ENVIRONMENTAL ASSESSMENT

WEST AIRPORT ROAD PROJECT
DEERING, ALASKA

Prepared For:

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ACRONYMS AND ABBREVIATIONS

°	Degrees
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
ATV	all-terrain vehicle
BIA	U.S. Bureau of Indian Affairs
BOCA	Building Official and Code Administrators
Bristol	Bristol Engineering Services Corporation
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulation
CY	Cubic Yard
CZMA	Coastal Zone Management Act
DCCED	Department of Commerce, Community, and Economic Development
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
FDD	Fish Distribution Database
FEMA	Federal Emergency Management Agency
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
FIRM	Flood Insurance Rate Maps
IRR	Indian Reservation Roads
JD	Jurisdictional Determination
LF	Linear Feet
MLW	Mining, Land, and Water
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NPDES	National Pollution Discharge Elimination System
OHW	Ordinary High Water
OSHA	Occupational Safety and Health Administration
PL	Public Law
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
ROW	right-of-way

SHPO	State Historic Preservation Officer
SWPPP	Storm Water Pollution Prevention Plan
U.S.C.	United States Code
U.S.C.A.	U.S. Code Annotated
USACE	US Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

EXECUTIVE SUMMARY

PROPOSED ACTION

The Native Village of Deering (NVD) has contracted Bristol Engineering Services Corporation (Bristol) to develop plans, complete environmental permitting and the NEPA process, for new road and bridge construction in Deering, Alaska. The proposed project will improve the road infrastructure and establish an emergency evacuation route for the Community (Figures 1 & 2). Funding for this project will be through the Bureau of Indian Affairs (BIA) Tribal Transportation Program (TTP).

The BIA, as the lead Federal agency, determines that this Environmental Assessment and the proposed action overall would be in compliance with National Environmental Policy Act (NEPA), as well as all other applicable federal laws and regulations, and that there would be no significant impacts to the human environment that would require development of an Environmental Impact Statement.

ENVIRONMENTAL CONSEQUENCES

The Preferred Alternative will consist of the construction of the new West Airport Road and new bridge, spanning Smith Creek. The proposed project road corridor will be approximately 1.0-mile long and have a total footprint of approximately 7.2 acres. The proposed road project will require the placement of fill into approximately 6.86 acres of USACE jurisdictional wetlands. The construction of the new road will permanently impact 6.78 acres of wetlands. Construction of the proposed bridge will require the creation of temporary construction laydown pads adjacent to Smith Creek (See Figures) which will temporarily impact 0.08 acres of wetlands Temporary construction impacts may include construction associated noise and dust emissions. Measures will be taken to minimize temporary construction impacts (see below) and due to the temporary nature of the impacts they are considered negligible.

The BIA proposes the following measures in order to minimize environmental consequences of the preferred alternative:

- Dust-control measures would be taken in order to minimize temporary dust emissions from road construction.
- Construction could be limited to waking hours to reduce potential unwelcome noise impacts.

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1.0 PURPOSE AND NEED FOR ACTION

1.1 SUMMARY

The Native Village of Deering (NVD) has contracted Bristol to develop plans and complete environmental permitting and the NEPA process, for new road and bridge construction in Deering, Alaska. The proposed project will consist of the construction of the new 1-mile West Airport Road along with a bridge that will span Smith Creek. The proposed project will improve the road infrastructure and establish an emergency evacuation route for the Community (Figures 1 & 2).

1.2 PURPOSE AND NEED FOR ACTION

The Community of Deering's existing road and bridge infrastructure is currently failing and unable to meet suitable emergency evacuation needs. Currently, the existing Deering Airport Road typically gets washed out during seasonal and tidal flooding events creating a serious safety hazard by blocking the only community egress to higher ground. The proposed new road will serve as the primary emergency evacuation route for Deering residents and will also provide more reliable road access to the airport.

Additionally, the existing bridge and primary access point to the community is deteriorating and may not support the crossing of heavy machinery. The proposed new bridge over Smith Creek will have the load-bearing capacity necessary to transport heavy equipment into and out of Deering year round to support infrastructure maintenance and construction needs (Figures 1 & 2).

1.3 VICINITY MAPS

Vicinity, Location, and Site maps can be found in the Figures section at the end of the report.

1.4 LOCATION

Deering is located on Kotzebue Sound at the mouth of the Inmachuk River, approximately 57 miles southwest of Kotzebue. The main village is built on a flat sand and gravel spit sandwiched between the Kotzebue Sound and Smith Creek, a tributary to the Inmanchuk River, that is approximately 300 feet wide and approximately half-mile long. It lies at approximately 66.07° north latitude and -162.71° west longitude (Sections 19 and 30, Township 008 North, Range 019 West, Kateel River Meridian). The area encompasses 5.1 sq. miles of land and 0.1 sq. miles of water. Deering is located within the Cape Nome Recording District (DCCED, 2015).

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2.0 ALTERNATIVES – INCLUDING THE PROPOSED ACTION

The requirements of the National Environmental Policy Act (NEPA), Section 102(2) (e) are to study, develop, and describe the appropriate alternatives to recommend courses of action in any proposal which may involve conflicts concerning alternative uses of available resources.

Three options represent the most reasonable range of alternatives:

- **Alternative 1: The Preferred Alternative**: The Preferred Alternative consists of constructing the new West Airport Road and a new bridge construction that will span Smith Creek in Deering, Alaska.

- **Alternative 2**: Suring up the existing Airport Road Bridge and constructing an engineered redesign of the Airport Road.

- **Alternative 3: No Action Alternative:** Under the No-Action Alternative, the proposed project will not be completed.

2.1 ALTERNATIVE 1: PREFERRED ALTERNATIVE

The Preferred Alternative will consist of developing and constructing a new road (Figure 2) that will serve as a reliable evacuation route for the village residents. The roads driving surface will be approximately 24-feet wide with 4:1 side slopes, by 1.0-mile long (See Figures 3-5). The proposed project will create reliable emergency evacuation infrastructure and will serve as the primary egress for emergency evacuation to higher ground from the village to the airport area during seasonal and tidal flooding events when the existing Deering Airport Road is typically washed out and in the event of a medical emergency. Additionally, the new route will ensure that the City will have a reliable new bridge with the load-bearing capabilities to support the transport of heavy machinery to support infrastructure maintenance and construction needs.

The bridge spanning Smith Creek will be a 100-foot single span pre-manufactured modular steel bridge stabilized with thermal helix piles and metal bin-wall abutments (See Figures 6 & 7). There will be 125-foot approaches on either side of the bridge. The bridge structure will allow a minimum of 10-feet of vertical clearance from ordinary high water (OHW) and 42.6-foot navigational opening. No in-stream piers of any kind are associated with the proposed design. The entire active water channel will be free of any fill material and the bridge abutments will be clear of the standing water.

The Preferred Alternative will require approximately 25,800 cubic yards (CY) of Subbase - Type B material to create the new road embankment, followed by approximately 2,300 CY of crushed aggregate surface course to create the driving surface. The proposed project will have a total footprint of 7.2 acres, of which 6.86 (6.78 permanent/.08 temporary) acres has been determined to be USACE jurisdictional wetlands.

Culverts will be appropriately placed along the proposed road corridor to ensure surface drainage patterns are maintained. No in-stream culverts are associated with this project.

The advantages and disadvantages of the preferred alternative are as follows:

Advantages of Alternative 1

- Will expand/enhance the overall Deering transportation infrastructure.
- The proposed road will establish a much needed reliable emergency evacuation route for the community.
- The new bridge crossing will allow year round access to the airport.
- The new bridge will allow for heavy machinery to access the village, which currently is not possible due to the current bridge not having the capacity to support such heavy loads.
- Though still in wetlands the new road is located out of the Inmachuk River floodplain.
- Smith Creek is a lower velocity water course than the Inmachuk River, and though still susceptible to flooding, it is likely that the flooding would be less intense than that associated with the Inmachuk River.

Disadvantages of Alternative 1

- Costs associated with developing/constructing the proposed road and bridge.
- The permanent loss of 6.78 acres of wetland associated with constructing the proposed road.

2.2 ALTERNATIVE 2: SURING UP THE EXISTING BRIDGE AND ROAD

This alternative would sure up the existing bridge to increase capacity to handle greater weight limits, including constructing river revetments to decrease the rivers ability to wash away the road.

Advantages of Alternative 2

- Potentially less wetland impact than those associated with new road construction impacts.
- No new bridge construction.

Disadvantages of Alternative 2

- High costs associated with engineering then constructing the reinforcing/stabilization of the Inmachuk River bank (high cost of importing large armor stone). The majority of the south side of Airport Road directly abuts the Inmachuk River.
- High costs for reinforcing/retro-fitting the existing bridge.

