

Application for Conditional Use

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



PETITIONER*		PETITIONER REPRESENTATIVE (if any)	
Name (last name first) Makela, Julie		Name (last name first) Cummings, Laurie	
Mailing Address 4700 Elmore Road		Mailing Address 582 E. 36th Ave, Suite 500	
Anchorage, AK 99508		Anchorage, AK 99503	
Contact Phone – Day 907-343-7598	Evening	Contact Phone – Day 907-644-2065	Evening
E-mail julie.makala@anchorageak.gov		E-mail laurie.cummings@hdrinc.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): 012-571-01 ; 010-531-03 and -04 ; 012-041-07		
Site Street Address: N/A		
Current legal description: (use additional sheet if necessary) PTN.NW4NW4, SEC. 1, R4W, T12N, S.M. (see additional sheet)		
Zoning: PLI-SL	Acreage: 32	Grid #: SW2028

CONDITIONAL USE APPROVAL REQUESTED	
Use: land reclamation (submitted concurrently with a Snow Disposal Site CUP application)	
☒ New conditional use	☐ Amendment to approved conditional use 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 a conditional use permit 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 conditional use. I also understand that assigned hearing dates are tentative and may have to be postponed by Planning Department staff or the Planning and Zoning Commission for administrative reasons.

Laurie Cummings

7/18/22

Signature

☐ Owner

☒ Representative

(Representatives must provide written proof of authorization)

Date

Laurie Cummings

Print Name

Accepted by:	Poster & Affidavit:	Fee:	Case Number: 2022-0099	Meeting Date: P2C: 09/12/2022
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COMPREHENSIVE PLAN INFORMATIONImprovement Area (per AMC 21.08.050B.): ☐ Class A ☐ Class B**Anchorage 2040 Land Use Designation:**

- ☐ Neighborhood (Residential) ☐ Center ☐ Corridor
☐ Open Space ☒ Facilities and Institutions ☐ Industrial Area

Anchorage 2040 Growth Supporting Features:

- ☐ Transit-supportive Development ☐ Greenway-supported Development
☐ Traditional Neighborhood ☐ Residential Mixed-use

Eagle River-Chugiak-Peters Creek Land Use Classification:

- ☐ Commercial ☐ Industrial ☐ Parks/opens space
☐ Public Land Institutions ☐ Marginal land ☐ Alpine/Slope Affected
☐ Special Study ☐ Residential at _____ dwelling units per acre

Girdwood- Turnagain Arm

- ☐ Commercial ☐ Industrial ☐ Parks/opens space
☐ Public Land Institutions ☐ Marginal land ☐ Alpine/Slope Affected
☐ Special Study ☐ Residential at _____ dwelling units per acre

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: 2021-0058
☐ Preliminary Plat ☐ Final Plat - Case Number(s):
☐ Conditional Use - Case Number(s):
☒ Zoning variance - Case Number(s): 2022-0012
☐ Land Use Enforcement Action for
☐ Building or Land Use Permit for
☐ Wetland permit: ☐ Army Corps of Engineers ☐ Municipality of Anchorage

SUBMITTAL REQUIREMENTS

(One copy of applicable items is required for initial submittal; additional copies required after initial submittal)

- 1 copy required: ☒ Signed application (original) ☐ Ownership and beneficial interest form
☒ Watershed sign off form ☐ Underlying plat
☐ Special limitations from the underlying zoning, if applicable

16 copies required:

- ☒ Signed application (copies)
- ☒ Map of area surrounding petition site within 500 feet, including zoning and existing uses
- ☒ Map of existing conditions, to scale, including:
 - ☐ land uses ☐ structures ☐ utilities ☐ vegetation ☐ soils
 - ☐ natural features ☐ drainage ☐ topography ☐ site access ☐ pedestrian facilities
 - ☐ vehicle circulation and driveways ☐ easements and/or reservations
- ☒ Project narrative explaining:
 - ☒ the project ☒ planning objectives ☒ facility operations
 - ☒ an analysis of how the proposal meets the standards on page 3 of this application
 - ☐ construction and operation schedule ☐ final ownership
 - ☐ gross and net density (PUDs only)
- ☒ Site plan(s) to scale depicting, with dimensions:
 - ☐ building footprints ☒ parking areas ☒ vehicle circulation and driveways
 - ☐ pedestrian facilities ☐ lighting ☒ grading ☐ landscaping
 - ☐ loading facilities ☐ fences ☒ drainage ☐ required open space
 - ☐ snow storage area or alternative strategy ☐ trash receptacle location and screening detail
 - ☒ easements ☐ significant natural features ☐ freestanding sign location(s)
- ☐ Building plans to scale depicting, with dimensions:
 - ☐ floor plans ☐ building elevations ☐ exterior colors and textures
- ☒ Summary of community meeting(s)

(Additional information may be required.)

GENERAL CONDITIONAL USE STANDARDS (AMC 21.03.080D.)

The Planning and Zoning Commission may only approve the conditional use if the Commission finds that **all** of the approval criteria 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 proposed use is consistent with the comprehensive plan and all applicable provisions of this title and applicable state and federal regulations;
2. The proposed use is consistent with the purpose and intent of the zoning district in which it is located, including any district-specific standards set forth in chapter 21.04;
3. The proposed use is consistent with any applicable use-specific standards set forth in chapter 21.05;
4. The site size, dimensions, shape, location, and topography are adequate for the needs of the proposed use and any mitigation needed to address potential impacts;
5. The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs, or prevents the use of surrounding properties for the permitted uses listed in the underlying zoning district;
6. The proposed use is compatible with uses allowed on adjacent properties, in terms of its scale, site design, operating characteristics (hours of operation, traffic generation, lighting, noise, odor, dust, and other external impacts);
7. Any significant adverse impacts anticipated to result from the use will be mitigated or offset to the maximum extent feasible;
8. The proposed use is appropriately located with respect to the transportation system, including but not limited to existing and/or planned street designations and improvements, street capacity, access to collectors or arterials, connectivity, off-site parking impacts, transit availability, impacts on pedestrian, bicycle, and transit circulation, and safety for all modes; and
9. The proposed use is appropriately located with respect to existing and/or planned water supply, fire and police protection, wastewater disposal, storm water disposal, and similar facilities and services.

SPECIFIC CONDITIONAL USE STANDARDS (AMC 21.05)

Certain conditional uses have detailed standards that relate only to that type of conditional use. When there are detailed standards, the Planning and Zoning Commission may only approve the conditional use if the Commission finds that **all** general standards listed in the previous section and detailed standards listed for that conditional use in AMC 21.05 are satisfied. Each detailed 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.

Land Reclamation CUP Application

Property Information

Parcel	Parcel Name	Legal Description	Parcel ID
1	Proposed West Anchorage Snow Disposal Site	T12N R4W SEC 1 NW4NW4 PTN	012-571-01
2	MOA Street Maintenance Kloep Station	International East Subdivision, Tract 3B	010-531-04
3	Javier De La Vega Park	International East Subdivision Tract 3A	010-531-03
4	Dedicated Park Land	Connors Lake Subdivision Tract B	012-041-07



Municipality of Anchorage
Project Management and Engineering



MEMORANDUM

DATE: February 4, 2021

TO: Dave Whitfield, Current Planning Manager
Economic & Community Development Department
MOA Planning Division

FROM: Melinda Tsu, P.E., Project Manager

SUBJECT: Agency Authorization
West Anchorage Snow Disposal Site
PM&E Project No. 19-01

The Project Management & Engineering Department (PM&E) hereby authorizes HDR to act as PM&E's representative with regards to the West Anchorage Snow Disposal Site Project. If you have any questions or concerns please contact me at 343-8196 or melinda.tsu@anchorageak.gov.

cc: Julie Makela, P.E., Project Administrator
Bill Spencer, P.E., HDR Project Manager
File 19-01 AM

MS 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: West Anchorage Snow Disposal Site
- Project Location, Tax ID, or Legal Description: Unsubdivided Portion, NW 1/4, NW 1/4, SEC. 1, T12N, R4W, S.M.
- Project Area (if different from the entire parcel or subdivision): Access rd. also impacts NE corner of Conners Lake Subdivision Tract B (85-130)

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

- ☒ **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:

02/15/22

West Anchorage Snow Disposal Site

Land Reclamation Conditional Use Permit Application



July 2022

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Acronyms and Abbreviations

AMC	Anchorage Municipal Code
AO	Anchorage Ordinance
ASTM	American Society of Testing and Materials International
CUP	Conditional Use Permit
FAA	Federal Aviation Administration
MOA	Municipality of Anchorage
PLI	Public Land and Institutions
PM&E	Project Management and Engineering
SWPPP	Storm Water Pollution Prevention Plan
TCC	Turnagain Community Council
TR	Transitional
TSAIA	Ted Stevens Anchorage International Airport

Introduction

The Municipality of Anchorage (MOA) Project Management and Engineering (PM&E) Department has identified the need to develop a new snow disposal site in West Anchorage to meet MOA's long-term snow removal needs in a cost-effective manner. The MOA leases the currently used Northwood Snow Disposal Site (Northwood Site) from Ted Stevens Anchorage International Airport (TSAIA) on a year-to-year basis. Due to Federal Aviation Administration (FAA) restrictions on this property, a lease agreement term longer than 5 years is only available for aviation uses. Because of operational restrictions, size limitations, and increasingly stringent State of Alaska water quality regulations, a number of improvements to the Northwood Site are necessary for its long-term operation. In order for MOA to make capital improvements to the snow disposal site, it must own or have long-term site control of the property; however, the lands containing the Northwood Site are not available to the MOA for long-term use.

PM&E conducted a *Site Selection Study* (February 2021) to identify a suitable location for a new snow disposal site. The study concluded that the parcel in the northeastern corner of Connor's Bog near the southwestern corner of the International Airport Road and Minnesota Drive intersection (south of Javier De La Vega Park; see Figure 1) was the most suitable site that allowed for cost-effective snow removal operations and would not result in unacceptable negative impacts on residential areas. The parcel is legally described as T12N R4W SEC 1 NW4NW4 PTN (parcel ID 012-571-01-000).

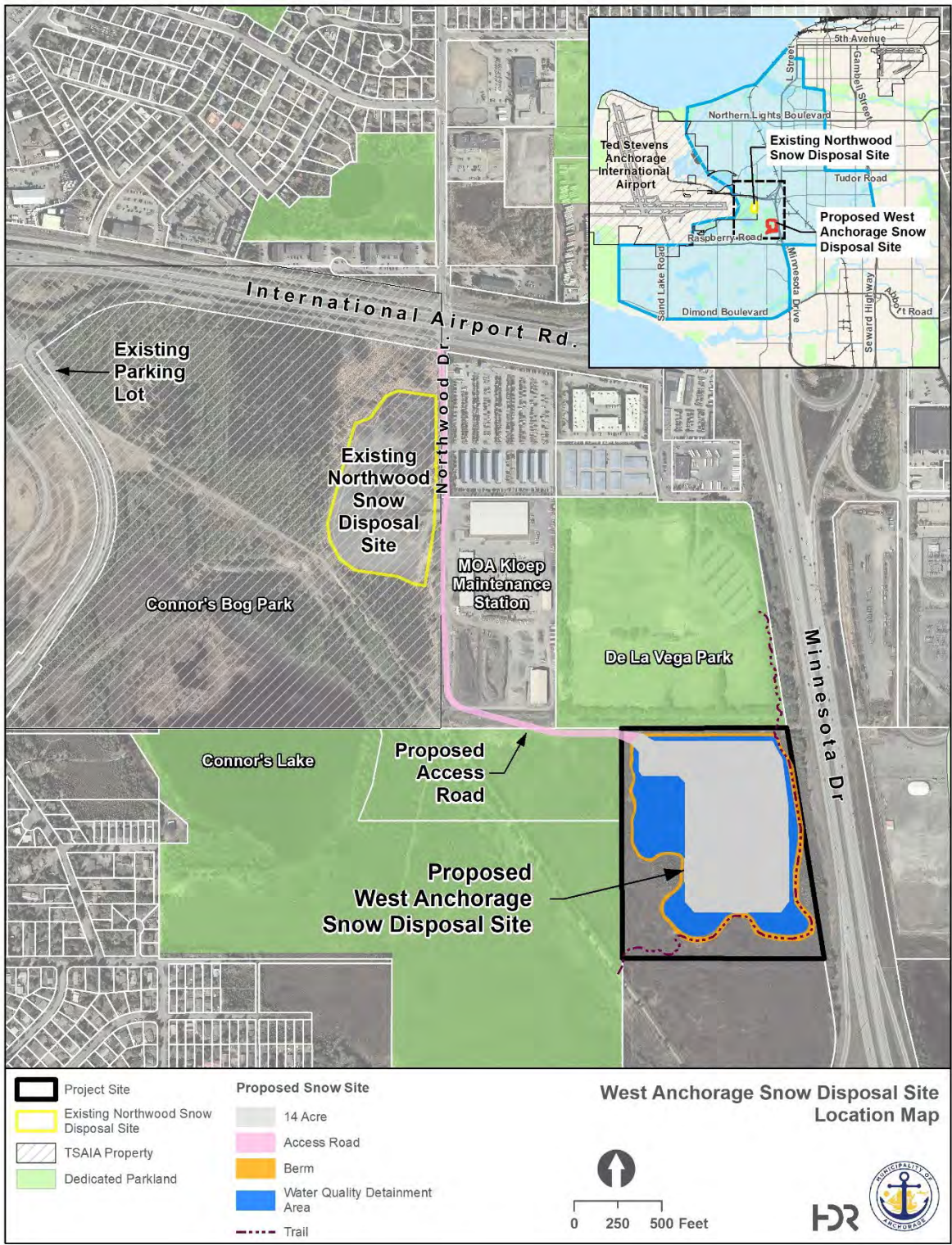
The purpose of this Conditional Use Permit (CUP) application is to obtain permission to conduct land reclamation work to allow the development of the West Anchorage Snow Disposal Site. This work requires land reclamation activities on four parcels listed in Table 1.

Table 1. Parcels

Parcel Name	Legal Description	Parcel ID
Proposed West Anchorage Snow Disposal Site	T12N R4W SEC 1 NW4NW4 PTN	012-571-01
MOA Street Maintenance Kloop Station	International East Subdivision, Tract 3B	010-531-04
Javier De La Vega Park	International East Subdivision Tract 3A	010-531-03
Dedicated Park Land	Connors Lake Subdivision Tract B	012-041-07

The land reclamation work will be conducted in two phases to provide surcharge compression of the underlying peat soils and then regrade the fill to provide a pad surface for snow deposition. Additional information about the phasing can be found in the narrative below.

Figure 1 Location Map



Stakeholder Outreach

The project team has used a variety of outreach methods to engage and inform the public regarding the West Anchorage Snow Disposal Project and to obtain feedback on the site selection and design process. Several opportunities for the public to provide input and feedback have been provided as part of the process. Over the life of the project, multiple online open houses, with an opportunity to chat live with the project team, were held to solicit and identify potential public concerns. Postcards were mailed to residents in the West Anchorage area notifying them of the opportunity to participate in the process. Two listening posts were held at the Connor's Bog parking lot off Jewel Lake Road. The public submitted comments by phone, by email, during Community Council meetings, at informational kiosks, through the online open house, and during the virtual public meeting. Comments received to date have focused on zoning guidelines and the site's aesthetic and environmental/ hydrological impacts.

Sand Lake Community Council Meeting – March 8, 2021

In anticipation of requesting a comprehensive plan map amendment, rezoning, conditional use permits, and design variances, the project team participated in a Sand Lake Community Council meeting on March 8, 2021 (see meeting notes in Appendix A). The project team gave an overview of the project, which covered:

- The current snow disposal site location,
- The new site location and selection process,
- The benefits and considerations of the new site,
- The permitting steps, and
- The schedule moving forward.

Meeting participants had an opportunity to ask questions and provide comments. Those included:

- Where does the snow come from?
- What will happen to the wetlands on the existing site?
- Will water monitoring occur?
- Will Connor's Lake flood as a result?
- What would happen to the site during an earthquake?
- What is the appropriate mitigation for the loss of these wetlands?

The Sand Lake Community Council issued a resolution supporting the approval of Conditional Use Permits for the project on May 10, 2021 (see Appendix A).

The project team received a letter from the Turnagain Community Council (TCC) stating the concerns about identification of Class A wetlands for the site location and the current zoning designations. The project team has engaged the community council president and the TCC Land Use Committee to discuss these concerns.

The project team has continued to engage the public throughout the process. A virtual public meeting was held on November 9, 2021, to present the draft Design Study Report (DSR). A total of 16 visitors attended the meeting. Comments received during the meeting were about the following:

- The height of the berm
- Details of the trail being built around the facility
- Details and purpose of the proposed fencing plan
- How possible contaminants/pollutants in the snow melt will be addressed
- Background as to why the access road will be constructed through the Chugach Electric right-of-way
- Possible impacts on the surrounding wetlands
- Noise mitigation measures
- Landscaping plans
- Possible impacts on the wildlife and recreational opportunities offered by Connor's Bog

The project team also hosted two informational kiosks at the Jewel Lake Road parking area of the Connor's Bog Park. These kiosks were held on September 21, 2021, and October 12, 2021. A total of 66 people visited the kiosks. Comments received focused on:

- Clarification as to why the Northwood Site does not meet the current MOA needs for a snow disposal site.
- Questions on potential changes to or impacts on the local ecosystem (e.g., runoff to wetlands).
- Questions about potential changes to or impacts on recreational snowshoe access during the winter months.

The majority of the people who visited the kiosk were generally supportive of the project.

General Conditional Use Standards (Anchorage Municipal Code [AMC] 21.03.080D)

- 1. The proposed use is consistent with the comprehensive plan and all applicable provisions of this title and applicable state and federal regulations;**

The parcel is classified as "Community Facility and Institution" per the *Anchorage 2040 Land Use Plan Map* as amended by Anchorage Ordinance (AO) 2021-57 (see Appendix A). This change was approved by the Anchorage Assembly on November 1, 2021, in support of the West Anchorage Snow Disposal Project. Use of this parcel as a snow disposal site is consistent with the *Anchorage 2040 Land Use Plan*. Please see the Snow Disposal Site CUP application submitted concurrently with this application for information about how the snow disposal site is consistent with the *Anchorage 2040 Land Use Plan*, *Anchorage 2020 Land Use Plan*, and other plans.

- 2. The proposed use is consistent with the purpose and intent of the zoning district in which it is located, including any district-specific standards set forth in chapter 21.04;**

Most of the proposed land reclamation activity will be located on property zoned PLI-SL (Public Land and Institutions – Special Limitations). This parcel was rezoned from Transitional (TR) by the Anchorage Assembly on November 1, 2021 (AO 2021-58) (see Appendix A).

The development of a snow disposal site is allowed in a PLI zone as a Conditional Use, so it is consistent with the purpose and intent of the zoning district. The PLI district is intended to include areas of significant public open space, major public and quasi-public institutional uses and activities, and land reserves for which a specific use or activity is not yet identified. The special limitation attached to the zoning designation states that “the use shall either be for a snow storage facility, or for a park or open area.”

Land reclamation activity will occur on the parcel to the west of the snow disposal site to facilitate the development of the access road. That parcel is zoned TR (Transitional). Approval of an Intragovernmental Use Permit for use of a portion of this property for an access road was approved by the Planning and Zoning Commission on September 14, 2021 (see Appendix A).

Land reclamation activities will also occur on the Kloop Station parcel, which is zoned I-2 (Heavy Industrial). As part of the project, Northwood Drive will be widened to the east and requires reconfiguration of the Kloop Station parking lot. Land reclamation is needed to regrade the parking lot and widen the extension of Northwood Drive through the maintenance yard. As of April 2022, geotechnical work is ongoing to determine if the entire parking lot or only a portion near the building foundation needs to be regraded. On the Kloop Station parcel, the existing water tank hill fill and street sweeping berms will be relocated to the access road or the snow disposal site.

Land reclamation activities will also occur on the snow disposal site parcel and the Javier De La Vega parcel to allow for the development of the snow site and a new soft-surface trail that will connect the Connor’s Bog main trail to the Javier De La Vega Park parking lot.

3. The proposed use is consistent with any applicable use-specific standards set forth in chapter 21.05;

The proposed use is consistent with all of the applicable use-specific standards set forth in Title 21.50.060.E.5, “Land Reclamation” (see below under Use Specific Standards for Land Reclamation).

4. The site size, dimensions, shape, location, and topography are adequate for the needs of the proposed use and any mitigation needed to address potential impacts.

The site size, dimensions, shape, location, and topography are adequate.

There may be temporary disruptions including noise, vibrations, and dust associated with the fill and grade work planned for the site. These impacts may be experienced at Javier De La Vega and Connor's Bog parks. The properties to the south and west of the proposed site are undeveloped and used primarily for open space/recreational purposes. However, use of these areas is limited due to the presence of wetlands. The eastern side of the parcel is bordered by Minnesota Drive.

The land reclamation activity will comply with MOA regulations for noise and hours of operation.

The property is adequate for the needs of the final proposed use (snow disposal site) and any needed mitigation. A CUP application for a snow disposal site has been submitted concurrently with this application and provides additional detail about how the site meets the needs of the use.

5. The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs, or prevents the use of surrounding properties for the permitted uses listed in the underlying zoning district.

The proposed land reclamation use will not alter the character of the surrounding area in a manner that limits, impairs, or prevents the use of surrounding properties. Once reclamation is completed, the site will be developed as a snow disposal site with a supporting access road. The comprehensive plan has been updated and the property rezoned to allow development of a snow disposal site at this location. The Kloop Station site will remain as a MOA Street Maintenance facility. The access road property will change from open space to a transportation use. However, this does not alter the character of the area, as it is adjacent to an existing industrial use.

6. The proposed use is compatible with uses allowed on adjacent properties, in terms of its scale, site design, operating characteristics (hours of operation, traffic generation, lighting, noise, odor, dust, and other external impacts);

The proposed use (snow disposal site) is compatible with uses allowed on adjacent properties. Land reclamation activities would occur in two phases.

Phase 1 construction is anticipated to occur, pending bond funding approval, between summer 2023 and spring 2024. Key tasks to be performed in this phase include construction of the access road, site clearing, construction of the over-height vehicle prevention structure, and surcharge placement activities.

Phase 2, also subject to bond funding approval, is anticipated to start in summer 2024 and would extend into fall 2025. Key activities in this phase include completing surcharging activities, trail construction, weir installation, fencing, and landscaping.

Upon completion of land reclamation activities, the site will be developed as a snow disposal site. The compatibility of the snow disposal site and adjacent land uses is discussed in the Snow Disposal Site CUP application submitted concurrently with this application.

7. Any significant adverse impacts anticipated to result from the use will be mitigated or offset to the maximum extent feasible;

The proposed use will have a substantial impact on wetlands, as they will be filled with surcharge material. However, the site's ultimate use as a snow disposal site will have a positive impact on the remaining Connor's Bog wetlands. According to the US Army Corps of Engineers, Connor's Bog is an isolated wetland. Its primary water sources are precipitation and snowmelt water from the existing Northwood Site. By discharging snowmelt water into Connor's Bog, the water will continue hydrating the remaining wetland habitats and maintain water levels in Connor's Lake.

The land reclamation activities will result in the loss of wildlife habitat in Connor's Bog. However, as described in the preceding paragraph, the eventual operation of the site as a snow disposal site will maintain water levels that support the bog habitats in the surrounding area. Additionally, the site plan allows for moose to move along the east side of the site as well as to the south to access other areas of Connor's Bog.

Impacts associated with the site's final use as a snow disposal site are discussed in the Snow Disposal Site CUP application submitted concurrently with this application.

PM&E is currently working with the MOA Parks and Recreation Department to identify additional suitable opportunities to offset the loss of the social trails on the snow disposal site parcel. For additional information about these opportunities, please see the Snow Disposal Site CUP application.

8. The proposed use is appropriately located with respect to the transportation system, including but not limited to existing and/or planned street designations and improvements, street capacity, access to collectors or arterials, connectivity, off-site parking impacts transit availability, impacts on pedestrian, bicycle and transit circulation, and safety for all modes; and

Vehicles would access the site via International Airport Road and Northwood Drive. A new access road would be constructed from the current south terminus of Northwood Drive to the site. Public access is restricted at the entrance to the MOA Street Maintenance operations area; the new access road would not be a public road. Construction activity would temporarily increase traffic in the area. Once completed, traffic volume to the new site would vary depending on snowfall but is expected to be similar to current levels. Transit service to the site is not needed. The proposed use is not anticipated to impact pedestrian and bicycle transportation.

9. **The proposed use is appropriately located with respect to existing and/or planned water supply, fire and police protection, wastewater disposal, storm water disposal, and similar facilities and services.**

Land reclamation activities are not expected to create new demand for utilities or similar public facilities and services. The needs that will result from the site's end use as a snow disposal site are discussed in the Snow Disposal Site CUP submitted concurrently with this application.

Specific Conditional Use Standards (AMC 21.05)

Use Specific Standards for Land Reclamation (21.05.060.E.5.b.ii)

(A) A site plan showing:

- (1) Drainage**
- (2) Existing and proposed topographical contours (ten-foot contour)**
- (3) Water table information**
- (4) Point of vehicular access to the sites**

A site plan showing existing conditions is provided in Appendix C. This site plan shows the topography, groundwater table information, drainage patterns, and access points.

Based on the Geotechnical Engineering Report prepared by Shannon & Wilson in September 2021, groundwater was measured to be approximately 6–9 feet below ground surface.

(B) An erosion and sediment control plan.

A Storm Water Pollution and Prevention Plan (SWPPP) is required as part of the building permit process for any project that disturbs more than 1 acre. The applicant or the applicant's contractor will prepare a SWPPP that will address erosion and sediment control, which will be submitted with the required Fill and Grade Permit. Cut and fill activities will not begin prior to approval of the SWPPP.

(C) A description of the soil types encountered on the site.

Based on geotechnical investigations conducted in 2021, the subsurface conditions of the site consist of 5–7 feet of peat overlying native granular and occasional fine-grained materials. A detailed subsurface investigation along the access road alignment and on the interior of the parcel was done during spring 2021. The complete geotechnical report is contained in Appendix C.

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

As soon as fill surcharge activities are complete, the disturbed areas of the site will be stabilized. At the end of Phase 1, all slopes, at a minimum, will have temporary slope stabilization. After surcharge haul-off and construction of the snow disposal site are completed at the end of Phase 2, all impacted soils will be seeded and vegetated per the mandated landscaping plans.

A Landscape Plan for the final use of the site as a snow disposal site will be provided with the fill and grade permit. Additional information about the landscaping can be found in the Snow Disposal Site CUP application submitted concurrently with this application.

(E) A security plan to prevent casual trespass.

Vehicular access to the site would be via Northwood Drive and a new access road. Signage along Northwood Drive indicates that only authorized vehicle access is allowed past the Kloep Maintenance Station. In addition, Northwood Drive is gated at the Kloep Maintenance Station. The gate will be closed except when needed to accommodate construction activities or MOA Street Maintenance activities.

The site is surrounded by recreational and open space. Signage will be installed around the site to discourage people from accessing the property from Javier De La Vega Park, Connor's Bog, or the Connor's Bog main trail during filling and construction activities.

(F) Proposed hours of operation.

The hours of operation associated with the surcharge of the site will comply with MOA hours of operation for construction and generally be between 6:00 AM and 10:00 PM, Monday through Saturday. Any work that is scheduled to occur outside these hours of operation will require a noise permit per AMC 15.70.070.

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

The project includes clearing of the snow disposal site and access road, installation of geotechnical fabric, and placement of fill material to surcharge the area. The site will be surcharged initially to a depth of approximately 6 feet. Then, approximately half that material will be removed and used to construct the containment berms. The finished snow site will be designed to shed meltwater off a gently sloping pad into the surrounding water quality detainment area.

Some materials sourced from the Kloep Station will be used as surcharge fills.

The berms will be constructed around the water quality detainment area using the excess material from the surcharge operation.

While the site is surcharging, a 12- to 18-inch berm will surround the top of the pad to capture rainfall and retain it on the upper surface of the fill where it will percolate into the granular fill soils. A silt fence will be located at the base of the snow disposal pad to capture silty water that may run off from the side slopes.

On the Kloep Station property, the parking lot will be regraded and paved.

A small trail prism will be constructed to connect the Connor's Bog and De La Vega Park parking areas and recreational trails to a recreational trail atop the snow site water quality detainment berms.

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

Traffic for this phase of the project is related to construction of the access road and surcharge activity. During Phase 1, approximately 12,325 truckloads of surcharge materials are being imported to the site. During Phase 2, approximately 4,110 truckloads of excess surcharge materials will be hauled out of the site. The contractor will determine the material source to be used for the project, so the route these trucks will use is unknown at this time. During each phase, trucking activity is expected to occur over a 6- to 10-week period but may take longer depending on site conditions. It is believed that the existing transportation system will be able to accommodate this additional demand without creating congestion or safety concerns.

Approximately 620 trucks of fill will be needed to fill the Kloep Station parking lot, with an additional 400 truckloads of material for improvements to Northwood Drive and access road construction on the Kloep Station parcel. The timing of this activity will be determined by the construction contractor.

Additional truck traffic will be associated with the berm construction activity, removal of the water tank hill fill, and street sweeping berms. This traffic will not leave the project site/Kloep Maintenance Station area.

There will be traffic associated with the final use of the site as a snow disposal site. Additional information about these impacts can be found in the Snow Disposal Site CUP application submitted concurrently with this application.

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

Approximately 160,000 cubic yards of material will be imported to the snow disposal site, which includes the material to construct the snow disposal pad and material for the

surcharge. The material will be placed over a 1- or 2-year period that is planned to begin in summer 2023. The fill will be placed in lifts not to exceed 12 inches and will be compacted to 90 percent maximum density determined by ASTM D1557.

Table 2 documents the quantities of material associated with the project features by parcel.

Table 2. Fill Quantities

Location	Quantity (cubic yards)
Proposed West Anchorage Snow Disposal Site	197,200
MOA Street Maintenance Kloop Station	7,400
Javier De La Vega Park	600
Dedicated Park Land	4,700

(J) A statement of the types of materials that will be accepted at the site.

Site grading and surcharge fill may be comprised of unclassified and classified fill. Unclassified fill and backfill is defined as excavated non-organic, mineral soils that may be frost-susceptible but are compactable and approved as suitable for the purpose by the engineer. Classified material consists of non-frost-susceptible gravel that meets MOA requirements for Municipality of Anchorage Standard Specification (MASS) Type II or Type II-A fill.

A Fill and Grade Permit is required for this project.

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

At this time, additional materials have not been requested.

AMC 21.05.060.E.5.b.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.

A SWPPP, which will address erosion and sediment control, will be obtained during the Fill and Grade Permit process. Cut and fill activities will not begin prior to approval of the SWPPP.

AMC 21.05.060.E.5.b.iv. A building or land use permit is required for land reclamation.

A Fill and Grade Permit will be obtained prior to the start of land reclamation activities.

AMC 21.05.060.E.5.b.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.**

The West Anchorage Snow Disposal Site does not use any local residential streets for access. A new access road (extending from the existing terminus of Northwood Drive) will be constructed to provide access to the site. As this access road does not intersect an arterial, traffic controls are not required. Water trucks will be used, as needed, to keep dust to a minimum. Only vehicles authorized by MOA Street Maintenance or PM&E will be allowed on the access road. The road will be gated and locked when the snow disposal site is not in use.

- (B) The site will not accept materials that are hazardous or flammable.**

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

- (C) The site will not accept junk as defined in chapter 21.15.**

None of the items defined as junk by Title 21.15.010 will be allowed as fill. Junk is defined in chapter 21.15.040 as "Any worn-out, wrecked, scrapped, partially or fully dismantled, discarded tangible material, or combination of materials or items, including junk vehicles as defined in AMC 15.20.010. Also included are machinery, metal, rags, rubber, paper, plastics, chemicals, and building materials which cannot, without further alteration and reconditioning, be used for their original purpose."

- (D) The site will not accept soils contaminated with petroleum products or byproducts.**

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

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

Reclamation operations will not pose a hazard to public health or safety. There is only one access point, which will be gated and locked during non-operational hours.

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

Noise will be kept to a minimum to the extent practicable. The primary type of noise generated by the project will be vehicle noise associated with the trucks moving surcharge materials and construction equipment.

Dust will be kept to a minimum with the use of a water truck. Additional dust control measures, if needed, will be addressed in the SWPPP.

Surface water runoff will be regulated as per public works standards and by the submittal and approval of a SWPPP. Traffic will not be on any local residential road. Access will use a new access road from the existing terminus of Northwood Drive.

(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.

The land reclamation will leave the project site in a condition that is appropriate for the future use of the land. The final use of the land will be for the development of a West Anchorage Snow Disposal Site as per the underlying zoning. After reclamation operations cease on the park property, it will be left as an access road. The Kloep Station site will remain an MOA Street Maintenance facility. The trail between the Javier De La Vega Trail and the Connor's Bog main trail will be a useable trail. An application for CUP for a Snow Disposal Site has been submitted concurrently with this application.

(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.

As of the date of this application, the applicant is unaware of any additional standards for land reclamation conditional use permits.

Appendix A: Resolutions and Meeting Notes

Municipal Clerk's Office
Approved
Date: November 1, 2021

Submitted by: Chair of the Assembly at
the Request of the Mayor
Prepared by: Planning Department
For reading: August 24, 2021

ANCHORAGE, ALASKA
AO No. 2021-80

1 AN ORDINANCE OF THE MUNICIPALITY OF ANCHORAGE AMENDING THE
2 ANCHORAGE 2040 LAND USE PLAN MAP TO CHANGE THE LAND USE
3 DESIGNATION OF ONE PARCEL FROM "PARK OR NATURAL AREA" TO
4 "COMMUNITY FACILITY OR INSTITUTION" FOR T12N R4W SEC 1 NW 1/4 NW
5 1/4 PTN, GENERALLY LOCATED SOUTH OF WEST INTERNATIONAL
6 AIRPORT ROAD, WEST OF MINNESOTA DRIVE, NORTH OF RASPBERRY
7 ROAD, AND EAST OF THE NORTHWOOD DRIVE RIGHT-OF-WAY
8 ALIGNMENT, IN ANCHORAGE.

9
10 (Sand Lake Community Council) (Planning and Zoning Commission Case 2021-0057)

11
12 **THE ANCHORAGE ASSEMBLY ORDAINS:**

13
14 **Section 1.** That the *Anchorage 2040 Land Use Plan Map* is hereby amended to
15 change the land use designation of one lot, as shown in Exhibits A and B, from
16 "Park or Natural Area" to "Community Facility or Institution".

17
18 **Section 2.** Anchorage Municipal Code section 21.01.080 is amended as follows
19 (*the remainder of the subsection is not affected and therefore not set out*):

20
21 **21.01.080 COMPREHENSIVE PLAN**

22
23 **A. Purpose**

24
25 The purpose of the comprehensive plan is to set for the goals,
26 objectives, strategies, and policies governing land use development
27 of the municipality. As adopted, this section and the documents
28 incorporated in this section constitute the comprehensive plan of the
29 municipality.

30
31 **B. Elements**

32
33 **1. Adopted Elements**

34
35 The comprehensive plan consists of the adopted elements
36 identified in the following table, and which are incorporated in
37 this chapter by reference. Plans or other elements that are not
38 listed below are not official elements of the comprehensive
39 plan, though they may be valid planning tools.

40
41 *** **

TABLE 21.01-1: COMPREHENSIVE PLAN ELEMENTS

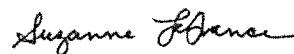
Area/Topic	Plan	Adoption Date ¹	Amendments
Anchorage Bowl	Anchorage 2020, Anchorage Bowl Comprehensive Plan	AO 2000-119(S); 2-20-2001	AO 2002-119; 9-10-2002
	Anchorage 2040 Land Use Plan	AO 2017-116, as amended; 9-26-2017	AO 2019-142, as amended; 12-17-2019; <u>AO 2021-_____</u> ; <i>(insert effective date of this ordinance)</i>
	Spenard Commercial District Development Strategy	AR 1986-121; 6-17-1986 AO 1987-145; 12-15-1987	
	Tudor Road Public Lands and Institutions Plan	AR 1986-162; 9-9-1986	
	3500 Tudor Road Master Plan	AO 2007-118; 11-13-2007	
	Anchorage Downtown Comprehensive Plan	AO 2007-113; 12-11-2007	
	Hillside District Plan	AO 2010-22; 4-13-2010	AO 2014-134; 11-18-14 AO 2015-17; 3-3-15
	Utility Corridor Plan	AO 1990-13(S); 2-27-1990	AO 2003-78; 8-19-2003 AO 2005-121(S); 10-25-2005 AO 2007-97; 7-17-2007
	Section 36 Land Use Study (recommending Alternative 2)	AO 1992-125; 11-10-1992	
	The Ship Creek/Waterfront Land Use Plan (May 1991), including the Transportation Element, as supplemented by the Ship Creek Framework Plan, 7-22-14	AO 1991-88; 6-3-1991	AIM 1991-178 AO 2014-79; 7-22-14
	Potter Valley Land Use Analysis	AO 1999-144; 12-7-1999	
	UMED District Plan	AO 2015-140; 3-22-2016	
	West Anchorage District Plan	AO 2012-47; 7-10-2012	AO 2016-32; 4-12-16
	Government Hill Neighborhood Plan	AO 2013-11; 2-12-2013	AO 2015-18; 3-3-15
	Fairview Neighborhood Plan	AO 2014-108; 9-9-14	

*** *** ***

(AO 2012-124(S), 2-26-13; AO 2013-117, 12-3-13; AO No. 2013-151, § 3, 1-14-14; AO No. 2014-63, § 3, 6-24-14; AO No. 2013-132(S), § 3, 7-8-14; AO No. 2014-79, § 3, 7-22-14; AO No. 2014-108, § 3, 9-9-14; AO No. 2014-134, § 3, 11-18-14; AO No. 2014-139(S), § 3, 12-2-14; AO No. 2015-17, § 3, 3-3-15; AO No. 2015-18, § 5, 3-3-15; AO No. 2015-46, § 3, 5-14-15; AO No. 2015-140, § 2, 3-8-16; AO No. 2016-101, § 2, 9-13-16; AO No. 2017-67, 5-9-2017; AO No. 2017-116, § 6, 9-26-17; AO No. 2018-23, § 3, 3-20-18; AO No. 2019-142, § 3, 12-17-19; AO No. 2020-74, § 2, 9-15-20)

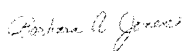
Section 3. This ordinance shall become effective immediately upon passage and approval by the Anchorage Assembly.

PASSED AND APPROVED by the Anchorage Assembly this 1st day of November, 2021.



Chair

ATTEST:



Municipal Clerk

(Planning and Zoning Commission Case 2021-0057)

MUNICIPALITY OF ANCHORAGE

ASSEMBLY MEMORANDUM

No. AM 549-2021

Meeting Date: August 24, 2021

1 **FROM: MAYOR**

2
3 **SUBJECT: AN ORDINANCE OF THE MUNICIPALITY OF ANCHORAGE**
4 **AMENDING THE ANCHORAGE 2040 LAND USE PLAN MAP TO**
5 **CHANGE THE LAND USE DESIGNATION OF ONE PARCEL FROM**
6 **"PARK OR NATURAL AREA" TO "COMMUNITY FACILITY OR**
7 **INSTITUTION" FOR T12N R4W SEC 1 NW 1/4 NW 1/4 PTN,**
8 **GENERALLY LOCATED SOUTH OF WEST INTERNATIONAL**
9 **AIRPORT ROAD, WEST OF MINNESOTA DRIVE, NORTH OF**
10 **RASPBERRY ROAD, AND EAST OF THE NORTHWOOD DRIVE**
11 **RIGHT-OF-WAY ALIGNMENT, IN ANCHORAGE.**
12

13 This is an amendment to the *Anchorage 2040 Land Use Plan* to change the designation
14 of a 32-acre parcel from "Park or Natural Area" to "Community Facility or Institution."
15 The Sand Lake Community Council adopted a resolution in support of the amendment
16 on May 10, 2021. The Planning and Zoning Commission recommended approval of
17 the amendment on July 19, 2021.
18

19 The implementing zoning district of the "Community Facility or Institution" designation
20 is Public Lands and Institutions (PLI) district. The current zoning of the site is Transition
21 (T) district.
22

23 A companion case is being processed to amend the zoning map and rezone this area
24 as well. The purpose of the rezone, and this update to the Land Use Plan Map, is to
25 reflect the intended use of the property, which is the West Anchorage Snow Disposal
26 Site. A public hearing conditional use permit with the Planning and Zoning Commission
27 is also required prior to the development of the snow disposal site.
28

29 This ordinance has no private sector economic effects and local government effects
30 are less than \$30,000. Pursuant to AMC 2.30.053B.1., a summary of economic
31 effects is not required.
32

33 **THE ADMINISTRATION RECOMMENDS APPROVAL.**

34
35 Prepared by: Francis McLaughlin, Senior Planner,
36 Planning Department
37 Approved by: Michelle J. McNulty, Planning Director
38 Concur: Adam Trombley, Community Development
39 Director
40 Concur: Karol (Karl) Raszkievicz, OMB Director
41 Concur: Patrick Bergt, Municipal Attorney
42 Concur: Amy Demboski, Municipal Manager
43 Respectfully submitted: Dave Bronson, Mayor
44

45 Attachments: Exhibits A and B
46 Planning Department Analysis Packet
47

48 (Planning and Zoning Commission Case No. 2021-0057)

Exhibit A - Recommended Land Use Plan Map (PZC Case No. 2021-0057)

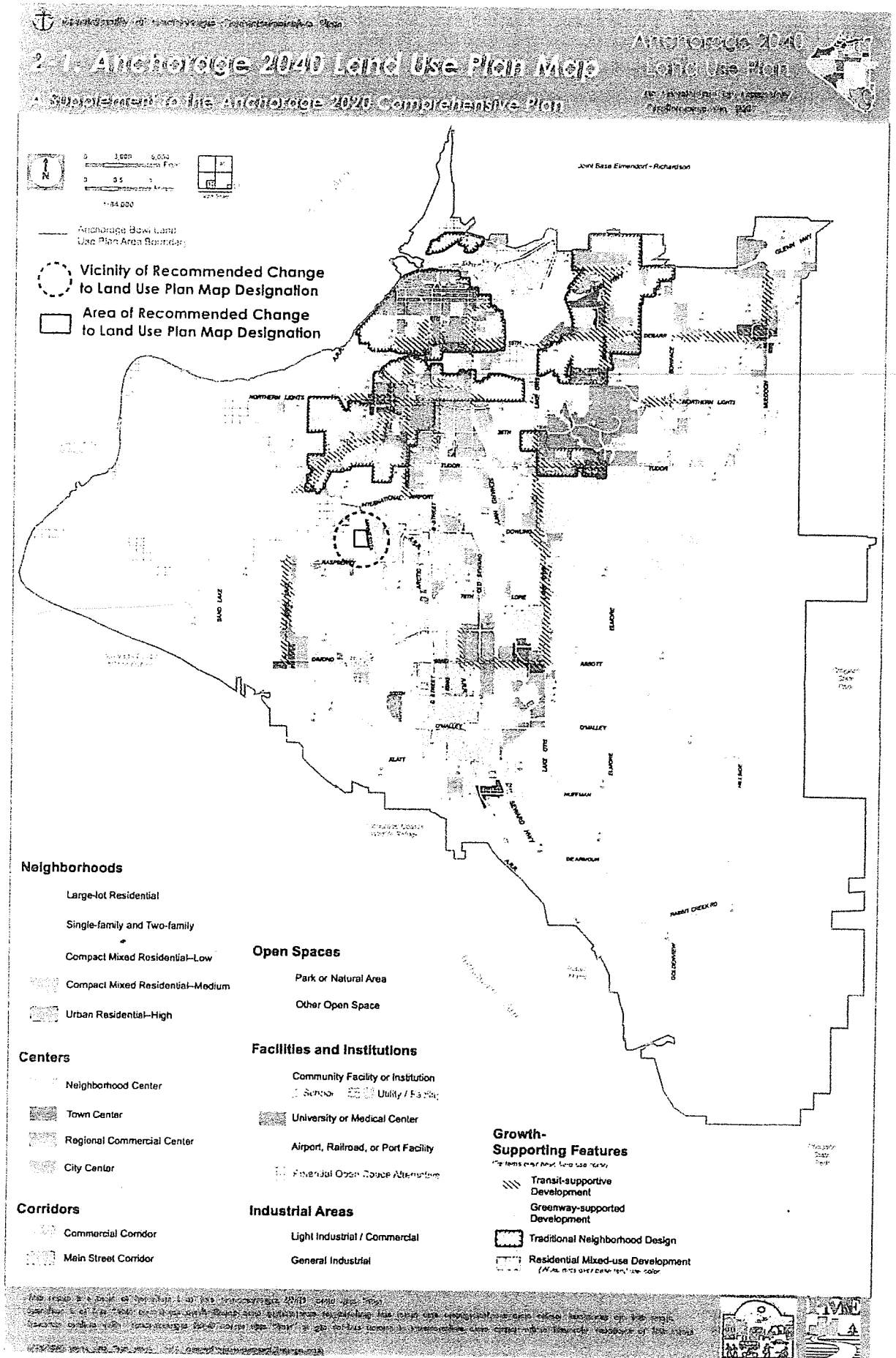
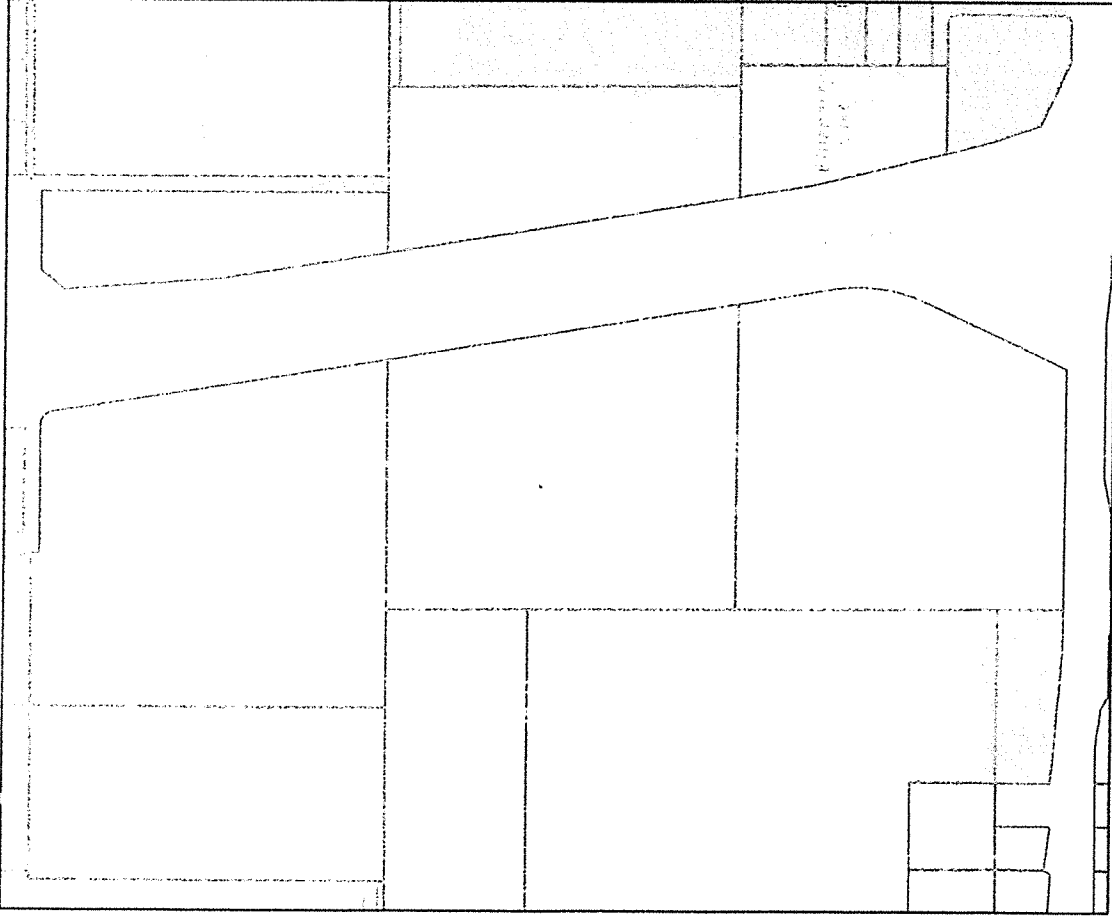


Exhibit B - Existing and Proposed Land Use Designation (PZC Case No. 2021-0057)

Existing

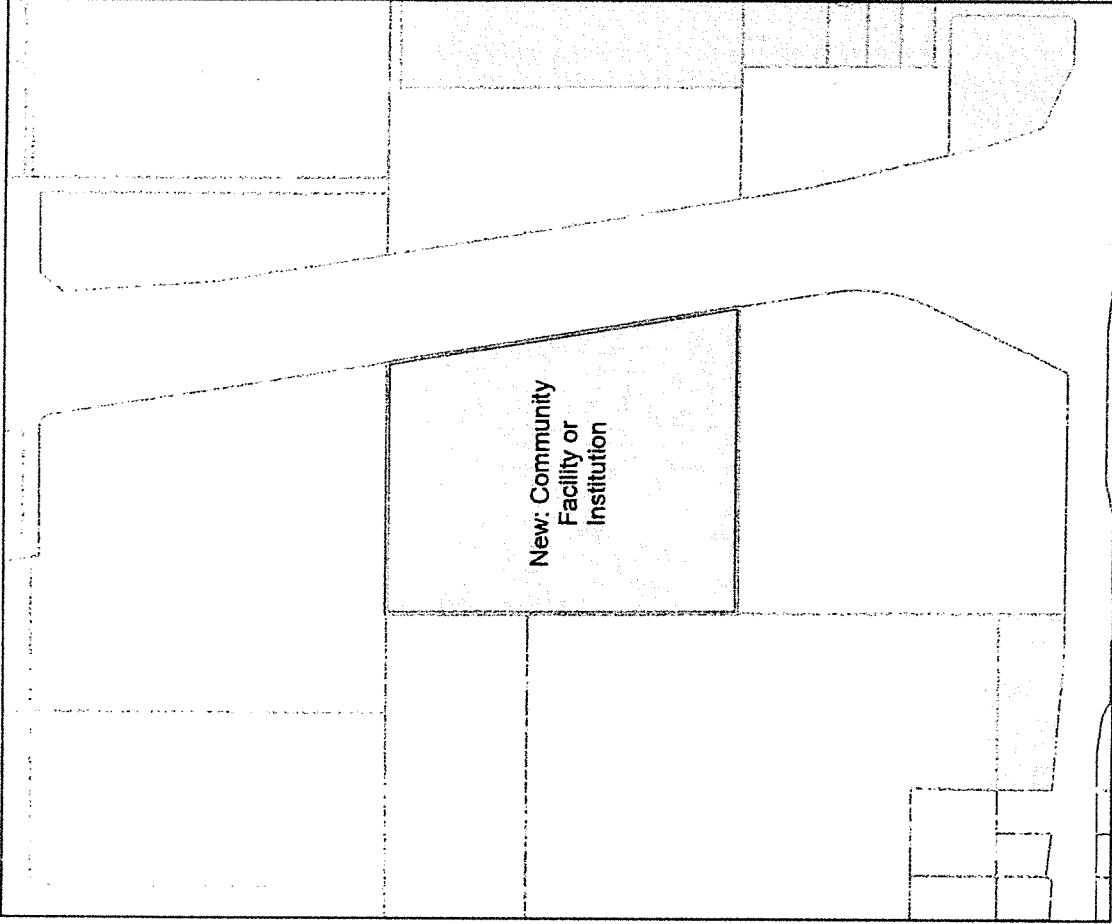


Anchorage 2040 Land Use Designations:

- Single-Family and Two-Family
- Neighborhood Center
- Park or Natural Area
- Community Facility or Institution
- Airport, Railroad, or Port Facility
- Potential Open Space
- General Industrial
- Water Feature
- ROW (White)

Date Exported: 6/24/2021

Proposed



West Anchorage Snow Dump Comp Plan Amendment

☐ Area of Recommended Change to Land Use Designation

Municipal Clerk's Office
Approved
Date: November 1, 2021

Submitted by: Chair of the Assembly at the
Request of the Mayor
Prepared by: Planning Department
For Reading: August 24, 2021

ANCHORAGE, ALASKA

AO No. 2021-81

1 AN ORDINANCE AMENDING THE ZONING MAP AND APPROVING THE
2 REZONING OF APPROXIMATELY 32 ACRES FROM TR (TRANSITION)
3 DISTRICT TO PLI SL (PUBLIC LANDS AND INSTITUTIONS) DISTRICT WITH
4 SPECIAL LIMITATIONS FOR T12N R4W SECTION 1 NW ¼ NW ¼ PTN;
5 GENERALLY LOCATED SOUTH OF WEST INTERNATIONAL AIRPORT
6 ROAD, WEST OF MINNESOTA DRIVE, NORTH OF RASPBERRY ROAD, AND
7 EAST OF THE NORTHWOOD DRIVE RIGHT-OF-WAY ALIGNMENT, IN
8 ANCHORAGE.

