y. AND SHALL BE AT LEAST 1.5 UNITS HORIZONTAL TO 1 UNIT VERTICAL. THESE SLOPES ARE STEEPER THAN 1 UNIT VERTICAL IN 5 UNITS HORIZONTAL (20% SLOPE) AND THE FILL HEIGHT IS GREATER THAN 5 FEET, A BENCH UNDER THE TOE OF THE FILL SHALL BE PROVIDED.
 7. AREA OF INSURANCE, 45 ACRES.
 8. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2015 CALIFORNIA CIVIL ENGINEERING BOARD'S (CEB) STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF GRADES AND SURFACES.
 9. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2015 CALIFORNIA CIVIL ENGINEERING BOARD'S (CEB) STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF GRADES AND SURFACES.
 10. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2015 CALIFORNIA CIVIL ENGINEERING BOARD'S (CEB) STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF GRADES AND SURFACES.
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 21. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2015 CALIFORNIA CIVIL ENGINEERING BOARD'S (CEB) STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF GRADES AND SURFACES.

SITE PLAN INFORMATION
 1. DRAINAGE - ALL DRAINAGE IS CONTAINED ON-SITE.
 2. WATER TABLE INFORMATION - NOT DETERMINED DURING THE SOILS INVESTIGATION.
 3. EROSION AND SEDIMENT CONTROL PLAN - A STABILIZED ENTRY IS PROVIDED AT THE PROJECT ENTRANCE. BMP'S WILL BE PROVIDED IN ACCORDANCE WITH THE PROJECT SWPPP.
 4. ALL EXISTING UTILITIES (ELECTRIC, GAS, WATER, TELEPHONE, CABLE, ETC.) SHALL BE MAINTAINED AND PROTECTED.
 5. ALL EXISTING UTILITIES (ELECTRIC, GAS, WATER, TELEPHONE, CABLE, ETC.) SHALL BE MAINTAINED AND PROTECTED.
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 21. ALL EXISTING UTILITIES (ELECTRIC, GAS, WATER, TELEPHONE, CABLE, ETC.) SHALL BE MAINTAINED AND PROTECTED.

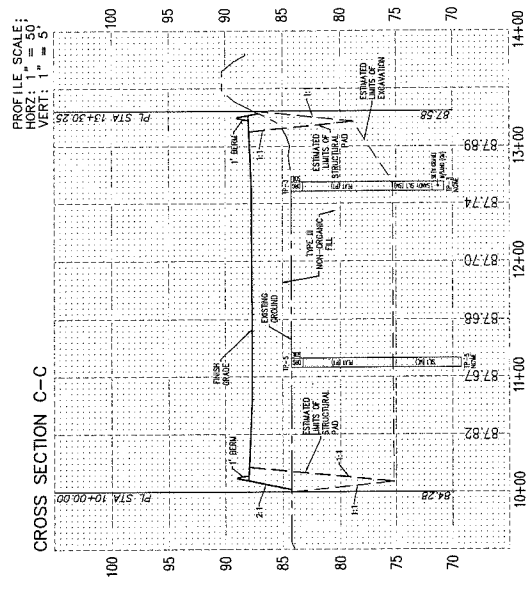
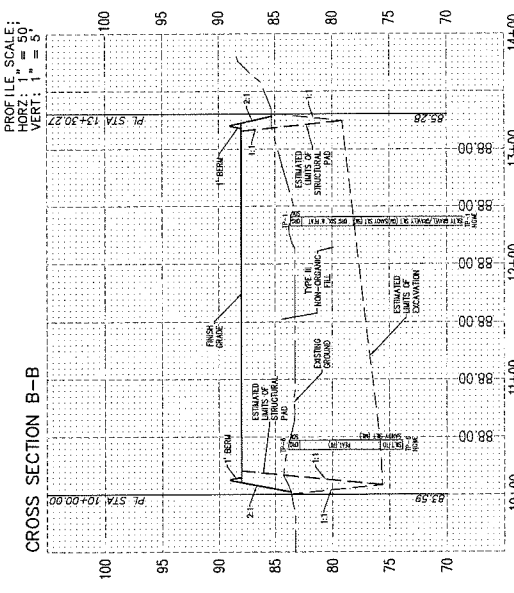
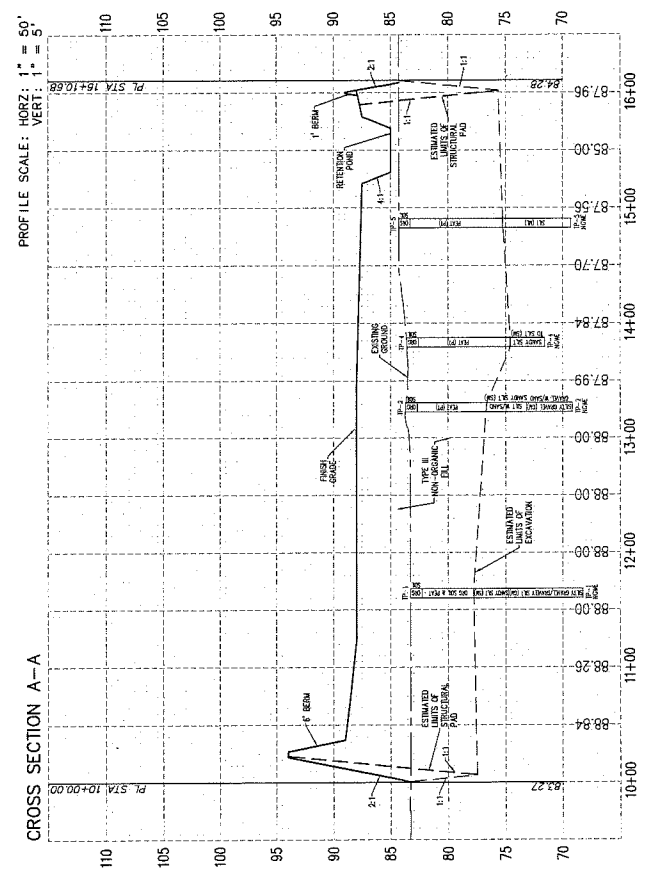
Cut/Fill Summary