- This will not create an additional route to higher ground nor will it take the road out of the flood zone, as the existing Airport Road extends adjacent to the Inmachuk River for almost its entire length.
- This alternative will not offer the Deering residents an alternative emergency evacuation route during high water/storm events from either river flooding or wind driven tides or access to the airport in the event of a medical emergency.
- Aerial photography indicated that the majority of the road is also located within the braided river bed/flood plain of the Inmachuk River. Re-engineering the road to be high enough as to be out of the flood zone would be prohibitively expensive and would greatly impact higher values wetlands than the Preferred Alternative.

2.3 ALTERNATIVE 3: NO-ACTION

Considering the No-Action Alternative is required by NEPA. Under the No-Action Alternative the proposed corridor will stay in its current, undeveloped state. No action will be taken to expand the Deering transportation infrastructure, improve access to the airstrip, or create a much needed reliable emergency evacuation route for the community.

The advantages and disadvantages of Alternative 3 follow.

Advantages of Alternative 3 (Avoidance and Minimization)

- No costs associated with Alternative 3.
- No wetland impacts

Disadvantages of Alternative 3

- A reliable emergency evacuation route will not be established.
- The transportation infrastructure will not be expanded or improved and will remain as it currently exists.
- Currently, Airport Road is the only road in to and out of Deering and floods intermittently, trapping the residents in the village with no access to the airport or higher ground. Should a medical emergency arise requiring evacuation, with the current road configuration access to the airport is completely blocked for extended periods during the year.

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3.0 AFFECTED ENVIRONMENT

3.1 LAND RESOURCES

a) Topography: Deering is located within the Kotzebue Sound Lowlands ecological sub region of Alaska, which is characterized by flat, poorly drained coastal plains dominated by terraces, low hills, and active dune fields. This area is subject to many thaw lakes and sinks that are connected by a maze of waterways. Typically elevations in the area are less than 330 feet (USFS, 1995). The project corridor, and surrounding area, consists of level to minimally sloping terrain throughout the proposed alignment.

b) Soils: Soils tend to be wet and shallow to permafrost. Dominant soils are Histic Pergelic Cryaquepts and Pergelic Cryofibrists. Soils are formed from stratified silty or sandy alluvial deposits, as well as volcanic ash and loess (USFS, 1995)

c) Geologic Setting and Material Resources: The geologic setting for the bedrock underlying the Quaternary surficial deposits on which Deering sits is likely to be Paleozoic marble or metalimestone (Selkregg, 1976). Material resources for road construction have been identified as previously permitted alluvial deposits of gravel silt and sand located approximately 1-mile south of the Deering Airport.

3.2 WATER RESOURCES

Deering is located on Kotzebue Sound near the mouth of the Inmachuk River, 57 miles southwest of Kotzebue. Deering households obtain water via water delivery from the community water system which is sourced from area surface water (DCCED, 2015).

Water for construction activities, such as compaction and dust suppression, will be withdrawn from the Inmachuk River as needed for project completion. The Inmachuk River has been listed in the Alaska Department of Fish and Game (ADFG) – Fish Distribution Database (FDD) as an anadromous stream (#331-00-10750) showing the occurrence of spawning Chum salmon and Pink salmon, and the presence of Dolly Varden. Additionally, the proposed new West Airport Road Bridge will span Smith Creek, a tributary of the Inmachuk River; Smith Creek is not listed as an anadromous stream in the ADFG - FDD Database.

a. Surface Water

- Clean Water Act Section 401 Water Quality Certification – Part of the 404 consultation. The proposed project will impact USACE jurisdictional wetlands and waters of the U.S.; therefore, a Section 404/401 permit/certification will be required for the proposed project.
- Clean Water Act Section 402, Storm Water Pollution Protection (SWPPP) – The proposed project will require the completion of a SWPPP. The SWPPP will be completed and submitted by the yet to be determined project construction contractor.
- Clean Water Act Section 404 – The proposed project will be placing fill material into wetlands/waters of the United States, as determined by the U.S.

Army Corps of Engineers. Therefore the project will require the completion of a Section 404/401 Permit for the placement of fill into USACE jurisdictional wetlands.

- Rivers and Harbors Act Section 10 – The proposed bridge spanning Smith Creek will not require a permit from the U.S. Coast Guard because the creek is not large enough to be considered a navigable waterway. Only small skiffs can be and are currently used along this waterway during flood events and high water. However, the bridge height was designed with enough clearance to allow passage of a larger vessel.

b. Groundwater – Groundwater will not be affected by the preferred alternative.

3.3 AIR RESOURCES

According to Title 18, Alaska Administrative Code, Chapter 50.015, Village of Deering is not in a nonattainment area for air contaminants. Air quality is not monitored.

a. Quality – There are no long-term affects to air quality associated with the preferred alternative. There is the potential for short-term increases in dust; however, these affects will be minimized with the use of dust palliatives.

b. Visibility – There will be a short-term potential for impacts to visibility during construction due to increased dust; however, the affects will be minimized by applying water for dust suppression. Upon completion of the proposed project, calcium-chloride will be applied as a dust palliative to limit the effects to visibility due to dust.

c. Climate/Meteorology – Deering is located in the transitional climate zone, which is characterized by long, cold winters and cool summers, with average temperatures ranging from -18°F in January to 63°F in July. Annual snowfall averages 36 inches, with total precipitation of 9 inches. Kotzebue Sound is ice-free from early July through mid-October (DCCED, 2015).

3.4 BIOTIC RESOURCES

a. Description of Ecosystem and Biological Communities

Deering is located within the Kotzebue Sound Subregion and is classified as moist tundra. The moist tundra plant community is characterized by a mixture of grasses, sedges, forbs, and lichens. Tussocks, formed by cottongrass (*Eriophorum* spp.), are a dominate feature of this plant community (Selkregg, 1976).

Habitats in the Kotzebue Sound Subregion range from treeless coastal tundra to forests and alpine tundra. Some mammals prefer specific habitats; while others have a more generalist approach, occupying multiple habitats. Coastal moist tundra is the most commonly encountered habitat within the Deering area (Selkregg, 1976).

Large mammals common in the Kotzebue Sound Subregion include; among others, brown bears, polar bear, wolves, wolverine, and moose. Others mammals known to be in the Kotzebue Sound Subregion may include: Arctic fox, mink, short-tailed

weasel, tundra shrew, Greenland collared lemming, Arctic ground squirrel, brown lemming, Arctic hare, red-backed vole, tundra vole, Alaska vole and Arctic hare (Selkregg, 1976).

Kotzebue Sound is located along a migratory flyway which is used by numerous sea ducks for resting during the spring and fall migration and in some cases for overwintering. Birds found in the moist tundra in the Deering area include, but are not limited to: common loon, yellow-billed loon (USFWS candidate species), Arctic loon, whistling swan, Canada goose, white-fronted goose, pintail, American widgeon, pintail, rough-legged hawk, gyrfalcon, peregrine falcon, willow ptarmigan, golden plover, long-tailed jaeger, short-eared owl, snowy owl, barn swallow, bank swallow, raven, gray-cheeked thrush, white wagtail, hoary redpoll, savannah sparrow, Lapland longspur, and snow bunting (Selkregg, 1976).

Review of the Alaska Department of Fish & Game (ADF&G) Anadromous Fish Distribution Database (FDD) shows the project area occurs in proximity to both the Inmachuk River and will cross Smith Creek. The Inmachuk River has an Anadramous Waters Catalogue (AWC) Code 331-00-10750, and shows the presence of spawning chum salmon (*Oncorhynchus keta*), and pink salmon (*Oncorhynchus gorbuscha*) and the presence of Dolly Varden (*Salvelinus malma*). Smith Creek is not listed on the Anadromous Fish Database as an anadromous stream. Though it is likely that there are resident blackfish and sculpin it is unlikely that there are any anadromous fish spending any time there. A Fish Habitat permit may be required for construction of the bridge crossing Smith Creek if the construction goes below ordinary high water.

The project's anticipated water needs for the purpose of compaction and as a dust palliative during construction will require water withdrawal from the Inmachuk River. Water withdrawal will require an ADNR – Habitat Division and MLW – Water Resources Division Permit.

b. Wildlife:

1. Terrestrial –The proposed project is not anticipated to negatively impact wildlife.

   The Preferred Alternative is located in an area that has a low potential to be nesting habitat for Bald or Golden eagles. Prior to construction the contractor will perform a site survey to confirm that nesting eagles are not present.

   The proposed project is not anticipated to negatively impact migratory or nesting birds. To limit potential impacts to nesting birds, land clearing will not take place between May 20 and July 20.