9
10 (Sand Lake Community Council) (Planning and Zoning Commission Case 2021-0058)

11 12 THE ANCHORAGE ASSEMBLY ORDAINS:

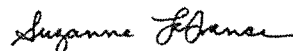
13
14 **Section 1.** The zoning map shall be amended by designating T12N R4W
15 Section 1 NW ¼ NW ¼ PTN, as PLI SL, public lands and institutions, district with
16 special limitations.

17
18 The property described above is shown on Exhibit "A," attached.

19
20 **Section 2.** The zoning map amendment is subject to the following special
21 limitation: "The use shall either be snow disposal, or park or open area."

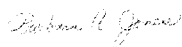
22
23 **Section 3.** This ordinance shall become effective 10 days after the Director of
24 the Planning Department has received the written consent of at least 51 percent
25 of the owners of the property within the area described in Section 1 above to any
26 special limitations contained herein. The rezone approval contained herein shall
27 automatically expire, and be null and void, if the written consent is not received
28 within 120 days after the date on which this ordinance is passed and approved.
29 In the event no special limitations are contained herein, this ordinance is effective
30 immediately upon passage and approval. The Director of the Planning
31 Department shall change the zoning map accordingly.

32
33 PASSED AND APPROVED by the Anchorage Assembly this 1st day of
34 November, 2021.

35
36 

37
38 _____
Chair

39 ATTEST:

40
41 

42
43 _____
Municipal Clerk

MUNICIPALITY OF ANCHORAGE

ASSEMBLY MEMORANDUM

No. AM 550-2021

Meeting Date: August 24, 2021

1 FROM: MAYOR

2
3 SUBJECT: AN ORDINANCE AMENDING THE ZONING MAP AND APPROVING
4 THE REZONING OF APPROXIMATELY 32 ACRES FROM TR
5 (TRANSITION) DISTRICT TO PLI SL (PUBLIC LANDS AND
6 INSTITUTIONS) DISTRICT WITH SPECIAL LIMITATIONS FOR
7 T12N R4W SECTION 1 NW ¼ NW ¼ PTN; GENERALLY LOCATED
8 SOUTH OF WEST INTERNATIONAL AIRPORT ROAD, WEST OF
9 MINNESOTA DRIVE, NORTH OF RASPBERRY ROAD, AND EAST
10 OF THE NORTHWOOD DRIVE RIGHT-OF-WAY ALIGNMENT, IN
11 ANCHORAGE.
12

13 This is a rezone of a 32-acre parcel of land from transition (TR) district to public
14 lands and institutions (PLI SL) district with special limitations. The TR district is an
15 antiquated zoning district that was not carried forward in the current zoning code,
16 Anchorage Municipal Code, Title 21. Remaining TR districts are intended to be
17 rezoned to more restrictive zoning classifications.
18

19 On July 19, 2021, the Planning and Zoning Commission recommended approval of
20 the rezone with a special limitation stating: "The use shall either be for a snow
21 storage facility, or for a park or open area." The Sand Lake Community Council
22 adopted a resolution recommending approval of the rezone on May 10, 2021.
23

24 The application complies with the approval criteria for rezoning in AMC 21.03.160E.,
25 *Approval Criteria*. This rezone implements the *Anchorage 2040 Land Use Plan* with
26 the comprehensive plan amendment that is being processed concurrent with this
27 rezone in a separate case (PZC Case 2021-0057).
28

29 The 2021 West Anchorage Snow Disposal Site Selection determined that this is the
30 best site to replace the existing snow dump in West Anchorage. The Federal
31 Aviation Administration prioritizes Ted Steven's Anchorage International Airport
32 property for commercial aviation use and the Municipality's use of the property is
33 only temporary. Snow disposal sites require conditional use approval in the PLI
34 district.
35

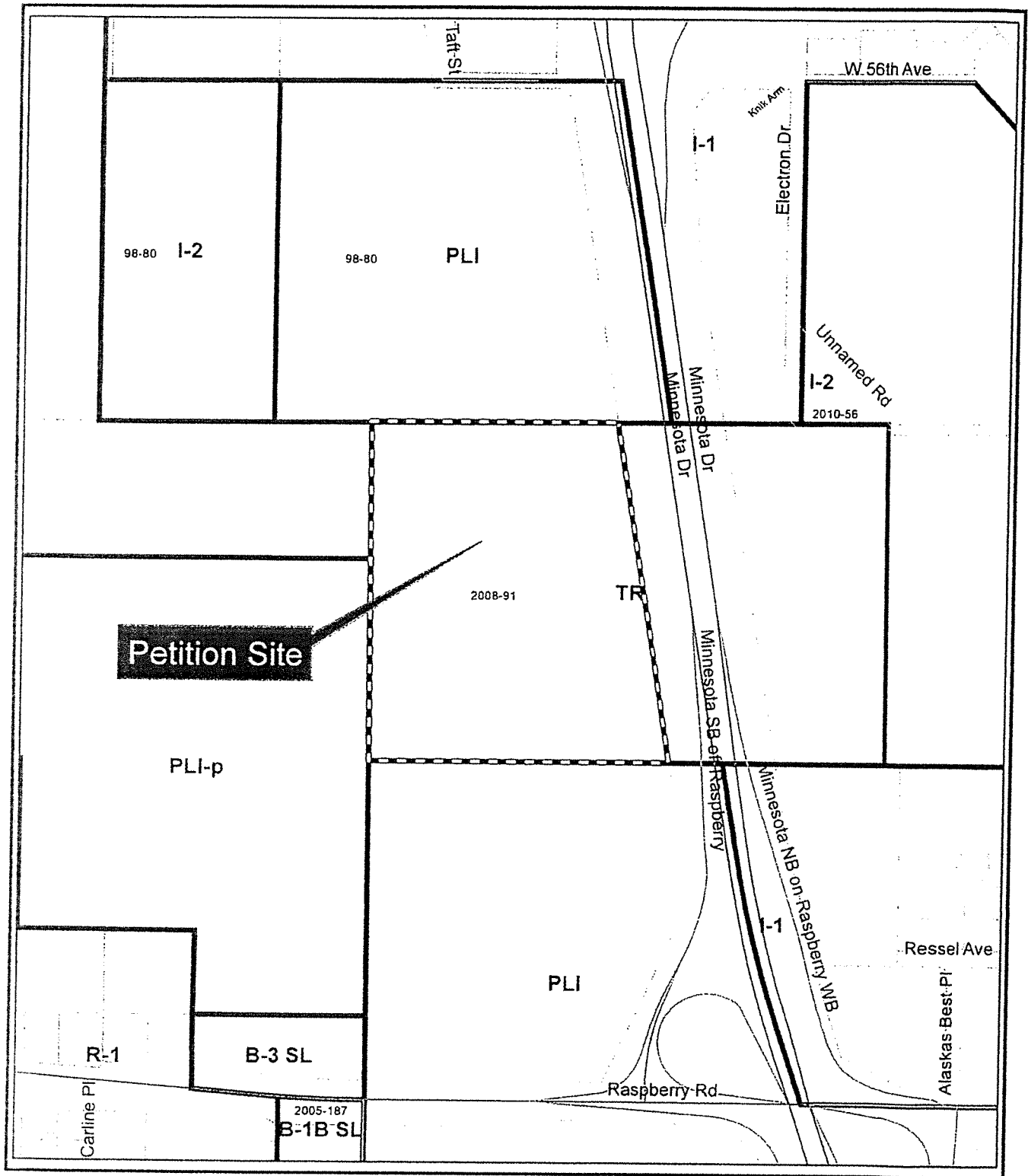
36 This ordinance has no private sector economic effects and local government
37 effects are less than \$30,000. Pursuant to AMC 2.30.053B.1., a summary of
38 economic effects is not required.
39

40 **THE ADMINISTRATION RECOMMENDS APPROVAL.**

41
42 Prepared by: Francis McLaughlin, Senior Planner
43 Planning Department

1 Approved by: Michelle J. McNulty, Planning Director
2 Concur: Adam Trombley, Community Development Director
3 Concur: Karol (Karl) Raszkievich, OMB Director
4 Concur: Patrick Bergt, Municipal Attorney
5 Concur: Amy Demboski, Municipal Manager
6 Respectfully submitted: Dave Bronson, Mayor
7
8 Attachment: Exhibit A
9 Planning Department Analysis Packet
10
11 (Planning and Zoning Commission Case No. 2021-0058)

2021-0058 EXHIBIT A



ANCHORAGE, ALASKA
AO No. 2021-77

1 AN ORDINANCE AUTHORIZING THE USE OF A PORTION OF MUNICIPAL
2 PROPERTY WITHIN THE DEDICATED CONNOR'S BOG PARK FOR AN
3 INTRAGOVERNMENTAL USE PERMIT THAT IS 464 FEET BY 21 FEET ON
4 THE NORTHERN BOUNDARY OF CONNOR'S LAKE SUBDIVISION, TRACT
5 B, PER PLAT 85-130, IN ACCORDANCE WITH AMC 25.10.080C.;
6 GENERALLY LOCATED SOUTH OF WEST INTERNATIONAL AIRPORT
7 ROAD, WEST OF MINNESOTA DRIVE, NORTH OF RASPBERRY ROAD, AND
8 EAST OF THE NORTHWOOD DRIVE RIGHT-OF-WAY ALIGNMENT, IN
9 ANCHORAGE.

10
11 (Sand Lake Community Council) (Planning and Zoning Commission Case 2021-0093)

12
13 **WHEREAS**, the Municipality of Anchorage Project Management and Engineering
14 Department seeks authorization for the use of municipal property dedicated as
15 Connor's Bog Park for an intragovernmental use permit, in accordance with AMC
16 25.10.080C.

17
18 **WHEREAS**, the intragovernmental use permit is 464 feet by 21 feet on the
19 northern boundary of Connor's Lake Subdivision, Tract B, per Plat 85-130, for a
20 driveway to the West Anchorage Snow Disposal Site.

21
22 **WHEREAS**, the purpose of the authorization is to construct a driveway from
23 Northwood Drive and the Kloop Street Maintenance Facility to a new snow
24 disposal site in West Anchorage.

25
26 **WHEREAS**, the affected area of Connor's Bog Park is primarily a natural area
27 with no developed trails or planned improvements, but has some social trails
28 connecting to Javier De La Vega Park.

29
30 **WHEREAS**, the Parks and Recreation Commission and the Planning and Zoning
31 Commission have both adopted resolutions recommending authorization for the
32 intragovernmental use permit.

33
34 **THE ANCHORAGE ASSEMBLY ORDAINS:**

35
36 **Section 1.** That the Municipality of Anchorage Project Management and
37 Engineering Department is hereby authorized the use of a portion of municipal
38 property within the dedicated Connor's Bog Park for an intragovernmental use
39 permit that is 464 by 21 feet on the northern boundary of Connor's Lake
40 Subdivision, Tract B, per Plat 85-130, in accordance with AMC 25.10.080C.
41

Section 2. This Ordinance shall be effective immediately upon passage and approval by the Assembly.

PASSED AND APPROVED by the Anchorage Assembly this 14th day of September, 2021.

Suzanne LaFrance

Chair

ATTEST:

Barbara A. Jones

Municipal Clerk

MUNICIPALITY OF ANCHORAGE

ASSEMBLY MEMORANDUM

No. AM 546-2021

Meeting Date: August 24, 2021

1 **FROM: MAYOR**

2
3 **SUBJECT: AN ORDINANCE AUTHORIZING THE USE OF A PORTION OF**
4 **MUNICIPAL PROPERTY WITHIN THE DEDICATED CONNOR'S**
5 **BOG PARK FOR AN INTRAGOVERNMENTAL USE PERMIT**
6 **THAT IS 464 FEET BY 21 FEET ON THE NORTHERN BOUNDARY**
7 **OF CONNOR'S LAKE SUBDIVISION, TRACT B, PER PLAT 85-**
8 **130, IN ACCORDANCE WITH AMC 25.10.080C.; GENERALLY**
9 **LOCATED SOUTH OF WEST INTERNATIONAL AIRPORT ROAD,**
10 **WEST OF MINNESOTA DRIVE, NORTH OF RASPBERRY ROAD,**
11 **AND EAST OF THE NORTHWOOD DRIVE RIGHT-OF-WAY**
12 **ALIGNMENT, IN ANCHORAGE.**
13

14 This ordinance authorizes an intragovernmental use permit for a driveway on a
15 portion of Connor's Bog Park that is dedicated parkland, in accordance with AMC
16 25.10.080C., *Use of municipal property for park or recreational purposes*. The
17 driveway will serve the new West Anchorage Snow Disposal Site.
18

19 The Parks and Recreation Commission and the Planning and Zoning Commission
20 recommended approval of the intragovernmental use permit on May 13, 2021, and
21 July 19, 2021, respectively.
22

23 The MOA Project Management and Engineering Department (PM&E) is requesting
24 a 464 feet by 21 feet intragovernmental use permit from the end of Northwood
25 Drive along the north boundary of Connor's Lake Subdivision, Tract B, to the
26 proposed West Anchorage Snow Disposal Site. The intragovernmental use permit
27 is the minimum needed for the driveway given the existing Chugach Electric
28 Association, Inc. transmission lines and the topography of the site.
29

30 This ordinance has no private-sector economic effects, and local government
31 effects are less than \$30,000. Pursuant to AMC 2.30.053B.1., a summary of
32 economic effects is not required.

THE ADMINISTRATION RECOMMENDS APPROVAL.

Prepared by: Francis McLaughlin, Senior Planner
Planning Department

Approved by: Michelle J. McNulty, Planning Director

Concur: Adam Trombley, Community Development Director

Concur: Karol (Karl) Raszkievicz, OMB Director

Concur: Patrick Bergt, Municipal Attorney

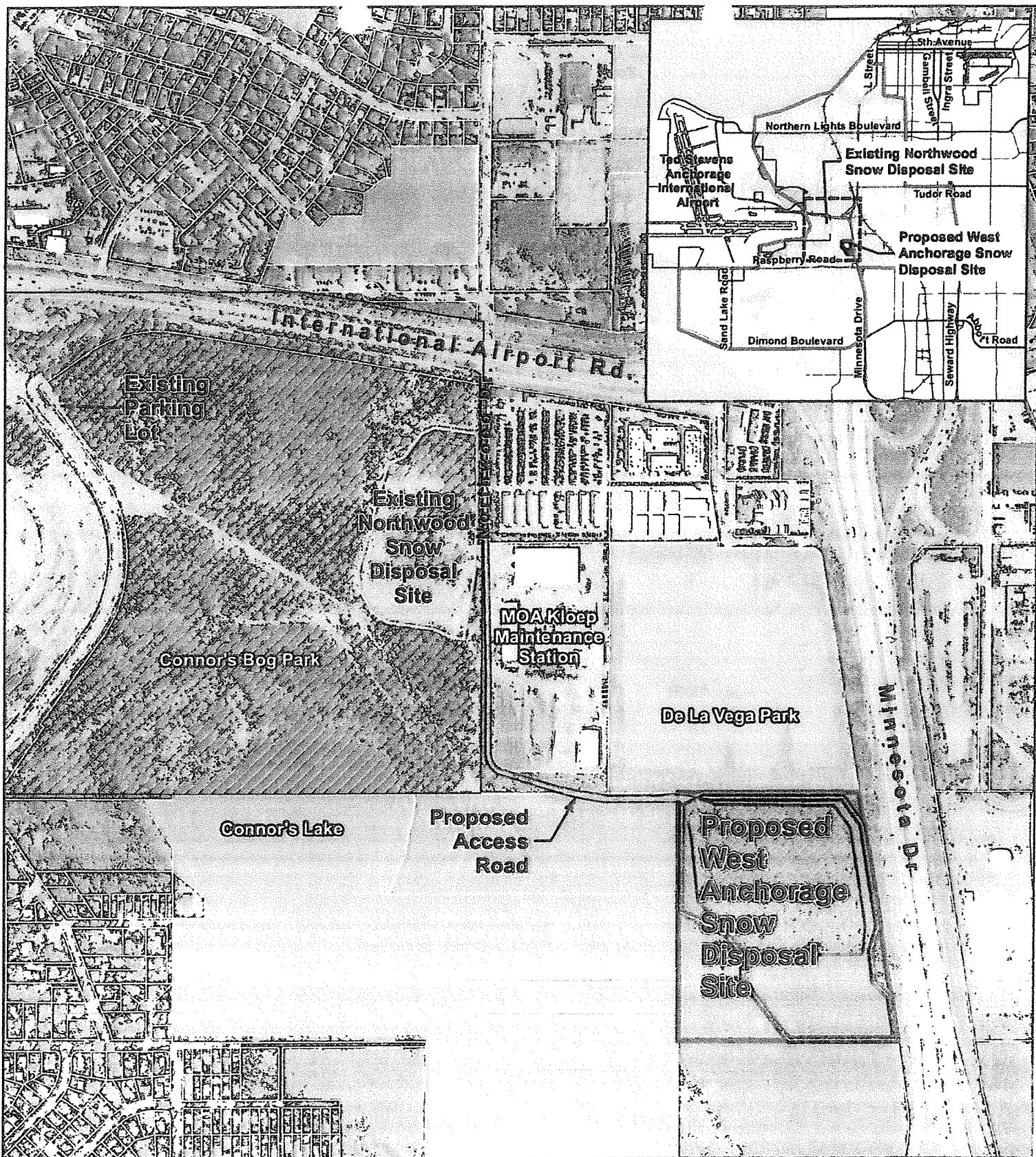
Concur: Travis C. Frisk, CFO

Concur: Amy Demboski, Municipal Manager

Respectfully submitted: Dave Bronson, Mayor

Attachment: West Anchorage Snow Disposal Site Exhibit A Location Map
Planning Department Analysis Packet

(Planning and Zoning Commission Case No. 2021-0093)

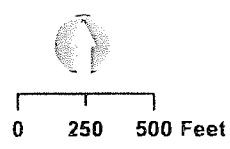


-  Project Site
-  Proposed West Anchorage Snow Disposal Site
-  Proposed Access Road
-  Existing Northwood Snow Disposal Site
-  TSAIA Property

Dedicated Parkland

West Anchorage Snow Disposal Site Exhibit A - Location Map

**Please note that the configuration and size of the snow disposal site is subject to change based on the Design Study Report



**MUNICIPALITY OF ANCHORAGE
PLANNING AND ZONING COMMISSION
RESOLUTION NO. 2021-023**

A RESOLUTION RECOMMENDING APPROVAL OF THE USE OF MUNICIPAL PARKLAND FOR AN INTRAGOVERNMENTAL USE PERMIT THAT IS 464 FEET BY 21 FEET ON THE NORTHERN BOUNDARY OF CONNOR'S LAKE SUBDIVISION, TRACT B PER PLAT 85-130, IN ACCORDANCE WITH AMC 25.10.080C.; GENERALLY LOCATED SOUTH OF WEST INTERNATIONAL AIRPORT ROAD, WEST OF MINNESOTA DRIVE, NORTH OF RASPBERRY ROAD, AND EAST OF THE NORTHWOOD DRIVE RIGHT-OF-WAY ALIGNEMENT, IN ANCHORAGE.

(Case 2021-0093; Parcel Number 012-041-07)

WHEREAS, a request has been received from the MOA Project Management and Engineering Department to approve the use of municipal parkland for an intragovernmental use permit that is 464 feet by 21 feet on the northern boundary of Connor's Lake Subdivision, Tract B, per Plat 85-130, in accordance with AMC 25.10.080C.; generally located south of West International Airport Road, west of Minnesota Drive, north of Raspberry Road, and east of the Northwood Drive right-of-way alignment, in Anchorage; and

WHEREAS, the proposed snow disposal site requires an access road that traverses a portion of Connor's Bog Park; and

WHEREAS, the proposed access road would require an intragovernmental use permit to use approximately 8,917 square feet of Connor's Bog Park, a dedicated municipal park of approximately 104 acre in area; and

WHEREAS, notices were published, posted, and mailed, and a public hearing was held on July 19, 2021.

NOW, THEREFORE, BE IT RESOLVED, by the Municipal Planning and Zoning Commission that:

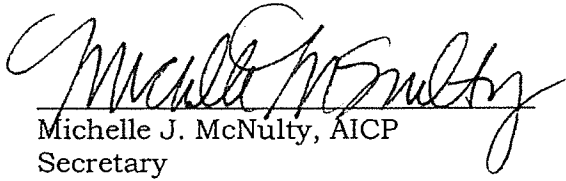
A. The Commission makes the following findings of fact:

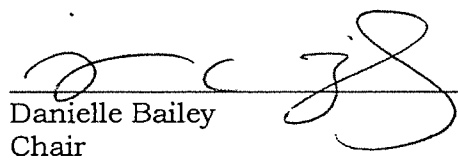
1. The MOA Parks and Recreation Commission adopted a resolution of support for the use of parkland for the intergovernmental use permit, in accordance with AMC 25.10.080C.
2. The MOA Maintenance and Operations Department identified the need for a replacement snow disposal site and this is an efficient location going forward.

3. The project team testified about the site selection process and the need for the intergovernmental use permit. This is the only available access to the parcel of land and it is the smallest possible use of parkland.
 4. The Parks and Recreation Commission Resolution recommends design features to offset trail and visual impacts to the reasonable satisfaction of the Parks and Recreation Department. The project team testified that they are working with the Parks and Recreation Department on the design of the intergovernmental use permit.
 5. A dissenting commissioner is concerned with the statement that there is no other viable alternative. While he appreciated the project team's level of analysis of the existing power line within the section line easement, he is concerned that some site specific considerations may not known or their potential impacts.
- B. The Commission recommends approval of the use of municipal parkland within the dedicated Connor's Bog Park for an intragovernmental use permit that is 464 by 21 feet on the northern boundary of Connor's Lake Subdivision, Tract B, per Plat 85-130, in accordance with AMC 25.10.080C.

PASSED AND APPROVED by the Municipal Planning and Zoning Commission on the 19th day of July, 2021.

ADOPTED by the Anchorage Municipal Planning and Zoning Commission this 2nd day of August, 2021.


Michelle J. McNulty, AICP
Secretary


Danielle Bailey
Chair

(Case 2021-0093; Parcel Number 012-041-07)

fm

**MUNICIPALITY OF ANCHORAGE
URBAN DESIGN COMMISSION
RESOLUTION NO. 2022-003**

A RESOLUTION APPROVING A VARIANCE FROM AMC 21.05.060E.8.b., TO ALLOW A SNOW DISPOSAL SITE TO ENCROACH INTO WETLANDS AND DISCHARGE WATER TO ADJACENT PROPERTY IN THE PLI SL (PUBLIC LANDS AND INSTITUTIONS DISTRICT WITH SPECIAL LIMITATIONS) FOR PTN, NW4NW, SEC. 1, R3W, T12N, S.M., IN ANCHORAGE.

(Case 2022-0012; Parcel Number 012-571-01)

WHEREAS, a request was received from the MOA Project Management and Engineering Division for a variance from AMC 21.05.060E.8.b. to allow a snow disposal site to encroach into wetlands and discharge water to adjacent property in the PLI SL (public lands and institutions district with special limitations) for PTN, NW4NW4, Sec. 1, R4W, T12N, S.M., in Anchorage, and

WHEREAS, 251 public hearing notices were published, posted, and mailed, and a public hearing was held April 13, 2022, and

NOW THEREFORE BE IT RESOLVED, by the Urban Design Commission that:

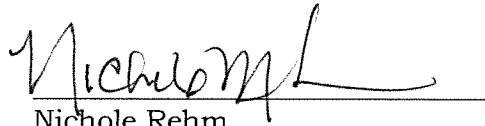
- A. The Commission makes the following findings of fact:
1. The approval criteria for a zoning variance are met, as required by AMC 21.03.240G., *Approval Criteria*.
 2. The granting of the variance is supported by *Anchorage 2040* Policies 5.5 and 6.2; *Anchorage 2020* Policies 5, 7, 30, 49, 67, 69, 71, 79, and 81; and the *West Anchorage District Plan*.
 3. The proposal results in benefits to the community that are equivalent to or better than compliance with the subject standard. The variance does not change the character of the PLI zoning district, where the property is located. There are no ADA accessibility concerns at this site. The variance does not adversely affect the health, safety, and welfare of the people of the Municipality. Signs are not an issue.
- B. The Commission approves the variance from AMC 21.05.060E.8.b., to allow a snow disposal site to encroach into wetlands and discharge water to adjacent property in the PLI SL district, subject to:
1. Prior to this variance becoming effective, a notice of zoning action shall be filed with the State of Alaska District Recorder's Office, including a map and a copy of the resolution of approval.

PASSED AND APPROVED by the Urban Design Commission on the 13th day of April 2022.

ADOPTED by the Urban Design Commission this 11th day of May 2022. This written decision/resolution of the Municipal Urban Design Commission is final, and any party may appeal it to the Board of Adjustment in accordance with AMC 21.03.050A.



Craig H. Lyon
Secretary



Nichole Rehm
Chair

(Case 2022-0012; Parcel Number 012-571-01)

fm

RESOLUTION 2021-01

Subject: A Resolution Pertaining to the Rezone, Comprehensive Plan Amendment and Conditional Use Permits for the Property Described Parcel ID 012-571-01-000 (referred to as West Anchorage Snow Disposal Site).

WHEREAS; the Anchorage Municipal Charter Art. VIII, Sec 8.01 establishes Community Councils as representatives for neighborhoods in planning and development; and

WHEREAS; Community Councils are intended to reflect actual neighborhoods and provide guidance advice on management of lands within their boundaries; and

WHEREAS; the West Anchorage Snow Disposal Site is zoned Transition (TR) District and is a single parcel approximately 32 acres in size; and

WHEREAS; the requested rezone, comprehensive plan map amendment, and conditional use permits will allow for the development of a proposed West Anchorage Snow Disposal Site, and

WHEREAS; the requested rezone, comprehensive plan map amendment, and conditional use permits (snow disposal site land reclamation) will support the Municipality's goal of meeting the city's long-term snow removal needs in a cost-effective manner. It would also support the city's vision of having a year-round multi-modal transportation system.

NOW THEREFORE; the Sand Lake Community Council hereby resolves to support the rezone of said property from TR District to PLI District, the 2040 LUP amendment of said property from "Park or Natural Area" to "Community Facility or Institution", and the approval of Conditional Use Permits.

Adopted, this 10th day of May, 2021 by the Sand Lake Community Council.

Parker Haymans

Parker Haymans

SLCC President

17 votes in favor

0 votes against & several abstaining

05/10/2021

MEETING SUMMARY

Prepared by:	HDR	
Project:	West Anchorage Snow Disposal Project	
Meeting Subject:	Sand Lake Community Council (SLCC) Meeting	
Meeting Time:	6:30 - 8:30 PM	
Meeting Date:	March 8, 2021	
Location:	Zoom Call	
List of Attendees:	Jason Mellerstig Robert Hayes Rick Chisham Alexandria McCormick Ken McCormick Edward Cullinane Mark Nusbaum Dustin Sherman Marilyn Stewart Lisa Rabinowitz Tony Spiroski Beverly Churchill Shirley Reeves Melinda Tsu Donovan Camp Josie Wilson Deva Johnson Barbara Carlson Jennifer Anderson Representative Sara Rasmussen Eugene Cho James Armstrong (AWWU)	Catherine Bollinger Rosemary Dunn Dave Hilmeyer Irene Quednow Nikki Wray Nancy Casey Russell Biggs Julie Makela Joy Boston Bill Spencer Representative Matt Claman Crystal Koeneman Simon Wigren Carl Jacobs Marjorie Paulson Judy Jessen Kollette Schroeder Claire Lewis David Anderson Frank Rast Linda Swiss Cathy Gleason

Summary

Josie Wilson of HDR introduced the project team and Bill Spencer of HDR gave a PowerPoint presentation. The following topics were covered in the approximately 10-minute presentation:

- The purpose of the West Anchorage Snow Disposal Project is to replace the current snow disposal site on Northwood Street, near Kloep Station, with a permanent site in West Anchorage owned by MOA.
- Description of the current site, which is leased on year-to-year basis from the State of Alaska.
- Overview of the site selection process and description of the selected site in Connor's Bog.

- The Connor's Bog Site was selected because it is owned by MOA, is in the West Anchorage Snow Disposal Area, and is available for 24-hour a day operation. Few potential sites met PM&E's location, size, ownership, and operational flexibility requirements for a new snow disposal site.
- Description of the permitting process for the project. The project will require a rezoning of the selected parcel, a change to the 2040 Land Use Plan Map, an approval for Other Municipal Use of Dedicated Park Land, Land Reclamation Permit, and a Conditional Use Permit. Due to the site's location in wetlands, several deviations from the Design Criterial Manual for snow disposal sites will be required.
- The project is currently in the design and permitting phase. Construction is scheduled to begin in 2022, pending project funding.
- The project website is <http://www.westanchoragesnow.com>

Comments and Questions from SLCC Members

- One community member asked where the snow meant for this site comes from. Bill Spencer explained that the snow comes from city streets, small cul-de-sacs, and sidewalks.
- A community member asked about the reclamation permit and if the project would be required to mitigate impacts to wetlands. The project team explained that the reclamation permit is for the placement of fill and that the project does not require a Corps wetland permit, therefore wetland mitigation is not required.
- A member asked about construction techniques in wetlands and water quality monitoring once the project is constructed. Bill Spencer explained that the team is considering low impact development design techniques and a buffer of wetlands to treat the snowmelt and reduce impacts to the remainder of the bog. The buffer of wetlands should act as biotic treatment of the snowmelt before it is released into the bog.
- A member asked if the snow stored in Connor's Bog would be enough to flood Connor's Lake and about alternative location in South Anchorage near Cabela's. The project team explained that the selected site is in the same basin as the existing site and that the amount of snow would be similar, which is why water levels are not expected to change. The team further explained that the site needs to be within the West Anchorage Snow Disposal Area due to trucking costs. The site near Cabela's is outside the West Anchorage Snow collection area and the Cabela's site is both privately owned and high valuable commercial property making acquisition costs prohibitive.
- Cathy Gleason of Turnagain Community Council stated concerns about the site selection process with respect to existing plans and the required approvals. She feels that a working group should be formed. The project team thanked Cathy for her input on the Site Selection Study and restated the permitting process that will be required for the new snow disposal site. Melinda explained that the project team has met with the MOA Planning Department and has a clear permitting plan. She also explained that the project team will continue to inform the public and will be reaching out to the Turnagain CC, Taku/Campbell CC, and Federation of CCs for additional project presentations.

- In response to Cathy Gleason, a community member stated that even if the project doesn't conform to existing plans, storing snow is a critical need for the city. Cathy Gleason responded that she understands but the various plans required a lot of work by many people.
- Josie Wilson explained that she and the project team kept track of the comments in the chat box and provided her contact information: 907-644-2030 or email info@westanchoragesnow.com.
- SLCC President, Parker Haymans, stated that many areas in the SLCC experienced significant structural damage during the November 2018 earthquake. He explained that the Sand Lake area is underlain with saturated fine grain sand material and has an inherent risk of liquefaction during earthquake events. He stated that this consideration should be incorporated into the design to prevent impacts to residences and business.

West Anchorage Snow Disposal Project

PM&E Project No. 19-01
Sand Lake Community Council Presentation March 8, 2021





What is the Snow Disposal Project?

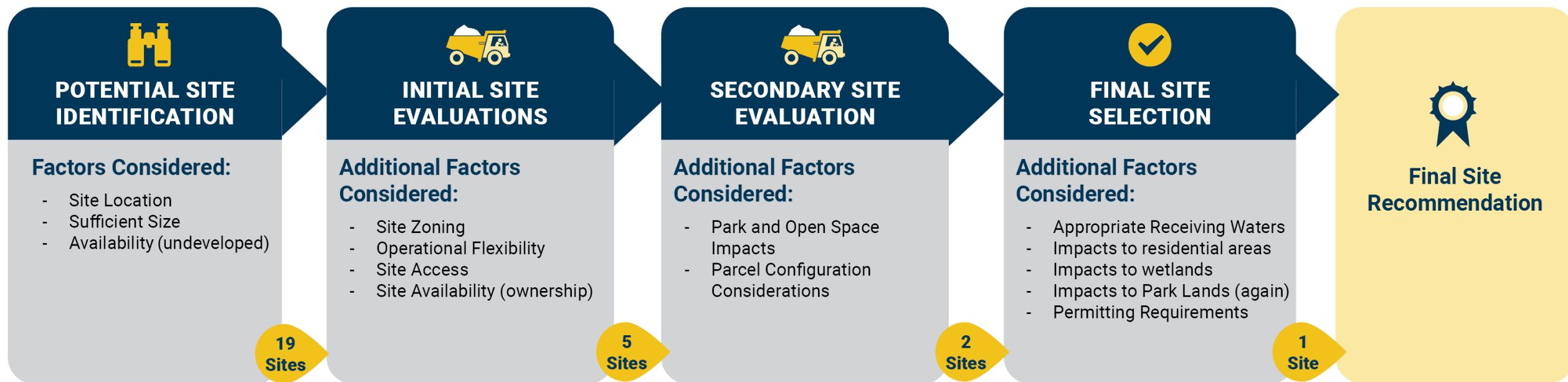
MOA has selected a new snow disposal location in order to meet long-term use, permitting requirements, and current water quality standards.





Site Selection Process

West Anchorage Snow Disposal Project



The Final Site Selection Study can be found at westanchoragesnow.com.



Selected Location: Connor's Bog

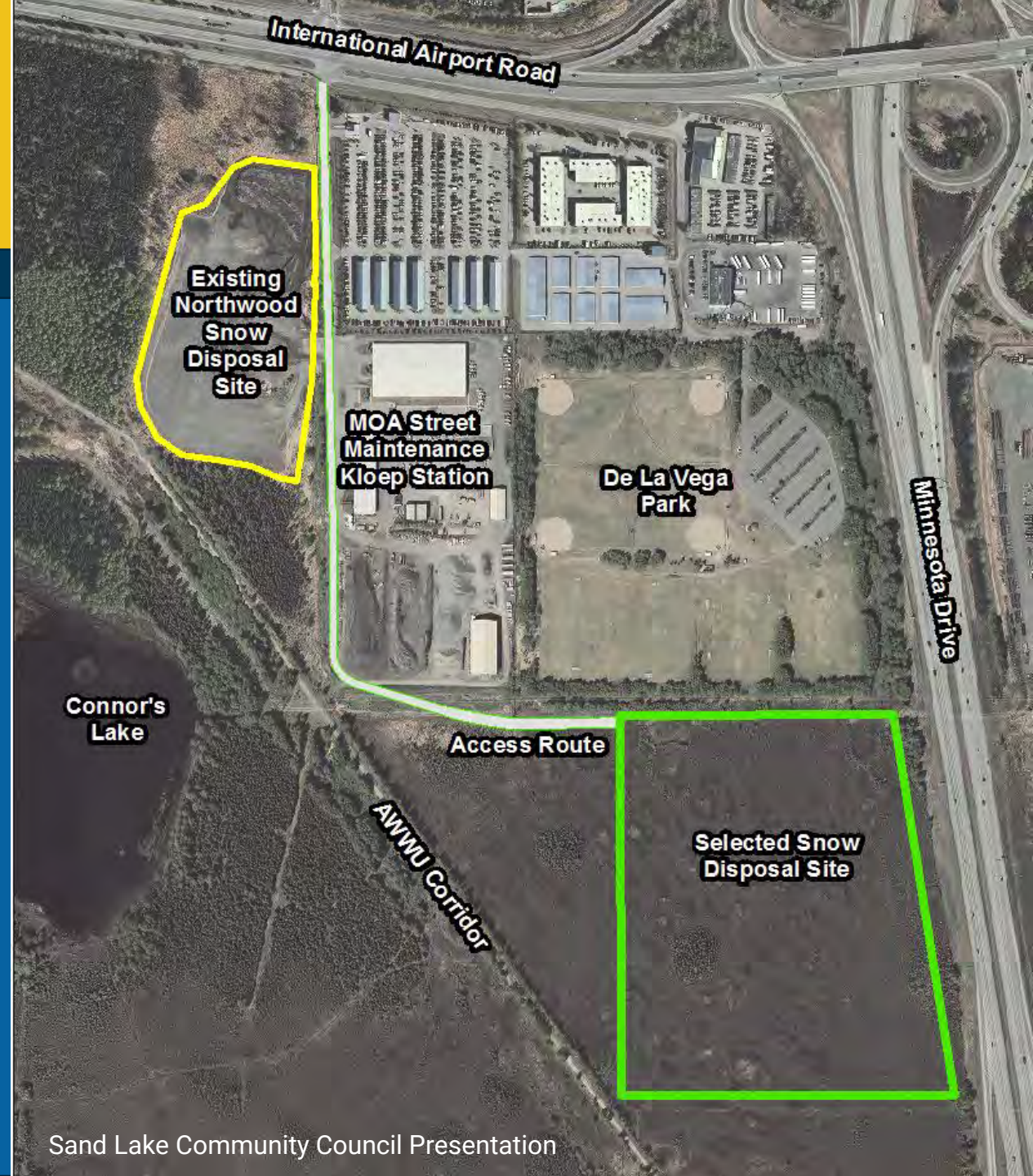
Advantages:

- Low impact on residents and neighbors
- Sufficiently sized and available for use
- No operational restrictions
- Adequate receiving waters

Considerations:

- Requires filling a portion of the Connor's Bog wetlands

March 8, 2021





Upcoming Permitting Steps

West Anchorage Snow Disposal Project

1

Rezoning

Classification change from Transitional (TR) to Public Lands and Institutional (PLI)

2

Comprehensive Plan Amendment

Anchorage 2040 Land Use Plan Map

3

Approval for Other Municipal Use of Dedicated Park Land

0.2 acres for the access road

4

Variances of Title 21 and Municipal Design Criteria

As identified in the Design Study Report

5

Conditional Use Permits

Land Reclamation and Snow Disposal Site





Schedule

West Anchorage Snow Disposal Project

Construction is planned for 2022 pending funding and permitting approvals.

PROJECT SCHEDULE	2019	2020	2021	2022
Data Collection				
Site Selection				
Permitting				
Field Work / Design				
Construction				
Public Involvement				

●
We Are
Here

🏠 Indicates Public Open House



Find more information

West Anchorage Snow Disposal Project

Visit the project website for more
information and to download
project documents!

westanchoragesnow.com





Questions?

West Anchorage Snow Disposal Project

Melinda Tsu, P.E.,
Project Manager

Julie Makela, P.E.,
Project Administrator



info@westanchoragesnow.com



www.westanchoragesnow.com



(907) 644-2030

Appendix B: Site Plan

Appendix C: Geotech Report

SUBMITTED TO:
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Anchorage, Alaska 99503

BY:
Shannon & Wilson, Inc.
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www.shannonwilson.com
AECC 125

GEOTECHNICAL ENGINEERING REPORT

West Anchorage (Connor's Bog) Snow Disposal Site

ANCHORAGE, ALASKA

Prepared for:
Municipality of Anchorage
Project Management &
Engineering

MOA Project Number: 20-17

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Submitted To: HDR Engineering, Inc.
2525 C Street, Suite 500
Anchorage, Alaska 99503
Attn: Bill Spencer, PE

Subject: GEOTECHNICAL ENGINEERING REPORT, WEST ANCHORAGE SNOW
DISPOSAL SITE, ANCHORAGE, ALASKA

Shannon & Wilson prepared this report and participated in this project as a consultant to the Municipality of Anchorage (MOA). Our work was authorized in Purchase Order Number 2021000725 with MOA dated March 9, 2021 and our scope of work is described in our proposal. This report presents the results of subsurface explorations, laboratory testing, and geotechnical engineering studies conducted by Shannon & Wilson, Inc. for the proposed relocation of the West Anchorage Snow Disposal Site in Anchorage, Alaska. This geotechnical engineering report was prepared by the undersigned.

We appreciate the opportunity to be of service to you on this project. If you have questions concerning this report, or we may be of further service, please contact us.

Sincerely,

SHANNON & WILSON, INC.

Russell Hepner, E.I.T.
Geotechnical Engineering Staff



Kyle Brennan, PE
Vice President

RCH:SKD/klb

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- Appendix A: Boring Logs and Laboratory Test Results
- Important Information

1 INTRODUCTION

This report presents the results of subsurface explorations, laboratory testing, and geotechnical engineering studies conducted by Shannon & Wilson for the proposed relocation of the West Anchorage snow disposal site. The purpose of this geotechnical study was to gather subsurface geotechnical information and provide geotechnical engineering recommendations needed to design and construct the proposed snow disposal site, access road, and other improvements near the existing Municipality of Anchorage (MOA) Northwood Maintenance Facility. To accomplish this, 14 soil borings and 13 peat probes were advanced near the proposed new snow disposal site and access road. Soil samples recovered from the borings were tested in our geotechnical laboratory. Presented in this report are descriptions of the site and project, subsurface explorations and laboratory test procedures, an interpretation of subsurface conditions, and conclusions and recommendations from our engineering studies.

Authorization to proceed with this work was received in the form of a Purchase Order (PO Contract No. 4400000636) requested by Mr. Ernest Gray III and approved by Mr. Ronald S. Hadden, both from MOA, dated March 9, 2021. Our work was conducted in general accordance with our January 22, 2021 proposal. This report is intended for use by the project design engineering staff, the MOA, and their representatives.

2 SITE AND PROJECT DESCRIPTION

According to parcel information available on the MOA GIS mapping website, the Connor's Bog site is located on an unsubdivided portion of the northwest $\frac{1}{4}$ of the northwest $\frac{1}{4}$ of Section 1 of Township 12 North, Range 4 West, in Anchorage, Alaska. The site is on an undeveloped bog located south of the existing MOA Northwood Maintenance Facility and Javier de la Vega Park, east of Connor's Lake, and west of Minnesota Boulevard in Anchorage, Alaska. The property adjacent to the existing access road was previously developed as a municipal landfill and currently houses the MOA Northwood Maintenance station, including several structures, paved and unpaved parking and driving areas, and storage for a variety of construction related materials. The site proposed for the snow disposal site is covered with tall grasses, shrubs, and spruce trees. There are overhead transmission lines running along the northern side of the site. Additionally, standing water was observed at the surface in some areas during spring and summer-time field activities. Telephone, electric, and natural gas easements are located within approximately 100 feet of the west and/or south property lines of the site.

Except for several small, vegetated mounds, the site is generally flat though the area of the proposed pad. The existing access road at the facility is relatively flat, but gently slopes down to the north and west. The proposed access road is approximately 9 to 21 feet above the surface of Connor's Bog. A vicinity map indicating the general project location is presented as Figure 1. The site plan, included as Figure 2, shows prominent site features and the approximate boring and probe locations.

We understand that the project consists of constructing an approximately 14-acre gravel pad on which snow will be stored seasonally from snow removal work conducted within the western portion of the MOA. We also understand that a containment berm with up to four weirs will be constructed around the gravel pad. Improvements to existing infrastructure near the Northwood facility include a reconfigured parking area, a truck bypass route to the west of the reconfigured parking area, and other potential improvements to the existing access road. Development of a new access road approaching the pad from the northwest, from the southwest corner of the existing access road, will connect the new snow pad to the western boundary of the Northwood facility.

3 SUBSURFACE EXPLORATIONS

Subsurface explorations for this study consisted of drilling and sampling 14 borings, designated Borings B-01 through B-14, and 13 peat probes, designated Probes P-01 through P-13, in the project area from March 29 through April 5 and on April 30, 2021. The general boring and probe locations were selected to provide relatively even coverage of subsurface data across the undeveloped site and at road and parking improvement areas. The boring and probe locations, shown on Figure 2, were recorded with a handheld global positioning system (GPS) capable of horizontal accuracies of ± 20 feet. It should be noted that GPS accuracy may be affected by tree canopies, geographic features, and other atmospheric anomalies. Elevations shown on the boring logs were extrapolated from topographic contours provided by the MOA GIS department. Therefore, the boring locations shown on the site plan and the elevations reported on the boring and probe logs should be considered approximate.

Drilling services for this project were provided by Discovery Drilling of Anchorage, Alaska, using a track-mounted, 6712DT Geoprobe and Nodwell CME-850 drill rigs. A geotechnical professional from our firm was present during drilling to locate the borings and probes, observe drill action, collect samples, log subsurface conditions, and observe groundwater conditions. We coordinated with the Call Locate Center for buried public utility locating services prior to drilling.

The borings were advanced with 3 1/4-inch inner diameter (ID), continuous flight, hollow-stem augers to a depth of between 16.5 and 31.5 feet below ground surface (bgs). As the borings were advanced, samples were recovered using standard penetration test (SPT) methods at 2.5-foot intervals to 10 feet bgs and at 5-foot intervals after that to the bottom of the borings. In the SPT method, samples are recovered by driving a 2-inch outer diameter (OD) split-spoon sampler into the bottom of the advancing hole with blows of a 140-pound hammer free falling 30 inches onto the drill rod. For each sample, the number of blows required to drive the sampler the final 12 inches of an 18-inch penetration into undisturbed soil is recorded. Blow counts are shown graphically on the boring log figures as "penetration resistance" and are displayed adjacent to sample depth. Where the sampler did not penetrate the full 18 inches, our log reports sampler refusal as the blow count and corresponding penetration in inches. The penetration resistance values give a measure of the relative density (compactness) or consistency (stiffness) of cohesionless or cohesive soils, respectively. In addition to the split spoon samples, a grab sample of the near-surface soils was collected from the auger cuttings in the upper 2 feet of borings advanced through suspected fill materials.

The peat probes were advanced to a depth of between 5.5 and 9 feet bgs. They were advanced by using the drill rig to push 2 3/4-inch drill rod from the ground surface to refusal. The rods were over-drilled with augers to the depth of probe refusal and a sample of the soil layer that caused refusal was recovered using SPT sampling techniques.

The soil samples recovered during drilling were observed and described in the field in general accordance with the classification system described by ASTM International (ASTM) D2488. Selected samples recovered during drilling were tested in our laboratory to refine our soil descriptions in general accordance with the Unified Soil Classification System (USCS) described in Appendix A, Figure A-1 (3 sheets). Frost classifications were also estimated for samples based on laboratory testing (sieve analyses and percent passing the No. 200 sieve) and are shown on the boring logs. The frost classification system is presented in Appendix A as Figure A-2 and summary logs of the borings and probes are presented in Appendix A as Figures A-3 through A-29.

At the completion of Borings B-03, B-06, B-09, B-10, B-11, B-13, and B-14; 1-inch, polyvinyl chloride (PVC) casing with hand-slotted sections was installed in the open borehole to facilitate observation of groundwater levels at a later date. The annular space between the borehole wall and casing was backfilled with cuttings produced during drilling and the PVC was allowed to stick up. The remaining borings were backfilled with cuttings produced during drilling. The ground surface surrounding Boring B-02 was repaired with asphalt cold patch.

4 LABORATORY TESTING

Laboratory tests were performed on selected soil samples recovered from the borings to confirm our field classifications and to estimate the index properties of the typical materials encountered at the site. The laboratory testing was formulated with emphasis on determining gradation properties, natural water content, and frost characteristics.

Water content tests were performed in general accordance with ASTM D2216. The results of the water content measurements are presented graphically on the boring logs in Appendix A.

Grain size classification (gradation) testing was performed to estimate the particle size distribution of selected samples from the borings. The gradation testing generally followed the procedures described in ASTM C136. The test results are presented in Appendix A as Figure A-30 (10 sheets) and summarized on the boring logs as percent gravel, percent sand, and percent fines. Percent fines on the boring logs are equal to the sum of the silt and clay fractions indicated by the percent passing the No. 200 sieve. Note that gradation testing indicates particle size only and visual classification under USCS designates the entire fraction of soil finer than the No. 200 sieve as silt. Plasticity characteristics (Atterberg Limits results) are required to differentiate between silt and clay soils under USCS.

5 SUBSURFACE CONDITIONS

The subsurface conditions encountered in our explorations are presented graphically on the summary logs in Appendix A. In general, our borings encountered peat and/or granular fill soils overlying native granular and occasional fine-grained material. Peat was generally encountered at the surface to depths of between 4 and 7.5 feet bgs. Borings B-01 through B-05 were advanced through an existing fill pad around the MOA Northwood Maintenance facility. These borings generally encountered between approximately 4.5 and 9.5 feet of fill material above the peat and/or native soils; however, Boring B-04, advanced through the top of an existing berm along the south side of the access road, found fill material throughout its depth (16.5 feet). Based on penetration resistance values ranging from 2 to 47 blows per foot (bpf) in samples where the ground was not frozen and our observations of drill action, the fill soils encountered during drilling are considered loose to dense. Note that soft to medium stiff, intermingled peat, wood, silt, and sand were encountered within the fill material, between roughly 4.5 and 9.5 feet bgs, in Boring B-05. Based on our laboratory testing, estimated fines contents of the fill material ranged from approximately 17 to 21 percent. Moisture contents of the fill material ranged from about 5 to 35 percent, with the

highest moisture contents found within the intermingled soil and organics observed in Boring B-05.

Native soils encountered beneath the fill and peat generally consisted of sands with varying amounts of fines and occasional gravels. However, fine-grained soils were encountered at varying depths in Borings B-01, B-08, B-13, and B-14. Native sands contained approximately 4 to 46 percent fines, with an average of about 10 percent, and the one silt sample tested was found to contain approximately 85 percent fines. Moisture contents of the granular native soils encountered above the groundwater table ranged from about 4 to 21 percent, with the higher percentages generally found in the soils with higher fines contents. Fine-grained materials encountered across the site generally consisted of silt to sandy silt with rapid dilatancy. Penetration resistance values ranged from 9 to 65 bpf where sampler refusal or significant heaving sand was not encountered. However, it is possible that some of the higher blow count samples may have been effected by heave that wasn't obvious during sampling. Based on our observations during drilling and the depositional environment, it is our opinion that native soils are, on average, medium dense or stiff to very stiff for granular and fine-grained soils, respectively. Isolated areas of loose and dense soils also likely exist.

Based on our probes and borings, peat depths in the area of the snow disposal pad vary between approximately 4 (Probe P-09) and 7.5 (Probes P-02 and P-05) feet, with an average of approximately 6 feet in depth. Figure 3 presents a peat thickness contour map that shows the approximate distribution of peat thickness across the site based on our borings and probes. The contours indicate that peat is thickest on the east side of the site with thinner peat soils in the southwest portion of the site. The peat and organic soils had moisture contents ranging from approximately 21 to 126 percent where underlying existing fill soils, and about 150 to 517 percent where exposed at the ground surface. The peat was predominantly very soft to soft where it wasn't frozen.

Groundwater, where observed, was encountered during drilling at depths ranging between approximately 12 and 25.5 feet bgs in borings advanced through the existing fill pad around the MOA Northwood Maintenance facility, and at depths ranging between approximately 7 and 10 feet bgs in borings advanced in Connor's Bog. On April 13, 2021, approximately two weeks after our initial drilling, water was measured at depths ranging between 6.3 and 9.6 feet bgs in the observation wells installed in Borings B-06, B-09, B-10, B-11, B-13, and B-14. Groundwater was again measured on July 11, 2021, approximately 3.5 months after drilling, and water was measured at depths ranging between 5.2 and 8.1 feet bgs. The groundwater level was also measured in Boring B-03, advanced through the fill pad, on April 13 and July 11, 2021, and water was measured at 25.6 and 24.3 feet bgs, respectively. Note that measured groundwater levels were approximately 1 to 1.5 feet shallower when measured in

July as compared to April. Also note that water levels may fluctuate by several feet seasonally and may vary during periods of high precipitation and rapid snow melt.