Name	Cut	Fill	Net
PEAT QTY	1,000	201,655.56 Sq. Ft.	51,732.54 Cu. Yd.
PAD QTY	1,000	1,987,778.81 Sq. Ft.	4,600.00 Cu. Yd.
Totals		4,004,343.37 Sq. Ft.	57,332.54 Cu. Yd.



PERIMETER EARTHEN BERM
 SCALE 1" = 1'

SEE SHEET 2 FOR CROSS SECTION LOCATIONS



CROSS SECTIONS
C STREET & 92nd AVENUE

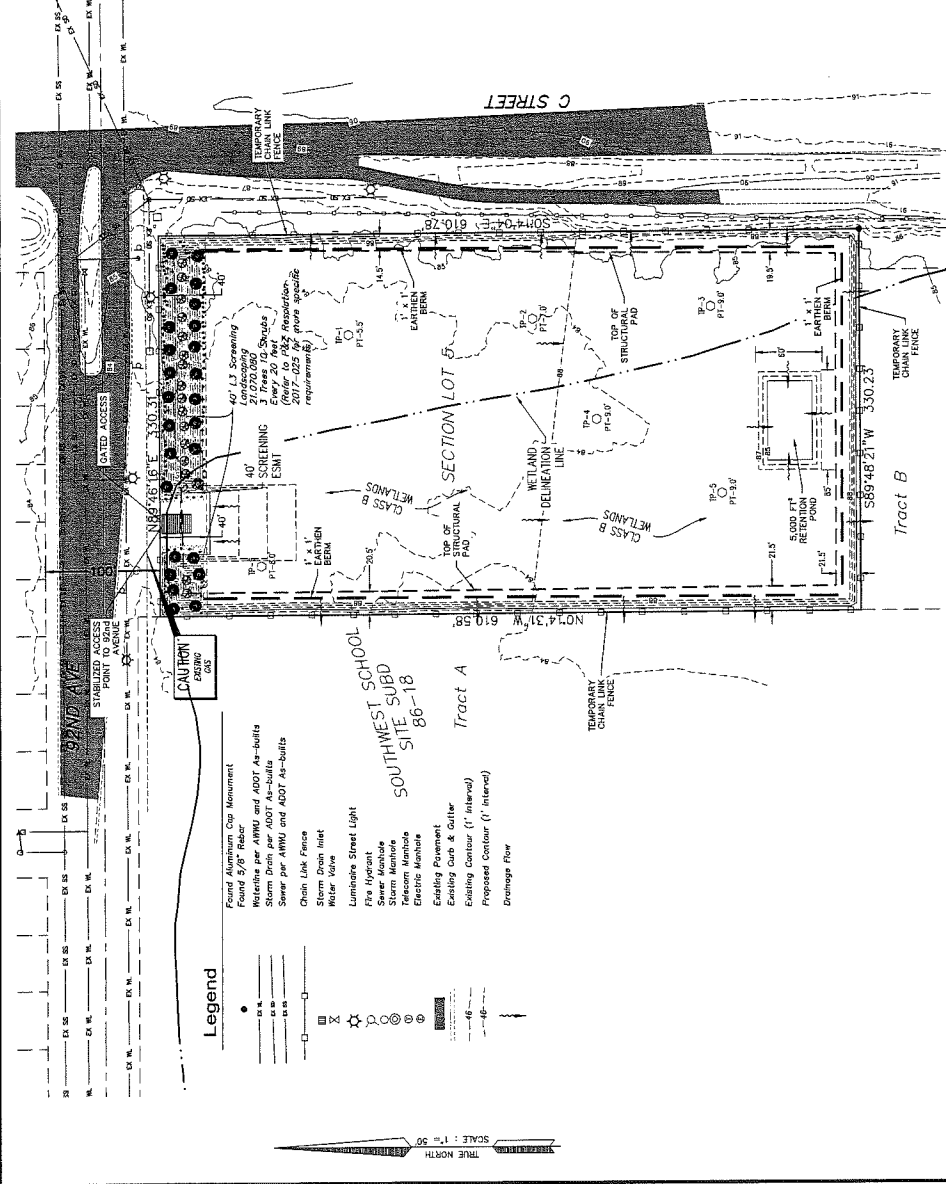
NO.	DATE	REVISIONS
1	05/20/17	ISSUED FOR PERMITS
2	05/20/17	REVISED PER BOA COMMENTS