   Deering is located within the limits of the Western Arctic caribou herd habitat range (ADFG, 2011).

   The proposed alignment on the north side of Smith Creek closest to the village had sign of Musk Ox usage (shed fur and scat), and at the time of the site visit a small herd was noted to be moving through the area following Smith Creek on the north side. Though the road will bisect this area, it will have 4H:1V side slopes that will not act as a barrier to modify their diurnal migration route. Additionally, the

design speed for this road is 25 miles per hour combined with the unlimited sight distances, there is minimal threat for negative outcome vehicle interactions.

2. Riparian/Aquatic – Smith Creek extends through the approximately midpoint of the proposed road corridor.

3. Threatened and Endangered Species – The USFWS Information, Planning, and Conservation (IPaC) system was accessed on December 4, 2014 to determine the presence of any threatened or endangered species, and the presence of any designated critical habitat that may occur within or near the boundaries of, or affected by, the proposed project as required under Section 7(c) of the Endangered Species Act. The IPaC reported that Steller's eider, spectacled eider, and polar bear may be present in proximity to the proposed project area. As a result of the IPaC report, an informal consultation with the USFWS was requested. The USFWS Consultation Letter (#07CAFB00-2015-SLI-0010) can be found in Appendix B. The letter includes Polar Bear Interaction Guidelines.

c. Vegetation:

1. Terrestrial –Deering is located within the Kotzebue Sound Subregion and is classified as moist tundra. The moist tundra plant community is characterized by a mixture of grasses, sedges, forbs, and lichens. Tussocks, formed by cottongrass (*Eriophorum* spp.), are a dominate feature of this plant community (Selkregg, 1976).

2. Riparian/Aquatic –Smith Creek bisects the midpoint of the proposed alignment. No in-stream work is associated with the proposed project.

3. Threatened and Endangered Species – No Threatened or Endangered vegetation species are found in proximity to the proposed project corridor. (USFWS, 2014).

d. Agriculture: (livestock, crops, prime and unique farmland(s)) - No livestock, crops, or prime and unique farmland(s) are found within or near the Preferred Alternative.

3.5 CULTURAL RESOURCES

Deering was established in 1901 as a supply station for Interior gold mining near the historic Malemiut Eskimo village of "Inmachukmiut." The name Deering was probably taken from the 90-ton schooner "Abbey Deering" which was in nearby waters around 1900. The city was incorporated in 1970 (DCCED, 2014).

An archaeological survey and report of the proposed project area was conducted and prepared by Mr. Robert Meinhardt and Ms. Amy Ramirez of True North Sustainable Development Solutions (TNSDS). The report found that no historic properties would be affected by the proposed project and recommended a finding of "No Historic Properties Affected" be adopted. The report was submitted to BIA Archaeology, who will submit it to SHPO for their review/concurrence and can be found in Appendix E. The BIA and SHPO concurred with TNSDS's findings, and the BIA concurrence letter along with the SHPO concurrence letter may be found in Appendix B.

3.6 SOCIOECONOMIC CONDITIONS

a. Employment and Income: Data from the 2010 U.S. Census data showed 69 residents as employed. The unemployment rate at that time was 31.71% percent; an additional 47.44% were not working but were not seeking employment and thus are not considered unemployed. The median household income is $37,250; the per capita income was $16,168; and 16.47% of residents were below the poverty level (DCCED, 2015).

b. Demographics and Trends: As of the 2010 census, the population of Deering is 122, with 86.89% of those being Alaska Native, and 13.1% white or two or more races (DCCED, 2015).

c. Lifestyles, Cultural Values, Attitudes, and Expectations: Deering is primarily an Inupiaq Eskimo village, and subsistence activities contribute substantially to local diets (DCCED, 2015).

d. Community Infrastructure: Deering is accessible year-round by plane. A state-owned 3,300 foot long by 75 foot wide gravel airstrip, with a 2,640 foot long by 75 foot wide gravel crosswind strip, enables flights by several Kotzebue air services. Additionally, a 2,400 foot long and 50 foot' wide private runway is available. Crowley Marine Services barges fuel and goods from Kotzebue each summer. Small boats, ATVs, and snow machines are used for local travel (DCCED, 2015).

   Households derive their water via the city water distribution system, surface sourced from the Inmachuk River; electricity is acquired from Ipnatchiaq Electric Company via diesel generator and wind; the community operates a Class III landfill for refuse (DCCED, 2015).

3.7 ENVIRONMENTAL JUSTICE

There will be no disproportionately high or adverse human health or environmental effects of the program and policies on minorities or low-income populations or communities. The proposed action will benefit the community and all those who reside there by providing an expanded transportation corridor, a more reliable emergency evacuation route, a reliable year-round access to the airport, and temporary jobs associated with the construction.

3.8 HAZARDOUS MATERIAL/WASTE

The following subheadings are addressed in the Phase I Environmental Site Assessment found in Appendix D.

a. Resource Conservation and Recovery Act (RCRA) Subtitle C hazardous waste/materials.

b. RCRA, non-hazardous solid waste sites.

c. RCRA Subtitle I, underground storage tank(s), as amended by the Hazardous & Solid Waste Amendments of 1984.

d. Comprehensive Environmental Response Compensation, and Liability Act, and Superfund Amendments and Reauthorization Act (CERCLA-SARA) of 1986.

e. Toxic Substances Control Act.

3.9 RESOURCE/LAND USE PATTERNS

- Hunting, Fishing, Gathering – The land adjacent to the existing road corridor is actively used for subsistence activities by Deering residents.
- Timber Harvesting – Not Applicable.
- Agriculture – Not Applicable.
- Mining – Not Applicable.
- Outdoor Recreation – The proposed roadway improvements project will improve access to areas potentially used for outdoor recreational activities.
- Transportation Network – The proposed project will enhance/expand the Deering transportation network.
- Land Use Plans – The proposed road and bridge is included in the Deering Community Comprehensive Plan 2006-2016. The road/bridge development was included on their "Top 10 Capital Project Priorities 2006-11". The quote that follows was taken directly from the Plan:

  "4. Road and bridge development via Smith Creek for a flood escape route, land expansion, and an alternate route to the airport."

3.10 OTHER VALUES

a. Wilderness: No areas considered wilderness are located within or near the project corridor.

b. Sound and Noise: Not applicable.

c. Public Health and Safety: Currently, Airport Road is the only route into or out of the village. This road is the only access the residents have to reach higher ground. The lack of an adequate, reliable emergency egress during seasonal flooding and wind driven tidal events currently poses a threat to the health and safety to Deering residents. Additionally, Airport Road washes out during high precipitation events and prevents residents from year-round access to the airport.

d. Visual Settings: The proposed road corridor is currently undeveloped; the new road and bridge will alter the visual settings of the area.

e. Non-user values: Not applicable.

4.0 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

1. Land Resources

   The Preferred and No-Action Alternatives are in compliance with the:

   A. Topography (land forms, drainage, gradients): The preferred alternative will not dramatically change the landforms of the area; the proposed improvements will be constructed on top of the existing terrain.

      Drainage/gradients of the area will be maintained, as necessary, through the installation of appropriately placed culverts to maintain the areas hydrologic regime.

   B. Soils (types, characteristics): See 3.1b Land Resources - Soils.

      Farmland Protection Policy Act PL 97-98: There is no identified Prime or Unique Farmland in Alaska or within or near the Preferred Alternative.

   C. Geologic Setting and Mineral Resources

      Surface Mining Control and Reclamation Act of 1977 (30 U.S.C.A. 1201, 1202, 1211): The Preferred Alternative will not affect any known mineral deposits or involve the act of mining.

2. Water Resources (quality, use, rights)

   A. Water Supply

      Safe Drinking Water Act of 1974 PL90-523 (42 U.S.C.A 300f to 300j-26): The Preferred Alternative will have no effect on the drinking water supply of Deering.

      Sole Source Aquifers: The Preferred Alternative will not affect any sole source aquifers.

   B. Waste Water

      Clean Water Act Section 402 (33 U.S.C.A. 1251): The Preferred Alternative will not have any waste water discharges associated with it.

   C. Storm Water

      The Preferred and No-Action Alternatives are in compliance with the Clean Water Act Section 402 (33 U.S.C.A. 1342): The Preferred Alternative will disturb over one acre, and will therefore require an National Pollution Discharge Elimination System (NPDES) permit. The NPDES permit will be completed and submitted by the yet to be determined project construction contractor. Additionally, a Storm Water Pollution Prevention Plan (SWPPP) will be required for the proposed project. The SWPPP will be completed and submitted by the yet to be determined project construction contractor.