6 ENGINEERING RECOMMENDATIONS

Geotechnical considerations for this project include developing an appropriate structural section for the gravel access road, truck bypass route, and new gravel snow disposal pad. We assume that the truck bypass route, access road, and gravel pad will not need to meet the MOA Design Criteria Manual (DCM) requirements, but will need to support truck traffic throughout the year. We understand that the snow pad will need to support snow piles that may be more than 30 feet high, and that some differential settlements are tolerable for the pad. We also understand that a containment berm is planned to be constructed around the snow disposal pad and that preliminary plans call for up to four weirs to be constructed within the berm to control water going from the snow disposal pad area to the surrounding Connor's Bog. The approximate locations of these weirs are shown on our site plan, presented as Figure 2.

Design of the gravel access road must consider the support capabilities of the underlying materials. The new access road and snow pad will be developed atop existing organic material at the site. Peat depths in the area of the snow disposal pad vary between approximately 4 (Probe P-09) and 7.5 (Probes P-02 and P-05) feet, with an average of approximately 6 feet in depth. Underlying soils generally consist of medium dense to dense sands with varying amounts of fines. Groundwater depths generally ranged between approximately 6 and 9 feet bgs when encountered during our explorations.

In general, we understand that the snow disposal pad will be constructed with an approximately 0.5 percent crown with the high point in the approximate center of the pad to allow water to drain off in all directions. We understand that the crown will be on the order of 3 to 4 feet above the outer edges of the pad. We also understand that the containment berm will be constructed to an approximate height of 4 to 6 feet above the surrounding ground surface, and that the height will likely vary around the berm (i.e., there will not be a consistent design height and the berm is not planned to be surcharged). Note that, depending on project schedule, the area that will receive the new gravel access road and snow pad is well suited for a portion of the work to be constructed during winter/frozen ground conditions.

6.1 Gravel Access Road, Snow Pad, and Containment Berm

We understand that embankment fills will be floated over the existing surface organic soils and peat for the new access road, gravel snow disposal pad, and containment berm. We

also understand that the road and pad will be able to tolerate differential movements with maintenance as needed as peat consolidates. The sections below describe general embankment development which consists of the following three components: an embankment base resting on the existing ground surface, a base structural section to establish the new working surface, and embankment fill between the base and surface structural section.

The access road construction will likely require excavation through the existing berm on the north side of the snow dump site. Our borings indicate that the material that will likely be exposed will consist of a mixture of silty sand and silty gravel down to approximate elevation 87 feet. Below this elevation we encountered mineral soil mixed with peat and other debris. Cut slopes in these materials should be established at slopes no steeper than 3 horizontal (H) to 1 vertical (V). Care should be taken to not undermine overhead power line poles with road excavations in this area. The pole foundations in this area are unknown, but if cut slopes are maintained at not steeper than 3H to 1V, undermining should not be an issue as long as the top of slope cut line is greater than 20 feet from the base of the overhead utility tower base. We recommend that an experienced geotechnical engineer be present on site to confirm these conditions during construction and help adjust the design if necessary.

6.1.1 Embankment Base Preparation

Initial site preparation of the existing grade for development of embankments (i.e., access road, snow pad, and containment berm) over surface organics should disturb the organic surface as little as possible. Trees and shrubs should be cut approximately 6 inches above the ground surface, leaving the surface mat largely intact. After the cut vegetation has been removed, embankments can be developed as recommended below. Note that if surcharging is to occur, settlement plates should be installed as described in Section 6.1.3 after placement of geofabric and prior to placement of fill materials.

6.1.1.1 Summer Construction

After the base has been prepared as described above, the fill areas should be overlain by a separation geofabric (see Section 6.1.6.1) placed on the organic surface. The fabric should extend a minimum of 2 feet beyond the outer edge of the toe of the embankment. After the fabric is in place, we recommend that at least 18 inches of Type II material be placed and compacted by tracking with equipment and static rollers. After the initial lift is placed, a layer of biaxial geogrid should be placed within the access road and snow pad embankments as described in Section 6.1.6.2. If the grade is firm and workable, an additional 18 inches of Type II fill should be placed and compacted with moisture/density control as described in Section 6.3. If the grade experiences significant rutting and pumping

under construction traffic, additional material can be placed until a firm, unyielding surface is achieved.

Filling over soft organic soils with unfrozen ground conditions will require a systematic approach to reduce the risk of developing mud waves (upheaval of organic soils at the toe of an advancing fill) and shearing failure of the organic mat beneath the fill. Mud waves in the subgrade can form if the fill pad is advanced uniformly in one direction over the pad limits. The initial lift of fill should be placed in a staggered manner using a combination of excavators to drop fill on the prepared surface ahead of the advancing fill front and pushing/spreading fill with a light weight/low ground pressure dozer. If a mud wave begins to form, the fill pad should be advanced in a different area to approach the mud wave with the fill from a different direction. To avoid shearing of the organic mat, fill should be placed at a metered rate. We recommend limiting the rate fill such that the elevation of the pad does not increase more than 2 feet every two weeks. Once the base is established, embankment construction can continue as described in Section 6.1.2.

6.1.1.2 Winter Construction

The embankment base may be constructed in the winter months to take advantage of firm ground conditions. We believe that this is a viable approach as long as the conditions described in this section are met during construction. Preparation of the ground surface should be carried out as described in Section 6.1.1 and should include snow removal. Snow should be removed from the ground surface to the extent practicable so as not to disturb the organic mat. No more than 6 inches of loose or packed snow should be left on the ground surface prior to embankment development. If ice is present, the snow should be cleared to the ice surface. We recommend drilling through the ice in a few locations to establish an average ice thickness in areas where ice is on top of the ground surface. If the ice thickness is greater than 1 foot, effort should be undertaken to remove the ice so there is not more than 1 foot of ice over organic surface materials.

After snow is removed, a woven geotextile should be spread on the ground surface as recommended in Section 6.1.6.1. The base of the embankment fill should then be constructed as described above in Section 6.1.1.1 for summer construction. The final lift of Type II material should be placed over the geogrid and crowned/graded to drain water off the embankment. A smooth drum roller should be used to condition the surface to as smooth a state as practicable. Snow can fall and accumulate on the resultant embankment surface over the winter months, but it should be removed prior to breakup to encourage thawing of the embankment base fill and subgrade. After the upper 2 feet of fill has thawed, the embankment surface should be bladed to a relatively smooth and level state and compacted with moisture density control as described in Section 6.3. From this point,

embankment construction may commence as recommended in Section 6.1.2. Note that if winter construction is conducted, peat consolidation and settlement will be spread over a longer period of time as the materials thaw. As such, the contractor should be prepared to accommodate additional re-leveling of the embankment surface as it is developed.

6.1.2 Embankment Construction

The new embankments for the access road, the snow pad, and containment berm should provide a stable, supportive subgrade for the structural section of the new surface. Embankment fills above the base described in Section 6.1.1 should generally consist of Type III or better material that is placed and compacted as described below in Section 6.3. However, we understand that the MOA plans to utilize unclassified fill soils within the embankments for this project. This may be acceptable between the embankment base (see Section 6.1.1) and the structural section described in Section 6.1.4 for the access road and snow pad provided that the unclassified material can be placed and compacted with moisture density control as described in Section 6.3. However, we recommend concentrating the unclassified fill soils within the containment berms to the extent practicable since they will not need to support truck traffic. Additionally, unclassified fills typically contain elevated fines, which can make them difficult to compact with moisture density control during wet conditions.

In order to estimate fill quantities, it will be important to account for consolidation of the peat soils under fill loading. Embankment settlement and total expected settlement under fills is discussed in Section 6.1.5. It is important to note that consolidation of the peat soils will begin as soon as filling occurs and a substantial of consolidation may occur before the filling activities are complete.

6.1.2.1 Access Road and Snow Pad Embankment Construction

Embankment fill slopes of the access road and snow disposal pad should be established at angles not steeper than 2H to 1V. The thickness of the embankment will vary (thicker near the crowned center of the roadway and pad) and should accommodate for settlement described in Section 6.1.5 as well as the desired final grade of the roadway and pad. As filling takes place, the surface grade should maintain a crown to allow for drainage of surface water off of the fill/embankment surface.

We understand that the planned crown slopes of the snow pad are on the order of 0.5 percent to limit the volume of fill material needed for the project. We typically recommend establishing the embankment surface crown slopes at a minimum of 2 percent; however, we believe that the 0.5 percent slope will be sufficient for this project since truck traffic over the embankments will generally be conducted during the winter months, after the road and pad

surfaces are partially frozen. Note that the shallower crown slope will likely result in a wet embankment during times of heavy precipitation and snow melting, so a soft driving surface and rutting should be anticipated when travelling over the embankments during the summer and fall months. It is likely that re-grading on a seasonal basis will be needed to re-establish the crown and maintain the desired drainage off the pad surface.

6.1.2.2 Containment Berm Embankment Construction

Embankment fill slopes of the containment berm should also be established an angle not steeper than 2H to 1V but may need to be flatter depending on the quality of the unclassified fill soils. We understand that the thickness of the berm will vary along its length, but that it will generally be about 4 (north and west berms) to 6 (south and east) feet above the surrounding ground surface. While we understand that berms will not necessarily be surcharged as described in Section 6.1.3, construction should accommodate for settlement described in Section 6.1.5 by adding embankment fill material above the desired final height of the berm during initial construction. Likewise, the surface grade should maintain a crown to allow for drainage of surface water off the top of the berm as filling takes place. Since unclassified soils are anticipated to be used to construct a significant portion of the containment berm and the berms will be allowed to settle as the underlying peat consolidates, we recommend that all exposed surfaces of the berm are constructed with a minimum crowned slope of 5 percent to drain water off the likely silty material.

While unclassified soils are generally acceptable overlying the embankment base for the berms, we recommend that Type II/IIA classified soils are used within approximately 10 feet of the sheet pile weirs that are planned to be installed in up to four locations around the site. We understand that a critical design component of the project is to keep each of the weirs at the same elevation to encourage excess water to drain evenly around the sides of the snow disposal site. The relatively high fines contents of unclassified soils typically make them more frost susceptible than the non frost susceptible Type II/IIA soils. Therefore, unclassified soils would likely add frost jacking forces to the sheet piles used to construct the weirs and increase the risk of frost related movements that would result in differential movements (i.e., different weir elevations) between the individual weirs.

6.1.3 Embankment Surcharging

Based on our borings and probes, peat depths at the site vary between approximately 4 (Probe P-09) and 7.5 feet (Probes P-02 and P-05), with an average of approximately 6 feet in depth. Native soils underlying the Peat generally consisted of medium dense to dense sands with varying amounts of fines. The magnitude of the settlements that will develop at the site are dependent upon the applied loads and density of the support material. If a

surcharge load significantly higher than expected operational loads is stored on the site as described below, much of the primary settlement could be achieved such that additional settlements would be comparatively small, depending on the existing surcharged soil thickness, surcharge load, and length of time surcharged.

The purpose of preloading is to consolidate the compressible peat soils before the access road, snow pad, and containment berm are constructed. Surcharge loads are generally applied by placing a fill embankment over the site to a load greater than will be expected to be constructed on the site. This will produce, in a shorter period of time, a large amount of settlement that would have occurred under the lighter long-term, design loads. Post-construction differential settlements, with the use of a properly completed preload program, should be more uniform across the site. These differential settlements should also be relatively small and within tolerable limits for the project; with the amount generally depending upon the degree of surcharging and the variability in pre-surcharge site conditions.

6.1.3.1 Surcharging Access Road and Snow Pad Areas

In developing surcharge embankments over surface organics, the surcharge fill should be a minimum of 3 feet thick (relative to the proposed final elevation). We expect total settlements will be on the order of 40 percent of the peat layer thickness, which varies between approximately 4 and 7.5 feet across the site. With preloading, additional settlements after the surcharge is removed should be small, probably less than 3 to 4 inches, and the settlement pattern should be more uniform across the site to reduce the frequency of maintenance. Note that consolidation of the peat soils will begin as soon as fills are placed on top of them and will likely continue for up to approximately 6 months after filling is complete.

We recommend that Type II/IIA material be used to surcharge the access road and snow pad areas so that it can be used on other projects as the excess material is removed. We recommend that the crown slope should be maintained at the ground surface during surcharging. The surcharge fill should be allowed to stay in place for at least 6 months, at which point it can be removed and the structural section graded to develop final grade. A shorter surcharge time length may be possible, which could be determined with settlement and pore pressure monitoring. This program would include installation settlement plates that are monitored to detect stabilization and transition from primary to secondary consolidation in the organic soils, as described in Section 6.1.3.3.

6.1.3.2 Surcharging Containment Berm Areas

We understand that the containment berm will generally not be surcharged, per se, the settlement results of surcharging will still be experienced by the berm. We also understand that a uniform height is not necessary around the perimeter of the berm and that the final height of the berm will generally vary between about 4 and 6 feet, with the highest points generally being in the southern and eastern berms. Therefore, we assume that an unclassified surcharge fill will generally remain in place (i.e., fill will not be removed, and the berm will not be constructed to a design shape), although landscaping vegetation may be placed over the berm after construction. As such, the surcharge fill thickness may vary along the berm, depending on the peat layer thickness around the site, which varies between approximately 4 and 7.5 feet across the site. In our opinion, a minimum of 2 feet of additional unclassified fill (relative to the proposed final elevation) should be placed over the berms during construction. We expect total settlements of the berm to be on the order of 40 percent of the peat layer thickness. With modified preloading, additional settlements after site construction is complete should be small to moderate, likely less than roughly 6 inches.

While most of the berm will not be surcharged, we recommend that the areas around the weirs are surcharged as recommended in Section 6.1.3.1. The surcharge fill area should extend out the full width of the berm or a minimum of 10 feet from the outer edges on all sides of the sheet pile weirs. We recommend that Type II/IIA classified soils are used to construct the full height of the containment berm embankment, including the surcharge load, in these areas to reduce the risk of frost jacking and/or downdrag forces that could lead to differential settlements between the drain height of the individual weirs. A surcharge monitoring program is also recommended at the weir locations to detect stabilization and transition from primary to secondary consolidation in the organic soils, as described in Section 6.1.3.3.

6.1.3.3 Surcharge Monitoring

As part of an effort to monitor the consolidation of the peat soil under the surcharge placed, we recommend installing settlement plates to monitor consolidation of the compressible peat soils under fill soils loads. These plates should be installed and monitored by a professional surveyor. The locations of the settlement monitoring points should be laid out on an approximate 200-foot grid within the area of the snow disposal pad and along the length of the access road. We also recommend that monitoring points are installed adjacent to each of the proposed weirs. PVC casing to house a thermistor string is recommended at occasional locations in the embankment to monitor ground temperatures where the ground was frozen at the time of fill placement. This would be the case within embankment bases that are constructed using winter construction recommendations (see Section 6.1.1.2).

Settlement plates should be installed on top of the ground surface and surveyed prior to placement of fill to establish the baseline condition. Rods extending up from the settlement plates should be extended up vertically as the fill is placed so that continued monitoring can be conducted after filling is completed. After filling, we recommend surveying the vertical locations once per week for the first month and then once every month after that.

Data from surveying elevation changes in the settlement plates and the ground temperatures (if the embankment base is initiated in the winter season) should be used to analyze the progress of the surcharge load. Note that since water must be removed from the soil for consolidation to occur, frozen grounds will not consolidate until thawed. Additionally, as thawing of the ground under the fill will not occur in a homogenous manner, soils near the edge of the fill will likely thaw faster than those in the center. The thawing and consolidation process of soil under a fill will behave in a somewhat unpredictable manner.

The rate of settlement will decrease over time and become linear at a relatively slow rate, indicative of primary consolidation being achieved. Once it is determined that primary consolidation of the peat has been achieved, the surcharge fill can be removed.

6.1.4 Structural Section

We understand that the access road and pad will remain gravel surfaced (i.e., paving is not planned for this project). The design of the driving surface for the road improvements should take into account the traffic loading and subgrade characteristics. We understand that the access road and gravel pad will likely experience loads from heavy equipment and dump trucks carrying loads of snow. The structural section to be constructed on top of the embankment should consist of at least 18 inches of Type IIA and 6 inches of E-1 surface course. Note that we recommend using Type IIA to surcharge the embankment, as described in Section 6.1.3, so that as it is removed to final elevation, the Type IIA layer is already in place. We also recommend placing the E-1 surface course layer at the end of the project to allow the embankment materials and subgrade to consolidate and settle as much as practicable from the surcharge. Prior to placement of the structural section, the embankment surface should be graded and compacted with the appropriate crown slope for drainage.

The performance of the road and snow disposal pad will be controlled by the details of construction and by the quality (gradation and durability characteristics) of the materials that are placed and compacted to develop the needed structural section. Fill placement and compaction procedures are described in Section 6.3. Quality control inspection is strongly recommended when placing structural support soils. To reduce the maintenance needed after construction, we recommend including strict quality control/assurance provisions in

the construction specifications. If constructed as recommended, we anticipate the road will require periodic maintenance including grading and pothole repair (depending on traffic loading/volume and weather conditions).

6.1.5 Embankment Settlement

Constructing the new access road, snow disposal pad, and containment berm over peat will result in measurable consolidation of the soft, organic material. This will result in differential settlement as the fill is placed and from secondary consolidation, after surcharging is complete. The actual magnitude of settlement of peat soils is difficult to estimate due to material variability and is dependent on the preloaded degree of consolidation, nature of the peat soils, and the amount of fill placed over the peat. For rough estimating purposes, the total settlement of new embankments over peat soils can be up to 40 percent of the original peat thickness under the fill. Based on the peat thicknesses encountered by our borings and probes, we estimate that the amount of primary settlement that the embankments could experience will likely be on the order of 1.6 to 3 feet, with an average of about 2.5 feet. Consolidation will take place over the life of the embankments and will begin during fill placement, but the rate of consolidation will be highest within approximately six months of construction (i.e., surcharging), depending on loading and traffic volume. Secondary settlements would likely be on the order of 3 to 4 inches for the access road and snow disposal pad; depending on the existing surcharged soil thickness, surcharge load, and length of time that the surcharge load remains in place.

It should be noted that as the embankments settle, they will likely need additional fill material to achieve a final grade above the existing ground surface and the desired crown slopes. Embankment material should be allowed to settle as much as practicable before development of the structural section to mitigate additional fill placement for maintenance of the desired road and pad grades.

6.1.6 Reinforcing Geofabric and Geogrid

Generalized guidelines for construction and recommended material types are listed above. Note that the recommended applications of these materials are to be used as guidelines in the final design. The manufacturer of the product selected can provide additional use and design guidelines for the specific product and application.

6.1.6.1 Geofabric

The geotextile recommended within the structural section should increase the strength and stability of the supporting material. By increasing the tensile strength of the soils, differential settlement should be decreased both longitudinally and laterally from the center

to the edges of the road and pad section. We recommend using Mirafi RS580i or equivalent for the applications described above.

Sections of geotextile should be unrolled smoothly and perpendicular to the access road alignment on the grade surface so that it covers the entire exposed grade evenly. Geofabric should extend beyond the toe of the embankment slopes at least 2 feet to accommodate for future settlement. Alternatively, the geofabric may be wrapped in a perpendicular fashion around the bottom layer of fill to provide additional support and reduce lateral loss of material into the existing peat. There should also be at least 3 feet of overlap between grid sheets, with seams sewn as recommended in the standard specifications from the product manufacturer. Traffic on top of the initial lift over the geotextile should travel in straight lines to prevent damage.

6.1.6.2 Geogrid

The geogrid recommended within the structural section should increase the strength and stability of the embankment bases. By increasing the tensile strength of the soils, differential settlement should be decreased both longitudinally and laterally from the center to the edges of the road and pad sections. We recommend using a Type B Geotextile grid as specified in the Municipality of Anchorage Standard Specifications (MASS).

Sections of geogrid should be unrolled smoothly on the grade surface so that it covers the entire exposed grade evenly. There should also be at least 3 foot of overlap between grid sheets, with seams sewn as recommended in the standard specifications from the product manufacturer. Traffic on top of the initial lift over the geogrid should travel in straight lines to prevent damage.

6.2 Sheet Pile Weirs

Based on the subsurface conditions encountered near the planned weir locations (see Borings B-07, B-10, B-13, B-14, and Probe P-13), it is our opinion that sheet pile weir structures are appropriate for this project. Design of the sheet pile weirs must consider the depth of retained water, embedment depth of the sheet pile, pile section strength, effects on the containment berm due to seepage around the sheets, and constructability. We understand that the weirs will generally be designed by others; therefore, the discussions included in this report are primarily focused on embedment depths and constructability aspects of the design.

6.2.1 Design Considerations

We understand that sheet pile weirs will be installed at up to four locations within the containment berm (see site plan for approximate locations), and that a uniform height is not necessary around the perimeter of the berm. The final height of the berm will generally vary between about 4 and 6 feet, with the highest points generally being in the southern and eastern berms. We also understand that a critical design component of the project is to keep each of the weirs at the same elevation to encourage excess water to drain evenly around the snow disposal site.

While unclassified soils are generally acceptable overlying the embankment base for the berms, we recommend that Type II/IIA classified soils are used within approximately 10 feet of each of the proposed sheet pile weirs. The relatively high fines contents of unclassified soils make them much more frost susceptible than the generally non frost susceptible Type II/IIA soils. Therefore, unclassified soils would likely add frost jacking forces to the sheet piles used to construct the weirs and greatly increase the risk of frost related movements that would result in differential movements (i.e., different weir elevations) between the individual weirs.

Due to the sensitive nature of the weirs to movement, we recommend that sheet piles be driven to a depth of at least 18 feet below the surrounding ground surface, or to a minimum of 10 feet into the medium dense to dense native sands underlying the peat at the site. Additionally, sheet piles for the weirs should not be driven until primary consolidation of the peat has taken place to reduce the downdrag forces on the sheet piles. Based on the peat thicknesses observed in our borings, the anticipated surcharge settlements, and the containment berm heights; we believe that sheet piles may need to be driven on the order of 18 to 20 feet below the top of the containment berm.

6.2.2 Weir Materials

Based on preliminary design conversations, we understand that fiberglass or PVC sheet piles are being considered for the project to reduce the risk of corrosion due to the potentially high chloride content of the snow melt water. While we believe that either material would be viable for the project, we recommend using fiberglass. We believe that fiberglass is a stronger material than PVC, so it would likely provide more lateral resistance and may be easier to install without damaging the sheet pile. Our primary concerns with using either fiberglass or PVC is that they may require special driving equipment/considerations to install them properly. A special driving shoe/pad may be needed to drive these types of sheet piles without damaging the weaker materials (as compared to steel). Additionally, finding a skilled contractor to do the work could increase construction costs of the project.

6.2.3 Pile Driving

The contractor should be responsible for developing a pile driving plan that will achieve the goals of the project. This plan should include a list of the equipment that is to be used and general procedures for conducting the pile driving, particularly if fiberglass or PVC sheet piles are selected. Axial loads will generally not be applied to the proposed sheet pile weirs, so the depth that the piles are driven into the medium dense to dense soils beneath the existing peat will be the driving criteria during construction. Based on the subsurface conditions and our analyses, the following criteria and procedures should be established for sheet pile driving:

- The sheet piles should be driven to a minimum depth of 18 feet below the surrounding ground surface, or at least 10 feet below the bottom of the surcharged peat soils.
- A continuous driving record, including the depth of the bottom of the peat soils encountered, should be taken for the entire depth of the sheet piles.
- Acceptance criteria should be based on achieving target tip embedment.

During driving, the contractor should be made responsible for keeping pile driving records to include pile location, penetration rates, time of driving, length of driving, length of pile, and the finish tip elevation. The records should highlight problems or difficulties encountered during driving and the methods or measures taken to overcome the issues. We recommend that a qualified geotechnical engineer be on site during pile installation to observe the construction effort on behalf of the project owner to verify that the construction is carried out per plan and the actual sheet pile design.

6.3 Structural Fill and Compaction

Structural fill will be needed to construct a new access road, snow disposal pad, and portions of the containment berm. Structural fill that is imported should be clean, granular soil free of organic material and meet the gradation properties for Type II/IIA as specified by the MASS, which is presented as Figure 3. We also understand that unclassified fill materials will also be imported to construction portions of the embankments and a large portion of the containment berm. While these unclassified materials are not necessarily subject to gradation specifications, they must be able to be placed and compacted as follows.

We understand that existing soils from the project area will likely not be excavated during construction activities. If minor grading is conducted along the existing access road and parking area, the granular soils do not meet the gradation requirements for Type II/IIA fill based on the results of our laboratory testing. In our opinion, these materials are unsuitable

for reuse in the pavement structural section but may be reused as unclassified fill in areas of the embankments and containment berm that will receive unclassified fills, provided the contractor can demonstrate the ability to place and compact the material with proper moisture density control.

Structural fills below roadways should be placed in lifts not to exceed 10 to 12 inches loose thickness, and compacted to at least 95 percent of the maximum dry density as determined by the Modified Proctor compaction procedure (ASTM D1557). Non-structural fills, including portions of the containment that are not subject to traffic loads or adjacent to weirs, should be compacted to at least 90 percent of the Modified Proctor optimum dry density. Bulking of backfill should be discouraged as this can cause voids and lead to large future surface settlements. During fill placement, we recommend that large cobbles or boulders with dimensions in excess of 8 inches be removed from any structural fills.

7 CLOSURE AND LIMITATIONS

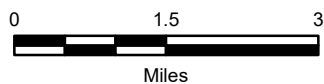
This report was prepared for the exclusive use of our client and their representatives for evaluating the site as it relates to the geotechnical aspects discussed herein. The conclusions and interpretation contained in this report are based on site conditions as they presently exist. It is assumed that the exploratory borings are representative of the subsurface conditions throughout the site, i.e., the subsurface conditions everywhere are not significantly different from those disclosed by the explorations.

If there is a substantial lapse of time between the submittal of this report and the start of work at the site, or if conditions have changed due to natural causes or construction operations at or adjacent to the site, it is recommended that this report be reviewed to determine the applicability of the conclusions considering the changed conditions and time lapse. Unanticipated soil conditions are commonly encountered and cannot fully be determined by merely taking soil samples or advancing test holes. Please read the Important Information section at the back of this report to reduce your project risks.

Copies of documents that may be relied upon by our client are limited to the printed copies (also known as hard copies) that are signed or sealed by Shannon & Wilson with a wet, blue ink signature. Files provided in electronic media format are furnished solely for the convenience of the client. Any conclusion or information obtained or derived from such electronic files shall be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, or you question the authenticity of the report please contact us.



Map adapted from files provided by the Alaska Department of Natural Resources



Connor's Bog Snow Dump
Anchorage, Alaska

VICINITY MAP

September 2021

106424-001

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

FIG. 1

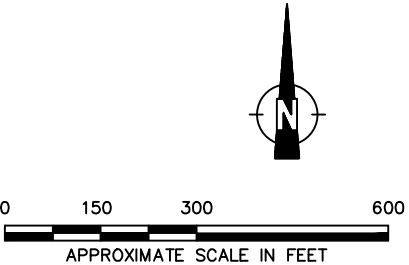


LEGEND

-  P-01 Approximate Location of Geotechnical Probe P-01, Advanced by Shannon & Wilson, March and April 2021.
-  B-01 Approximate Location of Geotechnical Boring B-01, Advanced by Shannon & Wilson, March and April 2021.

NOTES

1. Base map adapted from aerial imagery provided by Google Earth Pro, reproduced by permission granted by Google EarthTM/ Mapping Service.



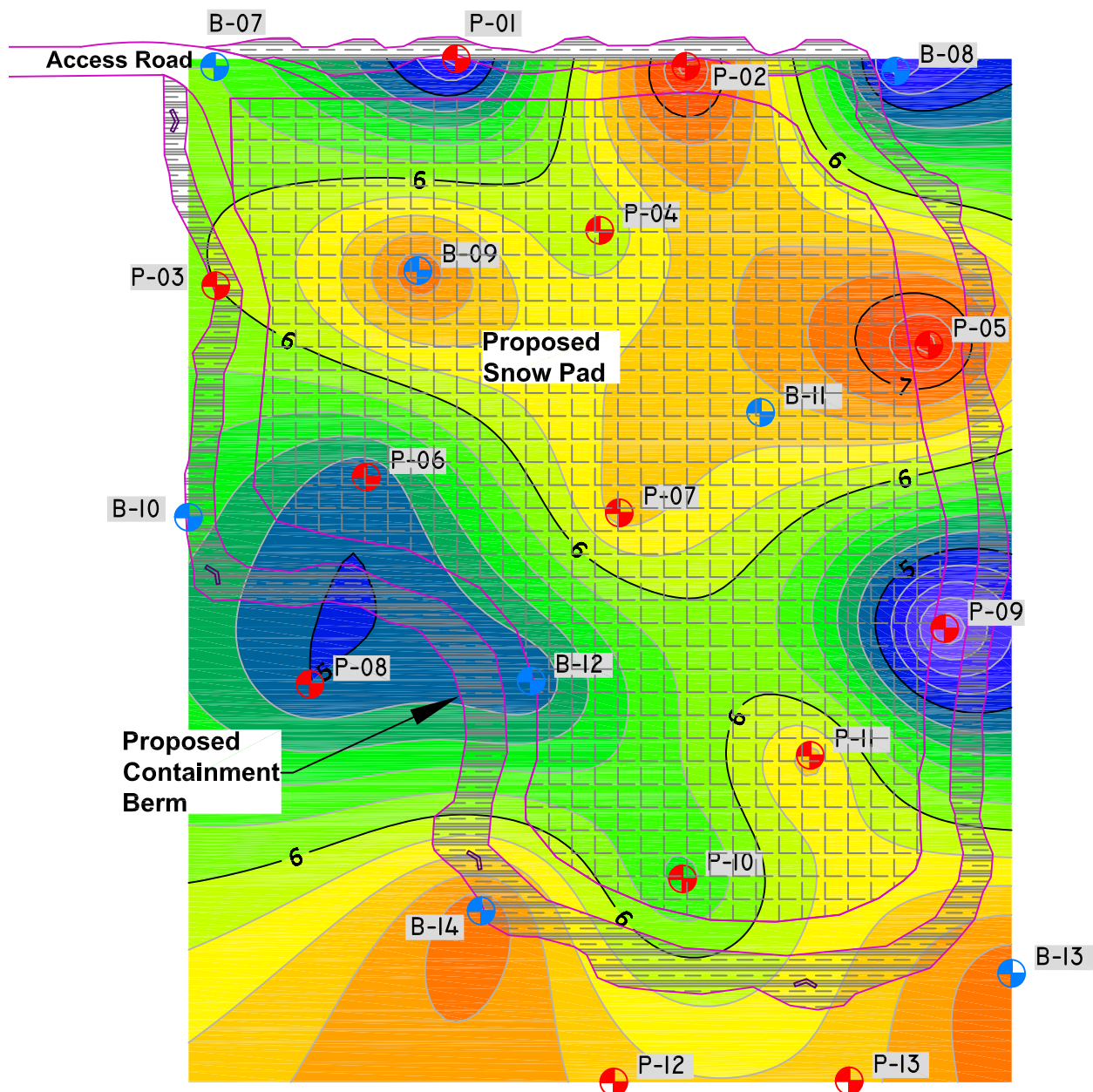
Connor's Bog Snow Dump
Anchorage, Alaska

SITE PLAN

September 2021 106424-001

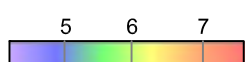
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FIG. 2



LEGEND

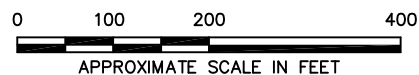
-  P-01 Approximate Location of Geotechnical Probe P-01, Advanced by Shannon & Wilson, March and April 2021.
-  B-01 Approximate Location of Geotechnical Boring B-01, Advanced by Shannon & Wilson, March and April 2021.



Peat thickness in feet. Cooler blue colors indicate thinner peat deposits, warmer red colors indicate thicker peat deposits.

NOTES

- Major peat thickness contour intervals = 1 foot.
- Peat contours taken from peat thicknesses provided in boring and probe logs.



Connor's Bog Snow Dump
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PEAT CONTOUR MAP

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FIG. 3

GRADATION REQUIREMENTS

(Adapted from Municipality of Anchorage Standard Specifications, 2015)

LEVELING COURSE

U.S. STANDARD SIEVE SIZE		PERCENT PASSING BY WEIGHT
English	Metric	
1 in.	25.0 mm	100
3/4 in.	19.0 mm	70 - 100
3/8 in.	9.5 mm	50 - 80
No. 4	4.75 mm	35 - 65
No. 8	2.36 mm	20 - 50
No. 50	0.30 mm	8 - 28
No. 200	0.075 mm	0 - 6*

TYPE II BACKFILL

U.S. STANDARD SIEVE SIZE		PERCENT PASSING BY WEIGHT
8 in.	-	100
3 in.	75 mm	70 - 100
1-1/2 in.	37.5 mm	55 - 100
3/4 in.	19.0 mm	45 - 85
No. 4	4.75 mm	20 - 60
No. 10	2.00 mm	12 - 50
No. 40	0.425 mm	4 - 30
No. 200	0.075 mm	2 - 6**

TYPE IIA BACKFILL

U.S. STANDARD SIEVE SIZE		PERCENT PASSING BY WEIGHT
3 in.	75 mm	100
3/4 in.	19.0 mm	50 - 100
No. 4	4.75 mm	25 - 60
No. 10	2.00 mm	15 - 50
No. 40	0.425 mm	4 - 30
No. 200	0.075 mm	2 - 6***

TYPE III BACKFILL

U.S. STANDARD SIEVE SIZE		PERCENT PASSING BY WEIGHT
8 in.	-	100
No. 200	0.075 mm	10 max.

E-1 SURFACE COURSE

(Adapted from Alaska DOT Standard Specifications, 2017)

U.S. STANDARD SIEVE SIZE		PERCENT PASSING BY WEIGHT
1 in.	25 mm	100
3/4 in.	19 mm	70-100
3/8 in.	9.5 mm	50 - 85
No. 4	4.75 mm	35 - 65
No. 8	2.36 mm	20 - 50
No. 50	0.30 mm	15 - 30
No. 200	0.075 mm	8 - 15

* The fraction passing the No. 200 sieve shall not exceed 75 percent of the fraction passing the No. 50 sieve.

** The fraction passing the No. 200 sieve shall not exceed 15 percent of the fraction passing the No. 4 sieve.

*** The fraction passing the No. 200 sieve shall not exceed 20 percent of the fraction passing the No. 4 sieve.

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GRADATION REQUIREMENTS

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FIG. 4

Appendix A: Boring Logs and Laboratory Test Results

Appendix A

Boring Logs and Laboratory Test Results

Subtitle if Applicable

CONTENTS

- Soil Description and Log Key (3 Sheets)
- Frost Classification Legend
- Log of Borings B-01 through B-14
- Log of Probes P-01 through P-13
- Grain Size Classification (10 Sheets)

Shannon & Wilson, Inc. (S&W), uses a soil identification system modified from the Unified Soil Classification System (USCS). Elements of the USCS and other definitions are provided on this and the following pages. Soil descriptions are based on visual-manual procedures (ASTM D2488) and laboratory testing procedures (ASTM D2487), if performed.

S&W INORGANIC SOIL CONSTITUENT DEFINITIONS

CONSTITUENT ²	FINE-GRAINED SOILS (50% or more fines) ¹	COARSE-GRAINED SOILS (less than 50% fines) ¹
Major	Silt, Lean Clay, Elastic Silt, or Fat Clay³	Sand or Gravel⁴
Modifying (Secondary) Precedes major constituent	30% or more coarse-grained: Sandy or Gravelly⁴	More than 12% fine-grained: Silty or Clayey³
Minor Follows major constituent	15% to 30% coarse-grained: with Sand or with Gravel⁴ 30% or more total coarse-grained and lesser coarse-grained constituent is 15% or more: with Sand or with Gravel⁵	5% to 12% fine-grained: with Silt or with Clay³ 15% or more of a second coarse-grained constituent: with Sand or with Gravel⁵

¹All percentages are by weight of total specimen passing a 3-inch sieve.

²The order of terms is: *Modifying Major with Minor*.

³Determined based on behavior.

⁴Determined based on which constituent comprises a larger percentage.

⁵Whichever is the lesser constituent.

MOISTURE CONTENT TERMS

Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, from below water table

STANDARD PENETRATION TEST (SPT) SPECIFICATIONS

Hammer:	140 pounds with a 30-inch free fall. Rope on 6- to 10-inch-diam. cathead 2-1/4 rope turns, > 100 rpm
	NOTE: If automatic hammers are used, blow counts shown on boring logs should be adjusted to account for efficiency of hammer.
Sampler:	10 to 30 inches long Shoe I.D. = 1.375 inches Barrel I.D. = 1.5 inches Barrel O.D. = 2 inches
N-Value:	Sum blow counts for second and third 6-inch increments. Refusal: 50 blows for 6 inches or less; 10 blows for 0 inches.
	NOTE: Penetration resistances (N-values) shown on boring logs are as recorded in the field and have not been corrected for hammer efficiency, overburden, or other factors.

PARTICLE SIZE DEFINITIONS

DESCRIPTION	SIEVE NUMBER AND/OR APPROXIMATE SIZE
FINES	< #200 (0.075 mm = 0.003 in.)
SAND Fine Medium Coarse	#200 to #40 (0.075 to 0.4 mm; 0.003 to 0.02 in.) #40 to #10 (0.4 to 2 mm; 0.02 to 0.08 in.) #10 to #4 (2 to 4.75 mm; 0.08 to 0.187 in.)
GRAVEL Fine Coarse	#4 to 3/4 in. (4.75 to 19 mm; 0.187 to 0.75 in.) 3/4 to 3 in. (19 to 76 mm)
COBBLES	3 to 12 in. (76 to 305 mm)
BOULDERS	> 12 in. (305 mm)

RELATIVE DENSITY / CONSISTENCY

COHESIONLESS SOILS		COHESIVE SOILS	
N, SPT, BLOWS/FT.	RELATIVE DENSITY	N, SPT, BLOWS/FT.	RELATIVE CONSISTENCY
< 4	Very loose	< 2	Very soft
4 - 10	Loose	2 - 4	Soft
10 - 30	Medium dense	4 - 8	Medium stiff
30 - 50	Dense	8 - 15	Stiff
> 50	Very dense	15 - 30	Very stiff
		> 30	Hard

WELL AND BACKFILL SYMBOLS

	Bentonite Cement Grout		Surface Cement Seal
	Bentonite Grout		Asphalt or Cap
	Bentonite Chips		Slough
	Silica Sand		Inclinometer or Non-perforated Casing
	Perforated or Screened Casing		Vibrating Wire Piezometer

PERCENTAGES TERMS^{1,2}

Trace	< 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

¹Gravel, sand, and fines estimated by mass. Other constituents, such as organics, cobbles, and boulders, estimated by volume.

²Reprinted, with permission, from ASTM D2488 - 09a Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. A copy of the complete standard may be obtained from ASTM International, www.astm.org.

Connor's Bog Snow Dump
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SOIL DESCRIPTION AND LOG KEY

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FIG. A-1
Sheet 1 of 3

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)
(Modified From USACE Tech Memo 3-357, ASTM D2487, and ASTM D2488)

MAJOR DIVISIONS			GROUP/GRAPHIC SYMBOL	TYPICAL IDENTIFICATIONS
COARSE-GRAINED SOILS (more than 50% retained on No. 200 sieve)	Gravels (more than 50% of coarse fraction retained on No. 4 sieve)	Gravel (less than 5% fines)	GW	Well-Graded Gravel; Well-Graded Gravel with Sand
			GP	Poorly Graded Gravel; Poorly Graded Gravel with Sand
		Silty or Clayey Gravel (more than 12% fines)	GM	Silty Gravel; Silty Gravel with Sand
			GC	Clayey Gravel; Clayey Gravel with Sand
	Sands (50% or more of coarse fraction passes the No. 4 sieve)	Sand (less than 5% fines)	SW	Well-Graded Sand; Well-Graded Sand with Gravel
			SP	Poorly Graded Sand; Poorly Graded Sand with Gravel
		Silty or Clayey Sand (more than 12% fines)	SM	Silty Sand; Silty Sand with Gravel
			SC	Clayey Sand; Clayey Sand with Gravel
FINE-GRAINED SOILS (50% or more passes the No. 200 sieve)	Sils and Clays (liquid limit less than 50)	Inorganic	ML	Silt; Silt with Sand or Gravel; Sandy or Gravelly Silt
			CL	Lean Clay; Lean Clay with Sand or Gravel; Sandy or Gravelly Lean Clay
		Organic	OL	Organic Silt or Clay; Organic Silt or Clay with Sand or Gravel; Sandy or Gravelly Organic Silt or Clay
	Sils and Clays (liquid limit 50 or more)	Inorganic	MH	Elastic Silt; Elastic Silt with Sand or Gravel; Sandy or Gravelly Elastic Silt
			CH	Fat Clay; Fat Clay with Sand or Gravel; Sandy or Gravelly Fat Clay
		Organic	OH	Organic Silt or Clay; Organic Silt or Clay with Sand or Gravel; Sandy or Gravelly Organic Silt or Clay
HIGHLY-ORGANIC SOILS	Primarily organic matter, dark in color, and organic odor		PT	Peat or other highly organic soils (see ASTM D4427)

NOTE: No. 4 size = 4.75 mm = 0.187 in.; No. 200 size = 0.075 mm = 0.003 in.

NOTES

- Dual symbols (symbols separated by a hyphen, i.e., SP-SM, Sand with Silt) are used for soils with between 5% and 12% fines or when the liquid limit and plasticity index values plot in the CL-ML area of the plasticity chart. Graphics shown on the logs for these soil types are a combination of the two graphic symbols (e.g., SP and SM).
- Borderline symbols (symbols separated by a slash, i.e., CL/ML, Lean Clay to Silt; SP-SM/SM, Sand with Silt to Silty Sand) indicate that the soil properties are close to the defining boundary between two groups.

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**SOIL DESCRIPTION
AND LOG KEY**

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FIG. A-1
Sheet 2 of 3

GRADATION TERMS

Poorly Graded	Narrow range of grain sizes present or, within the range of grain sizes present, one or more sizes are missing (Gap Graded). Meets criteria in ASTM D2487, if tested.
Well-Graded	Full range and even distribution of grain sizes present. Meets criteria in ASTM D2487, if tested.

CEMENTATION TERMS¹

Weak	Crumbles or breaks with handling or slight finger pressure
Moderate	Crumbles or breaks with considerable finger pressure
Strong	Will not crumble or break with finger pressure

PLASTICITY²

DESCRIPTION	VISUAL-MANUAL CRITERIA	APPROX. PLASTICITY INDEX RANGE
Nonplastic	A 1/8-in. thread cannot be rolled at any water content.	< 4
Low	A thread can barely be rolled and a lump cannot be formed when drier than the plastic limit.	4 to 10
Medium	A thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. A lump crumbles when drier than the plastic limit.	10 to 20
High	It take considerable time rolling and kneading to reach the plastic limit. A thread can be rerolled several times after reaching the plastic limit. A lump can be formed without crumbling when drier than the plastic limit.	> 20

ADDITIONAL TERMS

Mottled	Irregular patches of different colors.
Bioturbated	Soil disturbance or mixing by plants or animals.
Diamict	Nonsorted sediment; sand and gravel in silt and/or clay matrix.
Cuttings	Material brought to surface by drilling.
Slough	Material that caved from sides of borehole.
Sheared	Disturbed texture, mix of strengths.

PARTICLE ANGULARITY AND SHAPE TERMS³

Angular	Sharp edges and unpolished planar surfaces.
Subangular	Similar to angular, but with rounded edges.
Subrounded	Nearly planar sides with well-rounded edges.
Rounded	Smoothly curved sides with no edges.
Flat	Width/thickness ratio > 3.
Elongated	Length/width ratio > 3.

ACRONYMS AND ABBREVIATIONS

ATD	At Time of Drilling
Diam.	Diameter
Elev.	Elevation
ft.	Feet
FeO	Iron Oxide
gal.	Gallons
Horiz.	Horizontal
HSA	Hollow Stem Auger
I.D.	Inside Diameter
in.	Inches
lbs.	Pounds
MgO	Magnesium Oxide
mm	Millimeter
MnO	Manganese Oxide
NA	Not Applicable or Not Available
NP	Nonplastic
O.D.	Outside Diameter
OW	Observation Well
pcf	Pounds per Cubic Foot
PID	Photo-Ionization Detector
PMT	Pressuremeter Test
ppm	Parts per Million
psi	Pounds per Square Inch
PVC	Polyvinyl Chloride
rpm	Rotations per Minute
SPT	Standard Penetration Test
USCS	Unified Soil Classification System
q _u	Unconfined Compressive Strength
VWP	Vibrating Wire Piezometer
Vert.	Vertical
WOH	Weight of Hammer
WOR	Weight of Rods
Wt.	Weight

STRUCTURE TERMS¹

Interbedded	Alternating layers of varying material or color with layers at least 1/4-inch thick; singular: bed.
Laminated	Alternating layers of varying material or color with layers less than 1/4-inch thick; singular: lamination.
Fissured	Breaks along definite planes or fractures with little resistance.
Slickensided	Fracture planes appear polished or glossy; sometimes striated.
Blocky	Cohesive soil that can be broken down into small angular lumps that resist further breakdown.
Lensed	Inclusion of small pockets of different soils, such as small lenses of sand scattered through a mass of clay.
Homogeneous	Same color and appearance throughout.

Connor's Bog Snow Dump
Anchorage, Alaska

**SOIL DESCRIPTION
AND LOG KEY**

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FIG. A-1
Sheet 3 of 3

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FROST CLASSIFICATION
(after Municipality of Anchorage, 2007)

GROUP		0.02 Mil.	P-200*	USC SYSTEM (based on P-200 results)
NFS	Sandy Soils	0 to 3	0 to 6	SW, SP, SW-SM, SP-SM
	Gravelly Soils	0 to 3	0 to 6	GW, GP, GW-GM, GP-GM
F1	Gravelly Soils	3 to 10	6 to 13	GM, GW-GM, GP-GM
F2	Sandy Soils	3 to 15	6 to 19	SP-SM, SW-SM, SM
	Gravelly Soils	10 to 20	13 to 25	GM
F3	Sands, except very fine silty sands**	Over 15	Over 19	SM, SC
	Gravelly Soils	Over 20	Over 25	GM, GC
	Clays, PI>12			CL, CH
F4	All Silts			ML, MH
	Very fine silty sands**	Over 15	Over 19	SM, SC
	Clays, PI<12			CL, CL-ML
	Varved clays and other finned grained, banded sediments			CL and ML CL, ML, and SM; SL, SH, and ML; CL, CH, ML, and SM

PI = Plasticity Index

P-200 = Percent passing the number 200 sieve

0.02 Mil. = Percent material below 0.02 millimeter grain size

*Approximate P-200 value equivalent for frost classification.
Value range based on typical, well-graded soil curves.