TRZASKA ENGINEERING
P.O. Box 110890
Ann Arbor, Michigan 48101-0890
(973) 551-6537
www.trzaska.com

RECORD DRAWING
BY: DATA TRANSFERRED
DATE: 05/20/17
1. DATA TRANSFER CHECKED
DATE: 05/20/17
2. DATA TRANSFERRED
DATE: 05/20/17
3. DATA TRANSFER CHECKED
DATE: 05/20/17

DESIGNED: [Blank]
CHECKED: [Blank]
SCALE: HORIZ: 1" = 50'
VERT: 1" = 5'



Notes:
 1. BASIS OF BEARINGS ARE THE FOUND MONUMENTS, PER PLAT 202-98.
 2. BASIS OF ELEVATION IS GAB DATUM, 1972 MGS ADJUSTMENT.

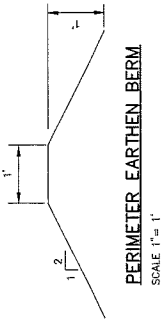
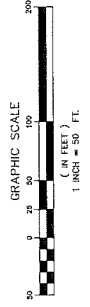
SITE PLAN INFORMATION (AMC 21.05.060.E.5)

- A. SITE PLAN SHOWING:
 - 1. DRAINAGE - ALL DRAINAGE IS CONTAINED ON-SITE.
 - 2. VEHICULAR ACCESS - NW CORNER OF THE SITE VIA GRAND AVENUE.
 - 3. WASTEWATER INFORMATION - NOT ENCOUNTERED DURING THE SOILS INVESTIGATION.
 - 4. WASTEWATER INFORMATION - NOT ENCOUNTERED DURING THE SOILS INVESTIGATION.
- B. ALL UTILITIES SHOWN ARE TO BE PROVIDED AT THE PROJECT ENTRANCE. BMP'S WILL BE PROVIDED IN ACCORDANCE WITH THE PROJECT SHEET.
- C. EXISTING SOIL TYPES CLASSIFIED TO A FOOT DEEP USING RESTRICTION (REFER TO 1982 RESOLUTION 2017-0252 FOR FURTHER SPECIFIC REQUIREMENTS).
- D. A TEMPORARY CHAIN LINK FENCE WITH LOCKED, GATED ACCESS IS PROVIDED AROUND THE SECURITY PLAN - A TEMPORARY CHAIN LINK FENCE WITH LOCKED, GATED ACCESS IS PROVIDED AROUND THE SECURITY PLAN - A TEMPORARY CHAIN LINK FENCE WITH LOCKED, GATED ACCESS IS PROVIDED AROUND THE SECURITY PLAN.
- E. HOURS OF OPERATION WILL BE BETWEEN 6:00 A.M. TO 10:00 P.M., MON.-SAT., ANY WORK SCHEDULED TO OCCUR OUTSIDE THESE HOURS IS SUBJECT TO THE LIMITS OF SANDY SILT INCOMING FILL WILL CONSIST OF NON-ORGANIC MATERIAL CAPABLE OF 95% COMPACTION.
- F. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- G. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- H. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- I. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- J. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- K. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- L. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- M. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- N. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- O. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- P. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- Q. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- R. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- S. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- T. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- U. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- V. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- W. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
- X. QUANTITY OF FILL IS APPROXIMATELY 80,000 CUBIC YARDS OF MATERIAL WILL BE NEEDED TO REACT FINISHED GRADE AS SHOWN BELOW.
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SITE PLAN / LANDSCAPE PLAN
 Located on
 U.S. Government Lot 5 (Remnant)
 Township 12 North, Range 3 West, Section 18, Seaward
 Meridian, Alaska