D. Wetlands

The Preferred and No-Action Alternatives are in compliance with the Executive Order 11990 (Protection of Wetlands, 1977): The Preferred Alternative will require the permanent placement of fill in approximately 6.78 acres, and temporary fill into approximately 0.08 acres of USACE Jurisdictional Wetlands. The USACE Section 404 Permit can be found in Appendix C.

The Preferred and No-Action Alternatives are in compliance with the Clean Water Act Section 404 (33 U.S.C.A. 1344): The Preferred Alternative will require the permanent placement of fill in approximately 6.78 acres, and temporary fill into approximately 0.08 acres of USACE Jurisdictional Wetlands. The USACE Section 404 Permit can be found in Appendix C.

E. Floodplain

The Preferred and No-Action Alternatives are in compliance with the Executive Order 11988 (Floodplain Management, 1977): No Federal Emergency Management Act (FEMA) Flood Insurance Rate Maps (FIRMs) are available for the area. Deering does not participate in the National Flood Insurance Program (NFIP).

The Smith Creek Bridge will require the placement of approximately 6,430 CY of fill material into the Smith Creek floodplain. This assumes that the 125-foot approaches leading up to either side of the bridge are within the floodplain. Steel support piles and bin-wall abutments for the bridge approaches will be placed within the Smith Creek floodplain (See Figures). No material will be placed below ordinary high water (OHW).

Water needed for road construction and compaction will be withdrawn from the Inmachuk River (See Figures). The suction hose used to withdraw water will be fitted with an appropriately sized screen to ensure fish safety. An ADNR-MLW Temporary Water Use permit and an ADF&G Fish Habitat permit have been applied for and the respective permits are located in Appendix C.

F. Clean Water Certification

The Preferred and No-Action Alternatives are in compliance with the Clean Water Act Section 401 Certification. The Section 401 Permit is a subset of the Section 404 Permit Application. The 401 Certification ensures that the project is in compliance with the Clean Water Act and can be found in Appendix C.

3. Air Resources (quality, visibility, etc.)

The Preferred and No-Action Alternatives are in compliance with the Clean Air Act (42 U.S.C.A. 7401 to 7671q): No excessive emissions are anticipated to be associated with the Preferred Alternative. Any potential for elevated emissions would be temporary in nature and associated with construction heavy equipment. Water will be applied to the road surfaces during construction to minimize the amount of fugitive

dust leaving the site. Once construction is complete, calcium-chloride will be applied as a dust palliative.

4. Living Resources

   A. Fish, Wildlife, Plants

   The Preferred and No-Action Alternatives are in compliance with the Endangered Species Act of 1973 Section 7 (16 U.SC.A. 1536): The BIA determined, through consultation with the USFWS (Consultation #07CAFB00-2015-SLI-0010), that no threatened or endangered species will be jeopardized by the Preferred Alternative. The proposed road and bridge corridor is located away from preferred nesting habitats for listed eiders, and polar bear habitat.

   Conclusions from the USFWS consultation letter are as follows:

   > "Because listed eider density in the action area is extremely low and disturbance to migrating eiders would be so minor that injury or death would occur, we expect project effects to these birds would be insignificant."
   >
   > "Due to lack of preferred denning habitat, polar bears rarely den near Deering. Additionally, given that the proposed activity would be limited to snow-free months, effects of the proposed action on denning polar bears would not occur."
   >
   > "Because (1) the density of polar bears in the action area is very low; (2) encounters with polar bears are expected to be rare; (3) behavioral effects to transient bears would be minor and temporary; (4) mitigation measures are included in the interaction guidelines to minimize potential impacts in the event that transient polar bears are encountered; and (5) effects on denning polar bears are not anticipated, we expect effects of the proposed action on polar bears would be insignificant."
   >
   > "The proposed action could temporarily disturb listed eiders or polar bears in the project area; however, due to low densities of these species and minimization measures in place, we expect the effects of disturbance to be insignificant. Therefore the Service concludes that the proposed action is not likely to adversely affect listed eiders or polar bears. Preparation of a Biological Assessment or further consultation under Section 7 of the ESA is not necessary at this time."

   See communications with USFWS in Appendix B (USFWS, 2014 & 2016).

   The Preferred and No-Action Alternatives are in compliance with the Bald and Golden Eagles Protection Act (16 U.S.C. 668-668d): The Preferred Alternative has a low potential to impact Bald or Golden Eagles. The proposed project is located within a wet tundra habitat; this is an unlikely location for nesting Bald or Golden Eagles. In the unlikely event that nesting eagles are present, steps to ensure that temporary disturbances are kept a minimum of 660 feet away from the

nest tree, and construction activities are scheduled to avoid times when the birds are nesting (April through September). If a nest is found in or near the project area construction will cease and the yet to be determined project contractor will immediately consult with USFWS on appropriate action.

The Preferred and No-Action Alternatives are in compliance with the Migratory Bird Treaty Act and Migratory Bird Conservation Act (16 U.S.C. 703-715): The proposed project is not anticipated to negatively impact migratory or nesting birds. To limit potential impacts to nesting birds, land clearing will not take place between May 20 and July 20.

B. Agriculture – Prime or Unique Farmland – Not applicable; there is no identified Prime or Unique Farmland in Alaska or the proposed project area.

5. Cultural, Historic, and Religious Properties

A. Historic Properties

The Preferred and No-Action Alternatives are believed to be in compliance with the National Historic Preservation Act Section 106 (16 470f): An archaeological assessment of the Preferred Alternative recommended a finding of no historic properties affected be issued for the West Airport Road Project (TNSDS, 2014). The concurrence letter can be found in Appendix B.

B. Religious Freedom

The Preferred and No-Action Alternatives are in compliance with the American Indian Religious Freedom Act of 1978 (PL 95-341): None of the alternatives would interfere with access to known areas required for cultural or religious practices.

6. Socioeconomic Conditions

A. Environmental Justice

The Preferred and No-Action Alternatives are in compliance with the Executive Order 12898: The Village of Deering is predominantly Alaska Native or American Indian, both minority groups. The BIA has determined that no disproportionately high or adverse human health or environmental impacts to the minority or low-income population within Deering would occur as a result of the Preferred Alternative.

B. Relocation of Residents

Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (PL 91-646) and Title IV – Uniform Relocation Act amendments of 1987 (42 U.S.C 4601): There are no relocations associated with the Preferred Alternative.

C. Community Infrastructure

The preferred alternative will not adversely affect water supply, sewer, or storm water. The proposed project will expand and enhance the community road and emergency evacuation infrastructure through the construction of the West Airport Road and bridge.

7. Resources Use Pattern

A. Hunting-Fishing-Gathering Subsistence: The Preferred Alternative may improve access to hunting-fishing-gathering subsistence sites.

B. Timber Harvesting or Range

Forrest and Rangeland Renewable Resources Planning Act of 1975 (16 U.S.C.A. 1600 to 1614): No commercially viable timber clearing is associated with this project.

C. Land Use Plans: In 2005/06 Deering worked with planners from the Northwest Arctic Borough Planning Department to develop the Deering Community Comprehensive Plan 2006-2016. The proposed project is project number 4 on their list of "Top 10 Capital Project Priorities".

8. Other Values

A. Sound and Noise

The Preferred and No-Action Alternatives are in compliance with the Noise Control Act of 1972 (42 U.S.C. 4901-4918): The preferred alternative will be in compliance with noise emission standards established by the EPA. Any increase in noise associated with construction would be temporary and short in duration.

The Preferred and No-Action Alternatives are in compliance with the Federal Highway Administration Procedures for Abatement of Traffic Noise and Construction Noise (23 CFR 772): The Preferred Alternative is located in a remote village in Alaska that has limited traffic. Therefore, this is not applicable to this project. Additionally, the proposed project site is new road construction and will not interfere with the existing Deering infrastructure.

B. Public Health and Safety: The proposed project is not anticipated to have any negative effects on public health and safety. The proposed project will enhance public safety by creating an alternate emergency egress for the village of Deering and create year-round reliable access to the airport for quick access during a medical emergency requiring airlifting to hospital facilities in Nome or Anchorage.

C. The Preferred and No-Action Alternatives are in compliance with the Toxic Substance Control Act of 1986 (TSCA) (15 U.S.C.A. 2601-2692): None of the alternatives will result in the inadvertent exposure of any humans to lead, radon, or asbestos.

D. The Preferred and No-Action Alternatives are in compliance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C.A.9601 to 9675) and the Superfund Amendments and Reauthorization Acts of 1986: None of the alternatives would knowingly expose humans to any hazardous substances listed in CERCLA at levels above established health criteria.