** Very fine sand : greater than 50% of sand
fraction passing the number 100 sieve

Connors Bog Snow Dump
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FROST CLASSIFICATION LEGEND

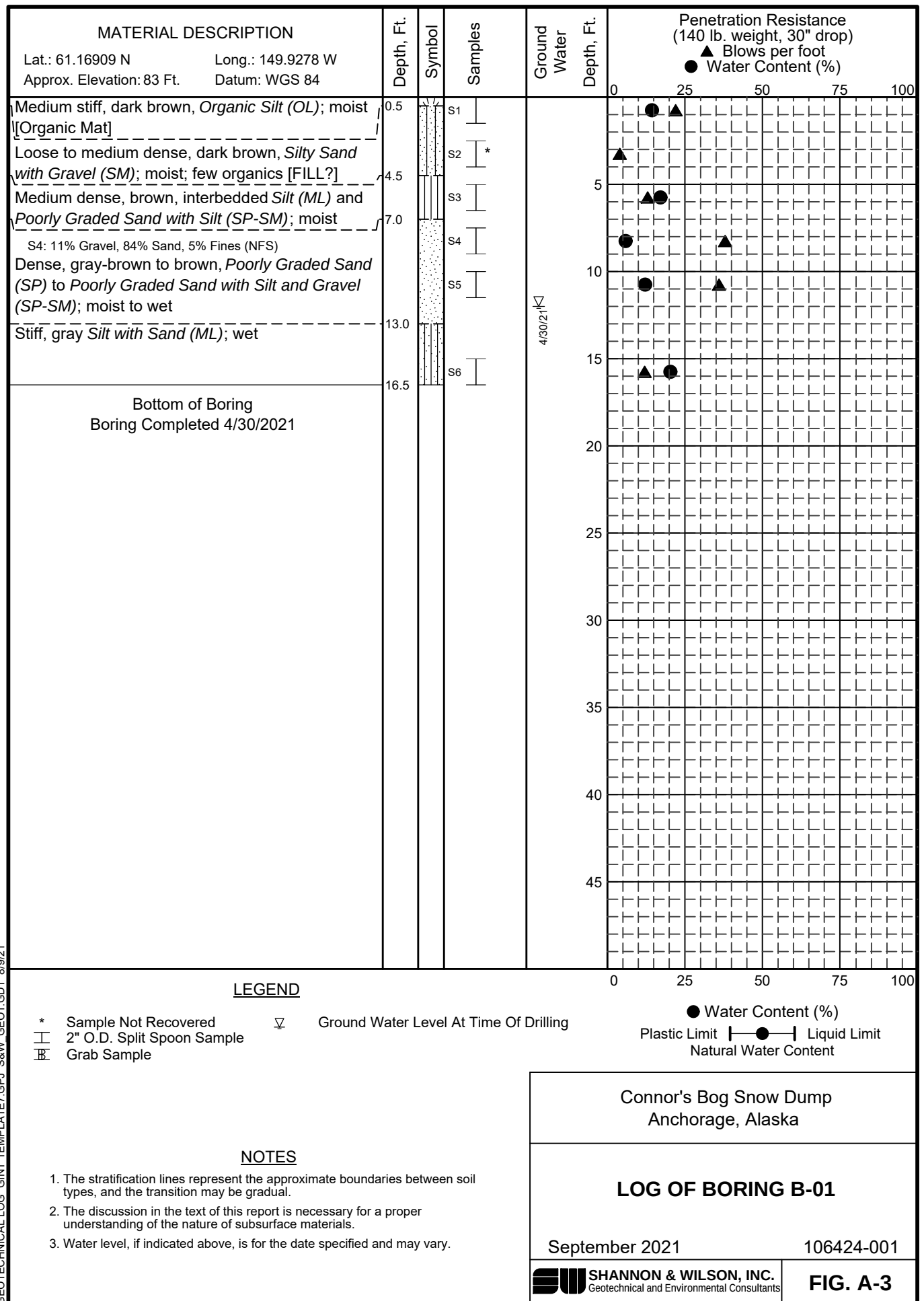
August 2021

106424-001

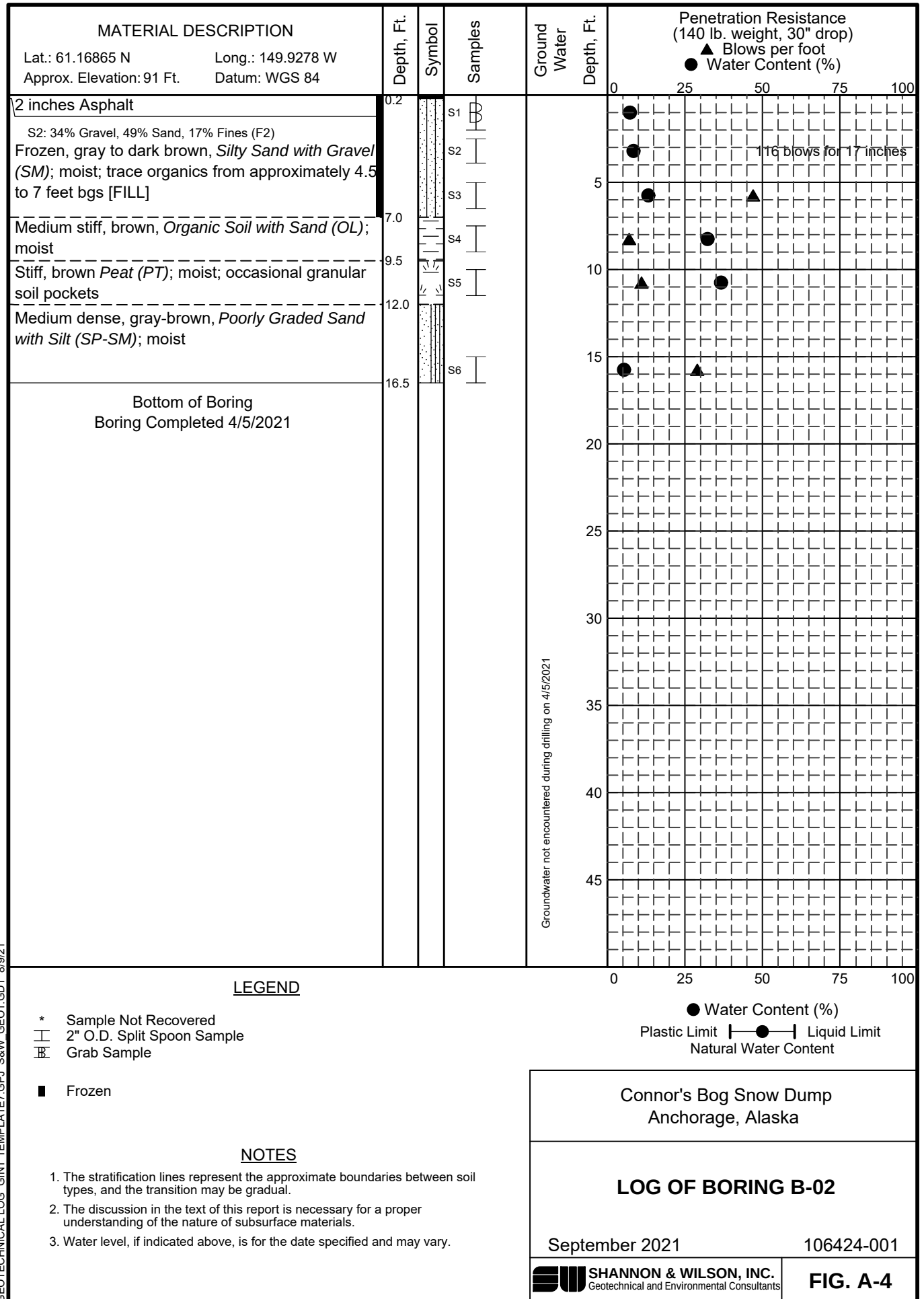


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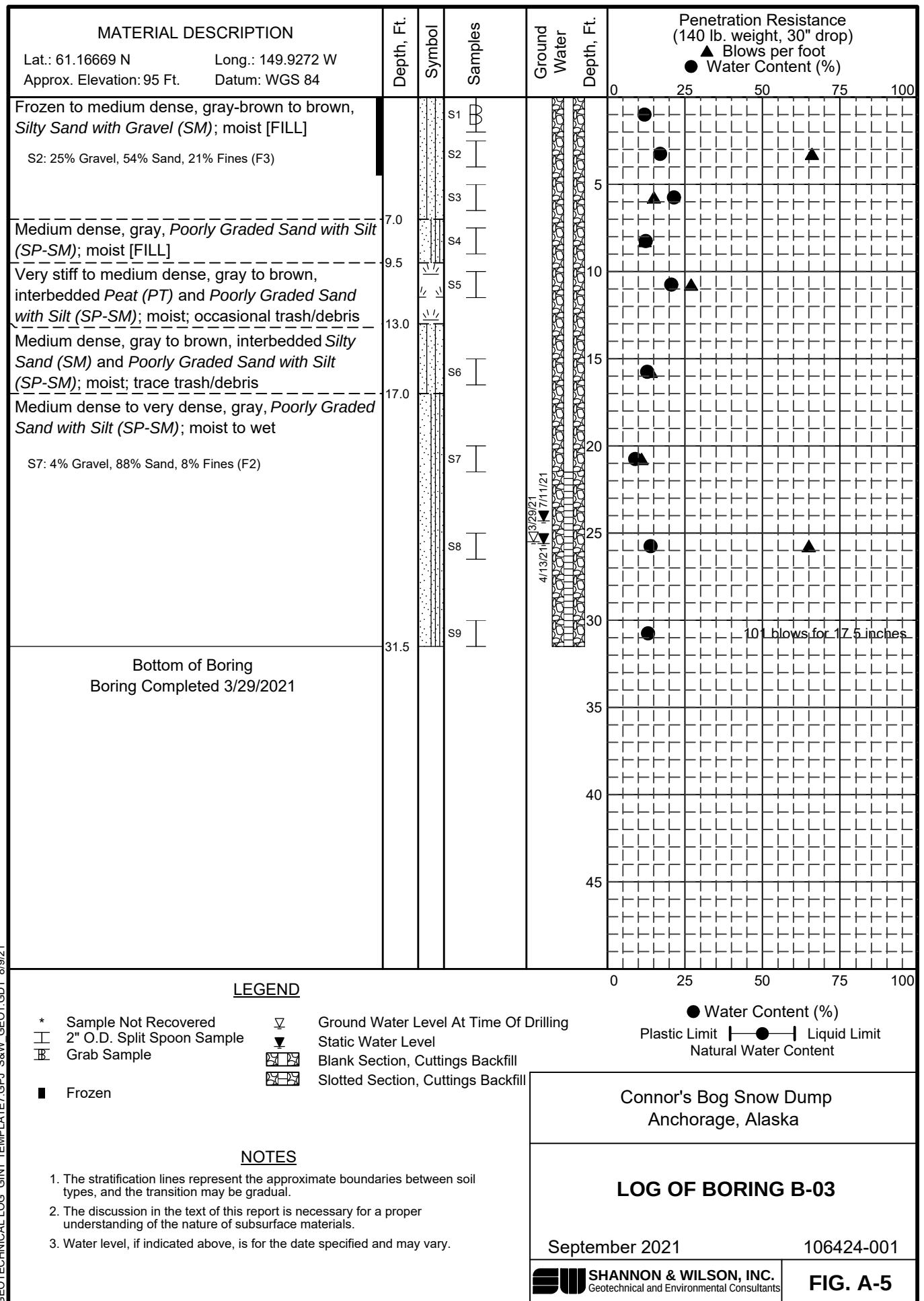
FIG. A-2



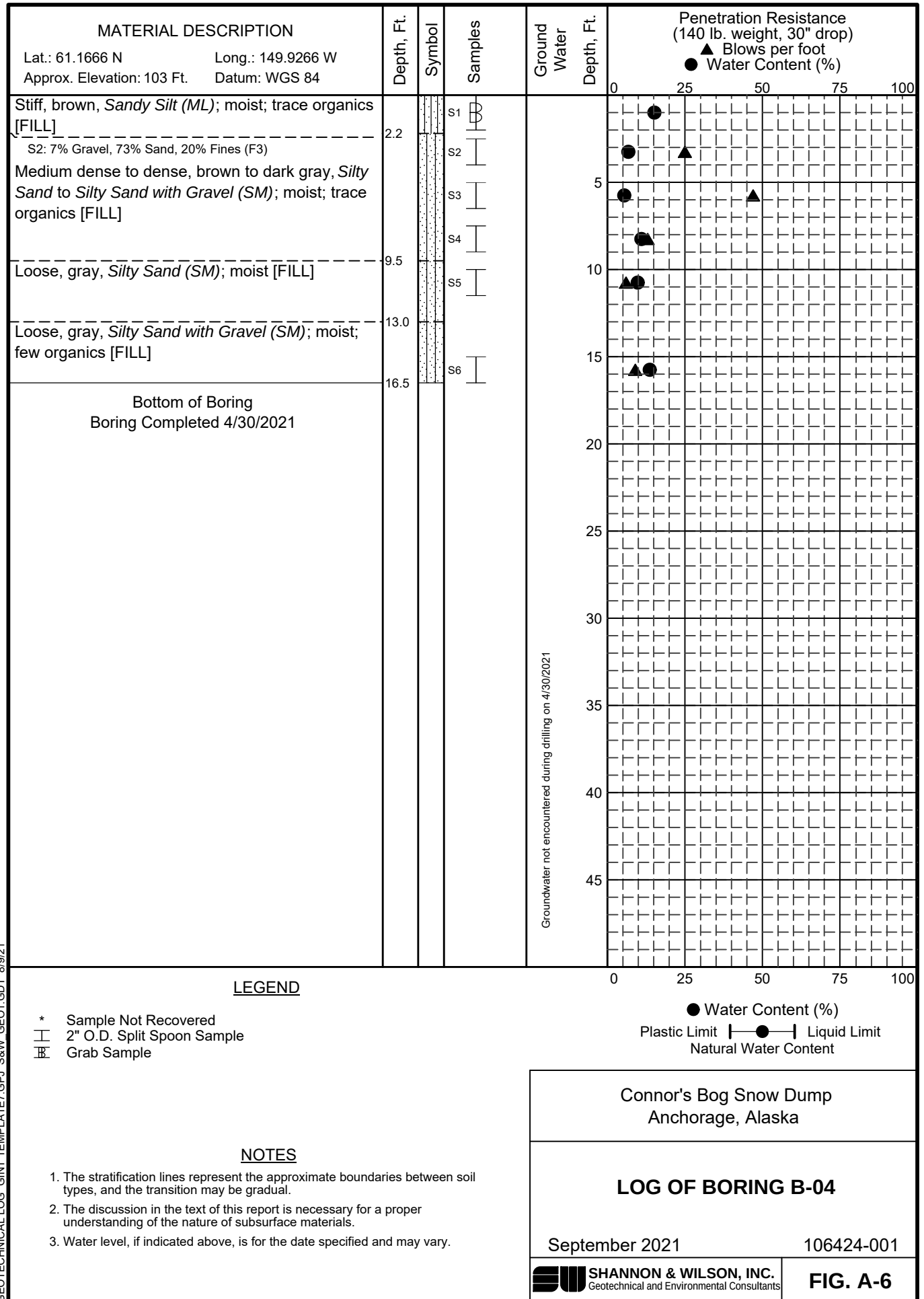
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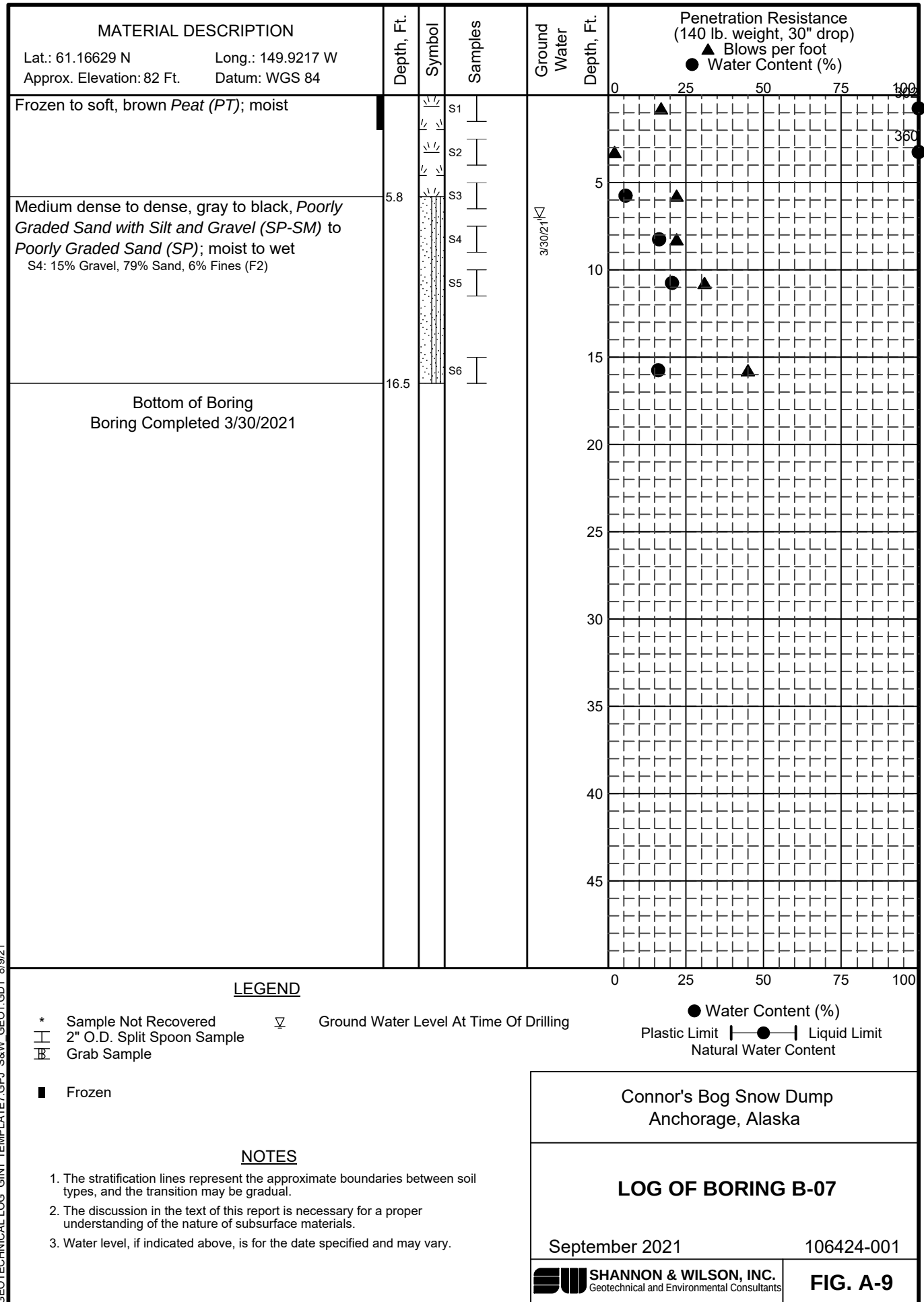
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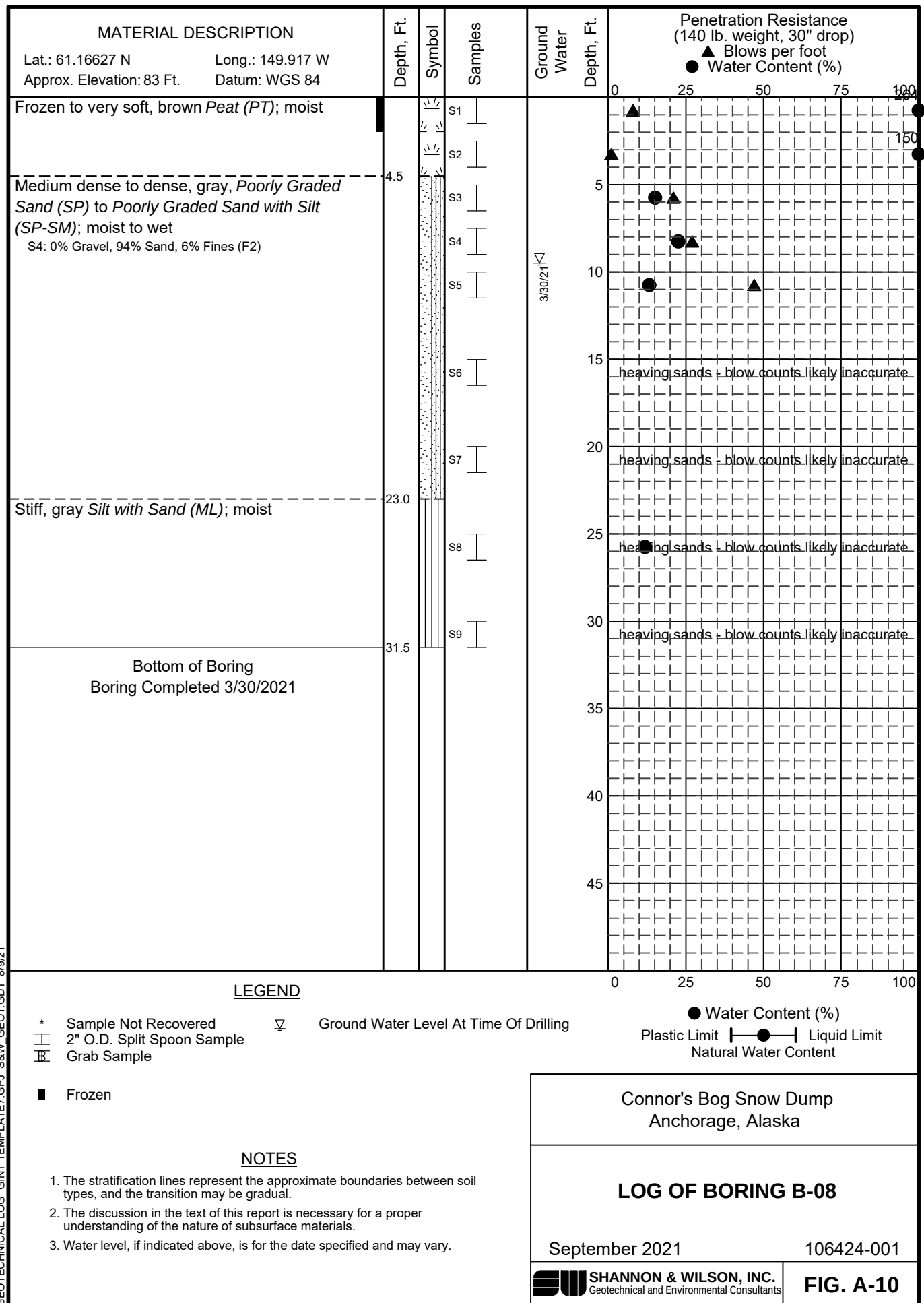
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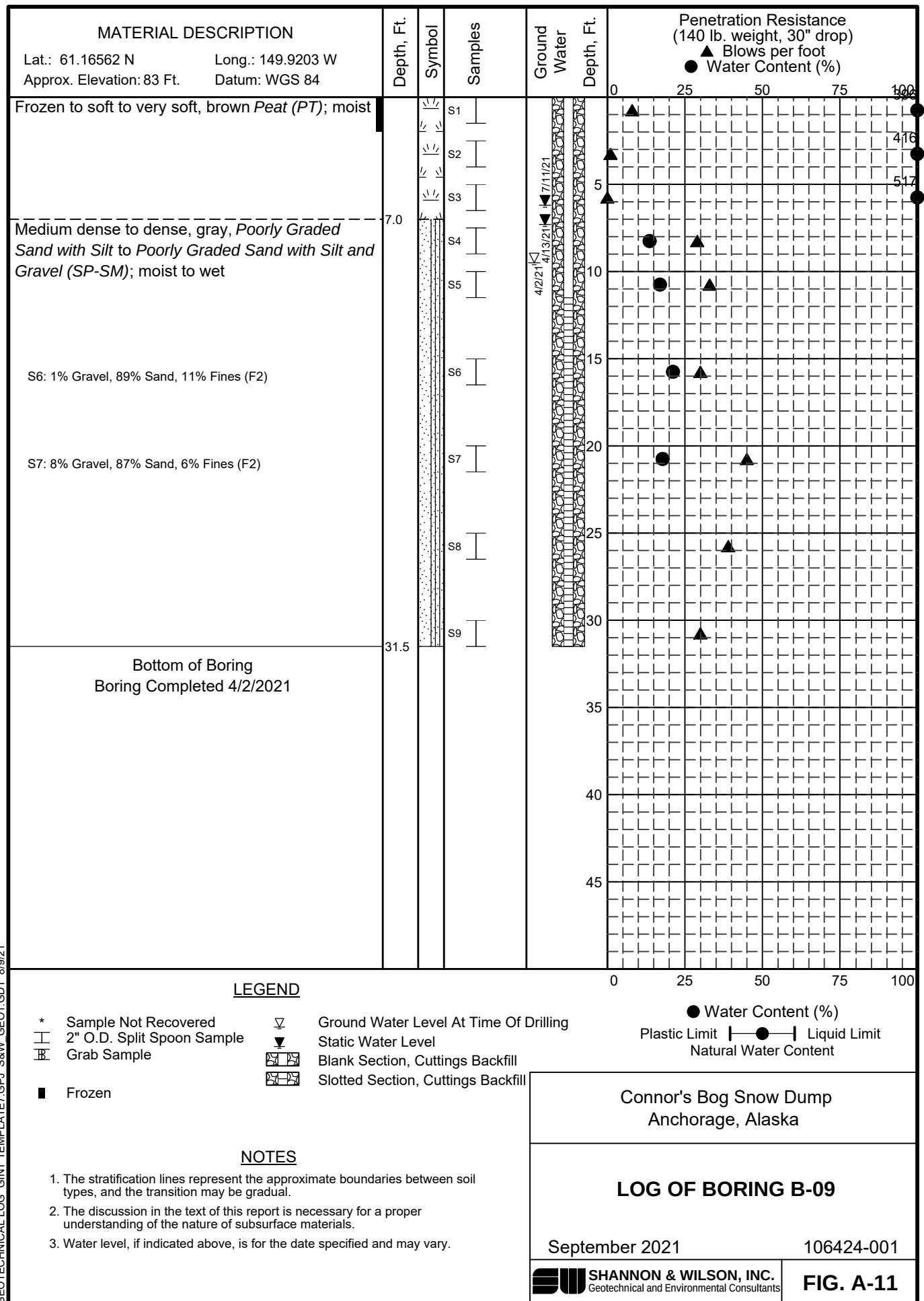
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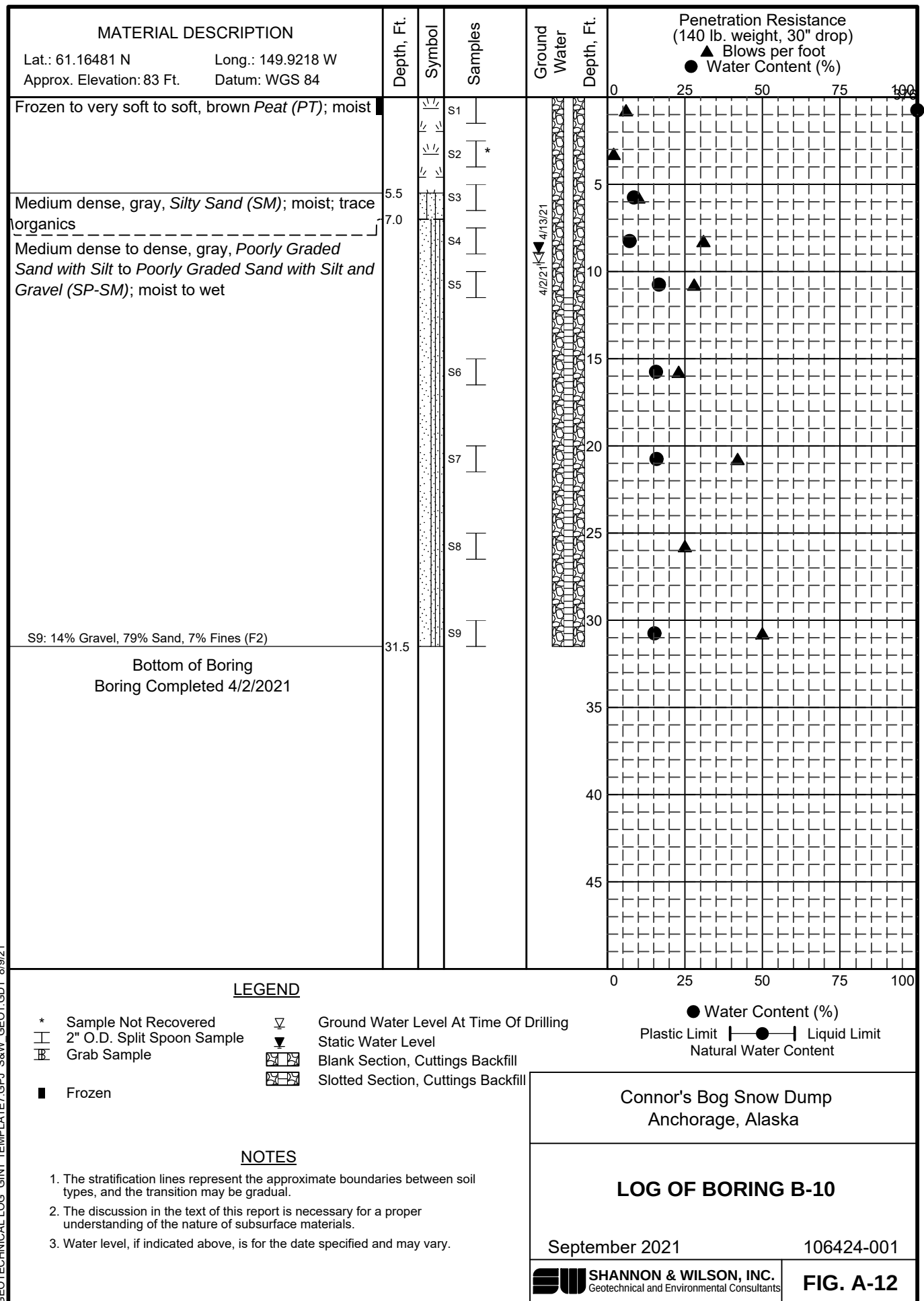
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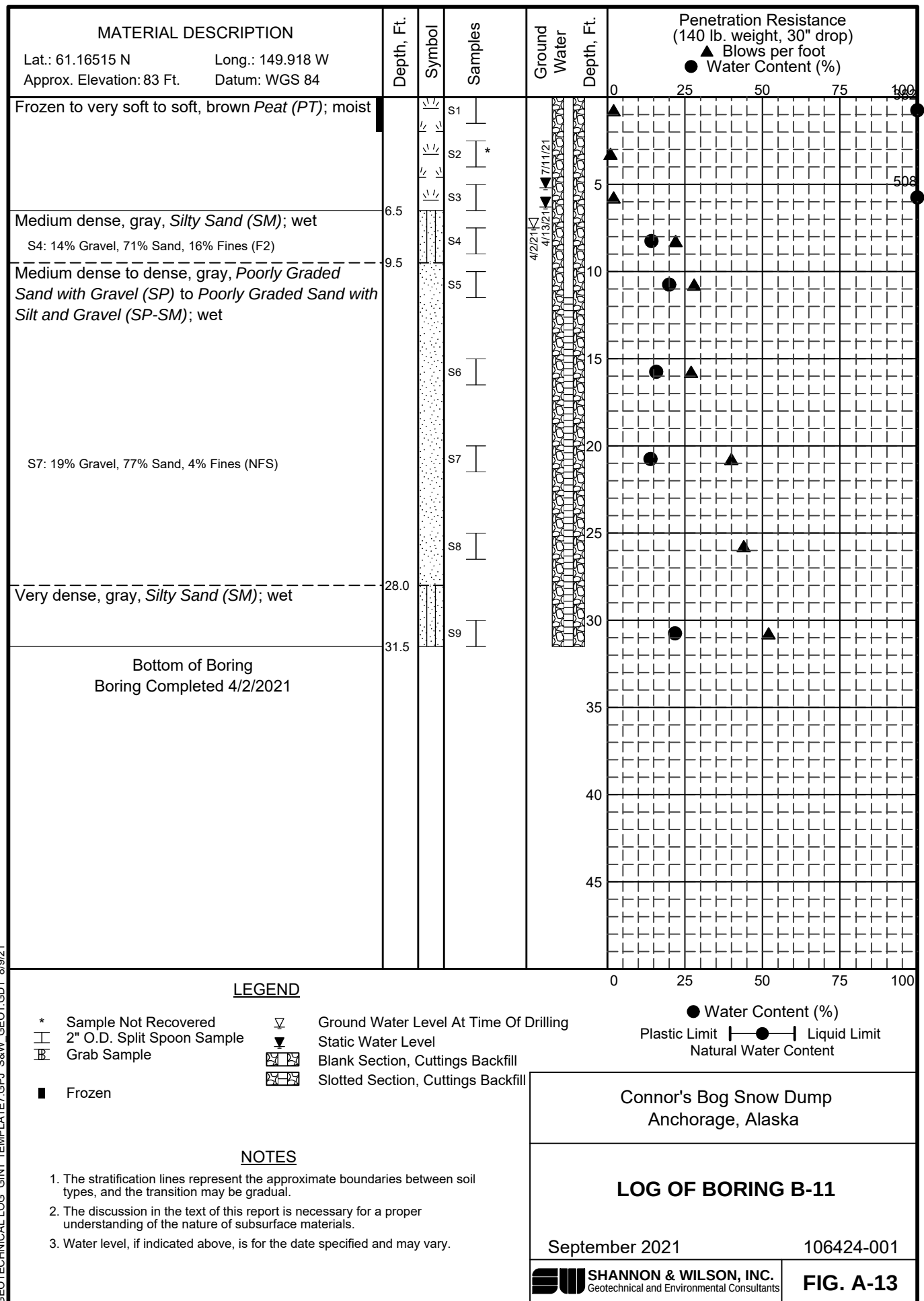
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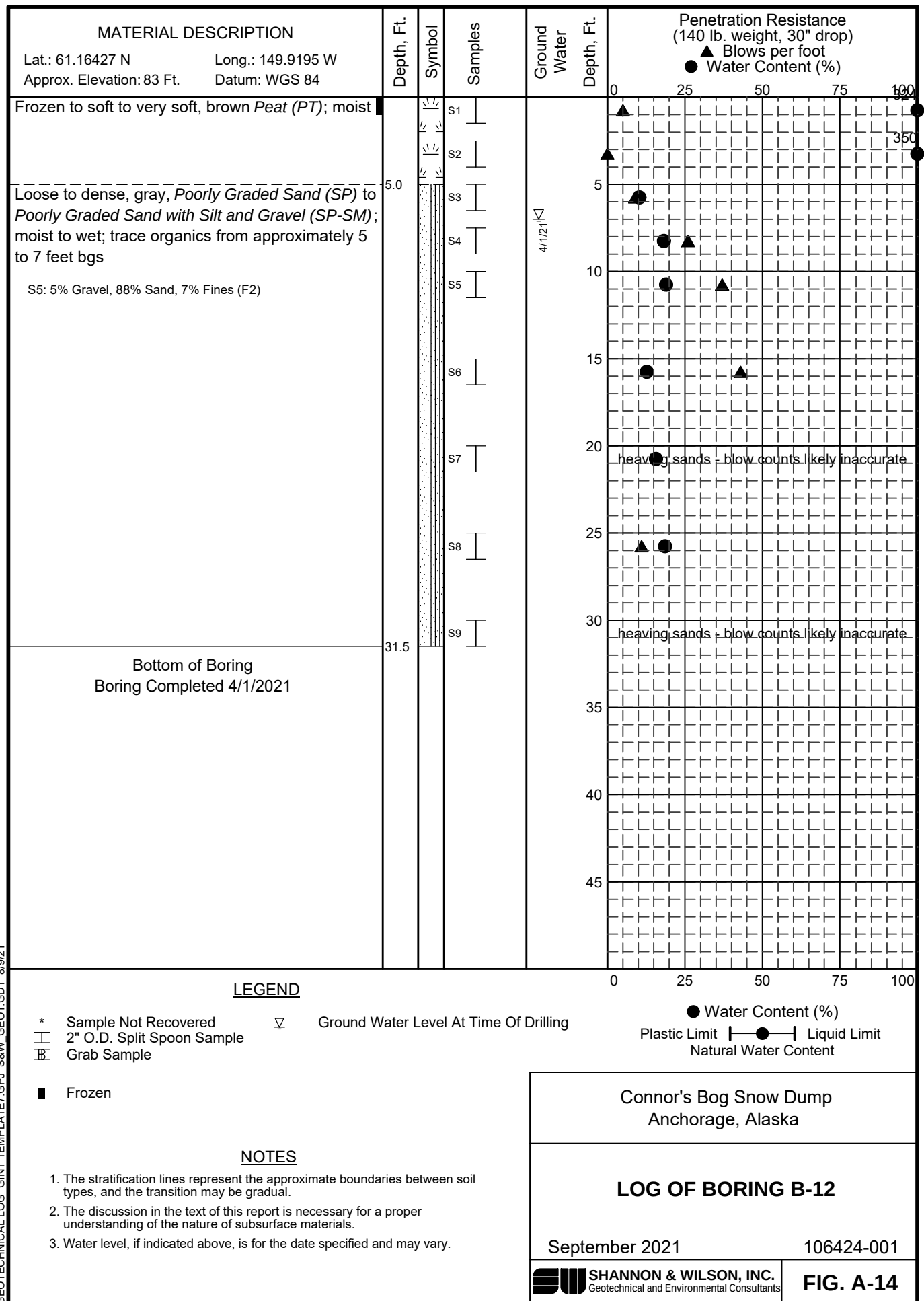
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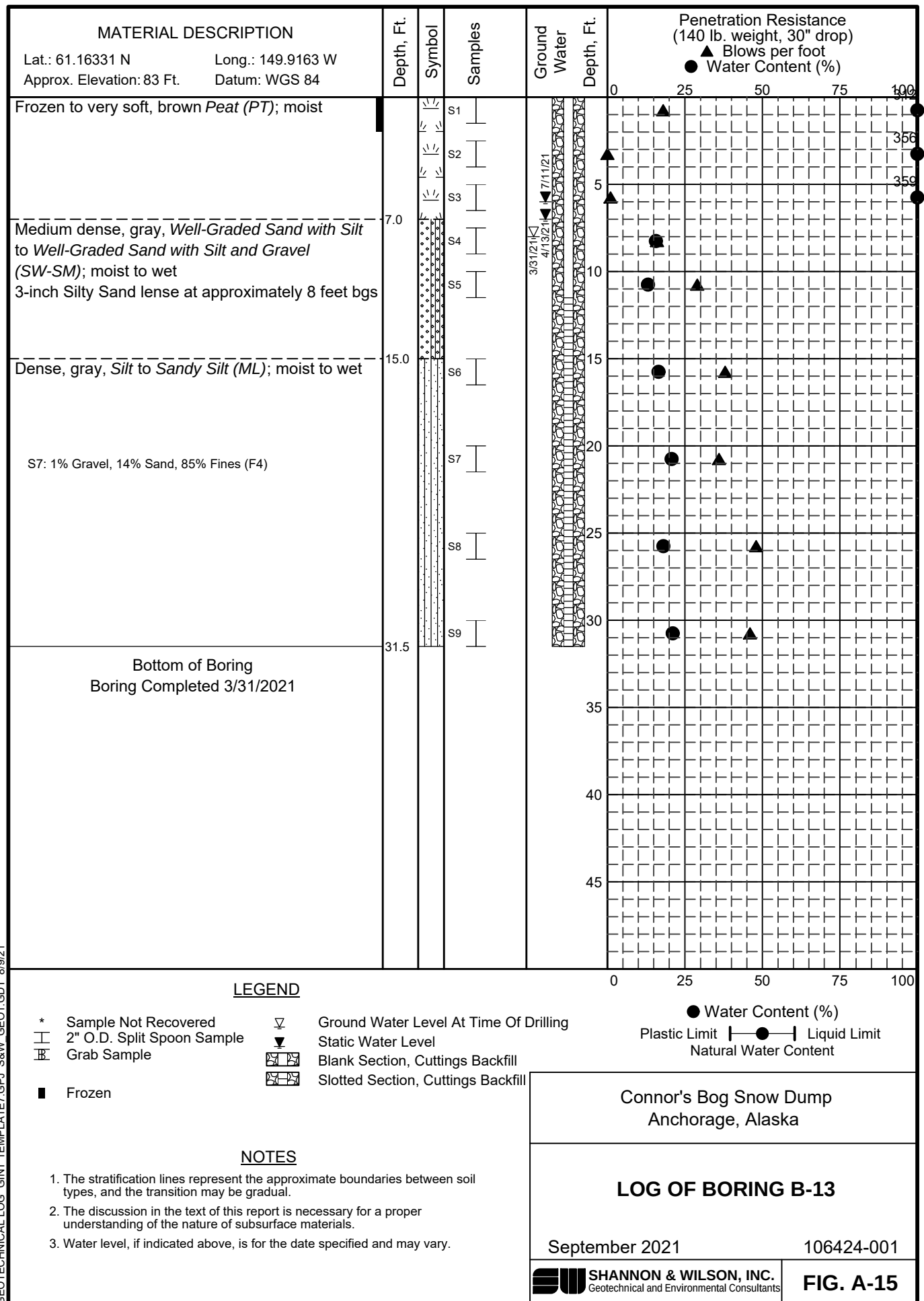
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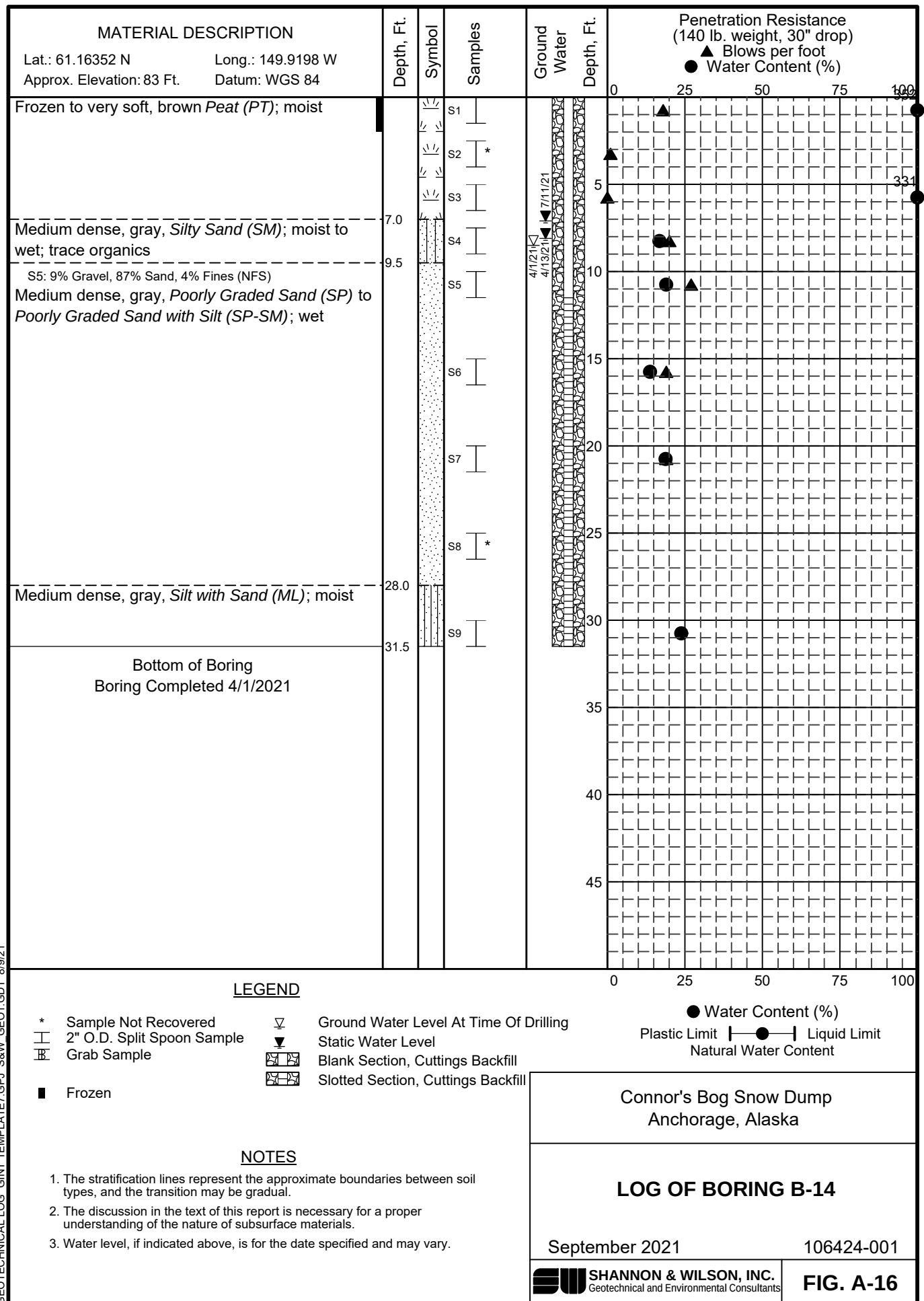
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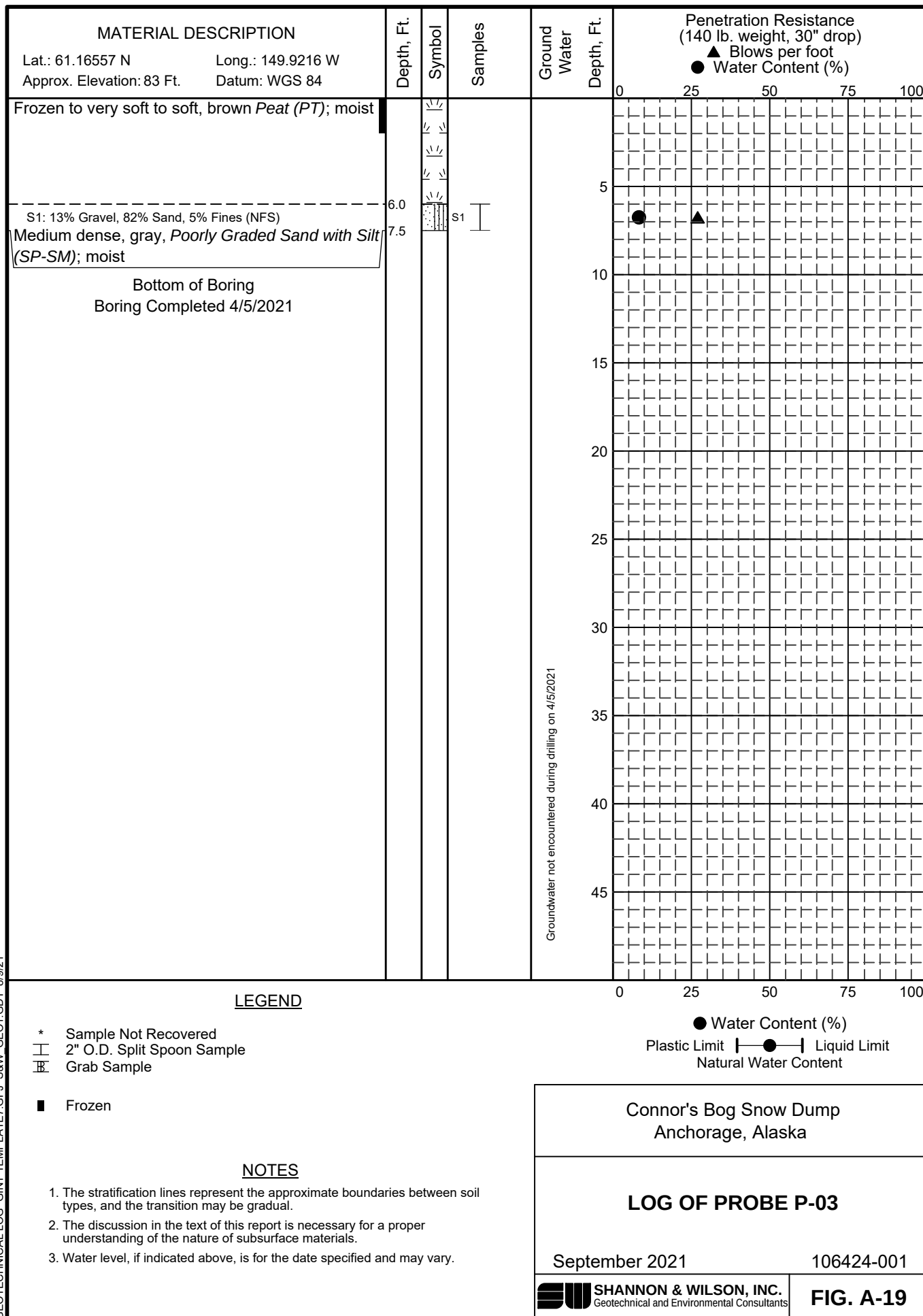
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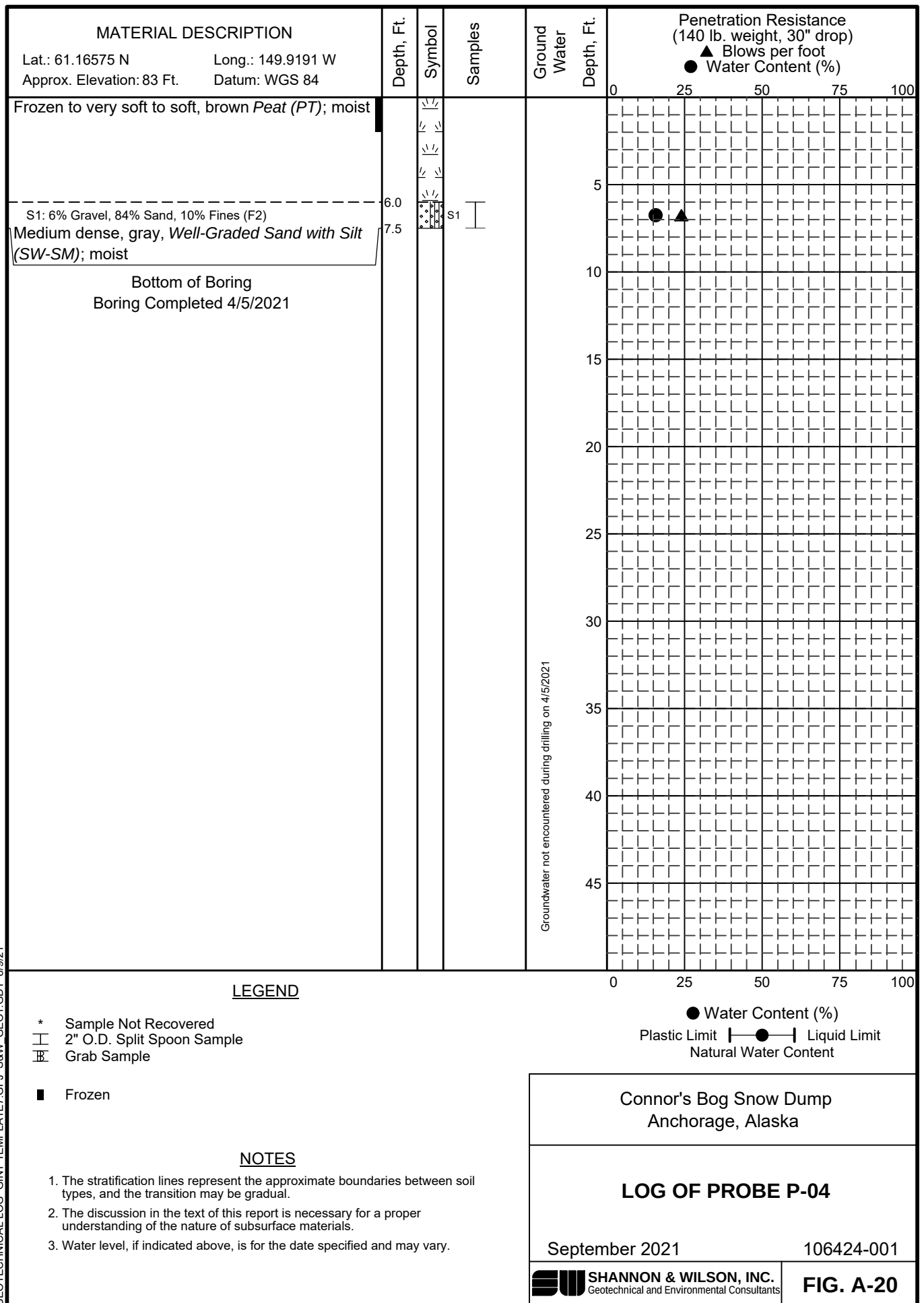
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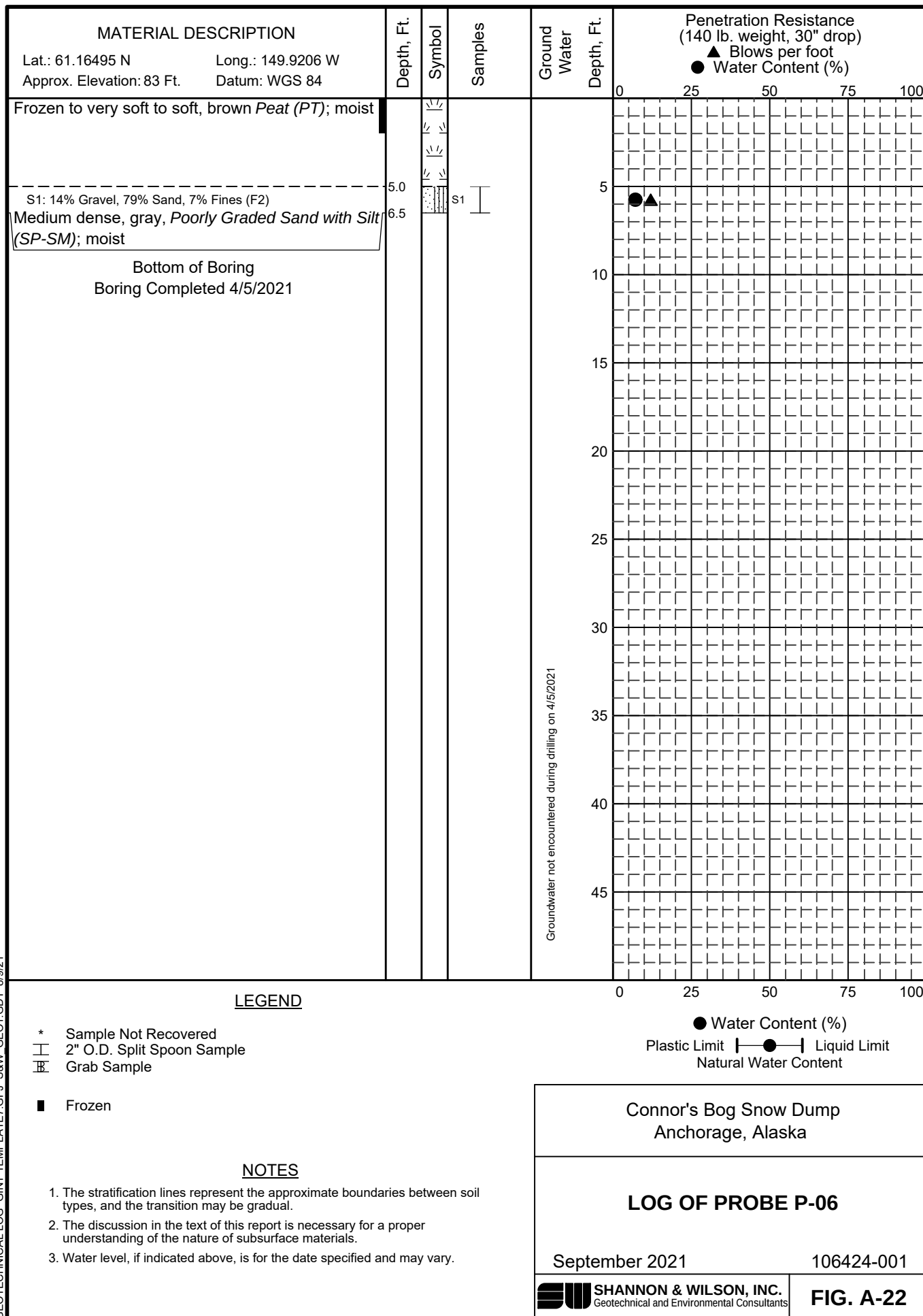
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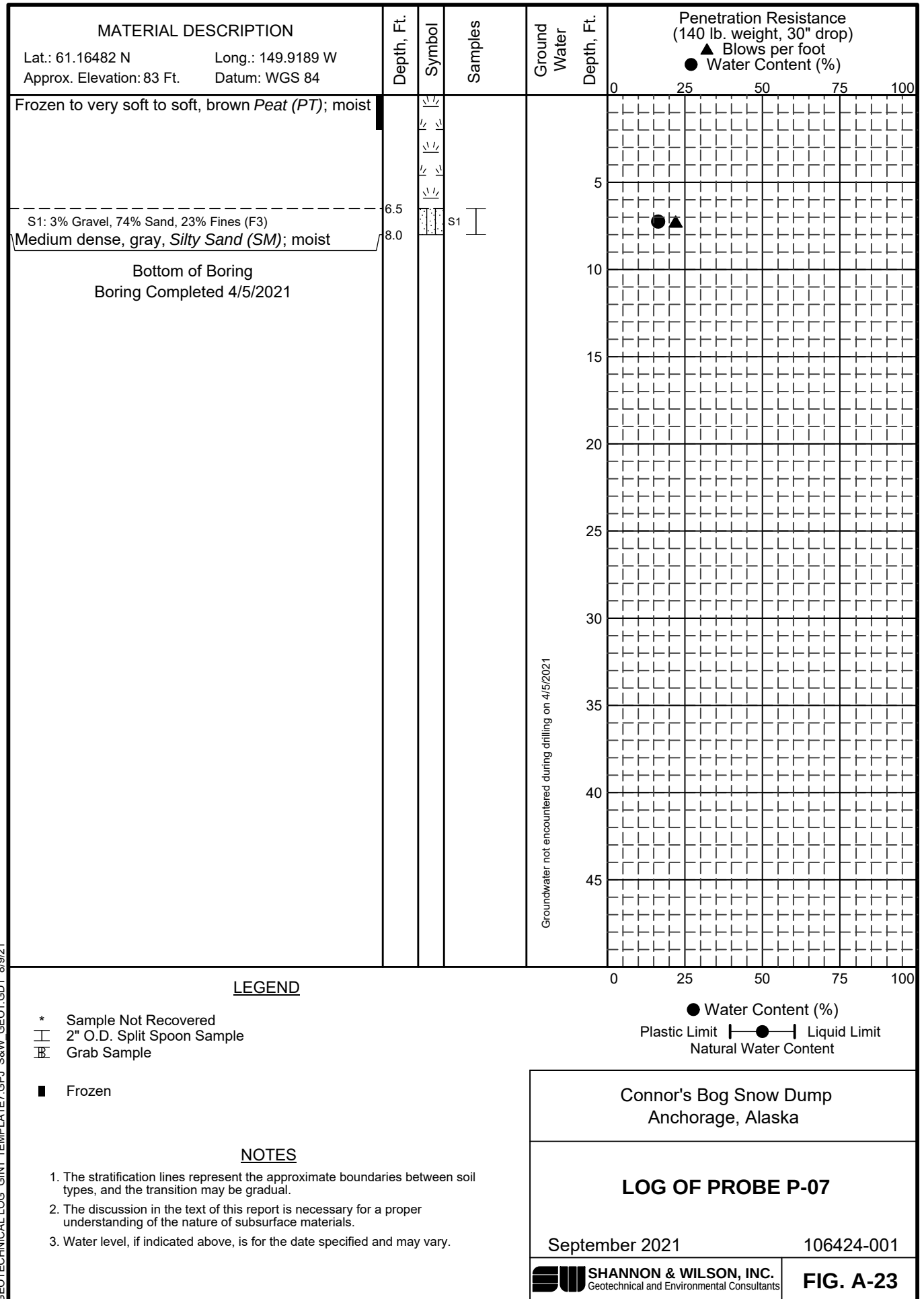