According to the official BLM Plat, dated February 13, 1984

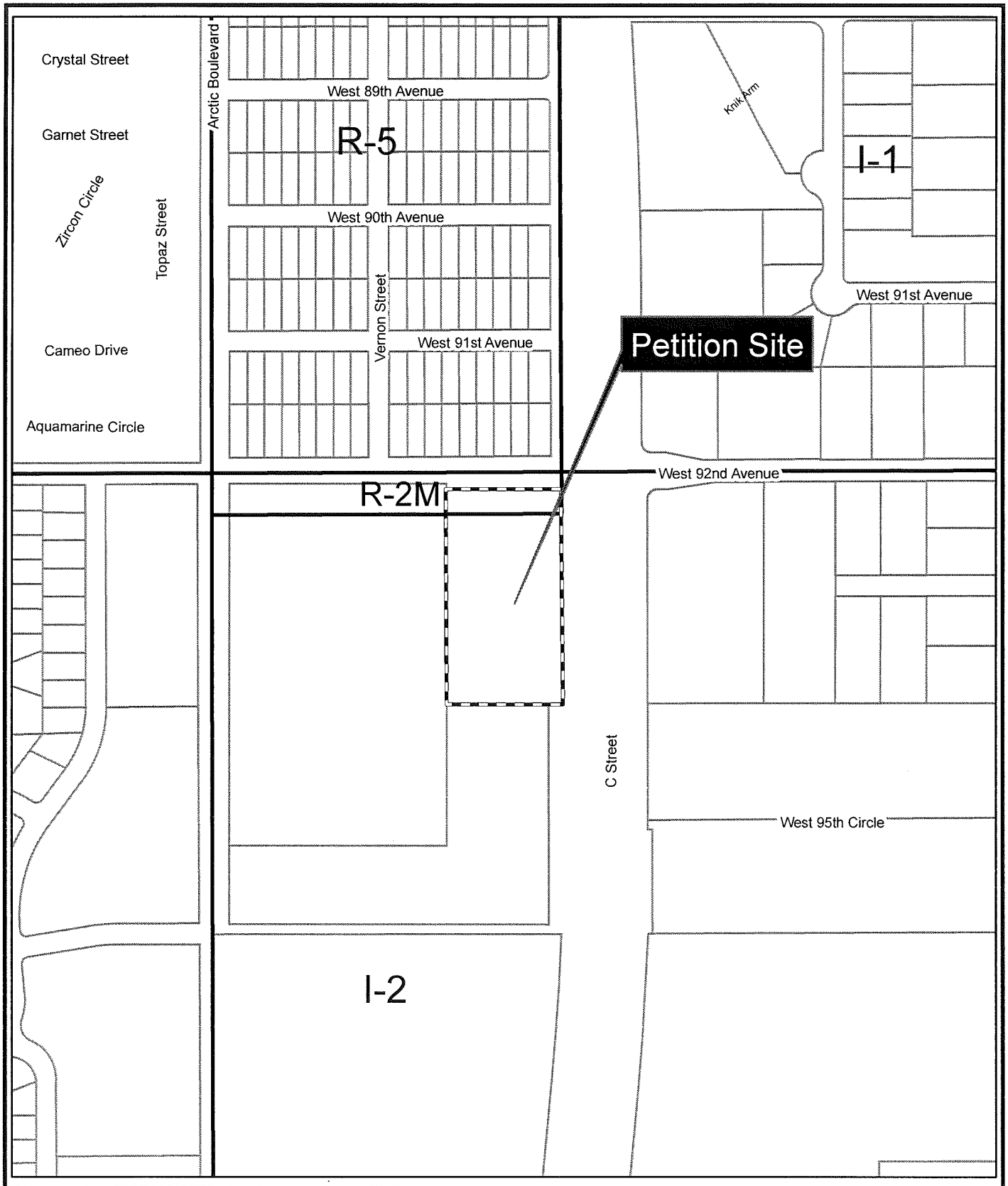
SCALE: 1" = 30'
 DATE: 5/12/2007
 PROJECT NO.:
 SHEET: 11 of 4



Fill/Grading/Excavation Permit C17-1231

TRUE NORTH

2017-0122



2017-0122