E. The Preferred and No-Action Alternatives are in compliance with the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act (RCRA) and the Federal Facilities Compliance Act of 1992 (42 U.S.C. 6901-6992): None of the alternatives will involve the treatment, storage, transportation or disposal of any listed chemical, or the disposal of solid waste on the site.

F. Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) (7 U.S.C.A. 136 to 136y): None of the alternatives will require the use of pesticides.

G. Food Safety: None of the alternatives involve any food preparation or serving of food.

H. Building Official and Code Administrators (BOCA) Standards for: construction, electrical, fire, and safety practices. None of the alternatives include construction or operation of public buildings or residences.

I. The Preferred and No-Action Alternatives are in compliance with the Occupational Safety and Health Act (OSHA) of 1970 (29 U.S.C. 651 et seq.): The unnamed construction contractor's Health and Safety Officer will be responsible for ensuring that OSHA regulations are obeyed and enforced.

J. Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 (42 U.S.C. 11011 et seq.): None of the alternatives would involve the use, transportation, or storage of listed hazardous materials.

K. Resource Conservation and Recovery Act (RCRA) Subchapter IX – Regulation of Underground Storage Tanks (42 U.S.C. 6991-6991i): None of the alternatives involve the use or closure of underground storage tanks.

L. Coast Guard Regulations: The Preferred Alternative will require the construction of a bridge over Smith Creek, which is not considered a navigable waterway and will therefore not require a USCG Bridge Permit.

M. Section 10 of the Rivers and Harbors Act: The Preferred Alternative will cross Smith Creek which is covered under Section 10 Rivers and Harbors Act of 1899. Since Smith Creek is not considered a navigable waterway of the US, the proposed structure will not require a permit through the USACE.

Direct, Indirect, and Cumulative Effects: The proposed project is not anticipated to have any negative direct, indirect, or cumulative effects to the environment, on the Village of Deering. It is fully anticipated that the proposed project will have only positive effects that will directly, indirectly, and cumulatively impact the community. The direct positive effect is that the residents will have an enhanced/expanded road infrastructure. Cumulative effects include reliable access to the airstrip and enhanced emergency evacuation/access route.

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5.0 LIST OF PREPARERS

Name/Title/Company	Expertise Applied to Environmental Assessment
Isaac Pearson, P.E. Senior Engineer, Bristol	Project Manager, QA/QC
Eric Lindeen Environmental Scientist, Bristol	Environmental research, author, impact assessement, QA/QC
Robert Burdick, EIT Staff Engineer, Bristol	Calculations and estimates/development of road design.
Kraig Hughes, P.E. Senior Engineer, Bristol	Calculations and estimates/development of bridge design.

(Intentionally Blank)

6.0 REFERENCES

Alaska Department of Commerce, Community, and Economic Development (DCCED 2014), *Alaska Community Database website, Community Profiles Online: Deering*, Website: http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.cfm

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Alaska Department of Fish and Game (ADFG 2014), *Anadromous Fish Stream Viewer*, Website: http://gis.sf.adfg.state.ak.us/AWC_IMS/viewer.htm

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Selkregg, Lidia L., ed., (1976*), Alaska Regional Profiles: Northwest Region, Volume V*, University of Alaska, Arctic Environmental Information and Data Center, Anchorage, Alaska.

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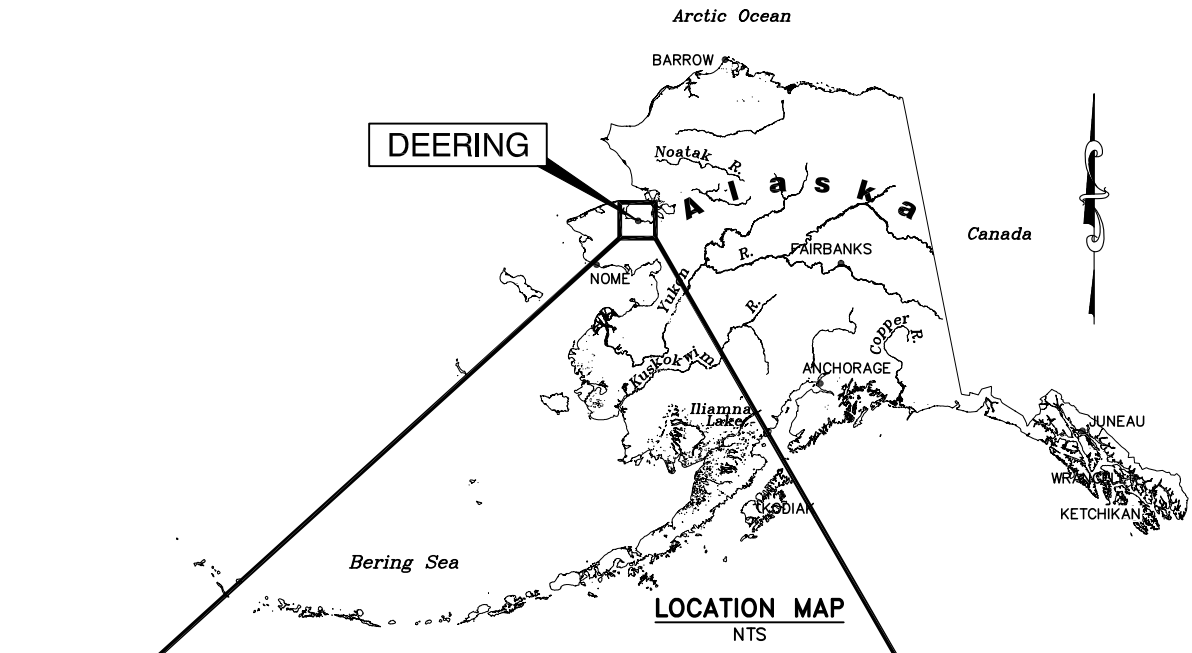
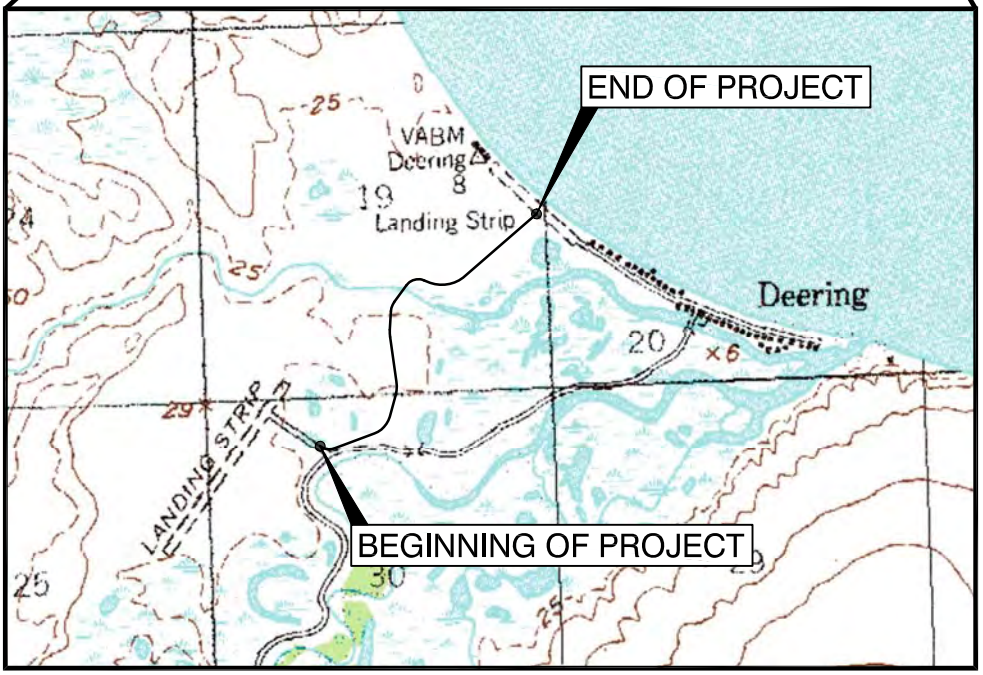
U.S. Army Corps of Engineers (COE), (2014), *Flood Hazard Data: Deering* Website: http://www.poa.usace.army.mil/en/cw/fld_haz/.htm