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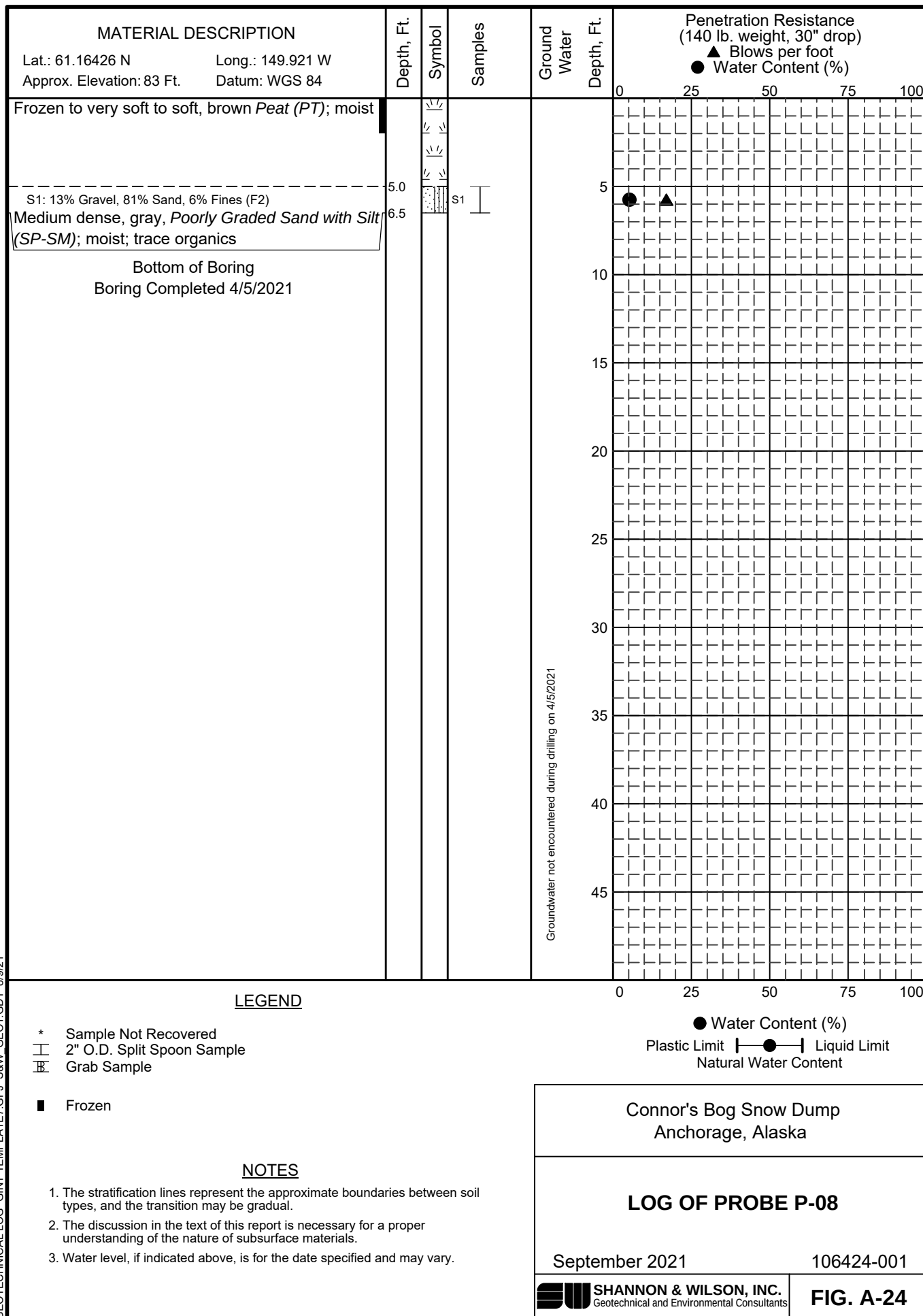
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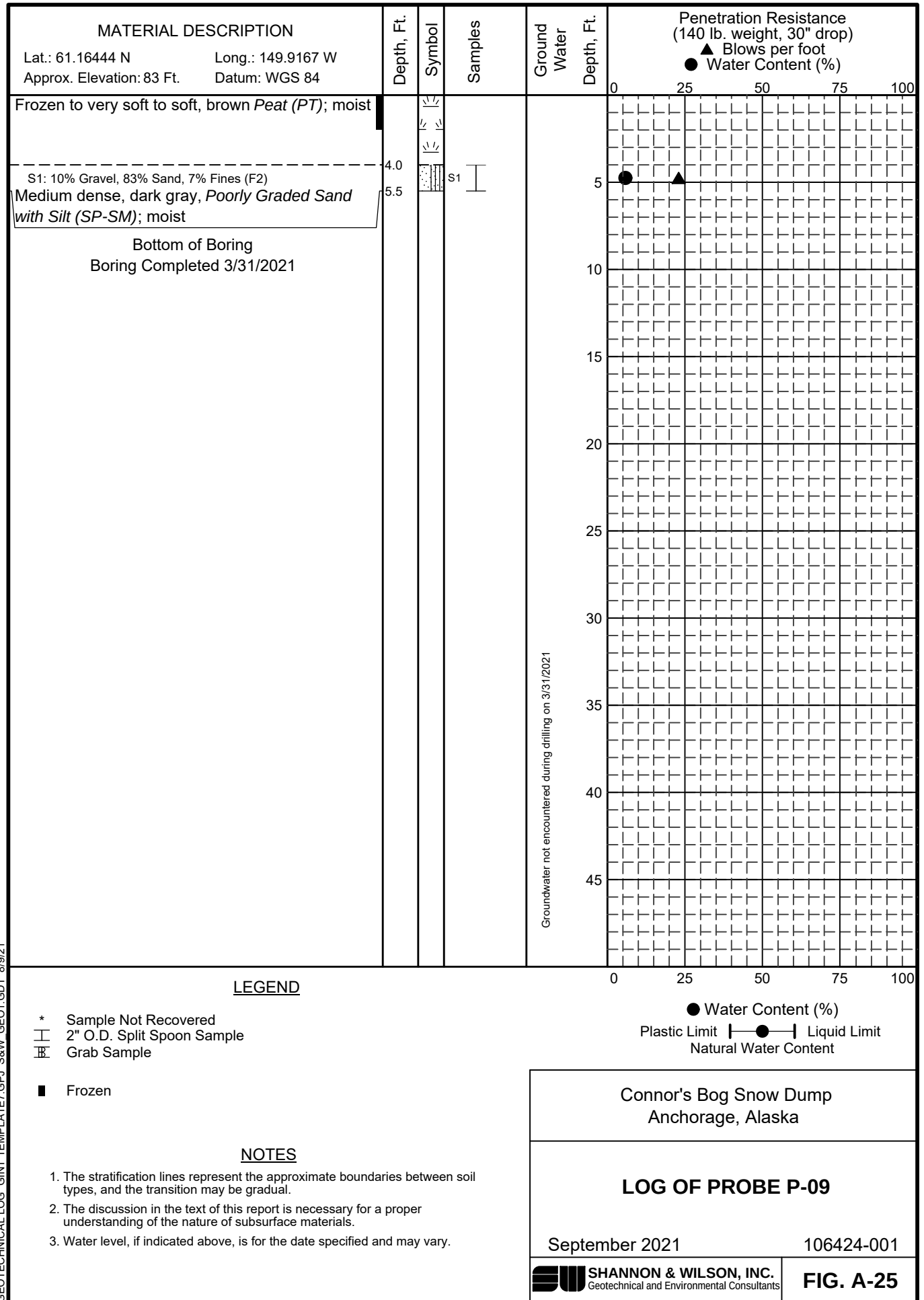




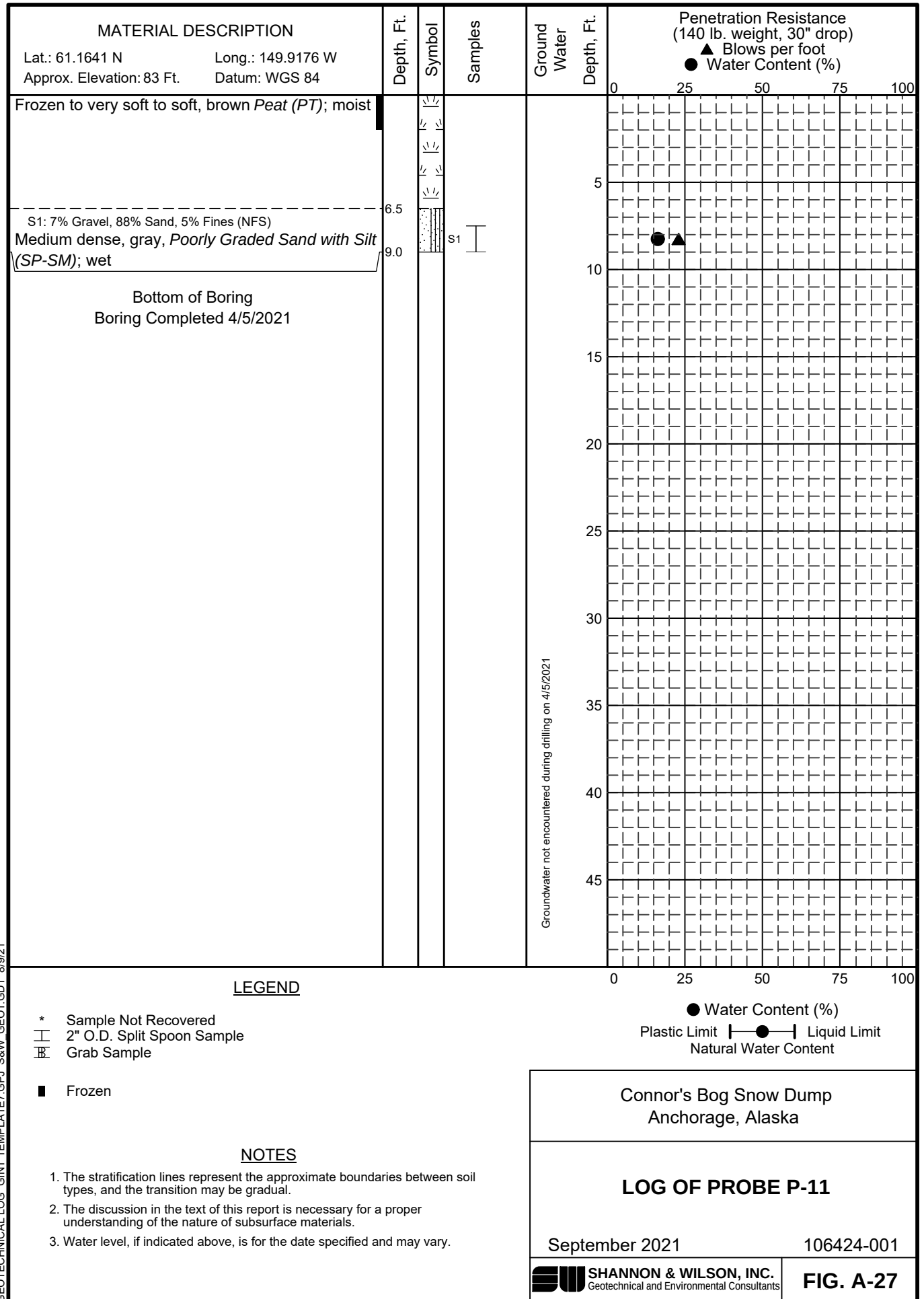
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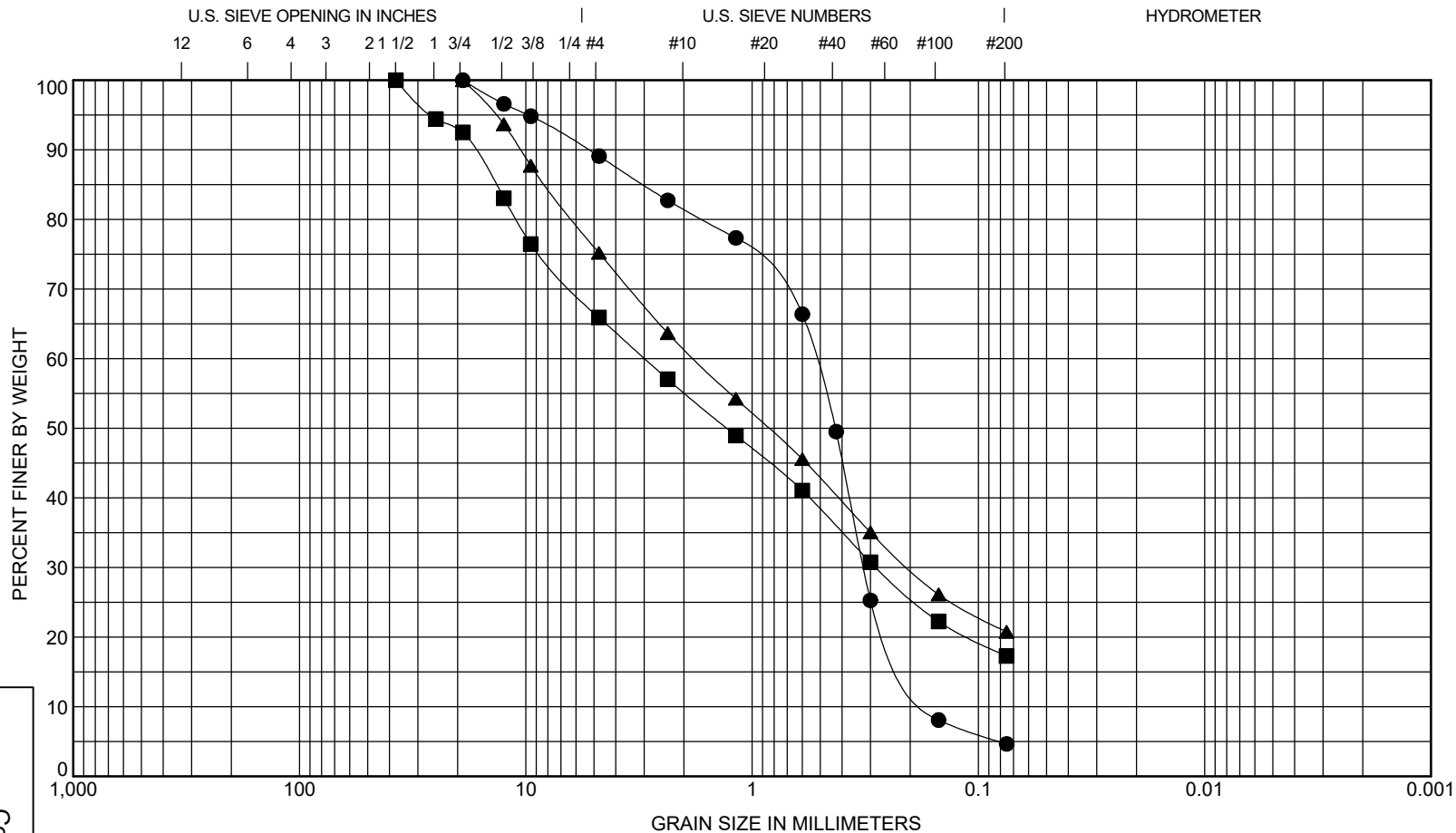




GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 8/9/21



GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 8/9/21



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

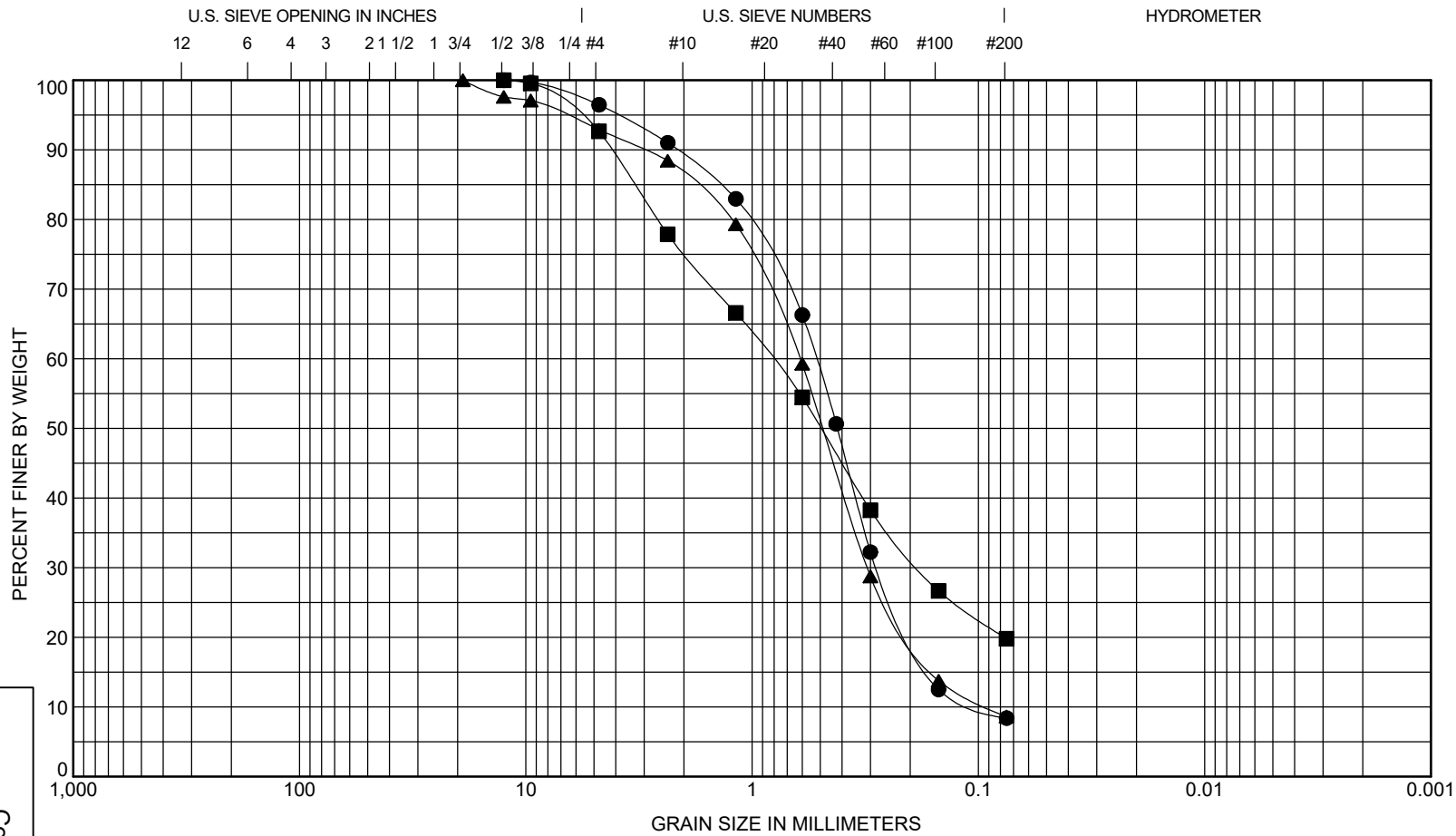
Sample	Depth, Ft	USCS Classification						LL	PL	PI	Cc	Cu
● B-01 S4	7.5 - 9.0	Poorly Graded Sand (SP)									1.2	3.2
■ B-02 S2	2.5 - 4.0	Silty Sand with Gravel (SM)										
▲ B-03 S2	2.5 - 4.0	Silty Sand with Gravel (SM)										
Sample	Depth, Ft	D100	D60	D30	D10	%Gravel	%Sand	%Silt		%Clay		
● B-01 S4	7.5 - 9.0	19	0.53	0.32	0.16	11	84	5				
■ B-02 S2	2.5 - 4.0	37.5	2.98	0.28		34	49	17				
▲ B-03 S2	2.5 - 4.0	19	1.8	0.2		25	54	21				

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GRAIN SIZE CLASSIFICATION

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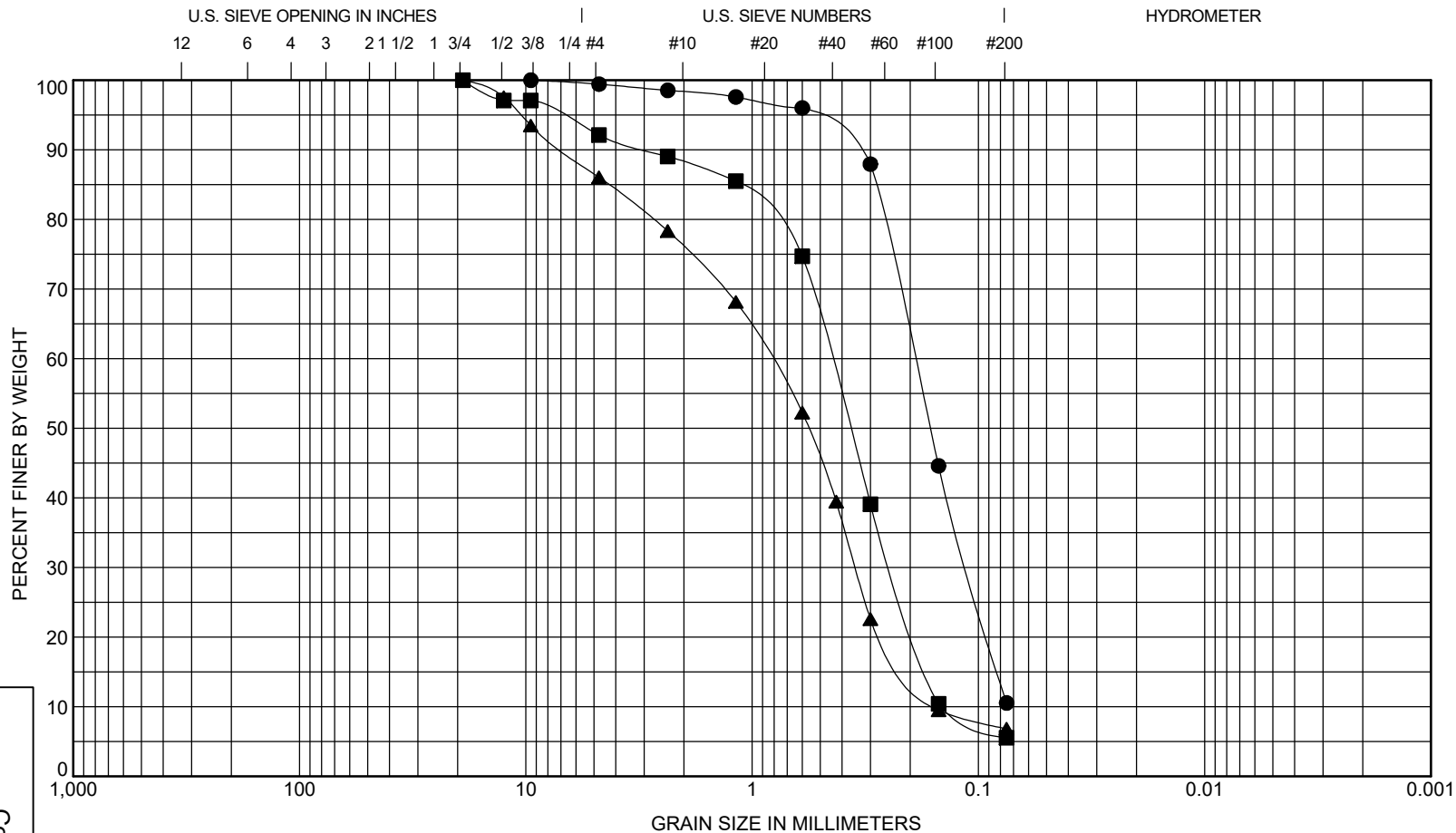
COBBLES		GRAVEL		SAND			SILT OR CLAY				
		coarse	fine	coarse	medium	fine					
Sample	Depth, Ft	USCS Classification					LL	PL	PI	Cc	Cu
● B-03 S7	20.0 - 21.5	Poorly Graded Sand with Silt (SP-SM)								1.5	5.3
■ B-04 S2	2.5 - 4.0	Silty Sand (SM)									
▲ B-05 S6	15.0 - 16.5	Well-Graded Sand with Silt (SW-SM)								1.7	6.8
Sample	Depth, Ft	D100	D60	D30	D10	%Gravel	%Sand	%Silt		%Clay	
● B-03 S7	20.0 - 21.5	12.5	0.52	0.28	0.1	4	88	8			
■ B-04 S2	2.5 - 4.0	12.5	0.82	0.18		7	73	20			
▲ B-05 S6	15.0 - 16.5	19	0.61	0.31	0.09	7	84	9			

Connor's Bog Snow Dump
Anchorage, Alaska

GRAIN SIZE CLASSIFICATION

September 2021

106424-001



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

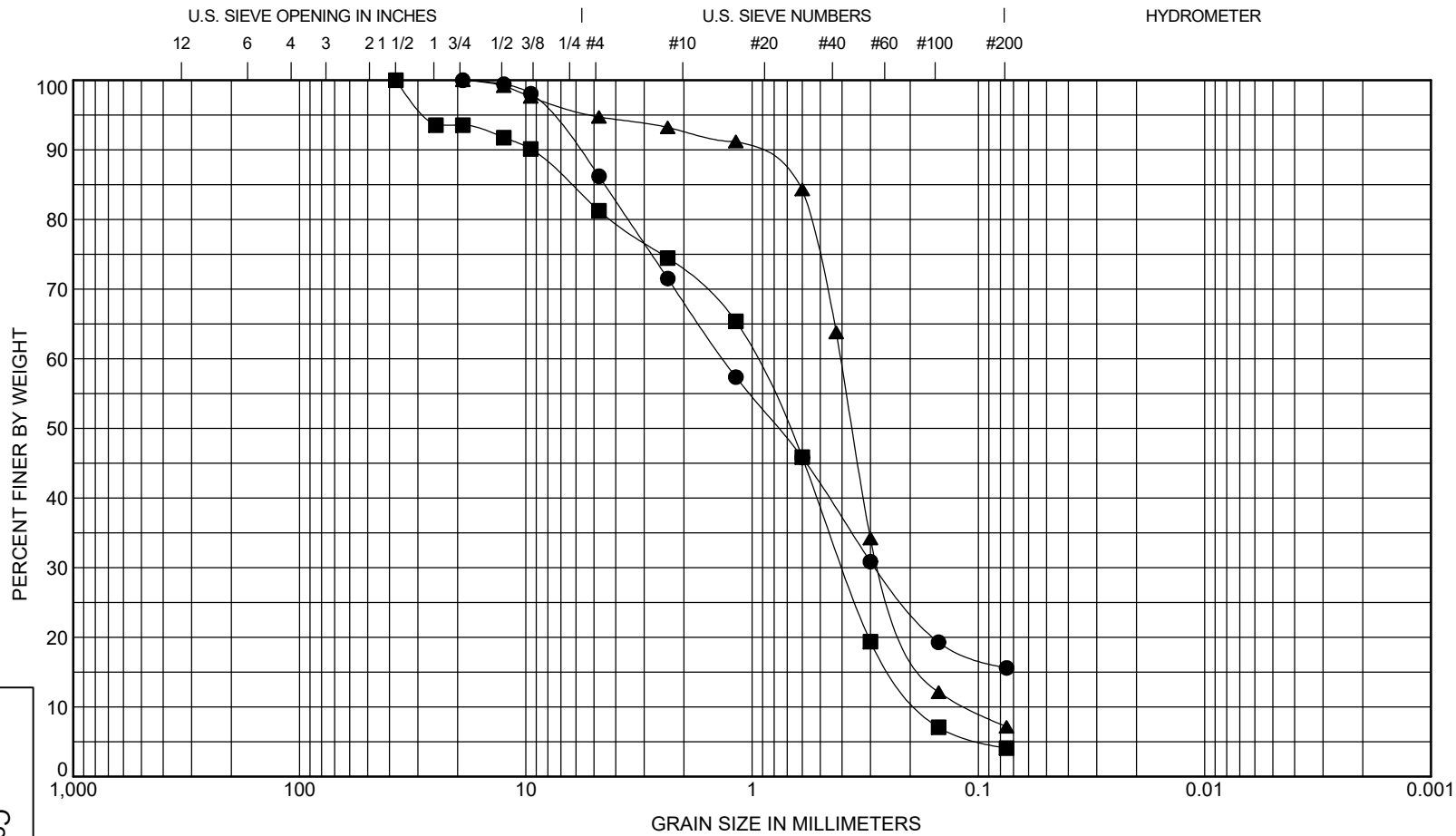
Sample	Depth, Ft	USCS Classification					LL	PL	PI	Cc	Cu
● B-09 S6	15.0 - 16.5	Poorly Graded Sand with Silt (SP-SM)								0.9	2.6
■ B-09 S7	20.0 - 21.5	Poorly Graded Sand with Silt (SP-SM)								0.9	3.2
▲ B-10 S9	30.0 - 31.5	Poorly Graded Sand with Silt (SP-SM)								1.0	5.4
Sample	Depth, Ft	D100	D60	D30	D10	%Gravel	%Sand	%Silt		%Clay	
● B-09 S6	15.0 - 16.5	9.5	0.19	0.11		1	89	11			
■ B-09 S7	20.0 - 21.5	19	0.45	0.24	0.14	8	87	6			
▲ B-10 S9	30.0 - 31.5	19	0.83	0.35	0.15	14	79	7			

Connor's Bog Snow Dump
Anchorage, Alaska

GRAIN SIZE CLASSIFICATION

September 2021

106424-001



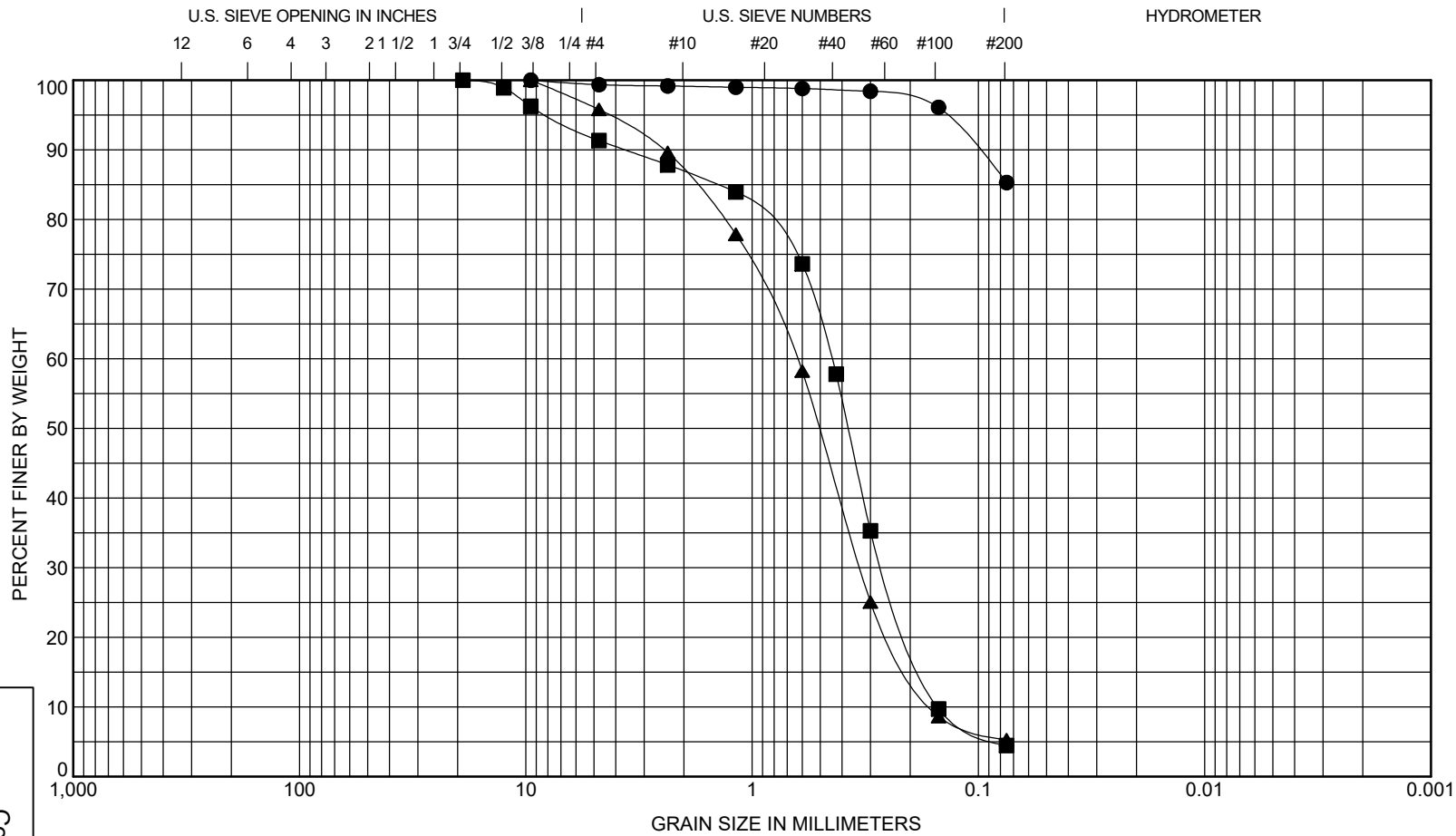
		GRAVEL		SAND			SILT OR CLAY				
		coarse	fine	coarse	medium	fine					
Sample	Depth, Ft	USCS Classification					LL	PL	PI	Cc	Cu
● B-11 S4	7.5 - 9.0	Silty Sand (SM)									
■ B-11 S7	20.0 - 21.5	Poorly Graded Sand with Gravel (SP)								0.9	5.5
▲ B-12 S5	10.0 - 11.5	Poorly Graded Sand with Silt (SP-SM)								1.5	3.6
Sample	Depth, Ft	D100	D60	D30	D10	%Gravel	%Sand	%Silt		%Clay	
● B-11 S4	7.5 - 9.0	19	1.34	0.28		14	71	16			
■ B-11 S7	20.0 - 21.5	37.5	0.98	0.4	0.18	19	77	4			
▲ B-12 S5	10.0 - 11.5	19	0.41	0.26	0.11	5	88	7			

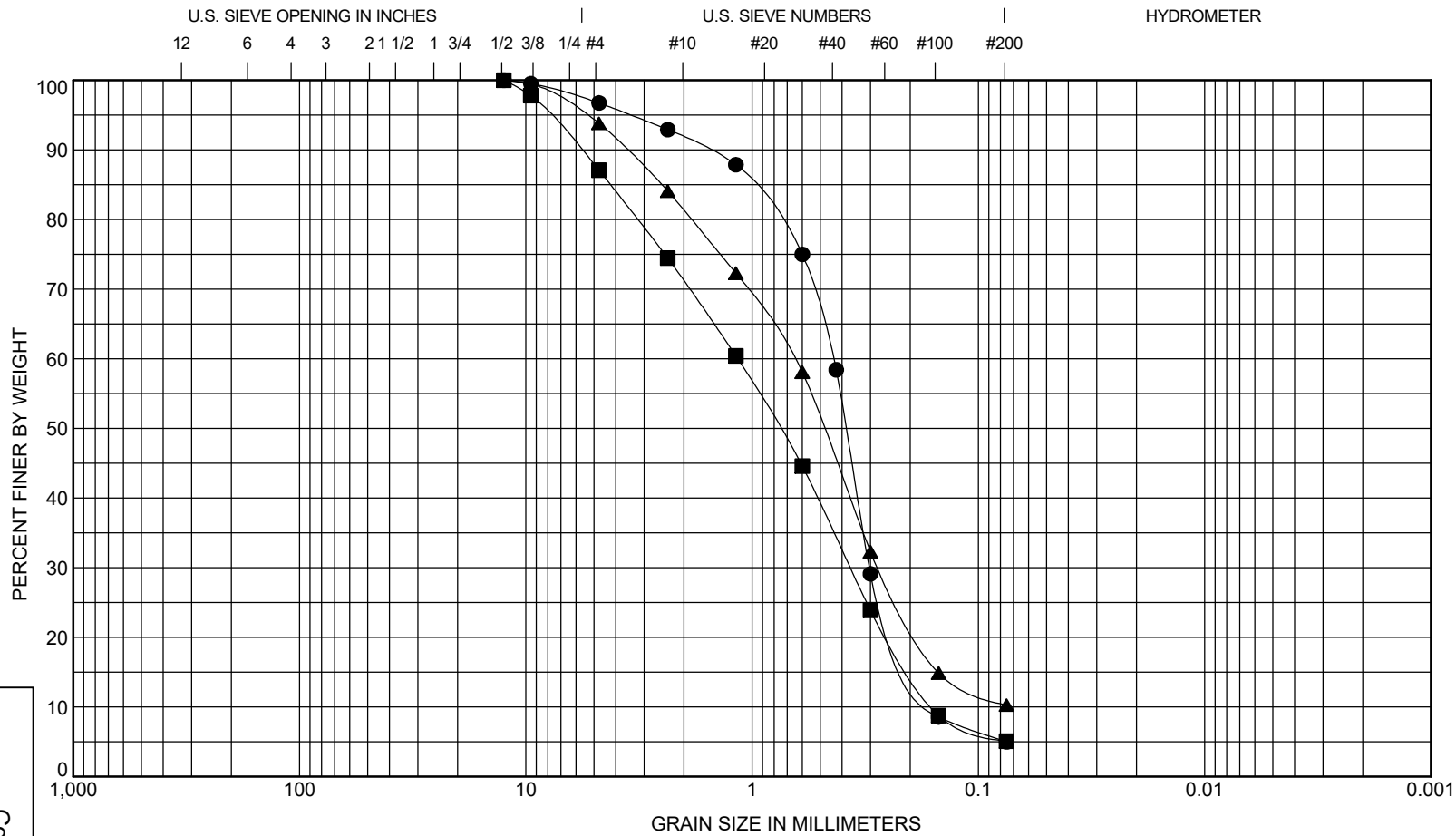
Connor's Bog Snow Dump
Anchorage, Alaska

GRAIN SIZE CLASSIFICATION

September 2021

106424-001





		GRAVEL		SAND			SILT OR CLAY				
		coarse	fine	coarse	medium	fine					
Sample	Depth, Ft	USCS Classification					LL	PL	PI	Cc	Cu
● P-02 S1	7.5 - 9.0	Poorly Graded Sand with Silt (SP-SM)								1.3	2.8
■ P-03 S1	6.0 - 7.5	Poorly Graded Sand with Silt (SP-SM)								0.7	7.3
▲ P-04 S1	6.0 - 7.5	Well-Graded Sand with Silt (SW-SM)								1.6	9.1
Sample	Depth, Ft	D100	D60	D30	D10	%Gravel	%Sand	%Silt		%Clay	
● P-02 S1	7.5 - 9.0	12.5	0.44	0.3	0.16	3	92	5			
■ P-03 S1	6.0 - 7.5	12.5	1.16	0.37	0.16	13	82	5			
▲ P-04 S1	6.0 - 7.5	12.5	0.66	0.27		6	84	10			

Connor's Bog Snow Dump
Anchorage, Alaska

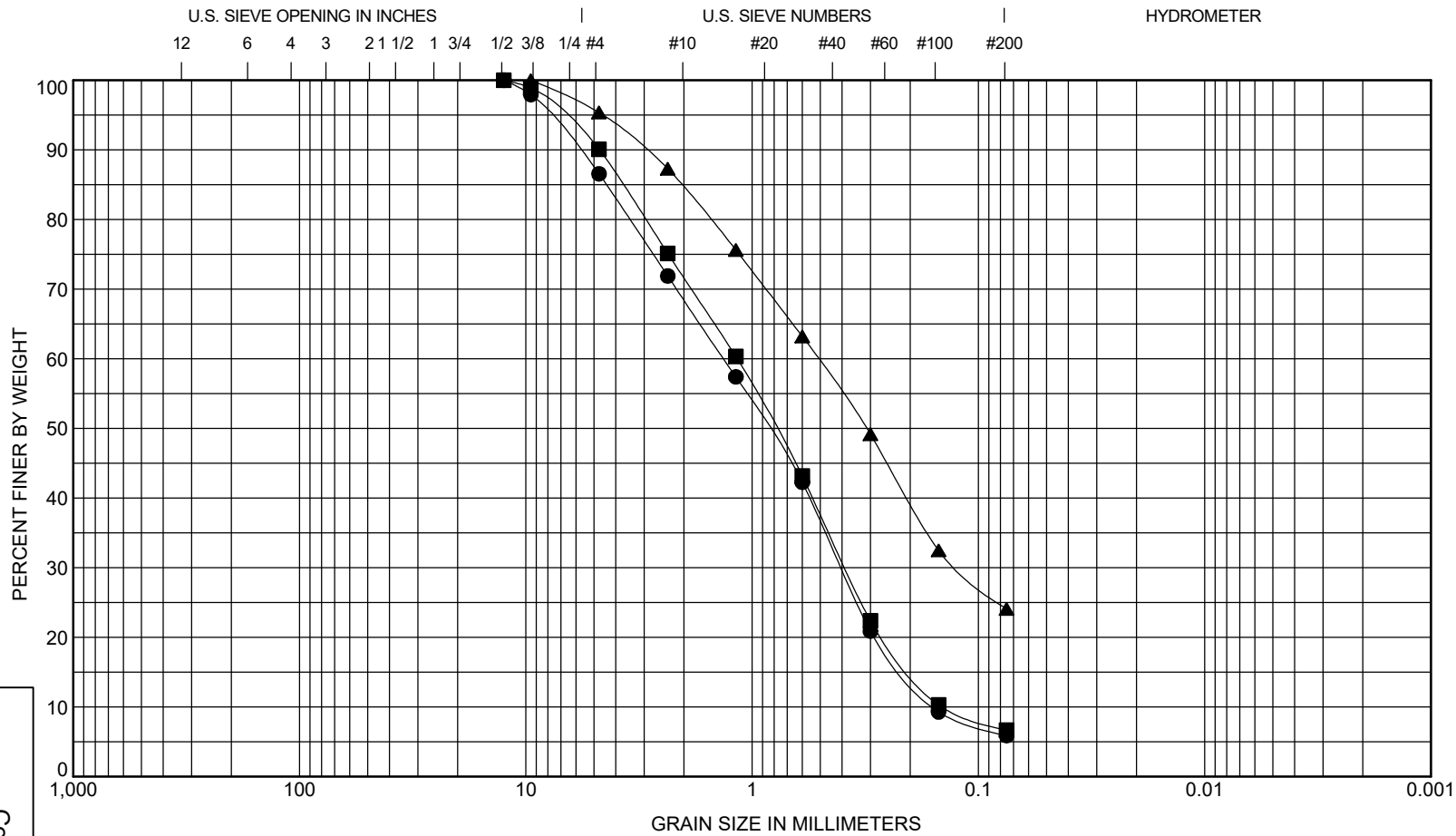
GRAIN SIZE CLASSIFICATION

September 2021

106424-001

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. A-30
Sheet 7 of 10



COBBLES		GRAVEL		SAND			SILT OR CLAY				
		coarse	fine	coarse	medium	fine					
Sample	Depth, Ft	USCS Classification					LL	PL	PI	Cc	Cu
● P-08 S1	5.0 - 6.5	Poorly Graded Sand with Silt (SP-SM)								0.8	8.5
■ P-09 S1	4.0 - 5.5	Poorly Graded Sand with Silt (SP-SM)								0.9	8.2
▲ P-10 S1	5.5 - 7.0	Silty Sand (SM)									
Sample	Depth, Ft	D100	D60	D30	D10	%Gravel	%Sand	%Silt		%Clay	
● P-08 S1	5.0 - 6.5	12.5	1.34	0.4	0.16	13	81	6			
■ P-09 S1	4.0 - 5.5	12.5	1.17	0.39	0.14	10	83	7			
▲ P-10 S1	5.5 - 7.0	9.5	0.51	0.12		5	71	24			

Connor's Bog Snow Dump
Anchorage, Alaska

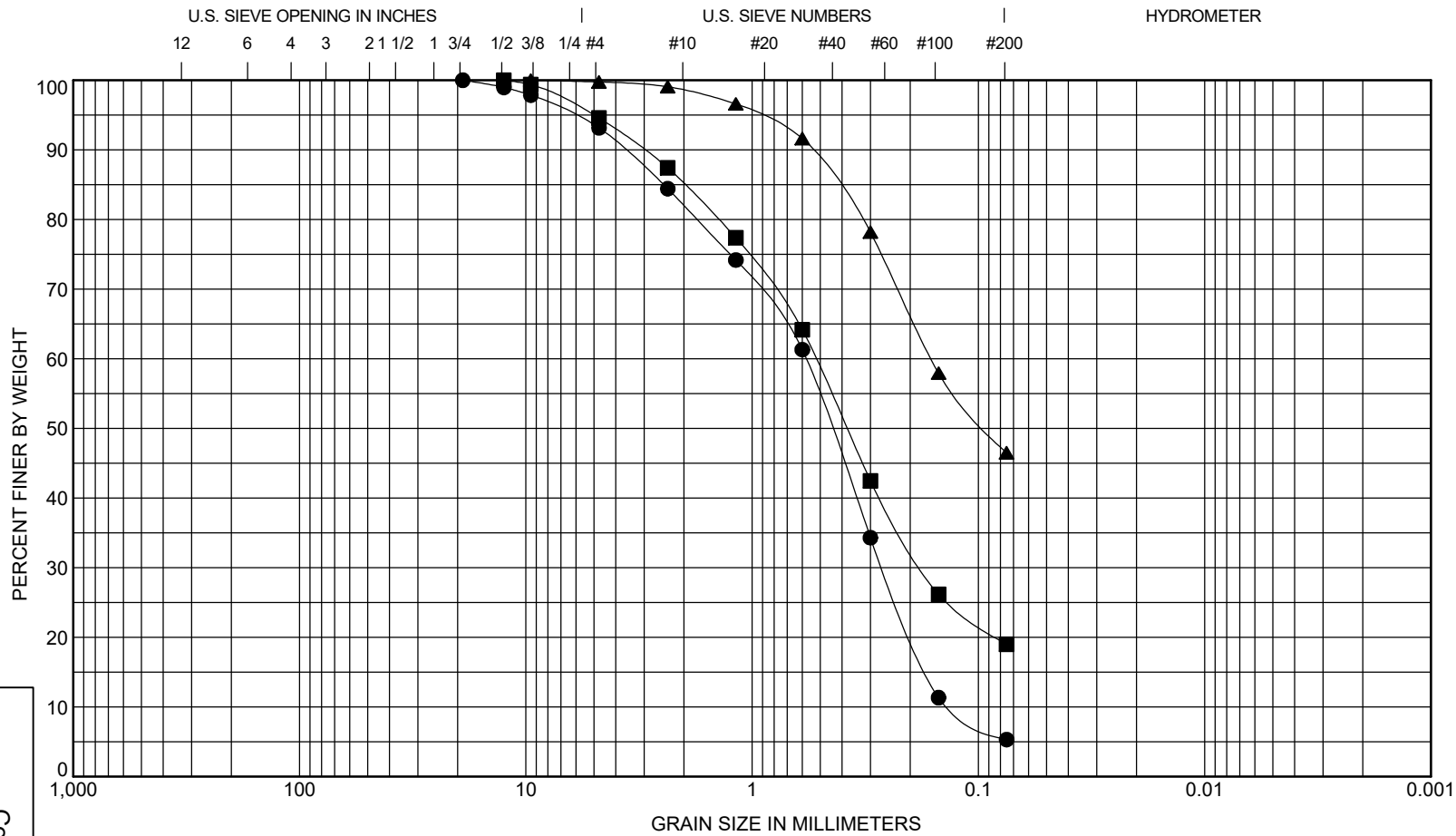
GRAIN SIZE CLASSIFICATION

September 2021

106424-001

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. A-30
Sheet 9 of 10



COBBLES			GRAVEL		SAND			SILT OR CLAY					
			coarse	fine	coarse	medium	fine						
Sample		Depth, Ft	USCS Classification						LL	PL	PI	Cc	Cu
●	P-11 S1	7.5 - 9.0	Poorly Graded Sand with Silt (SP-SM)									0.9	4.5
■	P-12 S1	7.0 - 8.5	Silty Sand (SM)										
▲	P-13 S1	7.0 - 8.5	Silty Sand (SM)										
Sample		Depth, Ft	D100	D60	D30	D10	%Gravel	%Sand	%Silt		%Clay		
●	P-11 S1	7.5 - 9.0	19	0.58	0.26	0.13	7	88	5				
■	P-12 S1	7.0 - 8.5	12.5	0.53	0.18		5	76	19				
▲	P-13 S1	7.0 - 8.5	9.5	0.16			0	53	46				

Connor's Bog Snow Dump
Anchorage, Alaska

GRAIN SIZE CLASSIFICATION

September 2021

106424-001

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. A-30
Sheet 10 of 10

Important Information

Important Information

About Your Geotechnical/Environmental Report

IMPORTANT INFORMATION

CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors that were considered in the development of the report have changed.

SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events and should be consulted to determine if additional tests are necessary.

MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining

your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary, because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by the consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

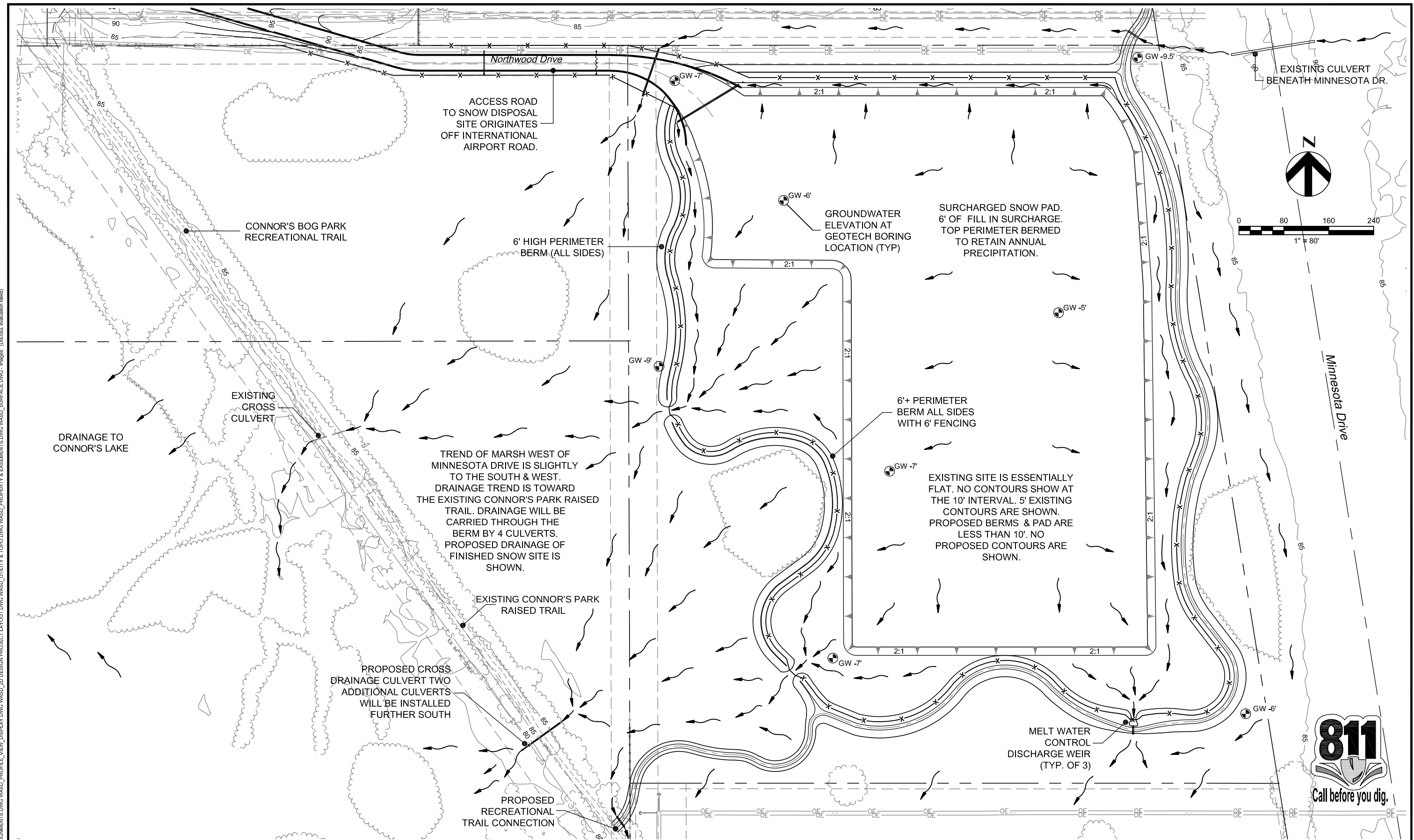
To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY.

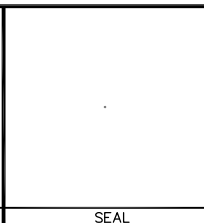
Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims

being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports, and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

The preceding paragraphs are based on information provided by the ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland

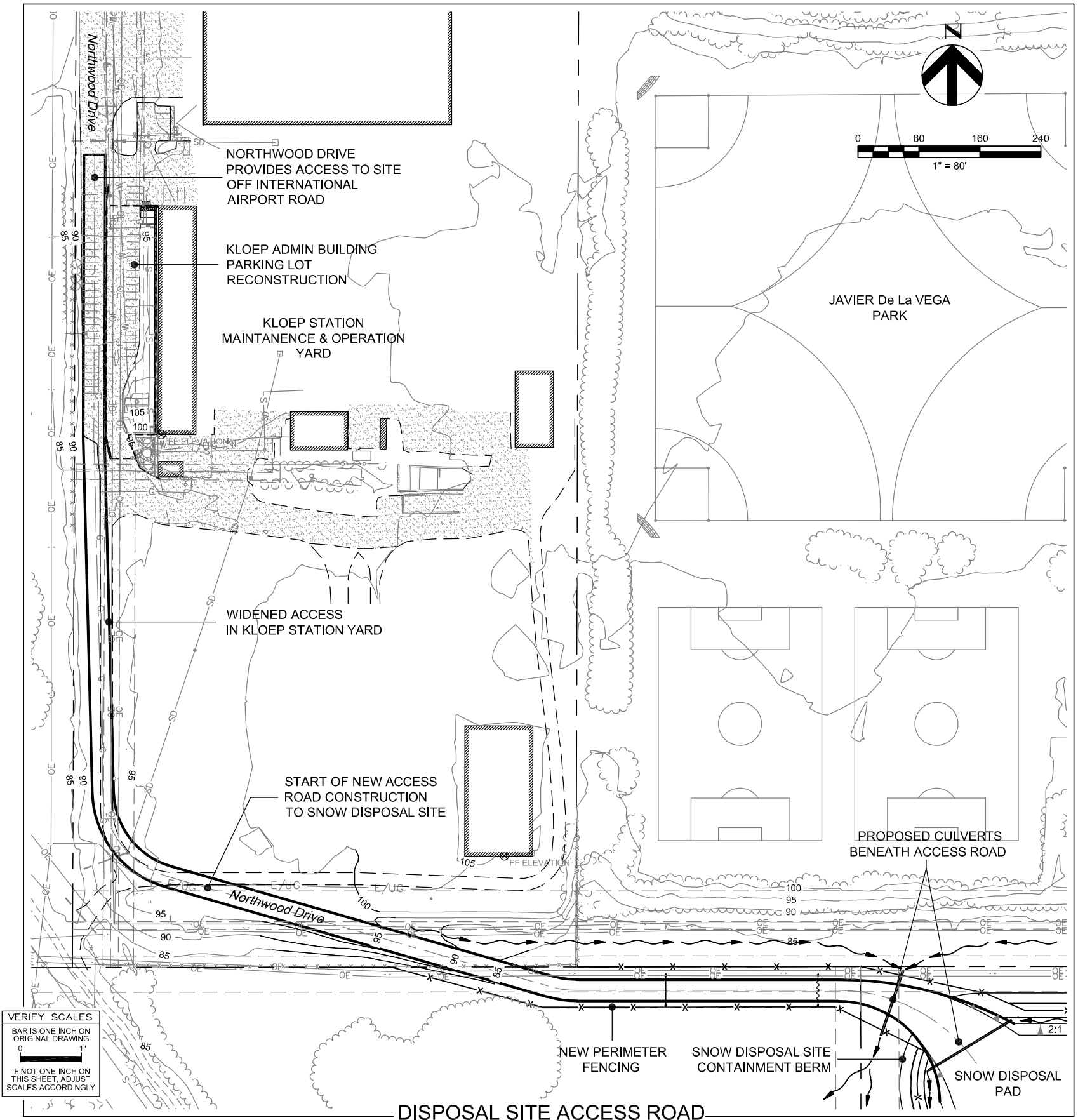


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ASBUILT:					SANITARY SEWER	--	--	DESIGN	TJH	DWS								
					STORM SEWER	--	--	QUANTITIES	--	DWS								
CONTRACTOR:					WATER	--	--	MUN. FINAL CHECK										
INSPECTOR:					GAS	--	--											
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CONSTRUCTION RECORD		HORIZONTAL & VERTICAL DATUMS					PLAN CHECK											

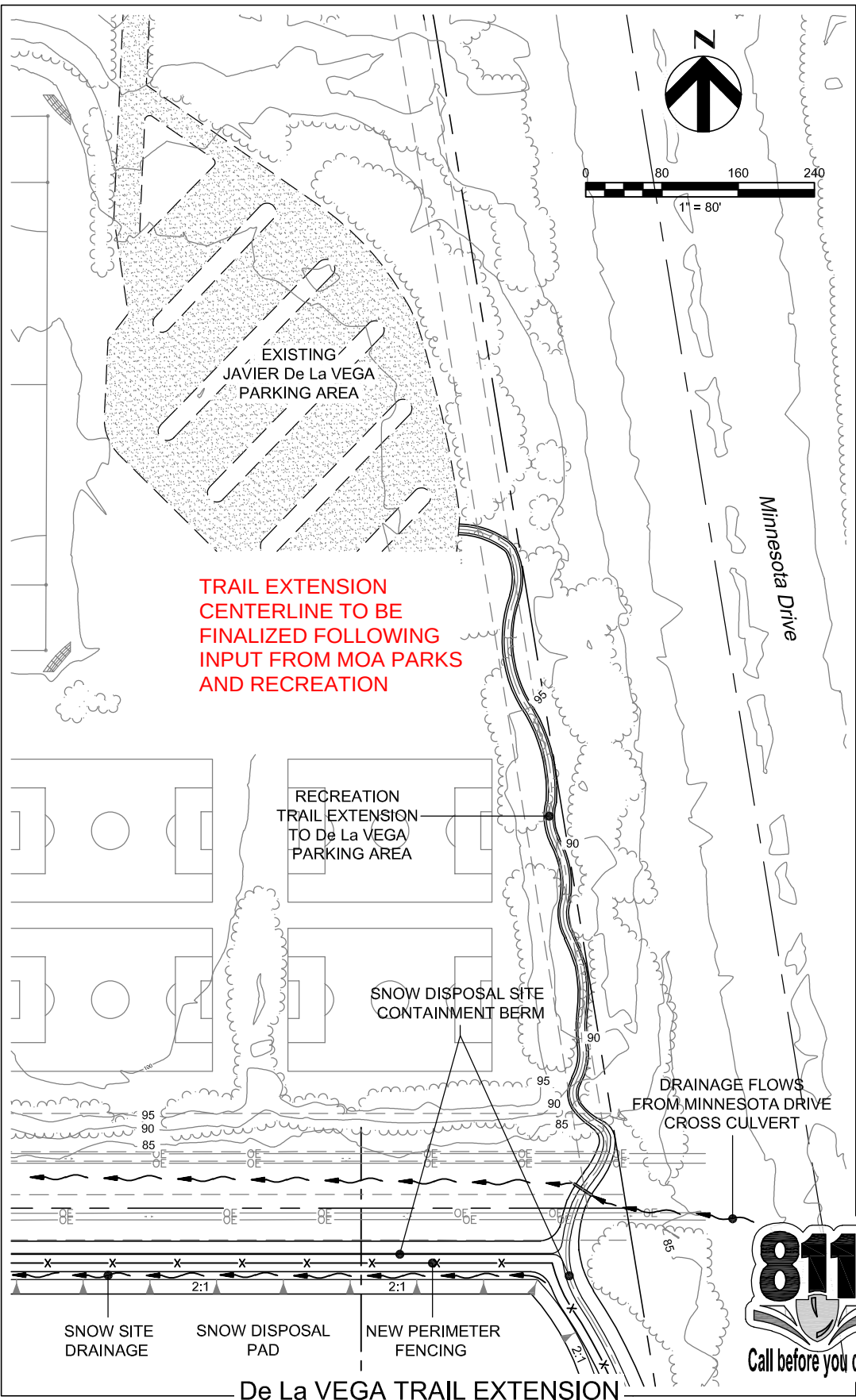


PROJECT MANAGEMENT & ENGINEERING DEPARTMENT			
WEST ANCHORAGE SNOW DISPOSAL SITE PROJECT No. 19-01			
SITE PLAN			
SCALE:	AS SHOWN NTS	DATE: MAY 2022	GRIDS: SW 1928 - - ACCT. NO. 00000XXXX (PME)
			SHEET 1 of 2

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Date: May 27, 2022
Time: 12:59pm
Status: (Diesel evaluation failed)



VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY



FIELD BOOKS	BM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY	REV	DATE	DESCRIPTION	BY
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				STORM SEWER	--	--	QUANTITIES	--	DWS								
				WATER	--	--	MUN. FINAL CHECK										
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CONSTRUCTION RECORD				HORIZONTAL & VERTICAL DATUMS				PLAN CHECK									



CONSULTANT



SEAL

PROJECT MANAGEMENT & ENGINEERING DEPARTMENT

WEST ANCHORAGE SNOW DISPOSAL SITE

PROJECT No. 19-01

SITE PLAN

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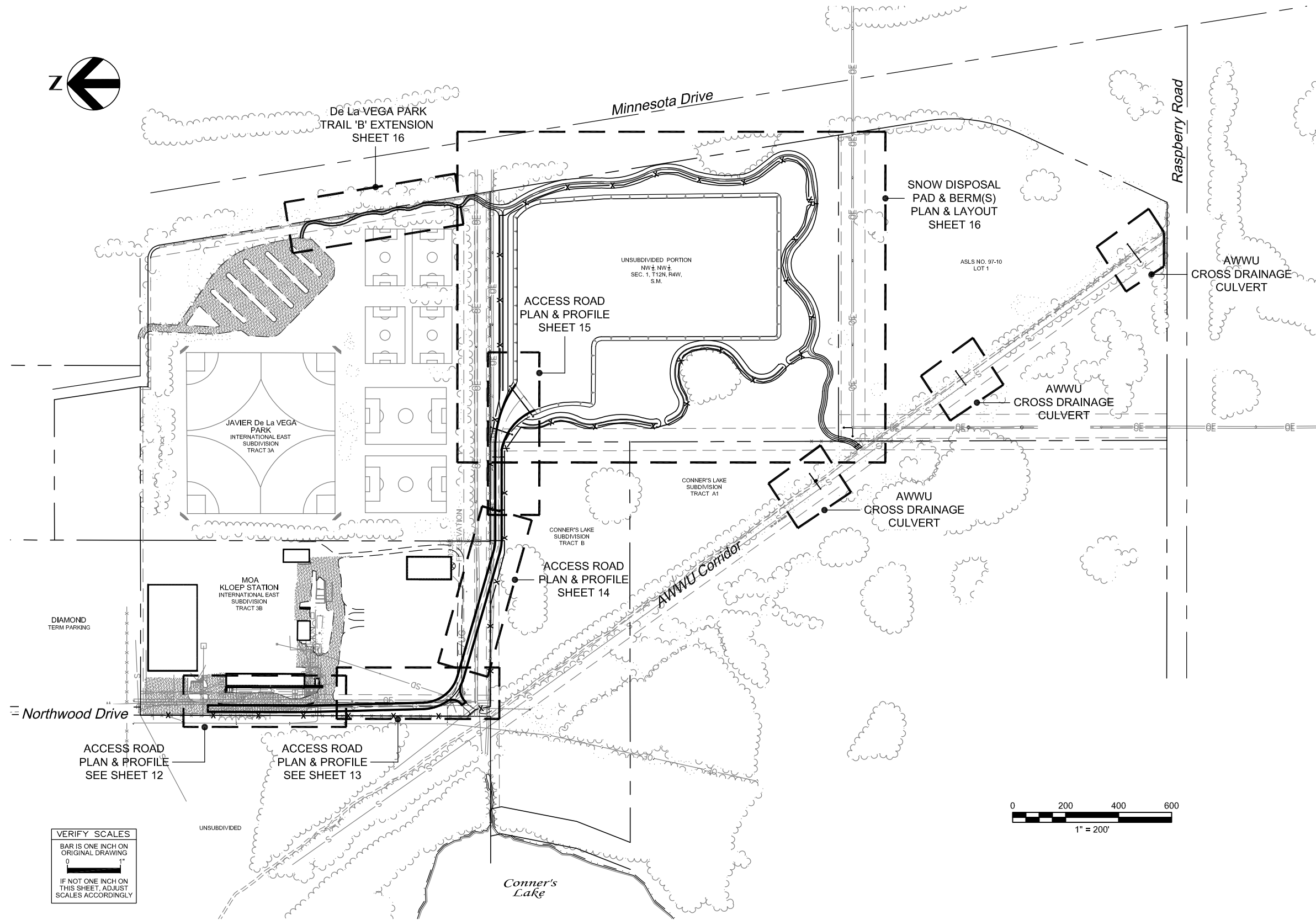
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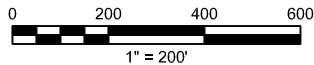
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SHEET 2 of 2

FILE NO. -



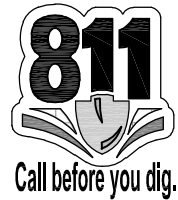
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NOTE

-SUPPLEMENTAL SHEETS ARE TAKEN FROM THE PROJECT 65% DESIGN DRAWINGS,

-SHEET NUMBERS ARE NOT SEQUENTIAL



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					STORM SEWER	--	--	QUANTITIES	--	DWS				
CONTRACTOR:					WATER	--	--	MUN. FINAL CHECK	--	--				
INSPECTOR:					GAS	--	--							
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		VERTICAL: 1972 N.G.S. DATUM												
CONSTRUCTION RECORD		HORIZONTAL & VERTICAL DATUMS			PLAN CHECK									

PROJECT MANAGEMENT & ENGINEERING DEPARTMENT

WEST ANCHORAGE SNOW DISPOSAL SITE

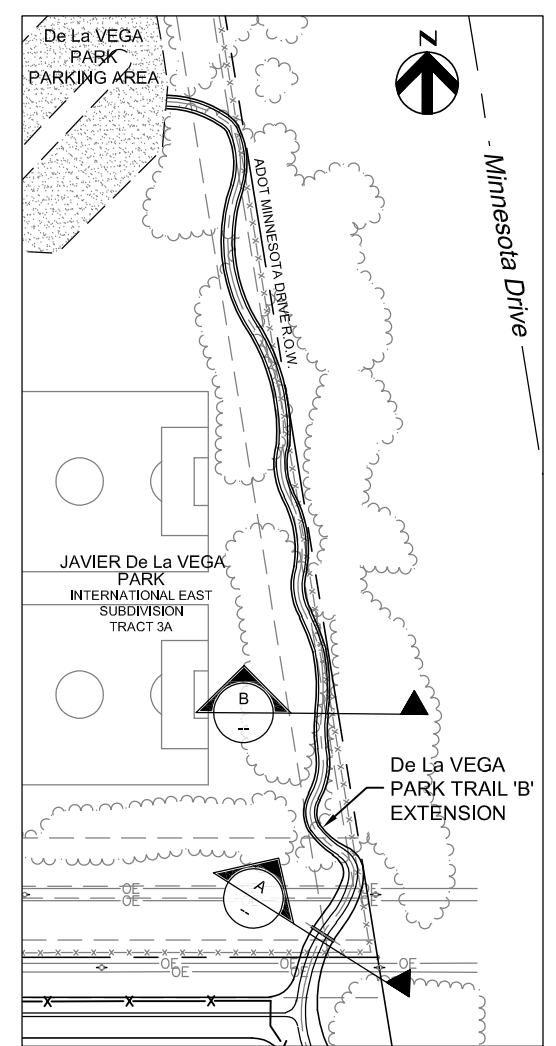
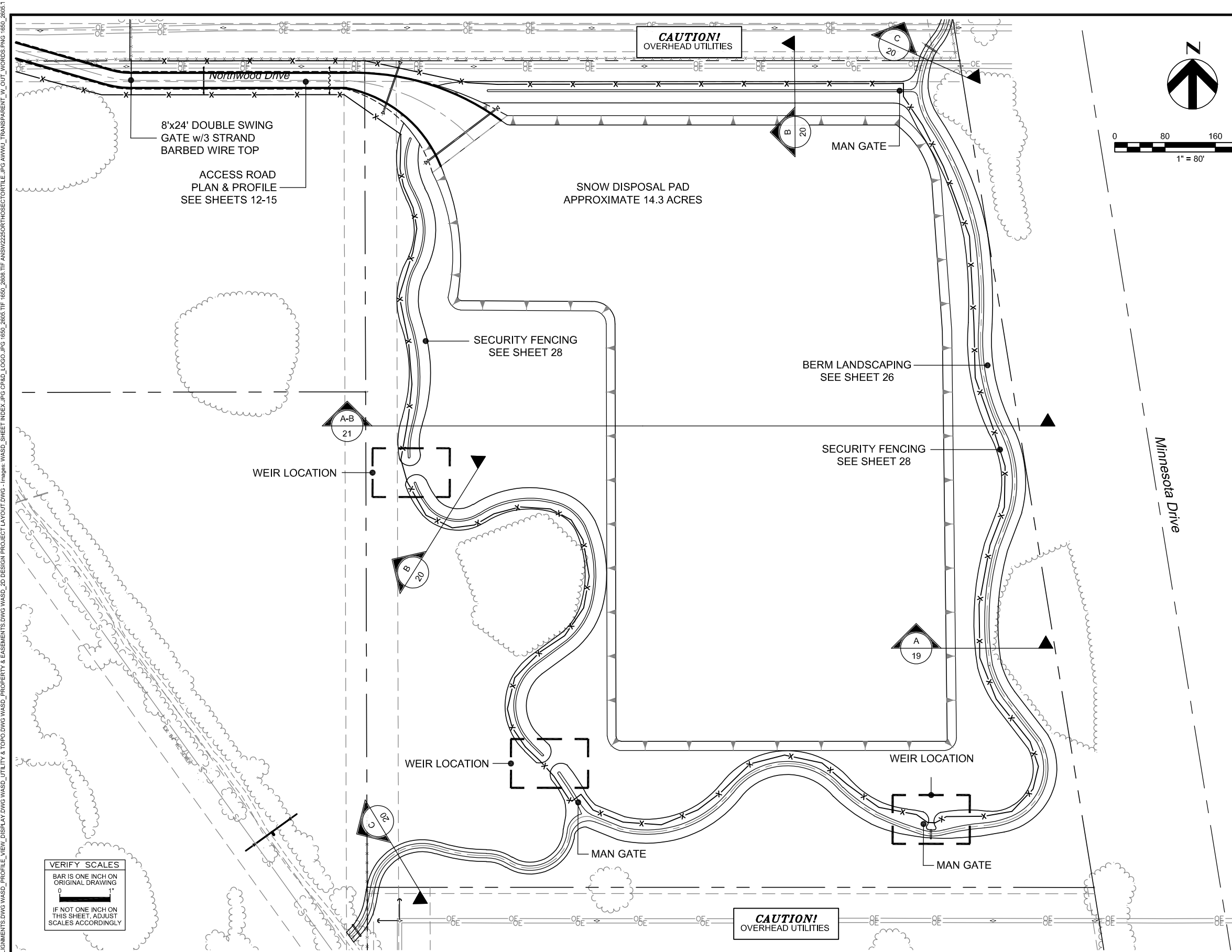
PROJECT No. 19-01

SITE PLAN SUPPLEMENTAL SHEET LAYOUT

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STAKING:					PROFILE	TJH	DWS	CABLE TV	--	--				
ASBUILT:					SANITARY SEWER	--	--	DESIGN	TJH	DWS				
					STORM SEWER	--	--	QUANTITIES	--	DWS				
CONTRACTOR:					WATER	--	--	MUN. FINAL CHECK	--	--				
INSPECTOR:					GAS	--	--							
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		HORIZONTAL: ANCHORAGE BOWL 2000												
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CONSTRUCTION RECORD		HORIZONTAL & VERTICAL DATUMS			PLAN CHECK									



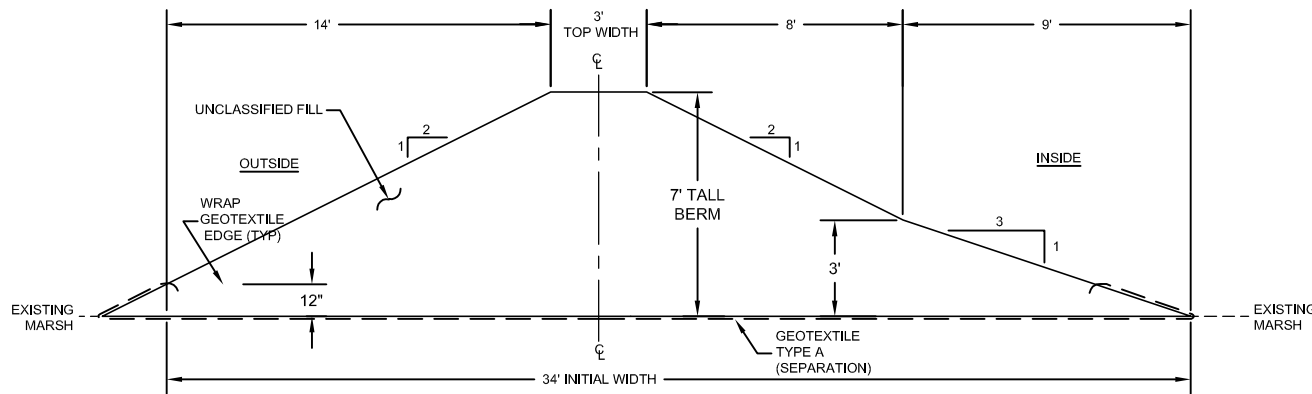
CONSULTANT

SEAL

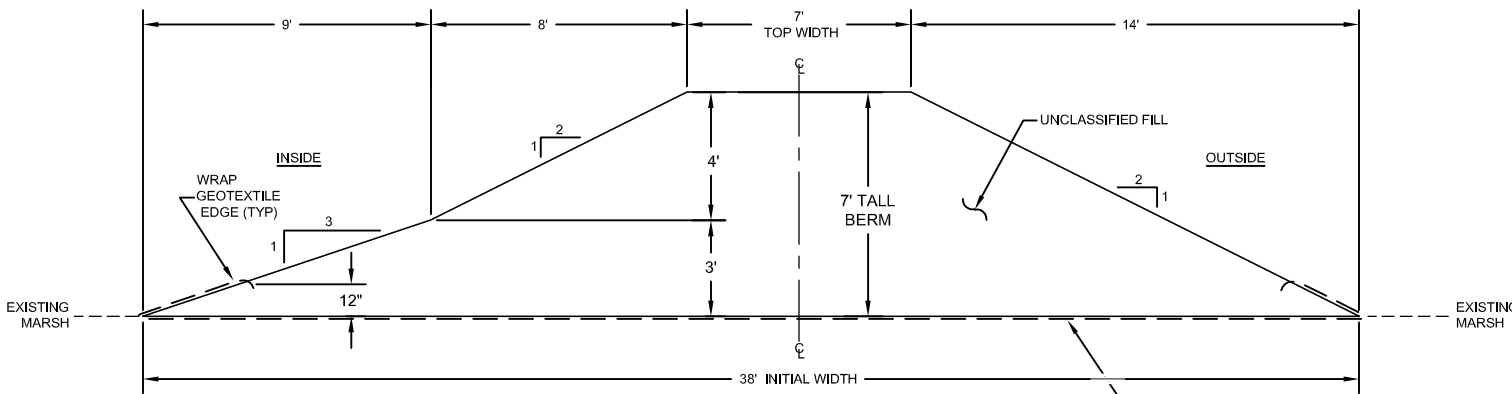


PROJECT MANAGEMENT & ENGINEERING DEPARTMENT			
WEST ANCHORAGE SNOW DISPOSAL SITE PROJECT No. 19-01			
DISPOSAL SITE & CONTAINMENT BERMS OVERALL LAYOUT			
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ACCT. NO. 000000XXXX (PME)			

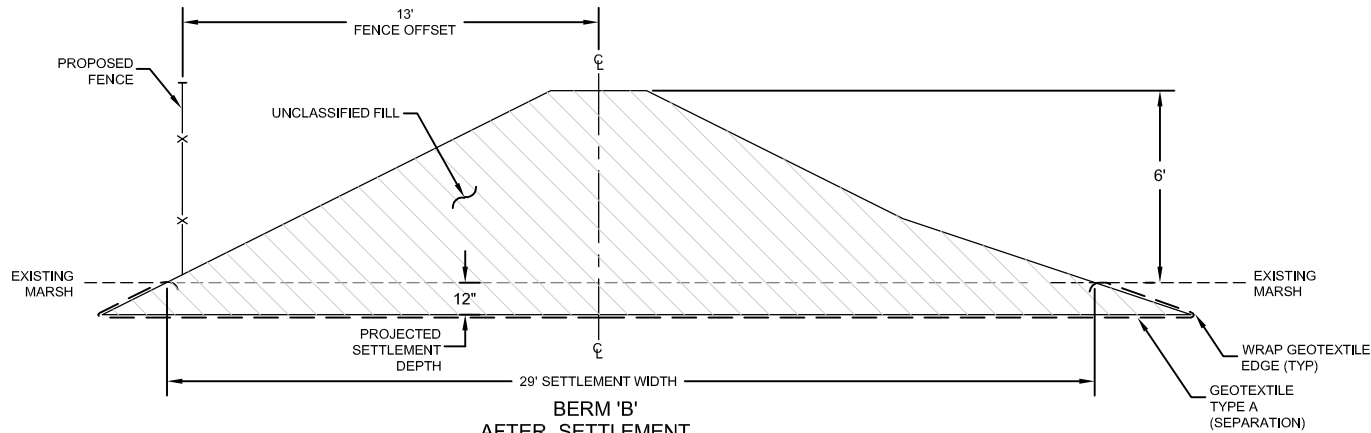
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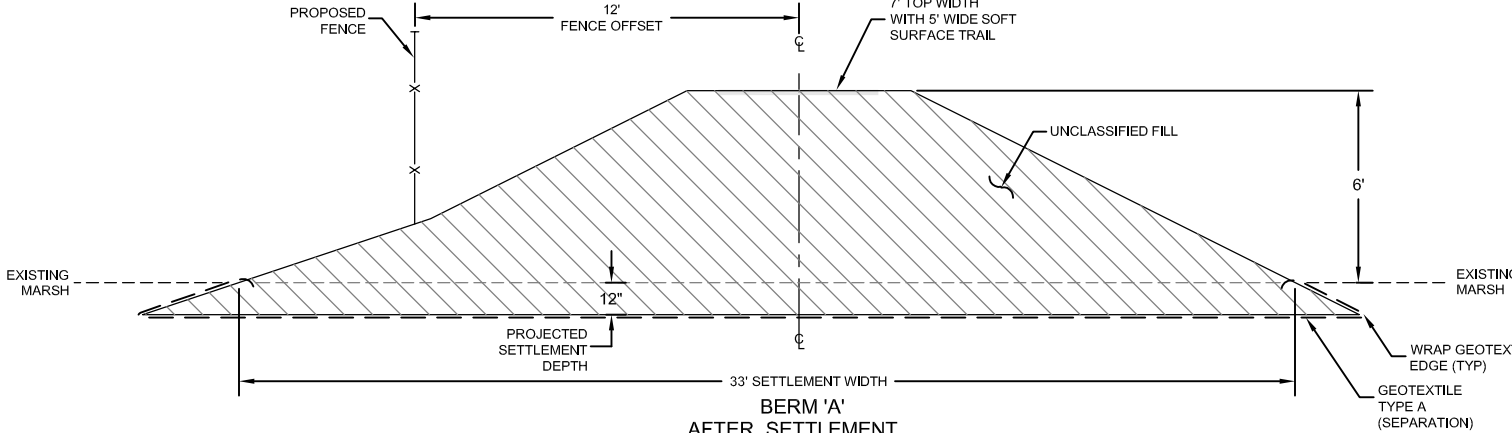
BERM 'B'
INITIAL FILL PLACEMENT



BERM 'A'
INITIAL FILL PLACEMENT



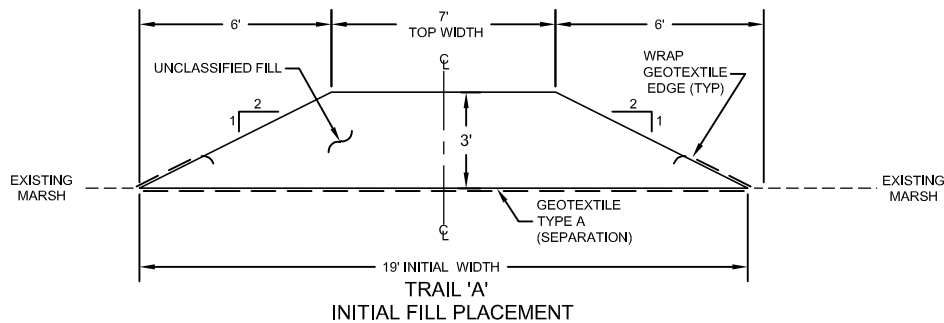
BERM 'B'
AFTER SETTLEMENT



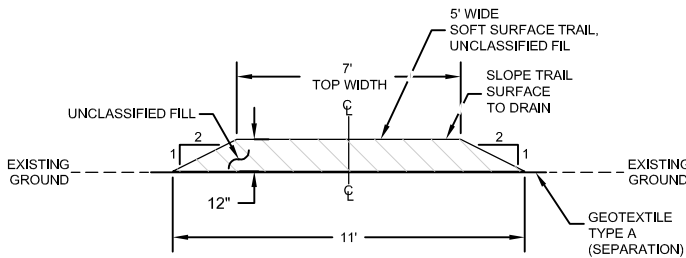
BERM 'A'
AFTER SETTLEMENT

B
BERM 'B' TYPICAL SECTIONS
1" = 3'-0"

A
BERM 'A' TYPICAL SECTIONS
1" = 3'-0"



TRAIL 'A'
INITIAL FILL PLACEMENT

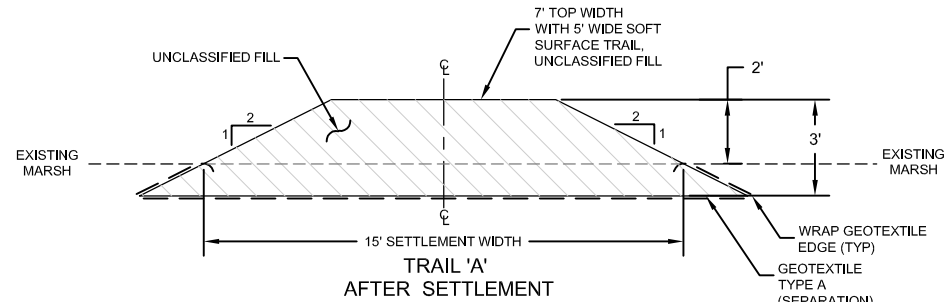


D
TRAIL 'B' TYPICAL SECTION
1" = 3'-0"

NOTE: BERM 'A' & 'B'

BERM 'A' & 'B' WILL BE CONSTRUCTED OF UNCLASSIFIED FILL WITHOUT SURCHARGE. INITIAL DEPTH OF FILL WILL BE 120 - 140% OF FINAL SETTLED HEIGHT. CLASSIFIED FILL WILL BE USED WITHIN 10 FT. EACH SIDE OF WEIR STRUCTURES.

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY



C
TRAIL 'A' TYPICAL SECTIONS
1" = 3'-0"

TRAIL TYPICAL SECTION DESIGN IS
PENDING INPUT FROM MOA PARKS AND
RECREATION STAFF



FIELD BOOKS	BM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY
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ASBULT:				PROFILE	TJH	DWS	CABLE TV	-	-				
CONTRACTOR:				SANITARY SEWER	-	-	DESIGN	TJH	DWS				
INSPECTOR:				STORM SEWER	-	-	QUANTITIES	-	DWS				
				WATER	-	-	MUN. FINAL CHECK	-	-				
				GAS	-	-							
CONSTRUCTION RECORD		HORIZONTAL & VERTICAL DATUMS		PLAN CHECK									



CONSULTANT

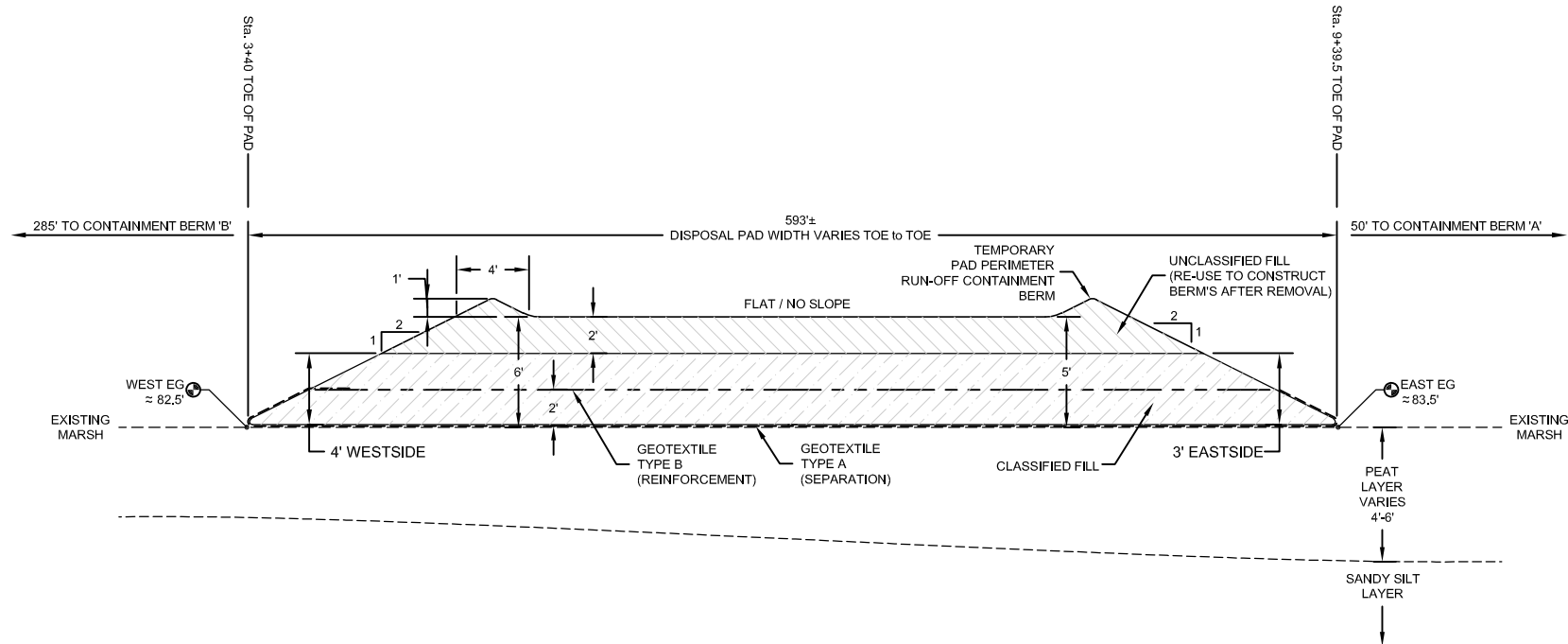


SEAL

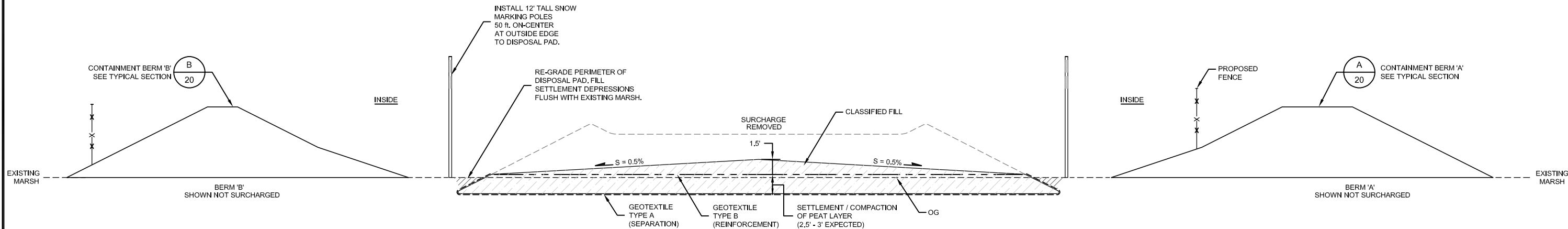
PROJECT MANAGEMENT & ENGINEERING
DEPARTMENT
WEST ANCHORAGE SNOW DISPOSAL SITE
PROJECT No. 19-01
CONTAINMENT BERMS AND TRAIL
TYPICAL CROSS-SECTIONS

SCALE: AS SHOWN NTS DATE: JULY 2022 GRIDS: SW1928 -- -- SHEET 20 of 20
ACCT. NO. 000000XXXX (PME)

FILE NO. --

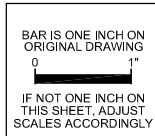


DISPOSAL PAD SURCHARGED
A
NTS



DISPOSAL PAD FINAL GRADING
B
NTS

VERIFY SCALES



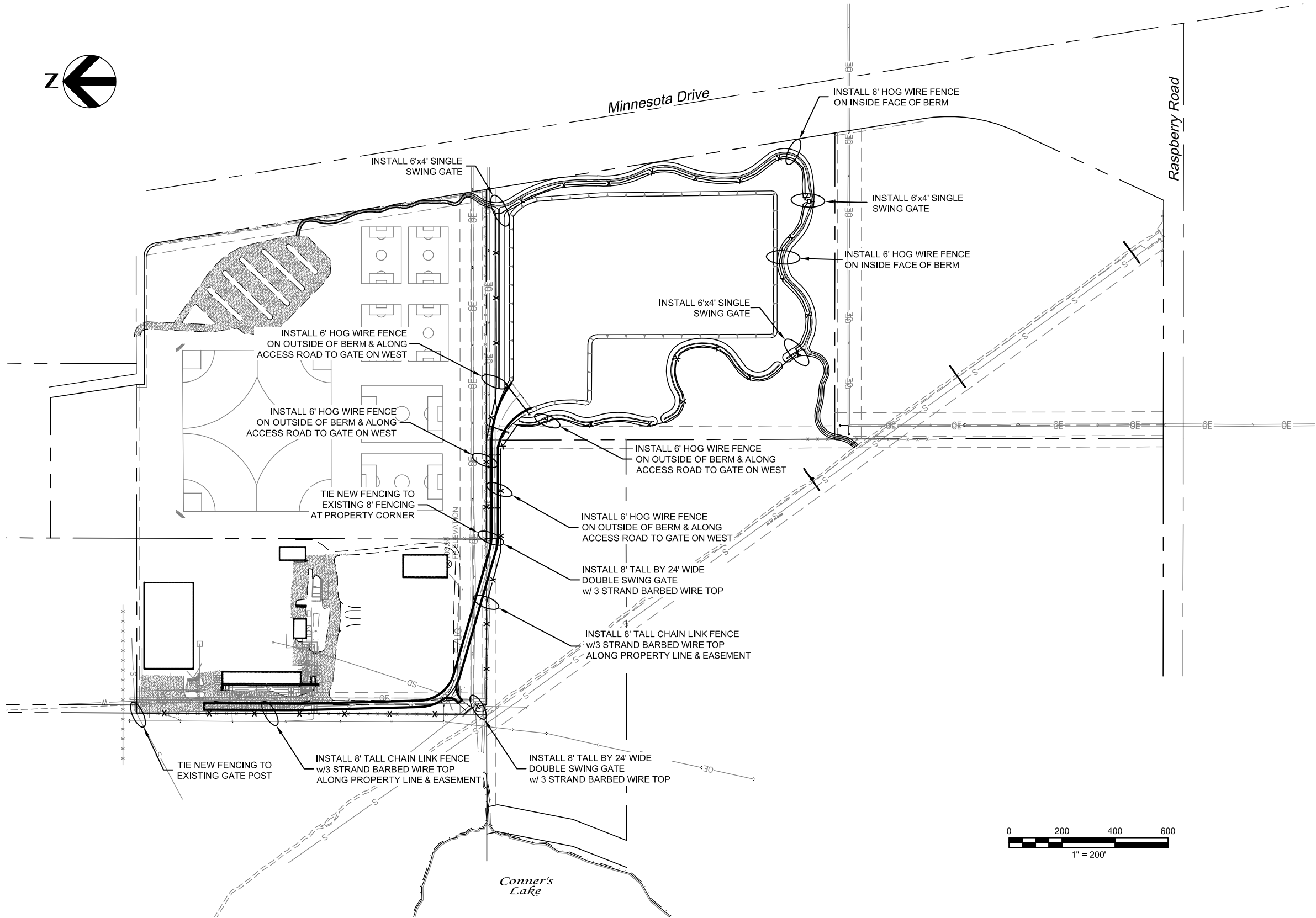
FIELD BOOKS	BM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY	REV	DATE	DESCRIPTION	BY
DESIGN: MOA 3782	E-75	OLD INTERNATIONAL	72.93'	BASE	MCR	PTS	TELEPHONE	-	-	-	-	-	-	-	-	-	-
STAKING:	GAAB-216	5011 SPENARD RD.	78.80'	TOPOGRAPHY	MCR	PTS	ELECTRIC	-	-	-	-	-	-	-	-	-	-
ASBUILT:				PROFILE	TJH	DWS	CABLE TV	-	-	-	-	-	-	-	-	-	-
CONTRACTOR:				SANITARY SEWER	-	-	DESIGN	TJH	DWS	-	-	-	-	-	-	-	-
INSPECTOR:				STORM SEWER	-	-	QUANTITIES	-	DWS	-	-	-	-	-	-	-	-
				WATER	-	-	MUN. FINAL CHECK	-	-	-	-	-	-	-	-	-	-
				GAS	-	-		-	-	-	-	-	-	-	-	-	-
BASIS OF DATUM:																	
HORIZONTAL: ANCHORAGE BOWL 2000																	
VERTICAL: 1972 N.G.S. DATUM																	
CONSTRUCTION RECORD				HORIZONTAL & VERTICAL DATUMS				PLAN CHECK									

	CONSULTANT
	SEAL



PROJECT MANAGEMENT & ENGINEERING DEPARTMENT			
WEST ANCHORAGE SNOW DISPOSAL SITE PROJECT No. 19-01			
SNOW SITE PAD TYPICAL CROSS-SECTIONS			
SCALE: AS SHOWN NTS	DATE: JULY 2022	GRIDS: SW1928	SHEET 21 of
ACCT. NO. 000000XXXX (PME)			

FILE NO. -



VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

0 200 400 600
1" = 200'



FIELD BOOKS		BM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY	REV	DATE	DESCRIPTION	BY
DESIGN:	MOA 3782	E-75	OLD INTERNATIONAL	72.93'	BASE	MCR	PTS	TELEPHONE	--	--								
STAKING:		GAAB-216	5011 SPENARD RD.	78.80'	TOPOGRAPHY	MCR	PTS	ELECTRIC	--	--								
ASBUILT:					PROFILE	TJH	DWS	CABLE TV	--	--								
CONTRACTOR:					SANITARY SEWER	--	--	DESIGN	TJH	DWS								
INSPECTOR:					STORM SEWER	--	--	QUANTITIES	--	DWS								
					WATER	--	--	MUN. FINAL CHECK	--	--								
					GAS	--	--											
CONSTRUCTION RECORD		HORIZONTAL & VERTICAL DATUMS			PLAN CHECK													



PROJECT MANAGEMENT & ENGINEERING
DEPARTMENT
WEST ANCHORAGE
SNOW DISPOSAL SITE

FENCING LAYOUT

SCALE: AS SHOWN NTS DATE: JULY 2022 GRIDS: SW1928 -- -- SHEET 28 of 28
ACCT. NO. 000000XXXX (PME)

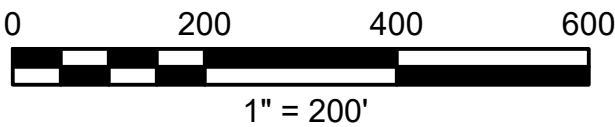
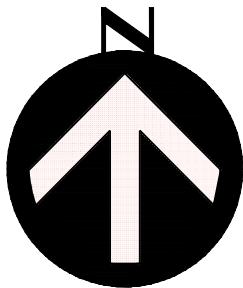
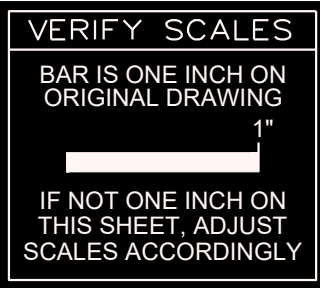
FILE NO. --

GENERAL NOTES:

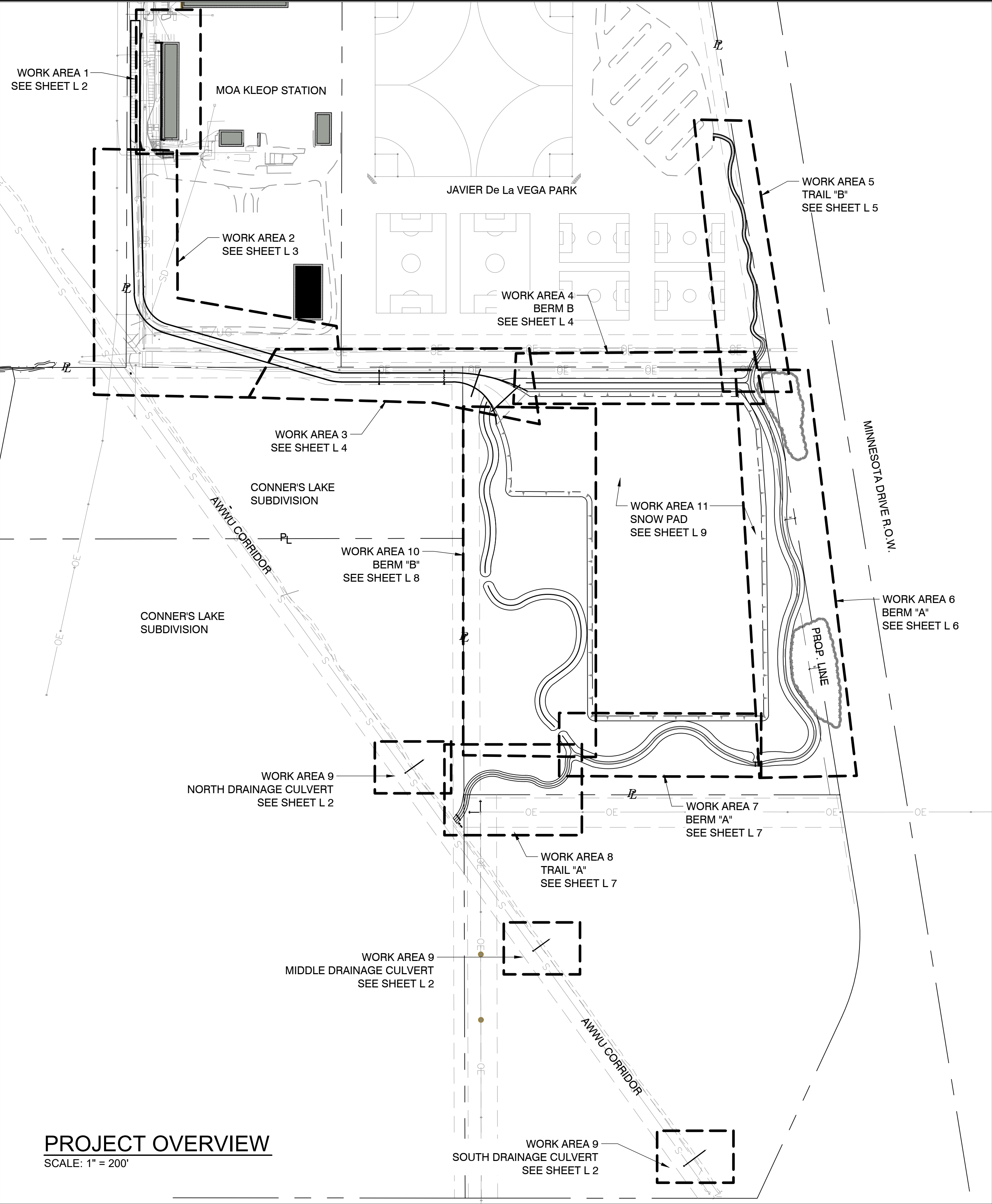
1. CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS (M.A.S.S.), 2015, LANDSCAPING IMPROVEMENTS, HEREAFTER REFERRED TO AS M.A.S.S.
2. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO BEGINNING CONSTRUCTION. THE PERMITS SHALL BE MAINTAINED AT THE JOB SITE.
3. ALL CONSTRUCTION OPERATIONS REQUIRED FOR THIS PROJECT SHALL REMAIN ON OR WITHIN MOA (MUNICIPALITY OF ANCHORAGE) PROPERTY AND RIGHTS-OF-WAY AND EASEMENTS, UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER AND THE AFFECTED PROPERTY OWNER.
4. REFER TO CIVIL SHEETS FOR UTILITY LOCATIONS, ALL OF WHICH ARE APPROXIMATE. SOME UTILITIES HAVE BEEN LOCATED FROM AS-BUILT DRAWINGS AND SOME FROM UTILITY LOCATES. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ALL UTILITIES PRIOR TO CONSTRUCTION. CALL 811 BEFORE YOU DIG!
5. UNDERGROUND AND OVERHEAD ELECTRICAL AND TELECOMMUNICATION LINES (AND POLES) MAY OCCUR WITHIN THE PROJECT AREA; CONTRACTOR SHALL COORDINATE ACCORDINGLY. ALL WORK IN CLOSE PROXIMITY TO EXISTING (OVERHEAD & UNDERGROUND) LINES AND POLES SHALL COMPLY WITH APPLICABLE FEDERAL, STATE, AND LOCAL STATUTES, CODES AND GUIDELINES, AND THE ELECTRICAL FACILITY CLEARANCE REQUIREMENTS OF THE GOVERNING UTILITY. HAND DIGGING IS REQUIRED WITHIN TWO (2) FEET OF BURIED ELECTRICAL CABLE. SOME UTILITIES HAVE BEEN LOCATED FROM RECORD DRAWINGS AND MAY NOT BE VISIBLE.
6. REFERENCE NOTES SCHEDULE CONTAINS QUANTITIES FOR ESTIMATION PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR PROVIDING MATERIALS, EQUIPMENT AND LABOR AS NEEDED FOR CONSTRUCTION AS PER PLANS & SPECIFICATIONS.