FIGURES



LOCATION MAP
NTS



VICINITY MAP
SCALE: NTS
SOURCE: U.S.G.S. QUAD
KOTZEBUE A2

FIGURE 1
DEERING, ALASKA
WEST AIRPORT ROAD PROJECT
VICINITY MAP

Bristol
ENGINEERING SERVICES CORPORATION

DATUM: -	DATE MAY 2017	SHEET 1
PROJECTION: -	DWN. JDW	of
PROJECT No. 32140053	SCALE SHOWN	7
	APPRVD. IPP	

PHOTO SOURCE: 2013 DCCED AEROMETRIC PHOTO

0 250 500
SCALE IN FEET

FIGURE 2
DEERING, ALASKA
WEST AIRPORT ROAD PROJECT
SITE PLAN

Bristol
ENGINEERING SERVICES CORPORATION

DATUM: -	DATE	MAY 2017	SHEET 2
PROJECTION: -	DWN.	JDW	of
PROJECT No. 32140053	SCALE	SHOWN	7
	APPRVD.	IPP	

Drawing: K:\JOBS\32140053 WEST AIRPORT RD\ACAD-ENVIRO\EA & ESA FIGS\32140053_FIG2_EA.DWG – Layout: FIG2
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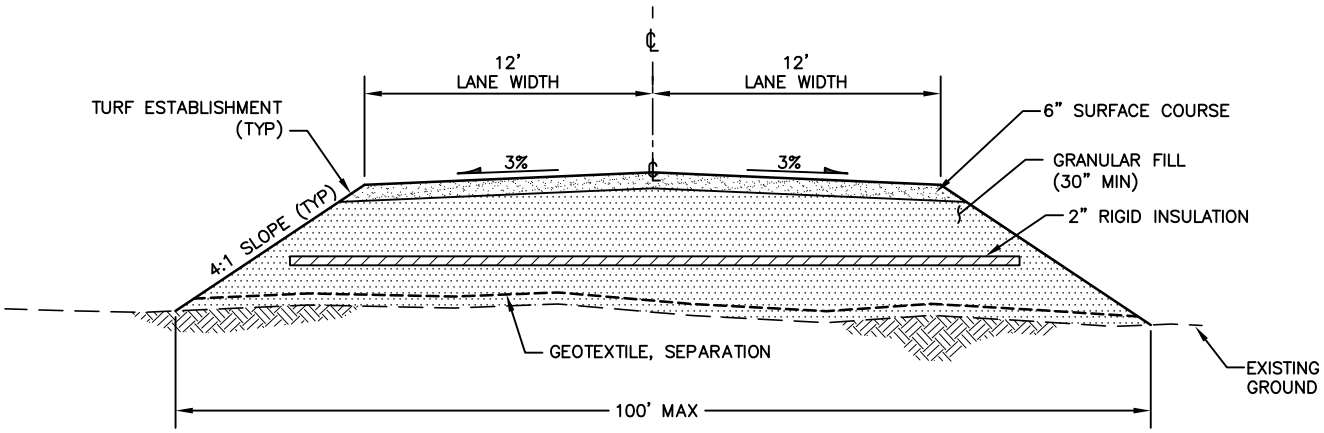

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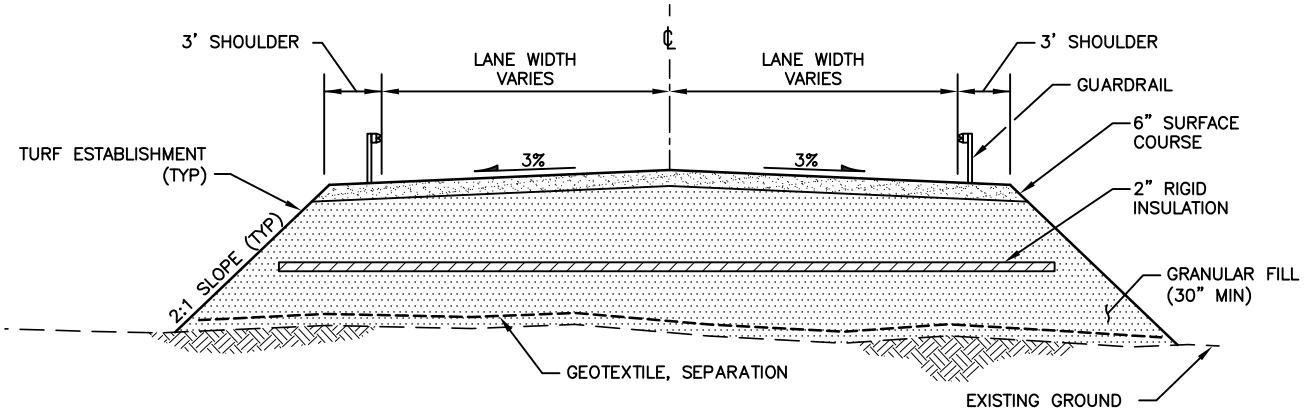
SCALE: NTS



2 — TWO–LANE CROWN SECTION WITH GUARDRAIL
SCALE: NTS

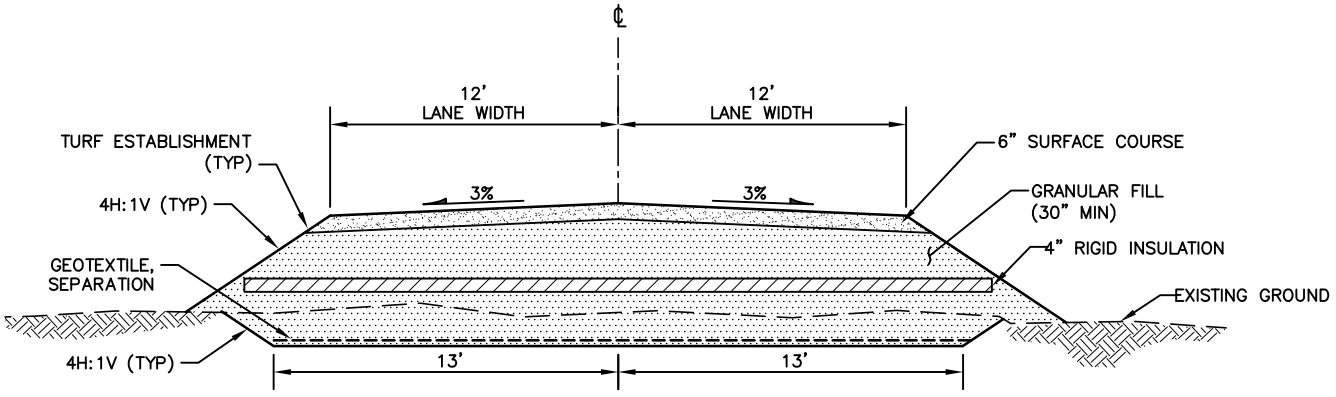
FIGURE 3
DEERING, ALASKA
WEST AIRPORT ROAD PROJECT
TYPICAL SECTIONS

Bristol
ENGINEERING SERVICES CORPORATION

DATUM: -
PROJECTION: -
PROJECT No. 32140053

DATE MAY 2017
DWN. JDW
SCALE SHOWN
APPRVD. IPP

SHEET 3 of 7



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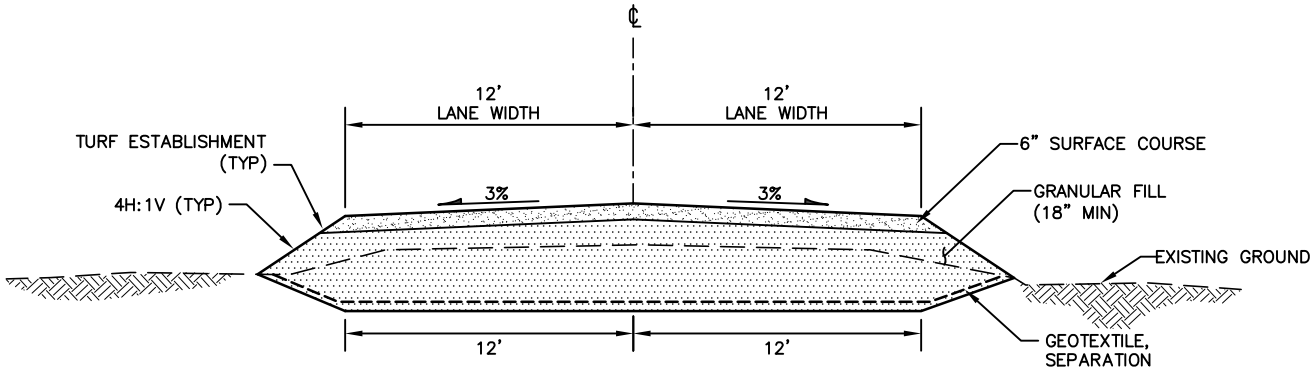