REFERENCE NOTES SCHEDULE

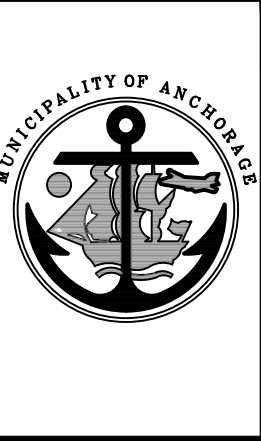
SYMBOL	DESCRIPTION	QTY	DETAIL
	1 SCHEDULE A MOWABLE SEED MIX OVER 4" TOPSOIL	1,099 sf	
	2 SCHEDULE C WETLAND SEED MIX OVER NATIVE SOIL	155,424 sf	
	3 SCHEDULE D REVEGETATION SEED MIX OVER NATIVE SOIL	67,003 sf	
	4 SCHEDULE F SNOW DUMP SEED MIX OVER NATIVE SOIL	629,410 sf	
	5 TACKIFIER	78,350 sf	
SYMBOL	DESCRIPTION	QTY	DETAIL
	6 OWNER-FURNISHED VICTORY STANLEY P-8 PARK BENCH.	2	
	7 KIOSK	3	
	8 DOG DOO DISPOSAL STATION	1	



PROJECT OVERVIEW
SCALE: 1" = 200'



FIELD BOOKS	BM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY	REV	DATE	DESCRIPTION	BY
DESIGN: MOA 3782	E-75	OLD INTERNATIONAL	72.93'	BASE	MCR	PTS	TELEPHONE	--	--								
STAKING:	GAAB-216	5011 SPENARD RD.	78.80'	TOPOGRAPHY	MCR	PTS	ELECTRIC	--	--								
ASBUILT:				PROFILE	TJH	DWS	CABLE TV	--	--								
CONTRACTOR:				SANITARY SEWER	--	--	DESIGN	TJH	DWS								
INSPECTOR:				STORM SEWER	--	--	QUANTITIES	--	DWS								
				WATER	--	--	MUN. FINAL CHECK	--									
				GAS	--	--											
CONSTRUCTION RECORD	HORIZONTAL & VERTICAL DATUMS				PLAN CHECK												

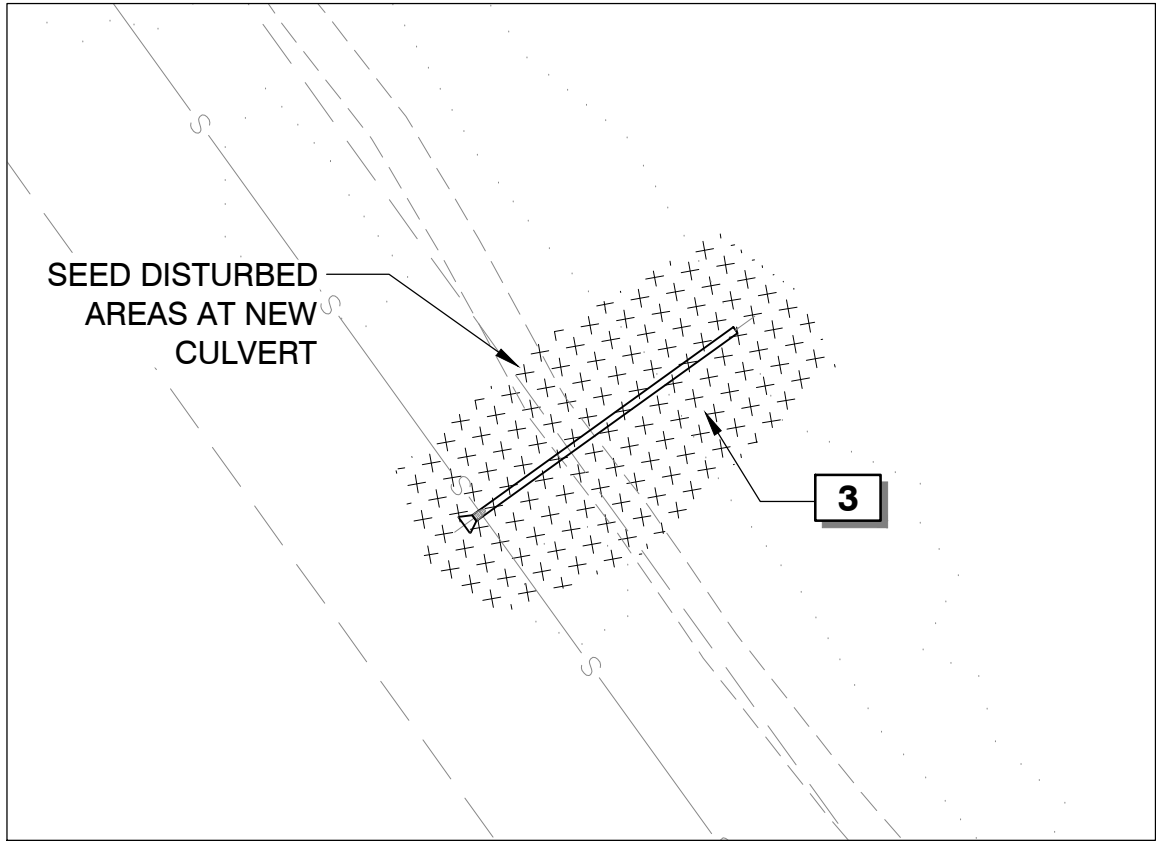


PROJECT MANAGEMENT & ENGINEERING
DEPARTMENT
WEST ANCHORAGE
SNOW DISPOSAL SITE
LANDSCAPE PLANS
KEY SHEET LAYOUT

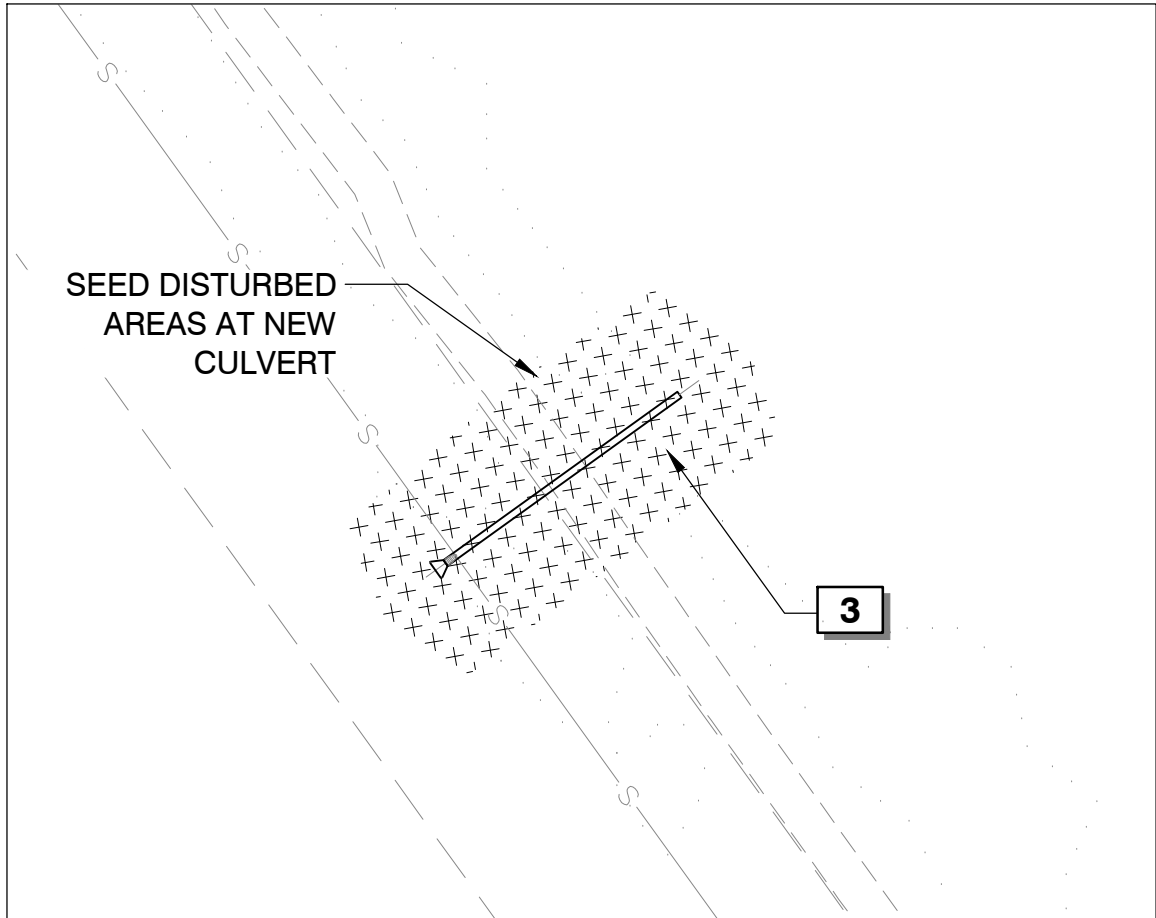
SCALE: AS SHOWN
DATE: JULY 1 2022
ACCT. NO. 000000XXXX (PME)

GRID: SW1928
SHEET 38 of 38

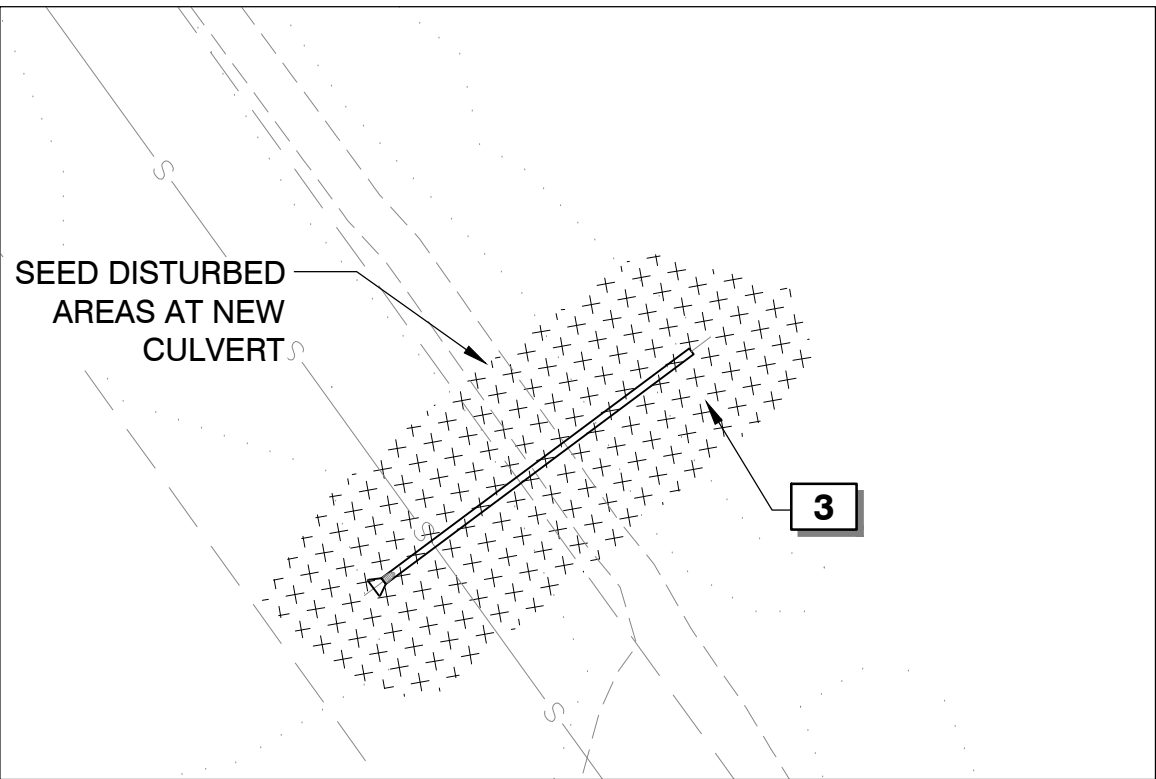
FILE NO. --



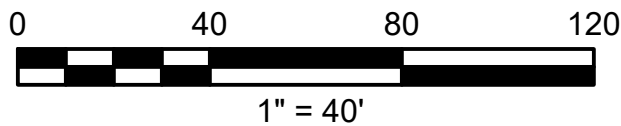
NORTH AWWU DRAINAGE CULVERT
SCALE: 1" = 40'



MIDDLE AWWU DRAINAGE CULVERT
SCALE: 1" = 40'



SOUTH AWWU DRAINAGE CULVERT
SCALE: 1" = 40'



REFERENCE NOTES SCHEDULE AREA 1

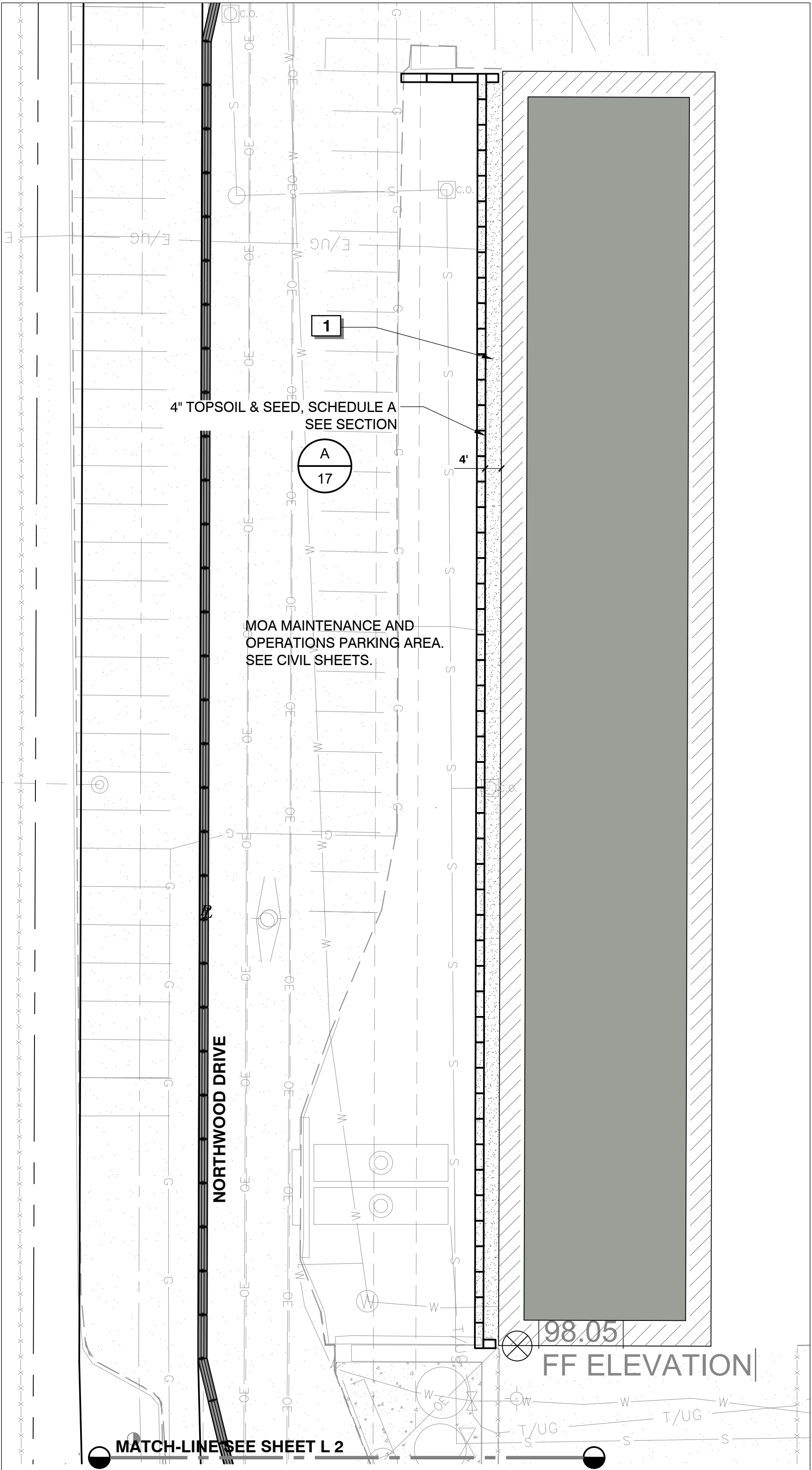
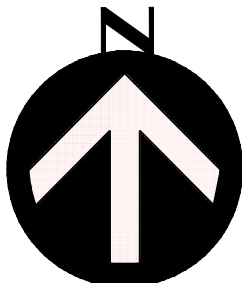
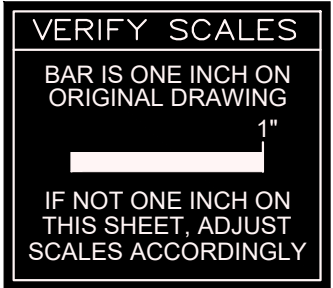
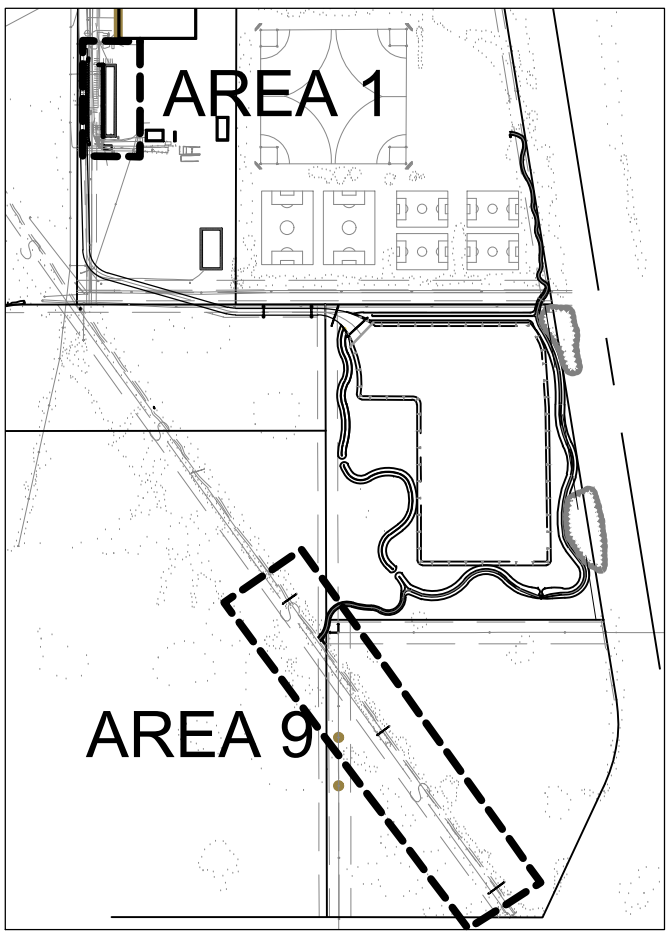
SYMBOL	DESCRIPTION	QTY	DETAIL
	1 SCHEDULE A MOWABLE SEED MIX OVER 4" TOPSOIL	1,099 sf	

REFERENCE NOTES SCHEDULE AREA 3

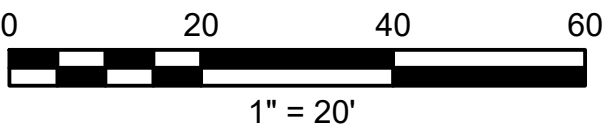
SYMBOL	DESCRIPTION	QTY	DETAIL
	3 SCHEDULE D REVEGETATION SEED MIX OVER NATIVE SOIL	10,663 sf	

SHEET NOTES:

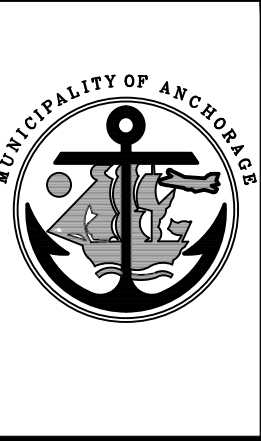
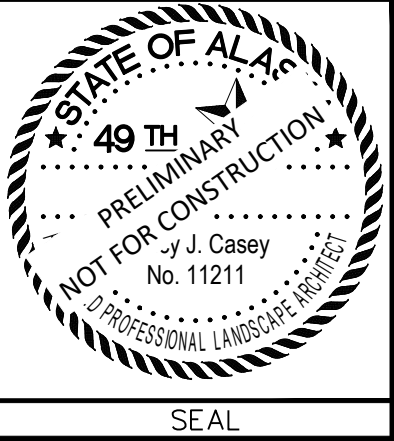
- SEE SHEET L 1 FOR GENERAL NOTES PERTAINING TO LANDSCAPE CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF LANDSCAPE MATERIALS WITHOUT DISTURBING NATURAL VEGETATION BEYOND APPROVED CLEARING LIMITS. SEE SHEET 10 FOR LIMITS OF CLEARING AND DISTURBANCE.
- SCARIFY SOIL SURFACE PRIOR TO HYDROSEEDING.
- HYDROSEED ALL DISTURBED AREAS AS PER PLANS; WHERE DISTURBANCE EXTENDS BEYOND AREAS SHOWN ON PLANS, CONTACT ENGINEER TO VERIFY LIMITS OF SEEDING.
- WHERE SURCHARGING IS REQUIRED, APPLY TACKIFIER AS SHOWN ON PLANS IMMEDIATELY FOLLOWING PLACEMENT OF OF SURCHARGE MATERIAL. SEEDING OF SURCHARGED AREAS WILL OCCUR DURING SECOND PHASE OF CONSTRUCTION, AFTER SUBSIDENCE HAS OCCURRED.
- SITE AMENITIES - FIELD VERIFY LOCATION PRIOR TO INSTALLATION.



WORK AREA 1
SCALE: 1" = 20'



FIELD BOOKS		BM NO.	LOCATION	ELEV.	DATA		DRAWN BY	CHECKED BY	DATA		DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY
DESIGN:	MOA 3782	E-75	OLD INTERNATIONAL	72.93'	BASE	MCR	PTS	TELEPHONE	--	--	--	--				
STAKING:		GAAB-216	5011 SPENARD RD.	78.80'	TOPOGRAPHY	MCR	PTS	ELECTRIC	--	--	--	--				
ASBUILT:					PROFILE	TJH	DWS	CABLE TV	--	--	--	--				
CONTRACTOR:					SANITARY SEWER	--	--	DESIGN	TJH	DWS	--	--				
INSPECTOR:					STORM SEWER	--	--	QUANTITIES	--	--	--	--				
					WATER	--	--	MUN. FINAL CHECK	--	--	--	--				
					GAS	--	--									
CONSTRUCTION RECORD		HORIZONTAL & VERTICAL DATUMS			PLAN CHECK											



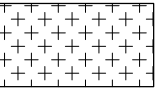
PROJECT MANAGEMENT & ENGINEERING DEPARTMENT		L2	
WEST ANCHORAGE SNOW DISPOSAL SITE			
LANDSCAPE PLAN			
WORK AREAS 1 & 9			
SCALE:	AS SHOWN	DATE: JULY 1 2022	GRID: SW1928
		ACCT. NO. 000000XXXX (PME)	SHEET 39 of 41
FILE NO. --			

MATCH-LINE SEE SHEET L 2

SHEET NOTES:

- SEE SHEET L 1 FOR GENERAL NOTES PERTAINING TO LANDSCAPE CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF LANDSCAPE MATERIALS WITHOUT DISTURBING NATURAL VEGETATION BEYOND APPROVED CLEARING LIMITS. SEE SHEET 10 FOR LIMITS OF CLEARING AND DISTURBANCE.
- SCARIFY SOIL SURFACE PRIOR TO HYDROSEEDING.
- HYDROSEED ALL DISTURBED AREAS AS PER PLANS; WHERE DISTURBANCE EXTENDS BEYOND AREAS SHOWN ON PLANS, CONTACT ENGINEER TO VERIFY LIMITS OF SEEDING.
- WHERE SURCHARGING IS REQUIRED, APPLY TACKIFIER AS SHOWN ON PLANS IMMEDIATELY FOLLOWING PLACEMENT OF OF SURCHARGE MATERIAL. SEEDING OF SURCHARGED AREAS WILL OCCUR DURING SECOND PHASE OF CONSTRUCTION, AFTER SUBSIDENCE HAS OCCURRED.
- SITE AMENITIES - FIELD VERIFY LOCATION PRIOR TO INSTALLATION.

REFERENCE NOTES SCHEDULE AREA 2

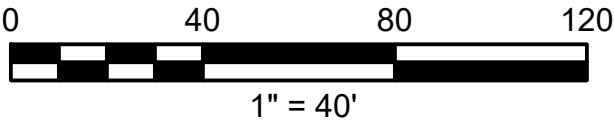
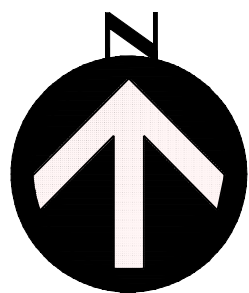
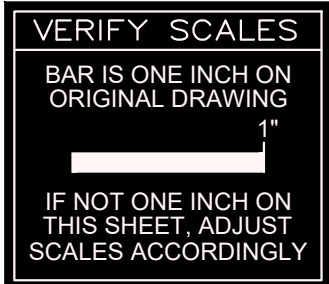
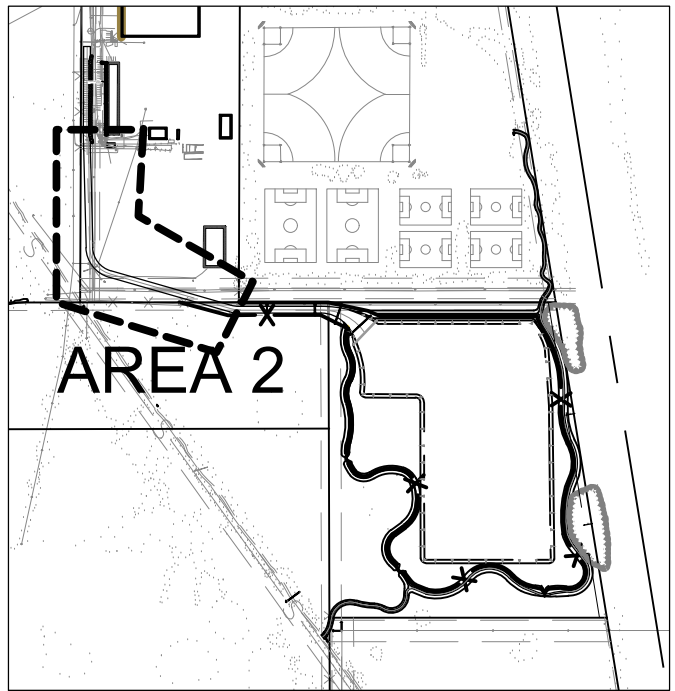
SYMBOL	DESCRIPTION	QTY	DETAIL
	3 SCHEDULE D REVEGETATION SEED MIX OVER NATIVE SOIL	34,824 sf	
SYMBOL	DESCRIPTION	QTY	DETAIL
	7 KIOSK		

SEED SIDE SLOPES AND DISTURBED AREAS ALONG NEW DRIVEWAY.

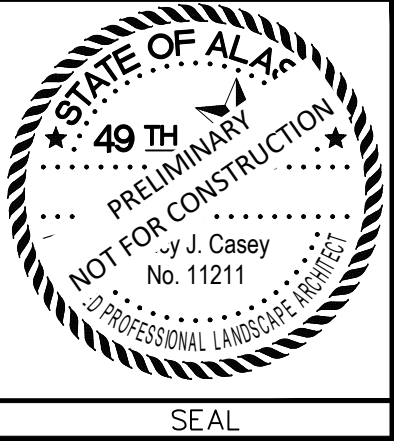
SEED BARE GROUND WHERE MATERIAL STORAGE PILES WERE REMOVED

NORTHWOOD DRIVE

AREA 2 - NORTHWOOD DRIVE
SCALE: 1" = 40'



FIELD BOOKS	BM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY	REV	DATE	DESCRIPTION	BY
DESIGN: MOA 3782	E-75	OLD INTERNATIONAL	72.93'	BASE	MCR	PTS	TELEPHONE	--	--								
STAKING:	GAA8-216	5011 SPENARD RD.	78.80'	TOPOGRAPHY	MCR	PTS	ELECTRIC	--	--								
ASBUILT:				PROFILE	TJH	DWS	CABLE TV	--	--								
CONTRACTOR:				SANITARY SEWER	--	--	DESIGN	TJH	DWS								
INSPECTOR:				STORM SEWER	--	--	QUANTITIES	--	DWS								
				WATER	--	--	MUN. FINAL CHECK	--									
				GAS	--	--											
BASIS OF DATUM:																	
HORIZONTAL: ANCHORAGE BOWL 2000																	
VERTICAL: 1972 N.G.S. DATUM																	
CONSTRUCTION RECORD				HORIZONTAL & VERTICAL DATUMS				PLAN CHECK									

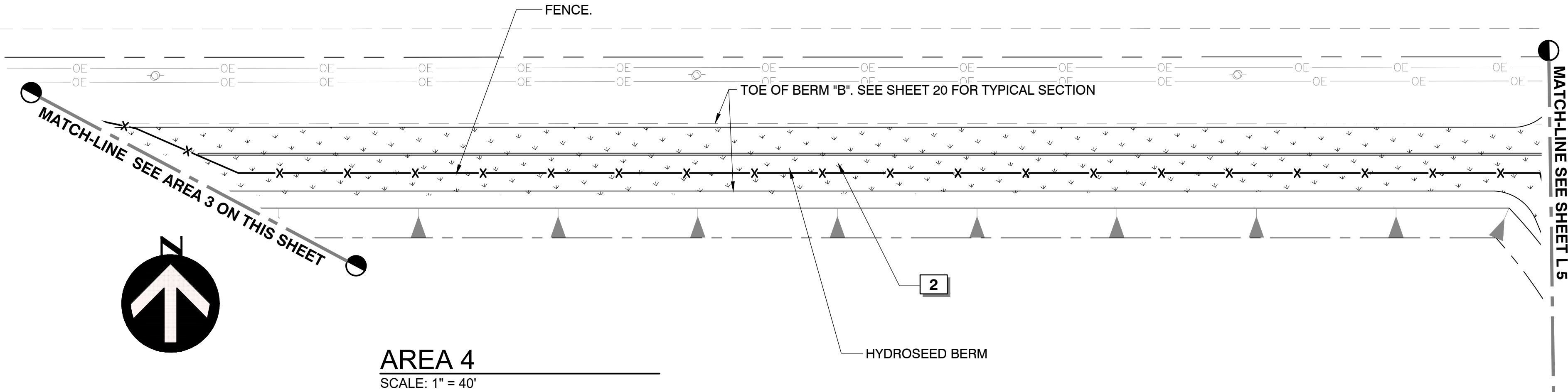


PROJECT MANAGEMENT & ENGINEERING DEPARTMENT					L3
WEST ANCHORAGE SNOW DISPOSAL SITE					
LANDSCAPE PLAN WORK AREA 2					
SCALE: AS SHOWN	DATE: JULY 1 2022	GRIDS: SW1928	ACCT. NO. 000000XXXX (PME)	SHEET 40 of 40	

FILE NO. -

REFERENCE NOTES SCHEDULE AREA 4

SYMBOL	DESCRIPTION	QTY	DETAIL
2	SCHEDULE C WETLAND SEED MIX OVER NATIVE SOIL	23,062 sf	



AREA 4
SCALE: 1" = 40'

SHEET NOTES:

- SEE SHEET L 1 FOR GENERAL NOTES PERTAINING TO LANDSCAPE CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF LANDSCAPE MATERIALS WITHOUT DISTURBING NATURAL VEGETATION BEYOND APPROVED CLEARING LIMITS. SEE SHEET 10 FOR LIMITS OF CLEARING AND DISTURBANCE.
- SCARIFY SOIL SURFACE PRIOR TO HYDROSEEDING.
- HYDROSEED ALL DISTURBED AREAS AS PER PLANS; WHERE DISTURBANCE EXTENDS BEYOND AREAS SHOWN ON PLANS, CONTACT ENGINEER TO VERIFY LIMITS OF SEEDING.
- WHERE SURCHARGING IS REQUIRED, APPLY TACKIFIER AS SHOWN ON PLANS IMMEDIATELY FOLLOWING PLACEMENT OF OF SURCHARGE MATERIAL. SEEDING OF SURCHARGED AREAS WILL OCCUR DURING SECOND PHASE OF CONSTRUCTION, AFTER SUBSIDENCE HAS OCCURRED.
- SITE AMENITIES - FIELD VERIFY LOCATION PRIOR TO INSTALLATION.

AREA 3
SCALE: 1" = 40'

REFERENCE NOTES SCHEDULE AREA 3

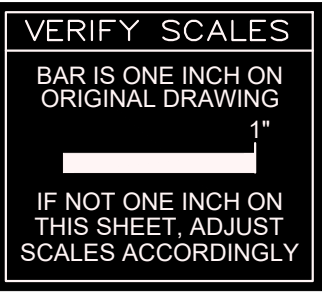
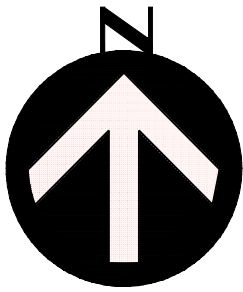
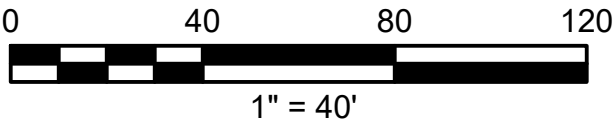
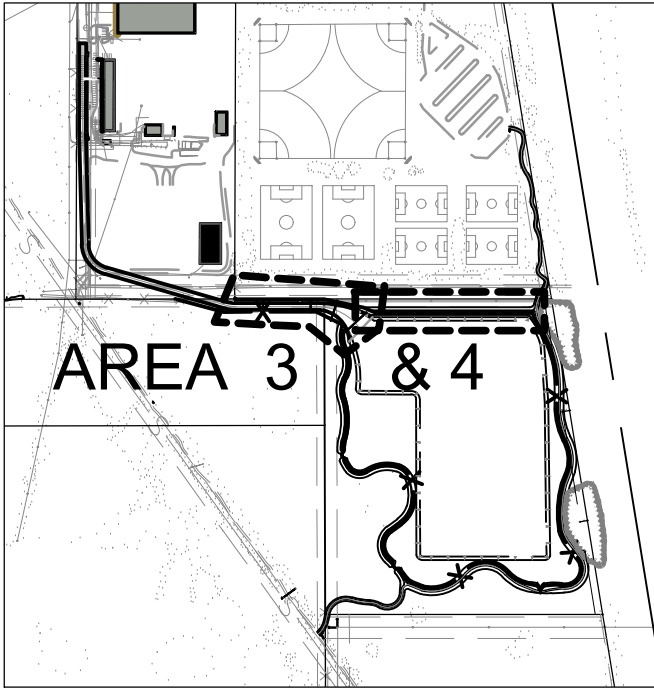
SYMBOL	DESCRIPTION	QTY	DETAIL
3	SCHEDULE D REVEGETATION SEED MIX OVER NATIVE SOIL	9,603 sf	
5	TACKIFIER	15,490 sf	

APPLY TACKIFIER TO SLOPES OF SURCHARGE MATERIAL

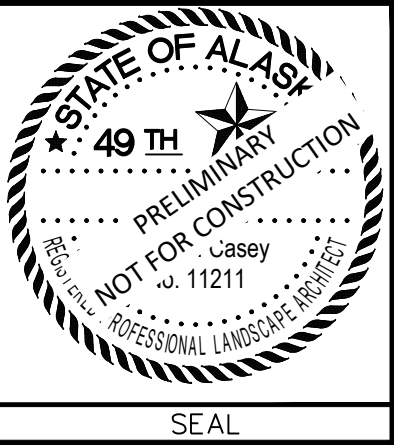
NORTHWOOD DRIVE
SEE CIVIL SHEETS 18 & 19

HYDROSEED SIDE SLOPES OF ROAD PROFILE.

NEW CHAIN LINK FENCE.



FIELD BOOKS	BM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY	REV	DATE	DESCRIPTION	BY
DESIGN: MOA 3782	E-75	OLD INTERNATIONAL	72.93'	BASE	MCR	PTS	TELEPHONE	--	--								
STAKING:	GAAB-216	5011 SPENARD RD.	78.80'	TOPOGRAPHY	MCR	PTS	ELECTRIC	--	--								
ASBUILT:				PROFILE	TJH	DWS	CABLE TV	--	--								
CONTRACTOR:				SANITARY SEWER	--	--	DESIGN	TJH	DWS								
INSPECTOR:				STORM SEWER	--	--	QUANTITIES	--	DWS								
				WATER	--	--	MUN. FINAL CHECK	--									
				GAS	--	--											
BASIS OF DATUM:																	
HORIZONTAL: ANCHORAGE BOWL 2000																	
VERTICAL: 1972 N.G.S. DATUM																	
CONSTRUCTION RECORD				HORIZONTAL & VERTICAL DATUMS				PLAN CHECK				CONSULTANT					

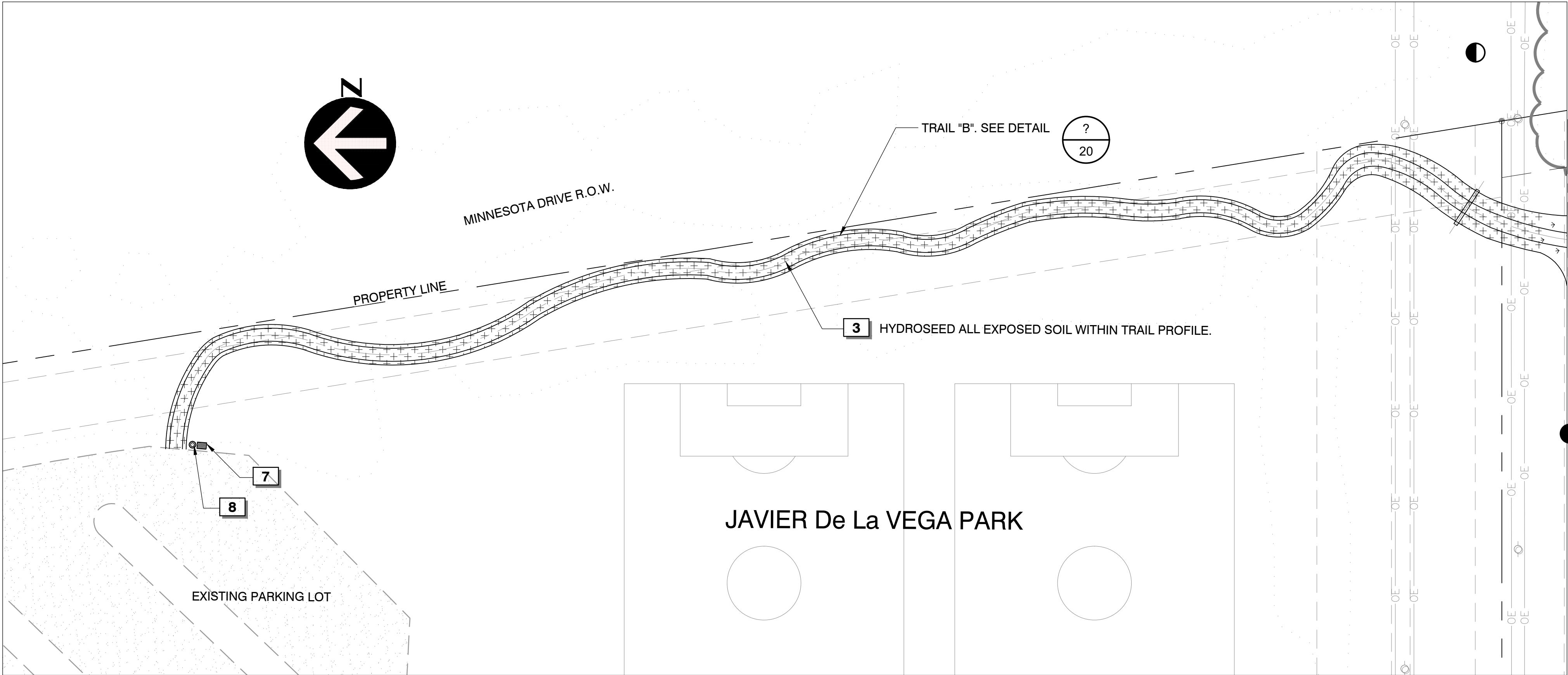


PROJECT MANAGEMENT & ENGINEERING DEPARTMENT		WEST ANCHORAGE SNOW DISPOSAL SITE		L4	
LANDSCAPE PLAN		WORK AREAS 3 & 4			
SCALE: AS SHOWN	DATE: JULY 1 2022	GRID: SW1928	ACCT. NO. 000000XXXX (PME)	SHEET 41	of 41

FILE NO. -

SHEET NOTES:

1. SEE SHEET L 1 FOR GENERAL NOTES PERTAINING TO LANDSCAPE CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF LANDSCAPE MATERIALS WITHOUT DISTURBING NATURAL VEGETATION BEYOND APPROVED CLEARING LIMITS. SEE SHEET 10 FOR LIMITS OF CLEARING AND DISTURBANCE.
3. SCARIFY SOIL SURFACE PRIOR TO HYDROSEEDING.
4. HYDROSEED ALL DISTURBED AREAS AS PER PLANS; WHERE DISTURBANCE EXTENDS BEYOND AREAS SHOWN ON PLANS, CONTACT ENGINEER TO VERIFY LIMITS OF SEEDING.
5. WHERE SURCHARGING IS REQUIRED, APPLY TACKIFIER AS SHOWN ON PLANS IMMEDIATELY FOLLOWING PLACEMENT OF OF SURCHARGE MATERIAL. SEEDING OF SURCHARGED AREAS WILL OCCUR DURING SECOND PHASE OF CONSTRUCTION, AFTER SUBSIDENCE HAS OCCURRED.
6. SITE AMENITIES - FIELD VERIFY LOCATION PRIOR TO INSTALLATION.

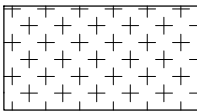


AREA 5: TRAIL "B"

SCALE: 1" = 40'

REFERENCE NOTES SCHEDULE AREA 5

SYMBOL DESCRIPTION QTY DETAIL



3 SCHEDULE D
REVEGETATION SEED MIX
OVER NATIVE SOIL 9,892 sf

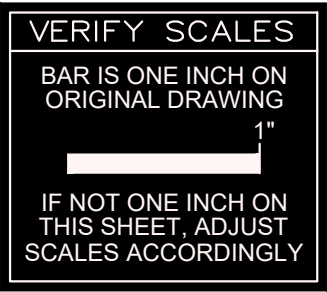
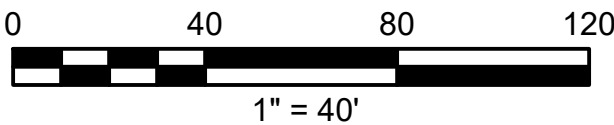
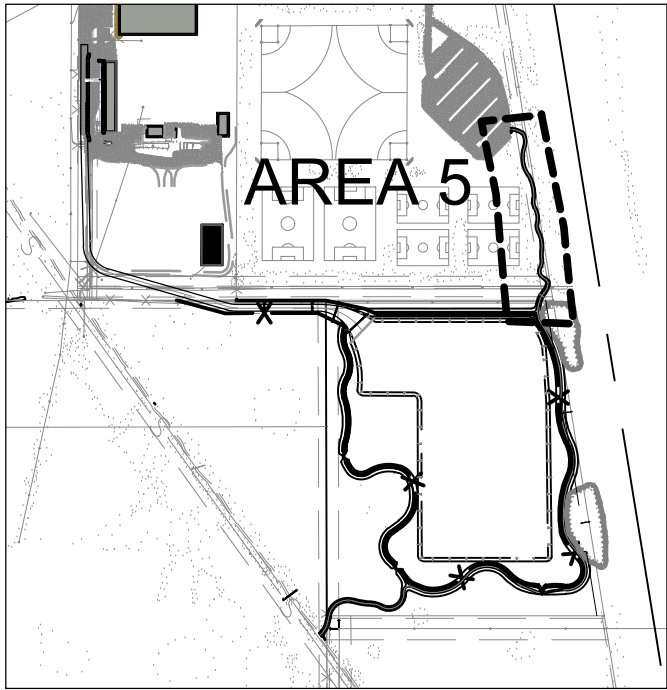
SYMBOL DESCRIPTION QTY DETAIL



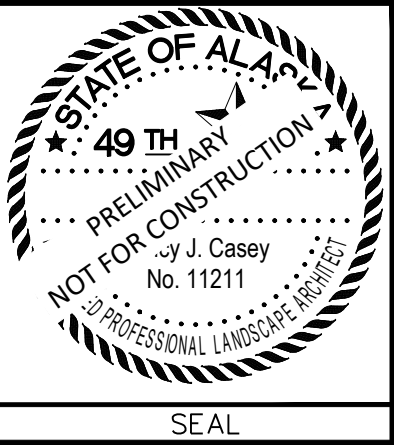
7 KIOSK 1



8 DOG DOO DISPOSAL STATION 1

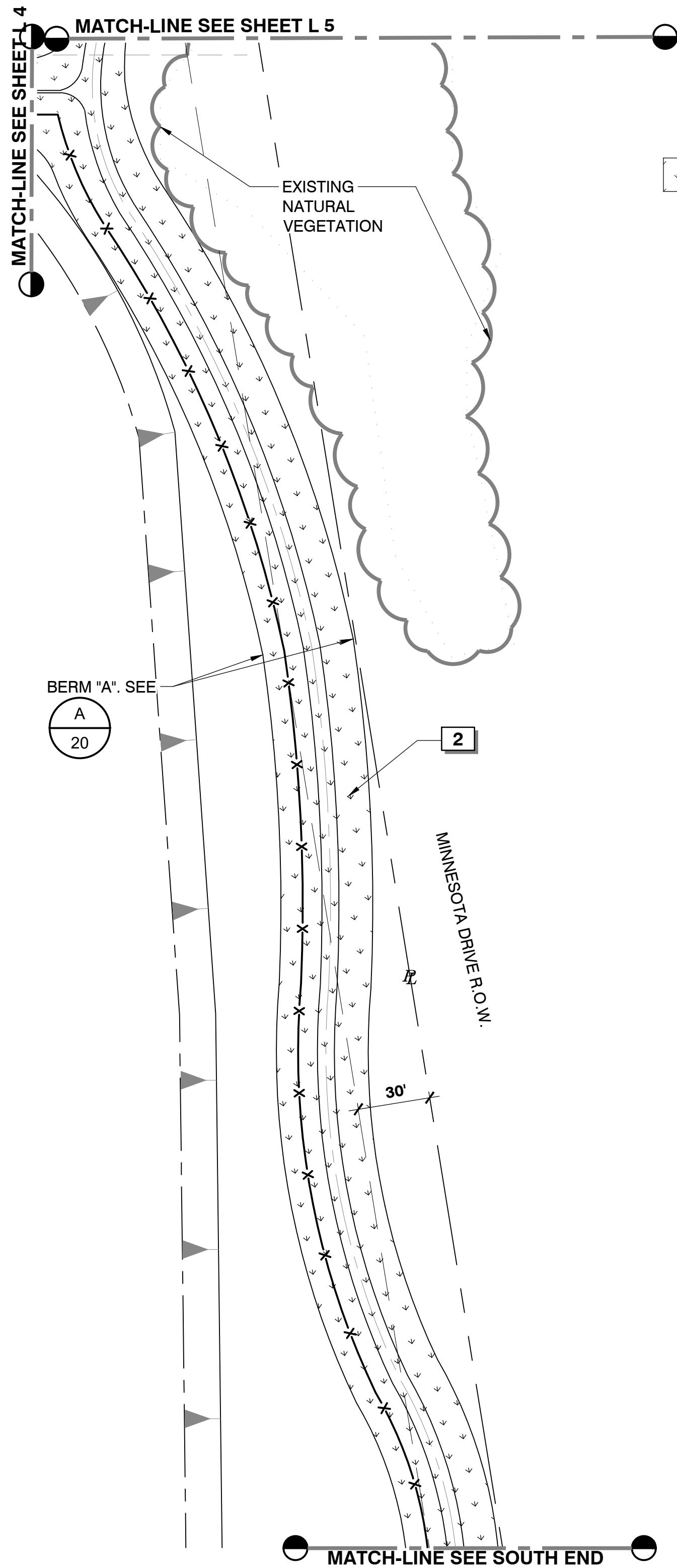


FIELD BOOKS		BM NO.	LOCATION	ELEV.	DATA		DRAWN BY	CHECKED BY	DATA		DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY	REV	DATE	DESCRIPTION	BY
DESIGN:	MOA 3782	E-75	OLD INTERNATIONAL	72.93'	BASE	MCR	PTS	TELEPHONE	--	--										
STAKING:		GAAB-216	5011 SPENARD RD.	78.80'	TOPOGRAPHY	MCR	PTS	ELECTRIC	--	--										
ASBUILT:					PROFILE	TJH	DWS	CABLE TV	--	--										
CONTRACTOR:					SANITARY SEWER	--	--	DESIGN	TJH	DWS										
INSPECTOR:					STORM SEWER	--	--	QUANTITIES	--	DWS										
					WATER	--	--	MUN. FINAL CHECK	--											
					GAS	--	--													
CONSTRUCTION RECORD		HORIZONTAL & VERTICAL DATUMS			PLAN CHECK															



PROJECT MANAGEMENT & ENGINEERING DEPARTMENT				L5
WEST ANCHORAGE SNOW DISPOSAL SITE				
LANDSCAPE PLAN				
AREA 5 - TRAIL "B"				
SCALE:	AS SHOWN	DATE: JULY 1 2022	GRIDS:SW1928	SHEET 42 of 47
		ACCT. NO. 000000XXXX (PME)		

FILE NO. -



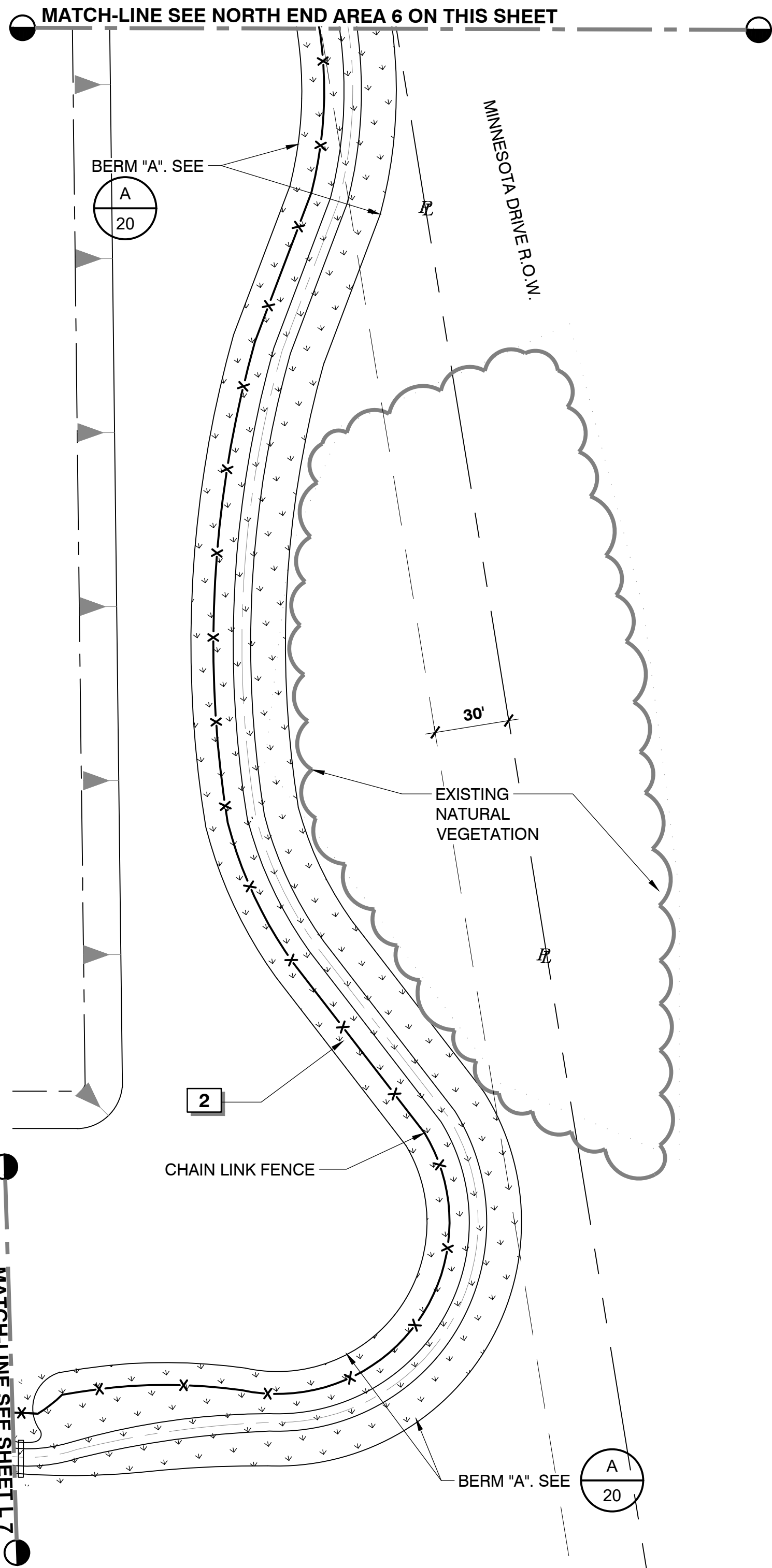
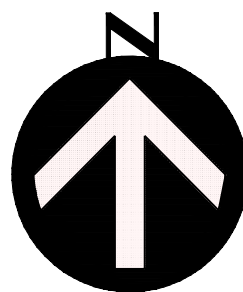
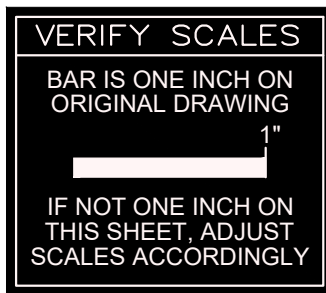
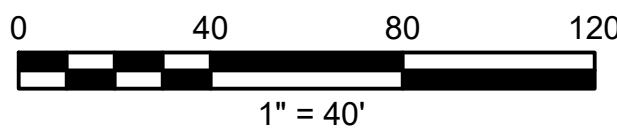
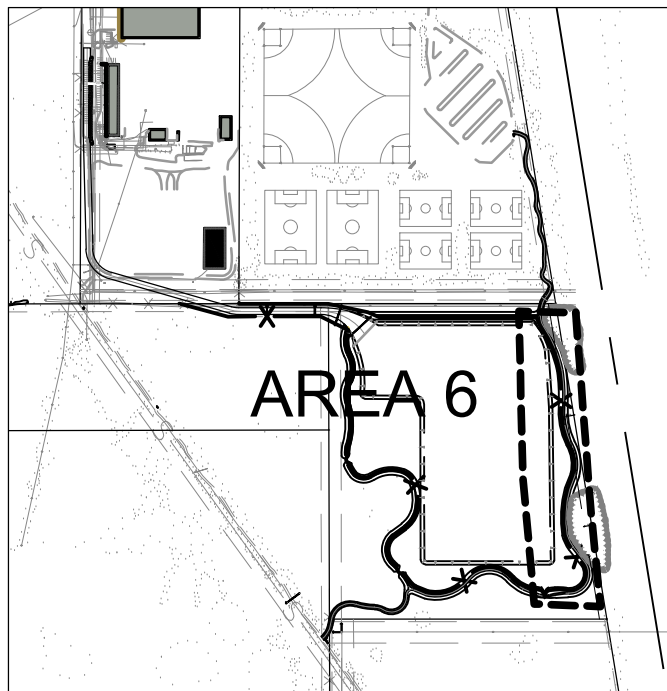
NORTH END OF AREA 6
SCALE: 1" = 40'

REFERENCE NOTES SCHEDULE AREA 6

SYMBOL	DESCRIPTION	QTY	DETAIL
2	SCHEDULE C WETLAND SEED MIX OVER NATIVE SOIL	53,016 sf	

SHEET NOTES:

- SEE SHEET L 1 FOR GENERAL NOTES PERTAINING TO LANDSCAPE CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF LANDSCAPE MATERIALS WITHOUT DISTURBING NATURAL VEGETATION BEYOND APPROVED CLEARING LIMITS. SEE SHEET 10 FOR LIMITS OF CLEARING AND DISTURBANCE.
- SCARIFY SOIL SURFACE PRIOR TO HYDROSEEDING.
- HYDROSEED ALL DISTURBED AREAS AS PER PLANS; WHERE DISTURBANCE EXTENDS BEYOND AREAS SHOWN ON PLANS, CONTACT ENGINEER TO VERIFY LIMITS OF SEEDING.
- WHERE SURCHARGING IS REQUIRED, APPLY TACKIFIER AS SHOWN ON PLANS IMMEDIATELY FOLLOWING PLACEMENT OF OF SURCHARGE MATERIAL. SEEDING OF SURCHARGED AREAS WILL OCCUR DURING SECOND PHASE OF CONSTRUCTION, AFTER SUBSIDENCE HAS OCCURRED.
- SITE AMENITIES - FIELD VERIFY LOCATION PRIOR TO INSTALLATION.