2 — TWO–LANE CROWN ROAD RECONSTRUCTION

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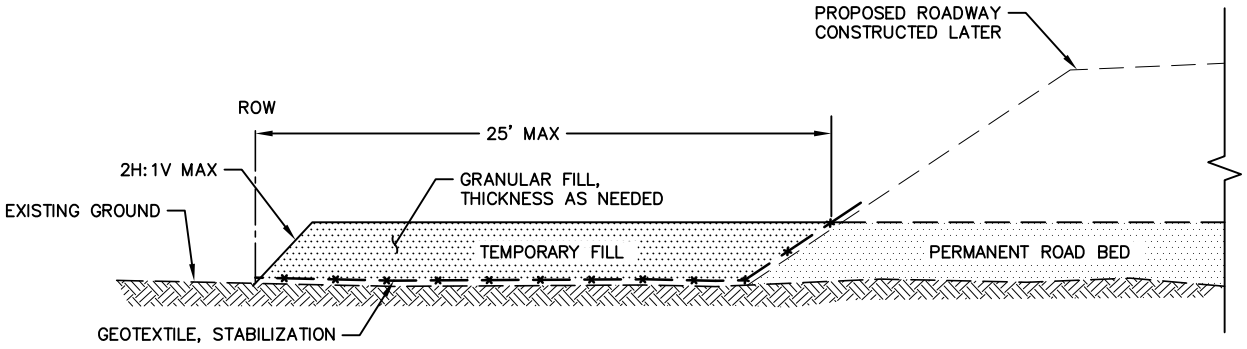


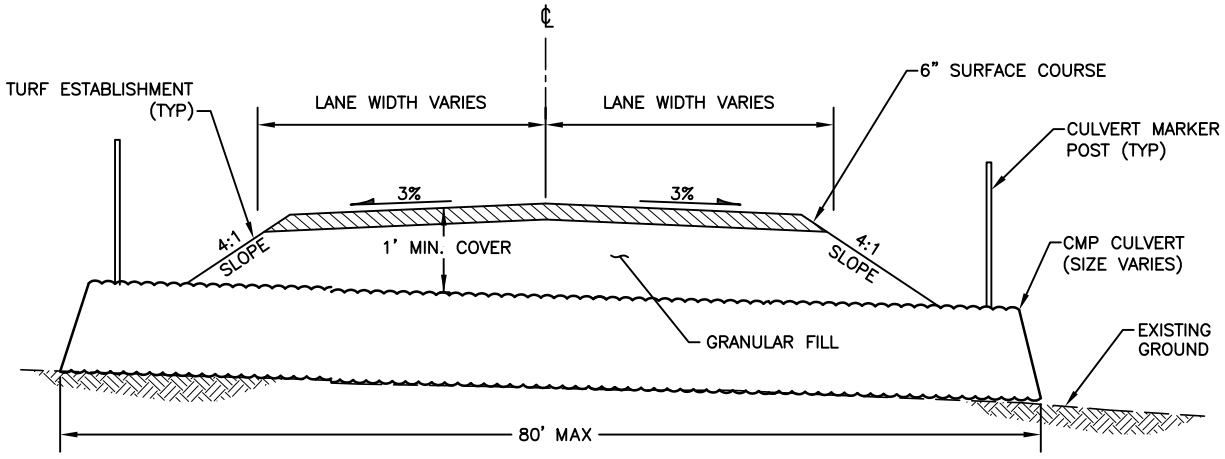
3 — TEMPORARY CONSTRUCTION PAD

SCALE: NTS

FIGURE 4
DEERING, ALASKA
WEST AIRPORT ROAD PROJECT
TYPICAL SECTIONS

Bristol
ENGINEERING
SERVICES CORPORATION

DATUM: -	DATE	MAY 2017	SHEET 4
PROJECTION: -	DWN.	JDW	of
PROJECT No. 32140053	SCALE	SHOWN	7
	APPRVD.	IPP	



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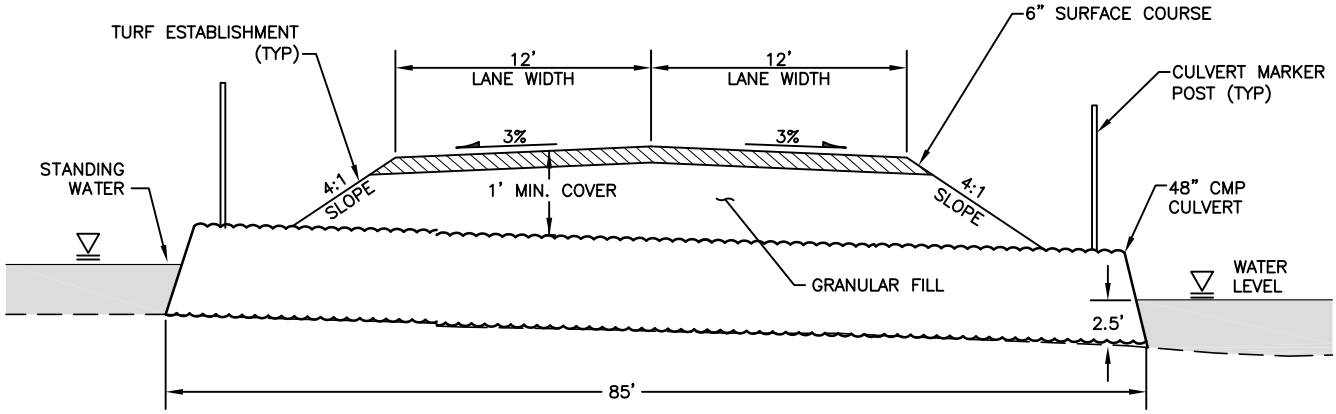
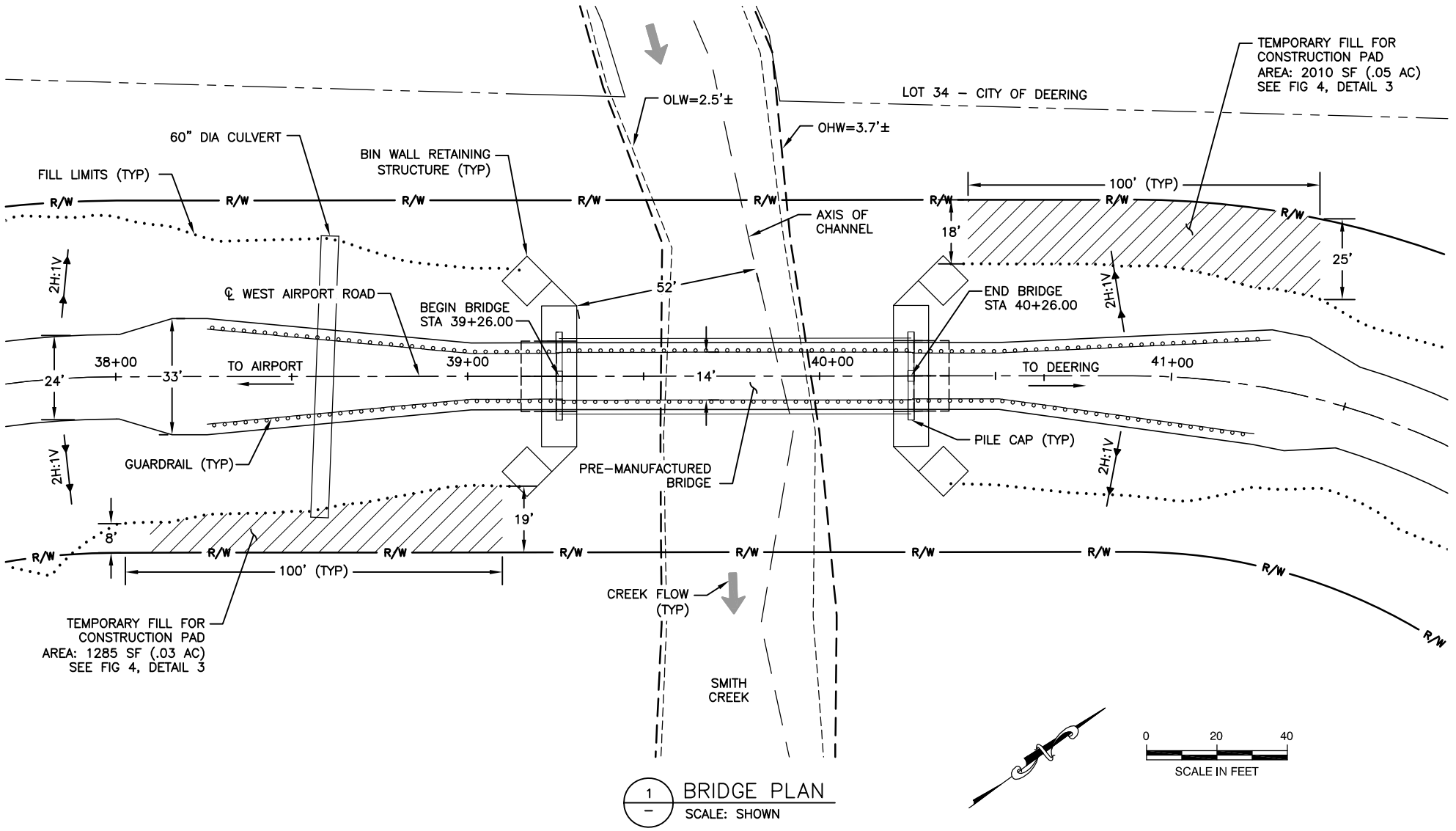