SOUTH END OF AREA 6
SCALE: 1" = 40'

TITLE 21 NOTES:

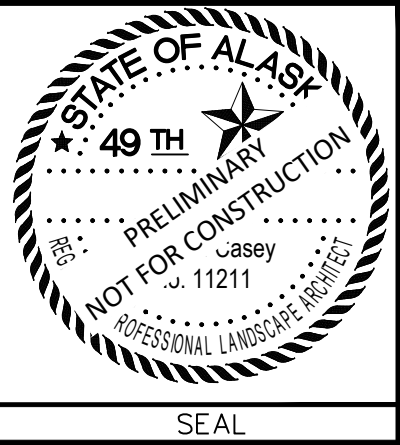
- THIS PROJECT IS REQUIRED TO PROVIDE L-4 FREEWAY LANDSCAPING ALONG THE EASTERN PROPERTY LINE.
- AS PER TABLE 21.07-1: LANDSCAPING SPECIFICATIONS, L4 REQUIRES 3 TREES AND 10 SHRUBS PER 20 LINEAR FEET OF PROPERTY LINE. THIS PROPERTY LINE IS 1,332 L.F. FOR A TOTAL TREE REQUIREMENT OF 200.
- AS PER 21.07.080f(1), EXISTING VEGETATION CAN BE USED TO MEET THESE REQUIREMENTS IF THE QUANTITY OF EXISTING TREES MEETS OR EXCEEDS THE TOTAL QUANTITY REQUIRED. EXISTING VEGETATION MUST BE LOCATED WITHIN THE FIRST 30' OF THE PROPERTY.
- REFER TO THE DIAGRAM AND TREE COUNT CHART FOR A SUMMARY OF THE EXISTING VEGETATION AND HOW IT EXCEEDS THE MINIMUM REQUIREMENT FOR L4 LANDSCAPING.



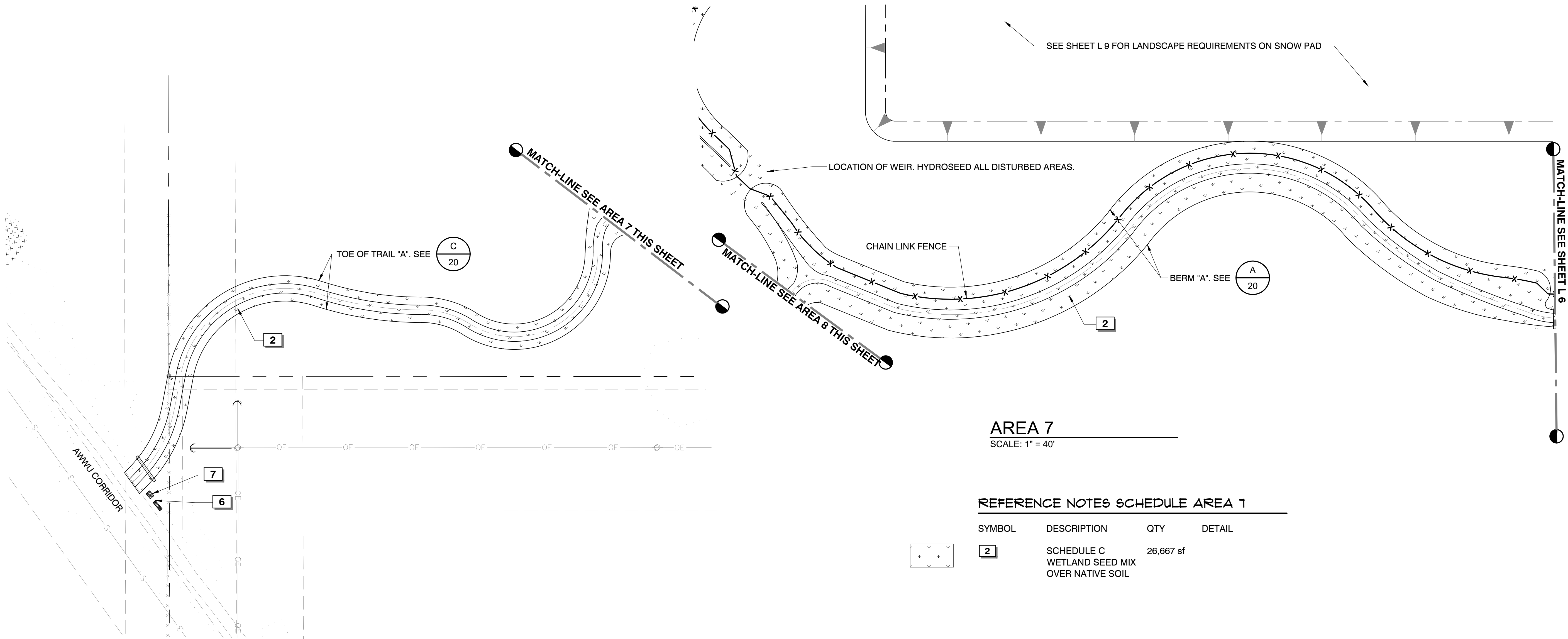
Table 1. Number of trees meeting Freeway Landscaping requirements in each Tree Count Area.

Tree Count Area	Number of Coniferous Trees Greater than 10 feet height	Number of Deciduous Trees Greater than 6 inches Caliper
1	220	15
2	15	0
3	421	0
4	33	0
Total	689	15

FIELD BOOKS	BM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY
DESIGN: MOA 3782	E-75	OLD INTERNATIONAL	72.93'	BASE	MCR	PTS	TELEPHONE	--	--				
STAKING:	GAAB-216	5011 SPENARD RD.	78.80'	TOPOGRAPHY	MCR	PTS	ELECTRIC	--	--				
ASBUILT:				PROFILE	TJH	DWS	CABLE TV	--	--				
CONTRACTOR:				SANITARY SEWER	--	--	DESIGN	TJH	DWS				
INSPECTOR:				STORM SEWER	--	--	QUANTITIES	--	DWS				
				WATER	--	--	MUN. FINAL CHECK	--					
				GAS	--	--							
BASIS OF DATUM:													
HORIZONTAL: ANCHORAGE BOWL 2000													
VERTICAL: 1972 N.G.S. DATUM													
CONSTRUCTION RECORD	HORIZONTAL & VERTICAL DATUMS			PLAN CHECK									



PROJECT MANAGEMENT & ENGINEERING DEPARTMENT				
WEST ANCHORAGE SNOW DISPOSAL SITE				L6
LANDSCAPE PLAN AREA 6				
SCALE:	AS SHOWN	DATE: JULY 1 2022	GRIDS: SW1928 二	SHEET 43 of
		ACCT. NO. 000000XXXX (PME)		



AREA 7
SCALE: 1" = 40'

REFERENCE NOTES SCHEDULE AREA 1

SYMBOL	DESCRIPTION	QTY	DETAIL
2	SCHEDULE C WETLAND SEED MIX OVER NATIVE SOIL	26,667 sf	

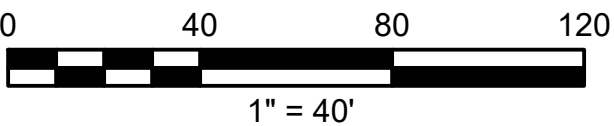
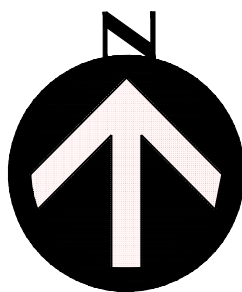
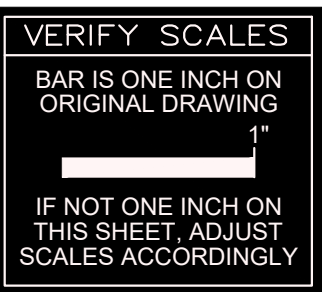
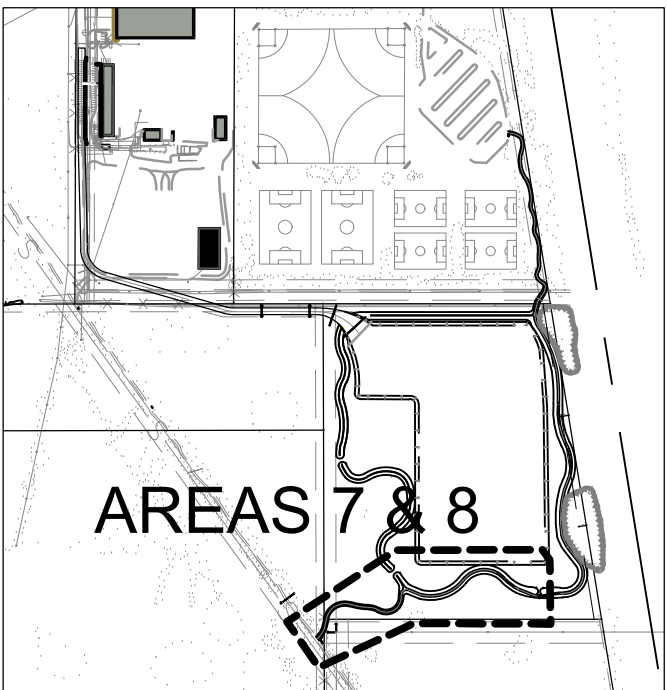
AREA 8: TRAIL "A"
SCALE: 1" = 40'

REFERENCE NOTES SCHEDULE AREA 8

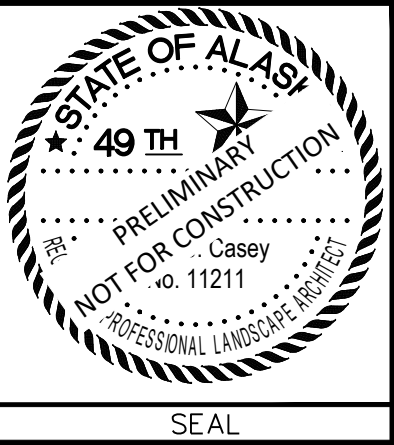
SYMBOL	DESCRIPTION	QTY	DETAIL
2	SCHEDULE C WETLAND SEED MIX OVER NATIVE SOIL	9,702 sf	
SYMBOL	DESCRIPTION	QTY	DETAIL
6	OWNER-FURNISHED VICTORY STANLEY P-8 PARK BENCH.	1	
7	KIOSK	1	

SHEET NOTES:

- SEE SHEET L 1 FOR GENERAL NOTES PERTAINING TO LANDSCAPE CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF LANDSCAPE MATERIALS WITHOUT DISTURBING NATURAL VEGETATION BEYOND APPROVED CLEARING LIMITS. SEE SHEET 10 FOR LIMITS OF CLEARING AND DISTURBANCE.
- SCARIFY SOIL SURFACE PRIOR TO HYDROSEEDING.
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- SITE AMENITIES - FIELD VERIFY LOCATION PRIOR TO INSTALLATION.



FIELD BOOKS	BM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY	REV	DATE	DESCRIPTION	BY
DESIGN: MOA 3782	E-75	OLD INTERNATIONAL	72.93'	BASE	MCR	PTS	TELEPHONE	--	--								
STAKING:	GAAB-216	5011 SPENARD RD.	78.80'	TOPOGRAPHY	MCR	PTS	ELECTRIC	--	--								
ASBUILT:				PROFILE	TJH	DWS	CABLE TV	--	--								
CONTRACTOR:				SANITARY SEWER	--	--	DESIGN	TJH	DWS								
INSPECTOR:				STORM SEWER	--	--	QUANTITIES	--	DWS								
				WATER	--	--	MUN. FINAL CHECK	--									
				GAS	--	--											
CONSTRUCTION RECORD		HORIZONTAL & VERTICAL DATUMS					PLAN CHECK										



PROJECT MANAGEMENT & ENGINEERING DEPARTMENT			
WEST ANCHORAGE SNOW DISPOSAL SITE			L7
LANDSCAPE PLAN WORK AREAS 7 & 8			
SCALE: AS SHOWN	DATE: JULY 1, 2022	GRIDS: SW1928	SHEET 44 of 47
ACCT. NO. 000000XXXX (PME)			

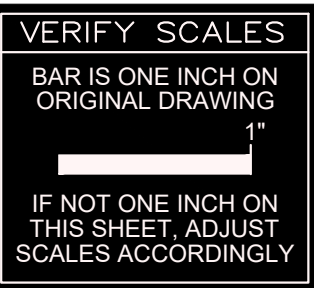
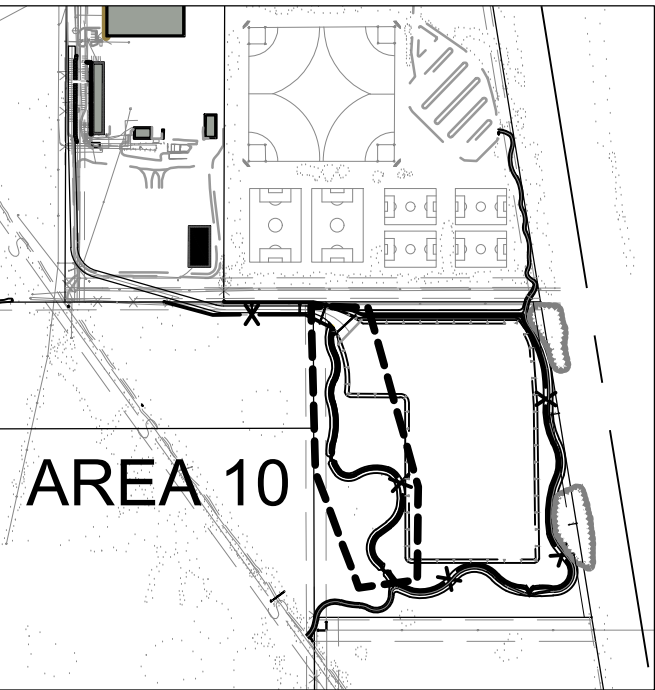
FILE NO. -

REFERENCE NOTES SCHEDULE AREA 10

SYMBOL	DESCRIPTION	QTY	DETAIL
2	SCHEDULE C WETLAND SEED MIX OVER NATIVE SOIL	42,976 sf	

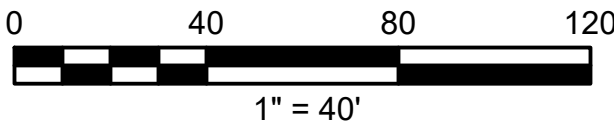
SHEET NOTES:

- SEE SHEET L 1 FOR GENERAL NOTES PERTAINING TO LANDSCAPE CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF LANDSCAPE MATERIALS WITHOUT DISTURBING NATURAL VEGETATION BEYOND APPROVED CLEARING LIMITS. SEE SHEET 10 FOR LIMITS OF CLEARING AND DISTURBANCE.
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- WHERE SURCHARGING IS REQUIRED, APPLY TACKIFIER AS SHOWN ON PLANS IMMEDIATELY FOLLOWING PLACEMENT OF OF SURCHARGE MATERIAL. SEEDING OF SURCHARGED AREAS WILL OCCUR DURING SECOND PHASE OF CONSTRUCTION, AFTER SUBSIDENCE HAS OCCURRED.
- SITE AMENITIES - FIELD VERIFY LOCATION PRIOR TO INSTALLATION.

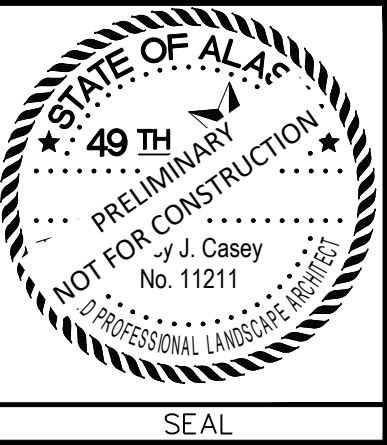


NORTH END OF AREA 10
SCALE: 1" = 40'

SOUTH END OF AREA 10
SCALE: 1" = 40'

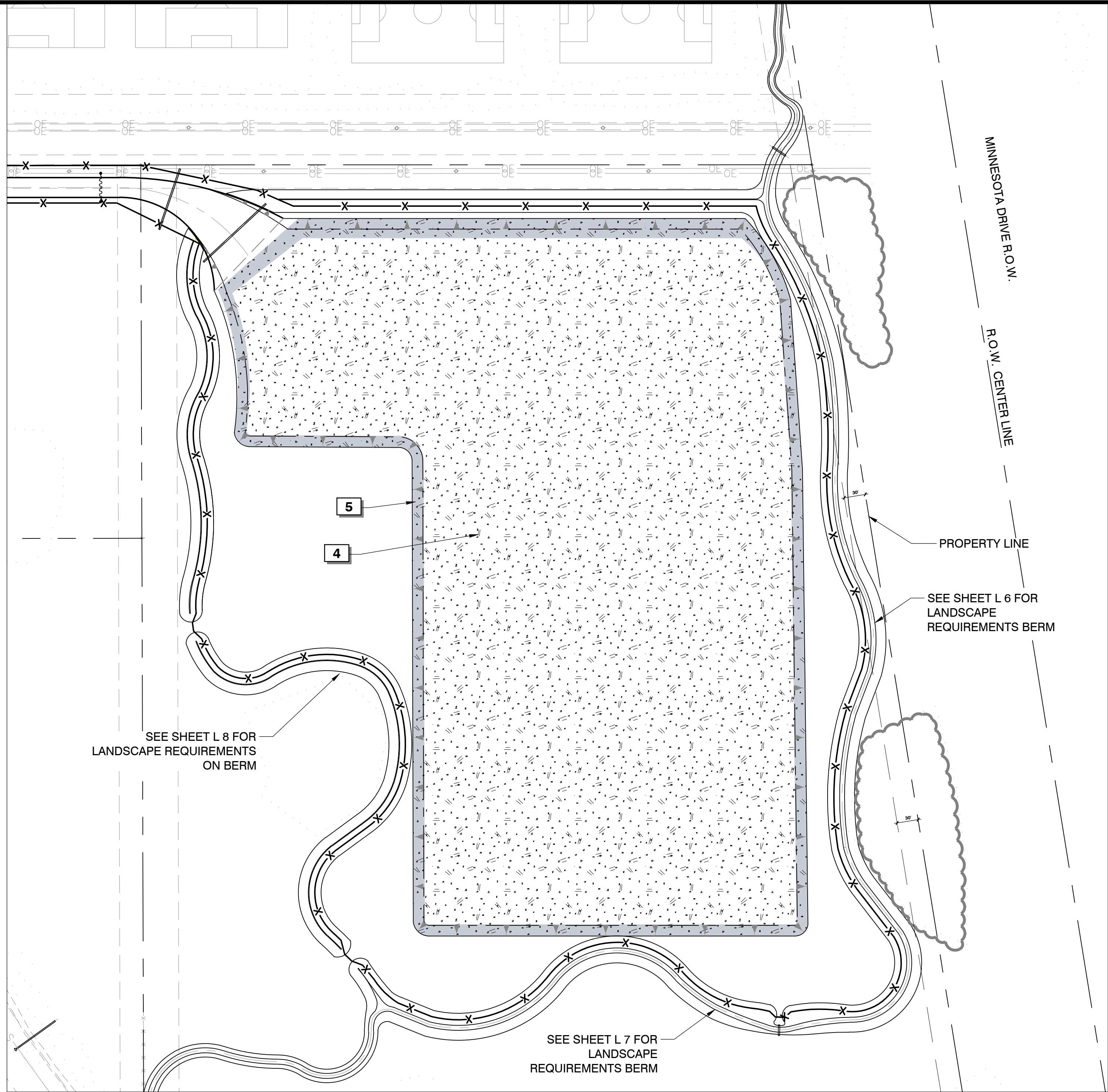


FIELD BOOKS	BM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY	REV	DATE	DESCRIPTION	BY
DESIGN: MOA 3782	E-75	OLD INTERNATIONAL	72.93'	BASE	MCR	PTS	TELEPHONE	--	--								
STAKING:	GAAB-216	5011 SPENARD RD.	78.80'	TOPOGRAPHY	MCR	PTS	ELECTRIC	--	--								
ASBULT:				PROFILE	TJH	DWS	CABLE TV	--	--								
CONTRACTOR:				SANITARY SEWER	--	--	DESIGN	TJH	DWS								
INSPECTOR:				STORM SEWER	--	--	QUANTITIES	--	DWS								
				WATER	--	--	MUN. FINAL CHECK	--									
				GAS	--	--											
BASIS OF DATUM:																	
HORIZONTAL: ANCHORAGE BOWL 2000																	
VERTICAL: 1972 N.G.S. DATUM																	
CONSTRUCTION RECORD				HORIZONTAL & VERTICAL DATUMS				PLAN CHECK				CONSULTANT					

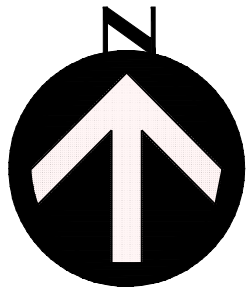
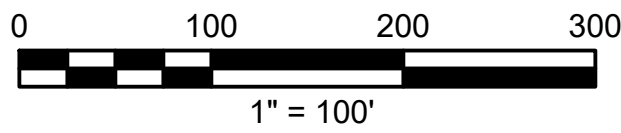


PROJECT MANAGEMENT & ENGINEERING DEPARTMENT				
WEST ANCHORAGE SNOW DISPOSAL SITE				L8
LANDSCAPE PLAN AREA 10				
SCALE: AS SHOWN	DATE: JULY 1, 2022	GRIDS: SW1928	ACCT. NO. 000000XXXX (PME)	SHEET 45 of 47

FILE NO. -



SNOW PAD - WORK AREA 11
SCALE: 1" = 100'



REFERENCE NOTES SCHEDULE AREA 11

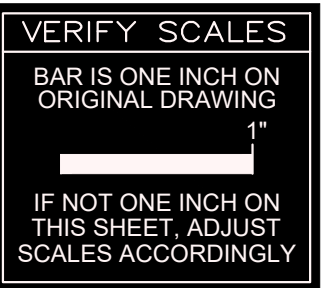
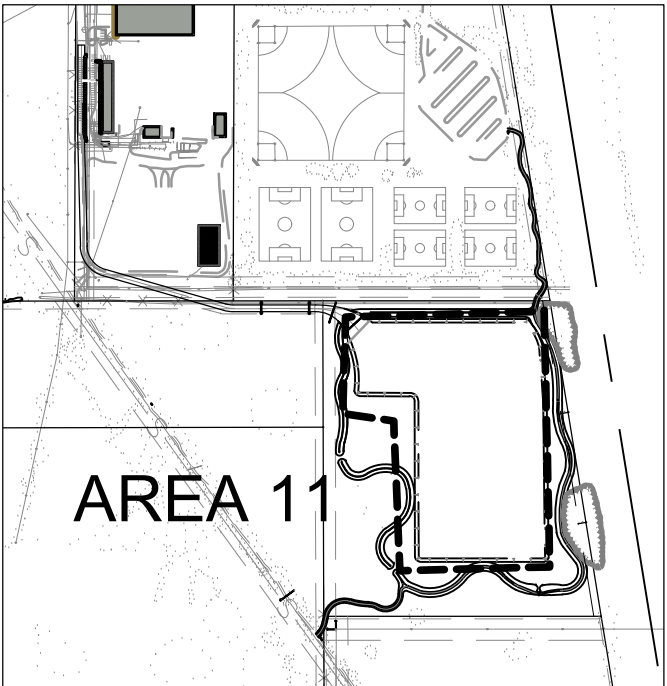
SYMBOL	DESCRIPTION	QTY	DETAIL
	4 SCHEDULE F SNOW DUMP SEED MIX OVER NATIVE SOIL	629,410 sf	
	5 TACKIFIER	62,861 sf	

SHEET NOTES:

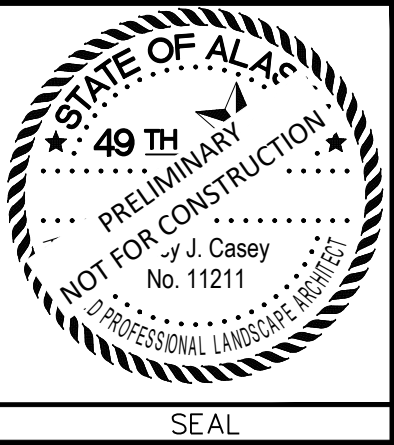
1. SEE SHEET L 1 FOR GENERAL NOTES PERTAINING TO LANDSCAPE CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF LANDSCAPE MATERIALS WITHOUT DISTURBING NATURAL VEGETATION BEYOND APPROVED CLEARING LIMITS. SEE SHEET 10 FOR LIMITS OF CLEARING AND DISTURBANCE.
3. SCARIFY SOIL SURFACE PRIOR TO HYDROSEEDING.
4. HYDROSEED ALL DISTURBED AREAS AS PER PLANS; WHERE DISTURBANCE EXTENDS BEYOND AREAS SHOWN ON PLANS, CONTACT ENGINEER TO VERIFY LIMITS OF SEEDING.
5. WHERE SURCHARGING IS REQUIRED, APPLY TACKIFIER AS SHOWN ON PLANS IMMEDIATELY FOLLOWING PLACEMENT OF OF SURCHARGE MATERIAL. SEEDING OF SURCHARGED AREAS WILL OCCUR DURING SECOND PHASE OF CONSTRUCTION, AFTER SUBSIDENCE HAS OCCURRED.
6. SITE AMENITIES - FIELD VERIFY LOCATION PRIOR TO INSTALLATION.

placeholder detail

BENCH INSTALLATION DETAIL
SCALE: NTS

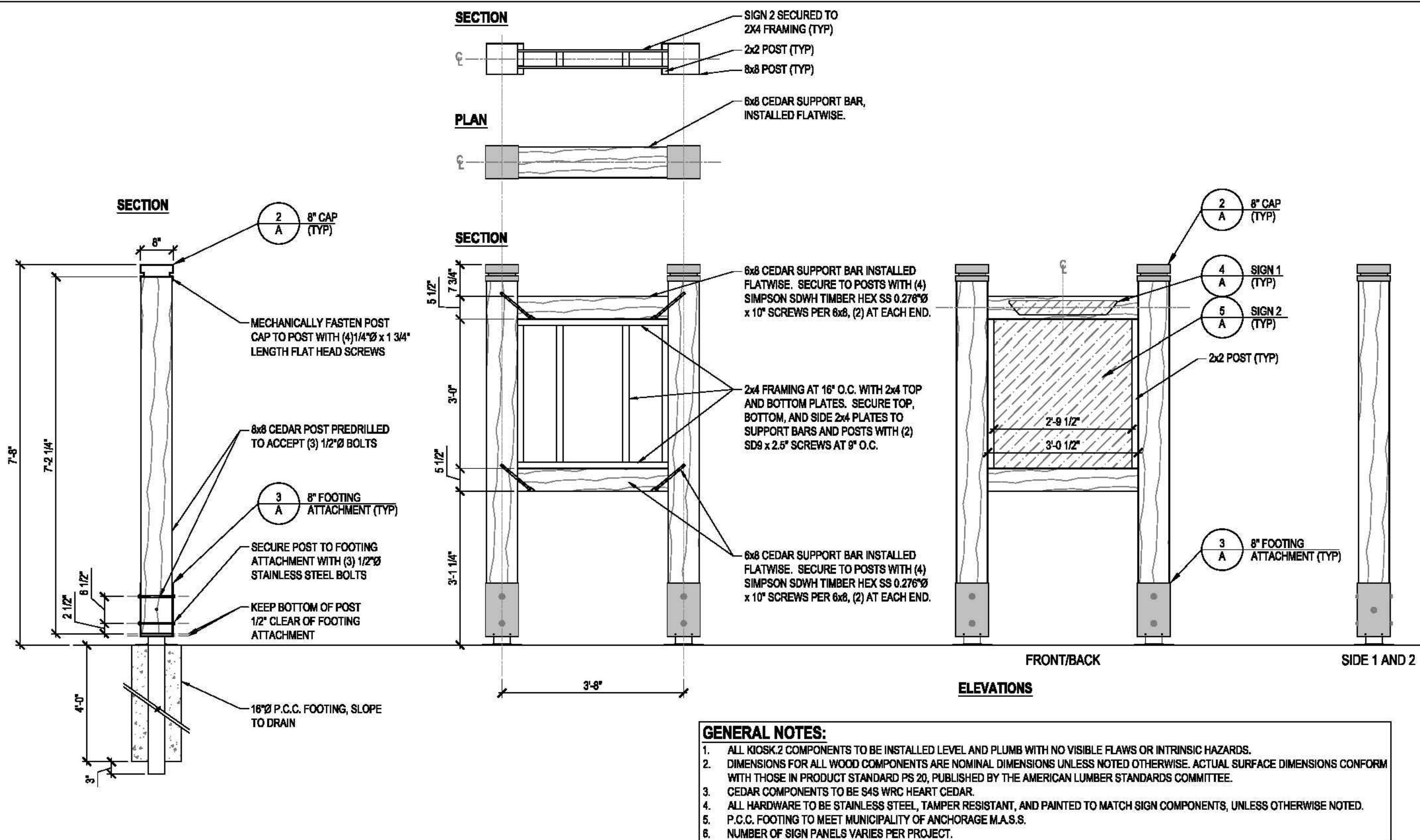


FIELD BOOKS		BM NO.	LOCATION	ELEV.	DATA		DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY	REV	DATE	DESCRIPTION	BY
DESIGN: MOA 3782		E-75	OLD INTERNATIONAL	72.93'	BASE	MCR	PTS	TELEPHONE	--	--	--	--	--						
STAKING:		GAAB-216	5011 SPENARD RD.	78.80'	TOPOGRAPHY	MCR	PTS	ELECTRIC	--	--	--	--	--						
ASBUILT:					PROFILE	TJH	DWS	CABLE TV	--	--	--	--	--						
CONTRACTOR:					SANITARY SEWER	--	--	DESIGN	TJH	DWS	DWS	--	--						
INSPECTOR:					STORM SEWER	--	--	QUANTITIES	--	--	--	--	--						
					WATER	--	--	MUN. FINAL CHECK	--	--	--	--	--						
					GAS	--	--												
CONSTRUCTION RECORD		HORIZONTAL & VERTICAL DATUMS			PLAN CHECK														

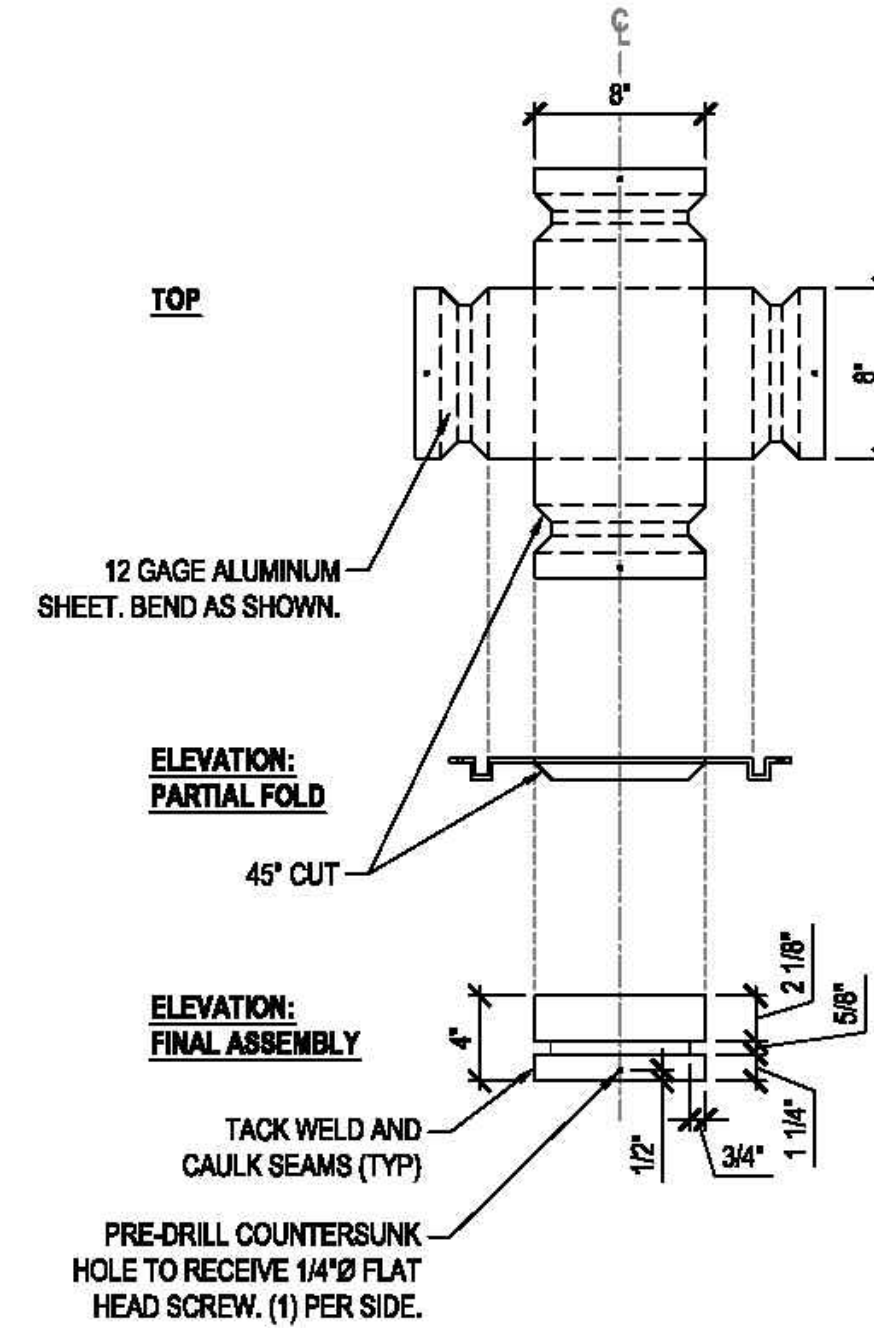


PROJECT MANAGEMENT & ENGINEERING DEPARTMENT				L9
WEST ANCHORAGE SNOW DISPOSAL SITE				
LANDSCAPE PLAN				
AREA 11 & BENCH DETAIL				
SCALE:	AS SHOWN	DATE: JULY 1, 2022	GRIDS: SW1928	SHEET 46 of 46
ACCT. NO. 000000XXXX (PME)				

FILE NO. -



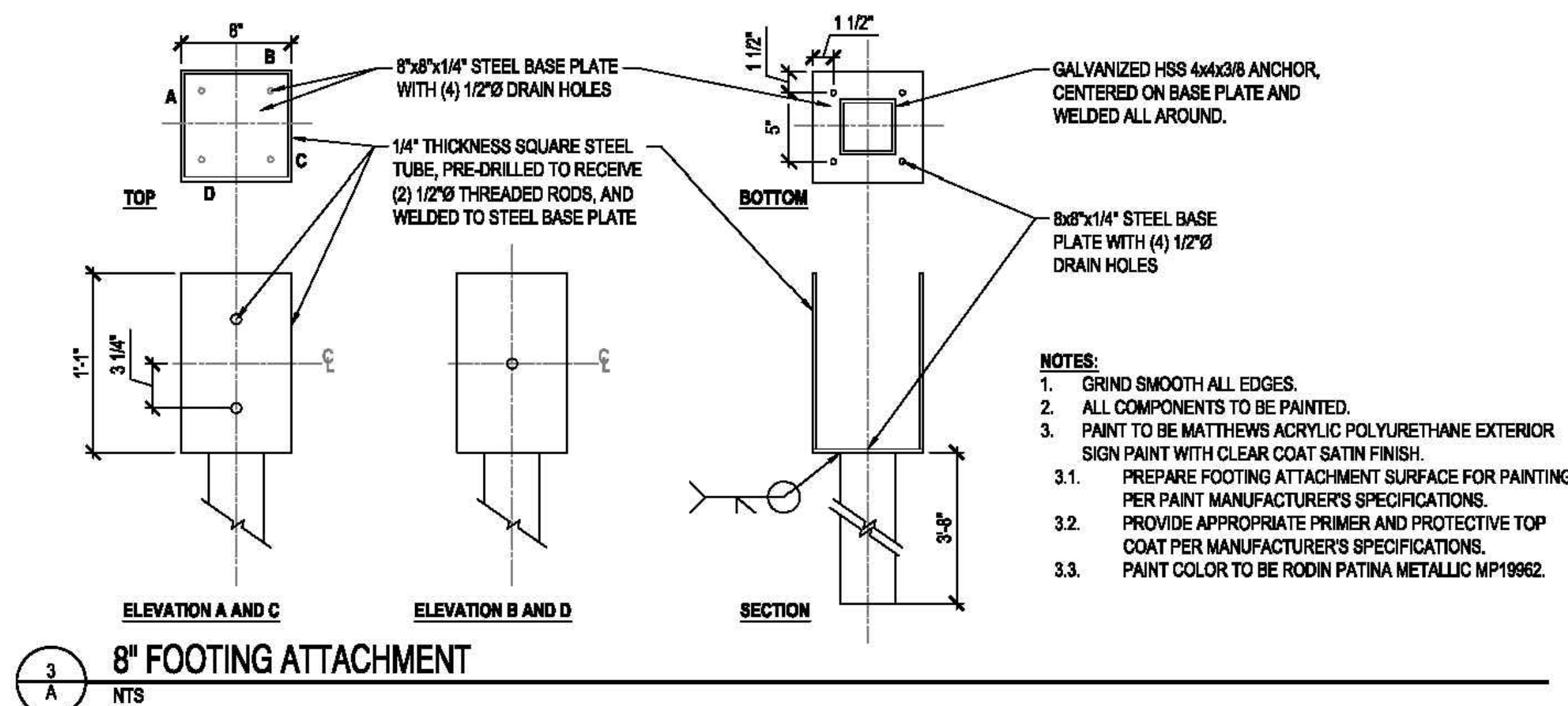
- NOTES:**
- GRIND SMOOTH ALL EDGES AND WELDS.
 - CAP MATERIAL: 1/4\"
 - PAINT TO BE MATTHEWS ACRYLIC POLYURETHANE EXTERIOR SIGN PAINT WITH CLEAR COAT SATIN FINISH.
 - PREPARE SIGN PANEL SURFACE FOR PAINTING PER MANUFACTURER'S SPECIFICATIONS.
 - PROVIDE APPROPRIATE PRIMER AND PROTECTIVE TOP COAT PER MANUFACTURER'S SPECIFICATIONS.
 - PAINT COLOR: RODIN PATINA METALLIC MP 19962.



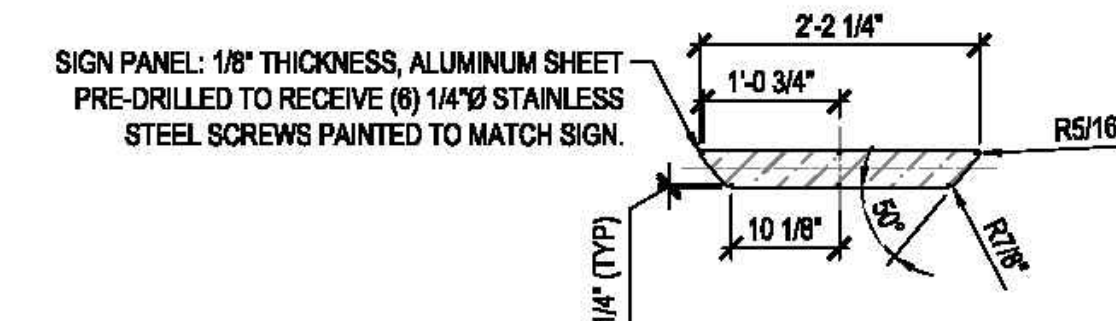
- GENERAL NOTES:**
- ALL KIOSK2 COMPONENTS TO BE INSTALLED LEVEL AND PLUMB WITH NO VISIBLE FLAWS OR INTRINSIC HAZARDS.
 - DIMENSIONS FOR ALL WOOD COMPONENTS ARE NOMINAL DIMENSIONS UNLESS NOTED OTHERWISE. ACTUAL SURFACE DIMENSIONS CONFORM WITH THOSE IN PRODUCT STANDARD PS 20, PUBLISHED BY THE AMERICAN LUMBER STANDARDS COMMITTEE.
 - CEDAR COMPONENTS TO BE S4S WRC HEART CEDAR.
 - ALL HARDWARE TO BE STAINLESS STEEL, TAMPER RESISTANT, AND PAINTED TO MATCH SIGN COMPONENTS, UNLESS OTHERWISE NOTED.
 - P.C.C. FOOTING TO MEET MUNICIPALITY OF ANCHORAGE M.A.S.S.
 - NUMBER OF SIGN PANELS VARIES PER PROJECT.

KIOSK2
NTS

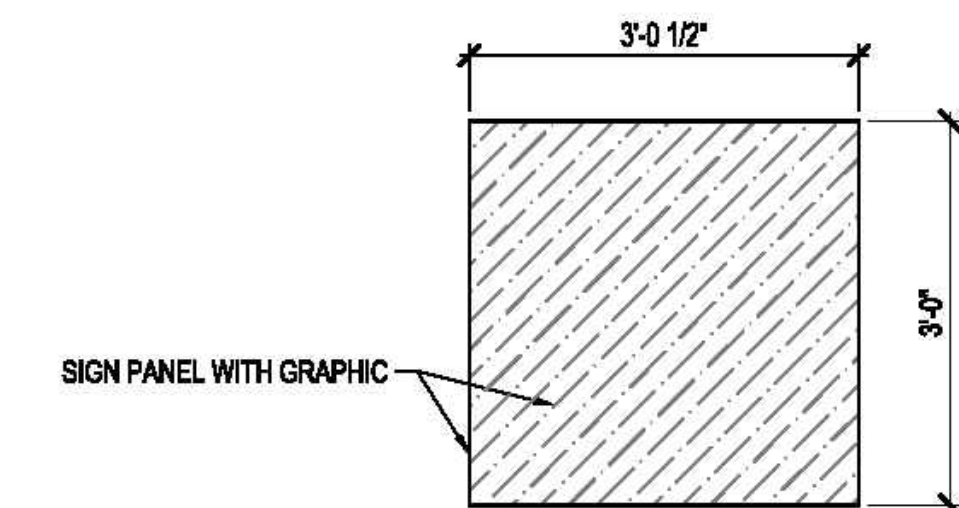
8\"



- NOTES:**
- GRIND SMOOTH ALL EDGES.
 - SIGN PANEL GRAPHIC TEMPLATE TO BE PROVIDED BY OWNER'S REPRESENTATIVE.
 - FONT TO BE GOTHAM BOLD.
 - PAINT TO BE MATTHEWS ACRYLIC POLYURETHANE EXTERIOR SIGN PAINT WITH CLEAR COAT SATIN FINISH.
 - PREPARE SIGN PANEL SURFACE FOR PAINTING PER PAINT MANUFACTURER'S SPECIFICATIONS.
 - PROVIDE APPROPRIATE PRIMER AND PROTECTIVE TOP COAT PER MANUFACTURER'S SPECIFICATIONS.
 - PAINT COLOR TO BE PROVIDED BY OWNER'S REPRESENTATIVE.



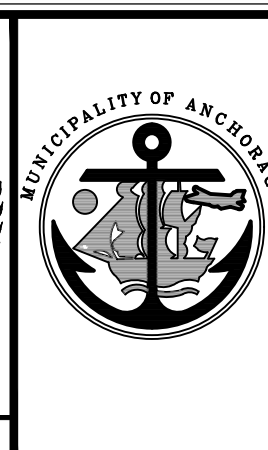
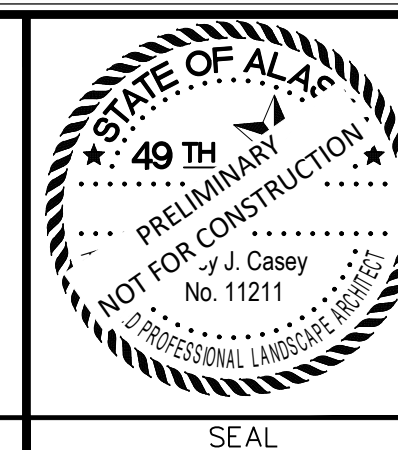
- NOTES:**
- SIGN PANEL: 1/4\"
 - SIGN PANEL GRAPHIC TEMPLATE TO BE PROVIDED BY OWNER'S REPRESENTATIVE.
 - SECURE TO KIOSK2 SIGN BRACKET PER MANUFACTURER'S SPECIFICATIONS.



SIGN 1
NTS

SIGN 2
NTS

FIELD BOOKS	BM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY
DESIGN: MOA 3782	E-75	OLD INTERNATIONAL	72.93'	BASE	MCR	PTS	TELEPHONE	--	--				
STAKING:	GAAB-216	5011 SPENARD RD.	78.80'	TOPOGRAPHY	MCR	PTS	ELECTRIC	--	--				
ASBUILT:				PROFILE	TJH	DWS	CABLE TV	--	--				
CONTRACTOR:				SANITARY SEWER	--	--	DESIGN	TJH	DWS				
INSPECTOR:				STORM SEWER	--	--	QUANTITIES	--	--				
				WATER	--	--	MUN. FINAL CHECK	--	--				
				GAS	--	--							
BASIS OF DATUM:													
HORIZONTAL: ANCHORAGE BOWL 2000													
VERTICAL: 1972 N.G.S. DATUM													
CONSTRUCTION RECORD	HORIZONTAL & VERTICAL DATUMS			PLAN CHECK									



PROJECT MANAGEMENT & ENGINEERING DEPARTMENT				L1
WEST ANCHORAGE SNOW DISPOSAL SITE				
LANDSCAPE DETAILS KIOSK				
LE:	AS SHOWN	DATE: JULY 1, 2022	GRIDS: SW1928	SHEET 47 of 47
ACCT. NO. 000000XXXX (PME)				
FILE NO. --				