2 — SPECIAL CULVERT SECTION
SCALE: NTS

FIGURE 5
DEERING, ALASKA
WEST AIRPORT ROAD PROJECT
TYPICAL SECTIONS

Bristol ENGINEERING SERVICES CORPORATION

DATUM: -	DATE MAY 2017	SHEET 5
PROJECTION: -	DWN. JDW	of
PROJECT No. 32140053	SCALE SHOWN	7
	APPRVD. IPP	



1 / - BRIDGE PLAN
SCALE: SHOWN

NOTES

1. VEHICULAR BRIDGE FOR PUBLIC USE WILL BE AASHTO-LRFD COMPLIANT.
2. NO FILL WILL BE PLACED BELOW OHW.

ABBREVIATIONS

OHW = ORDINARY HIGH WATER (SEPTEMBER 2013)
OLW = ORDINARY LOW WATER (SEPTEMBER 2013)

MAP INFO

PARCEL OWNER
NANA REGIONAL CORPORATION INC.

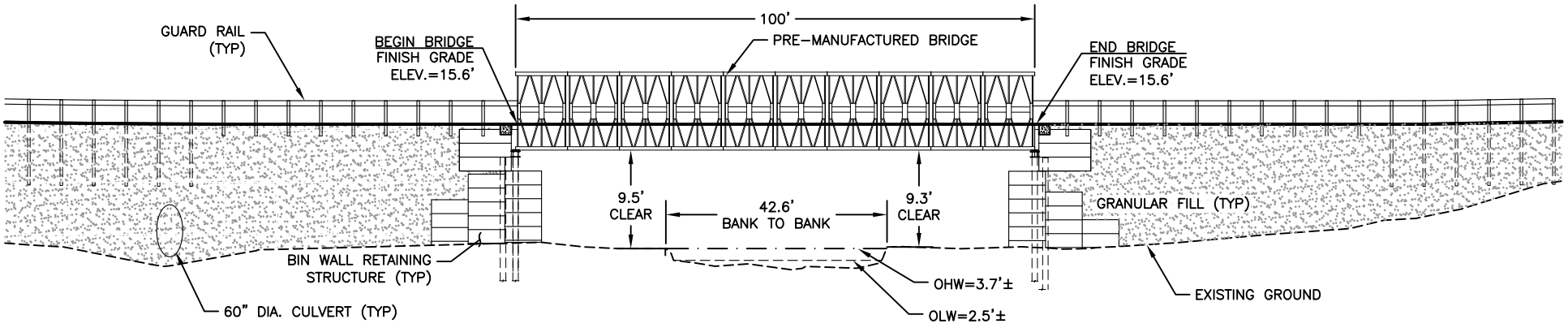
HORIZONTAL DATUM:
ALASKA STATE PLANE NAD83, ZONE 7, U.S. FEET

VERTICAL DATUM:
NAVD88

FIGURE 6
DEERING, ALASKA
WEST AIRPORT ROAD PROJECT
BRIDGE PLAN

Bristol ENGINEERING SERVICES CORPORATION

DATUM: -	DATE MAY 2017	SHEET 6
PROJECTION: -	DWN. JDW	of
PROJECT No. 32140053	SCALE SHOWN	7
	APPRVD. IPP	



1 – BRIDGE ELEVATION AT BRIDGE ℄
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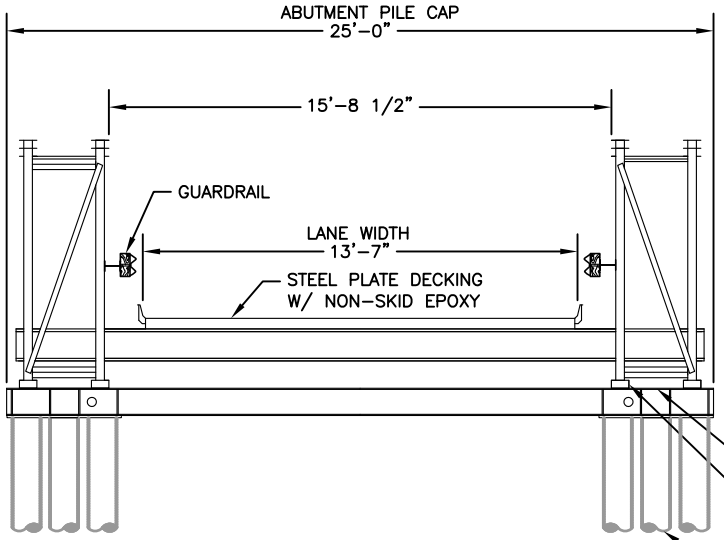


2 – VEHICULAR BRIDGE SECTION
SCALE: NTS

NOTES

1. VEHICULAR BRIDGE FOR PUBLIC USE WILL BE AASHTO-LRFD COMPLIANT.

HORIZONTAL DATUM:
ALASKA STATE PLANE NAD83, ZONE 7, U.S. FEET

VERTICAL DATUM:
NAVD88

FIGURE 7
DEERING, ALASKA
WEST AIRPORT ROAD PROJECT
BRIDGE ELEVATION & SECTION

Bristol ENGINEERING SERVICES CORPORATION

DATUM: -	DATE MAY 2017	SHEET 7
PROJECTION: -	DWN. JDW	of
PROJECT No. 32140053	SCALE SHOWN	7
	APPRVD. IPP	

APPENDIX A

SCOPING DOCUMENTS

Bristol
ENGINEERING
SERVICES CORPORATION

111 W. 16th Avenue, Third Floor
Anchorage, AK 99501-5109
907-563-0013 Phone
907-563-6713 Fax

March 7, 2014

Subject: Agency Scoping Request for Comments
West Airport Road Project, Deering, Alaska

Dear Agency Representative:

The Native Village of Deering has contracted Bristol Engineering Services Corporation (Bristol) to develop plans, complete environmental permitting and the NEPA process, for new road and bridge construction in Deering, Alaska. The proposed project will improve the road infrastructure and establish an emergency evacuation route for the Community (Figures 1 & 2).

Funding for this project will be through the Bureau of Indian Affairs (BIA) – Indian Reservations Roads (IRR) Program; therefore this is a federal undertaking. In accordance with the National Environmental Policy Act (NEPA), Bristol is soliciting comments from potentially interested parties to determine if the proposed project could significantly impact the natural environment. Responses and recommendations received by Bristol as a result of this action will be used to determine the appropriate NEPA documentation procedure.

PROJECT LOCATION

The Native Village of Deering is located on Kotzebue Sound at the mouth of the Inmachuk River, approximately 57 miles southwest of Kotzebue. It is built on a flat sand and gravel spit approximately 300 feet wide and approximately half-mile long. It lays at approximately 66.07° North Latitude and -162.71° west Longitude (Sections 19 and 30, Township 008 North, Range 019 West, Kateel River Meridian). The area encompasses 5.1 sq. miles of land and 0.1 sq. miles of water (DCCED, 2013). Deerong is located in the Cape Nome Recording District.

PROPOSED PROJECT

The proposed project will consist of construction a new road (Figure2) the will serve as an evacuation route for the village residents. The road driving surface will be approximately 24 feet wide by 1 mile long and include a bridge crossing over Smith Creek. Placement of fill into wetlands will be unavoidable and will consist of no more than 10 acres.

At this early stage it is anticipated the bridge will likely be a single span/rail car bridge with earthen abutments. The bridge structure will allow a minimum of 6 feet of vertical clearance from ordinary high water (OHW) and a minimum of 10 feet horizontal clearance between

abutments at OHW. The plan is to have significantly more horizontal clearance than the required minimum. At this time there are no in-stream piers planned.

Culverts will be appropriately placed along the proposed road corridor to ensure drainage patterns. Culvert placement and drainage patterns along the road corridor will be evaluated during the design phase of the project. No stream culverts are associated with this project.

PURPOSE AND NEED

The proposed project will improve the infrastructure and safety of travel within the Native Village of Deering. The new road and bridge will serve as the primary egress for emergency evacuation from the village to the airport area during seasonal and tidal flooding when the existing Deering Airport Road is typically washed out. A new bridge over Smith Creek will have the load-bearing capacity necessary to move heavy equipment into and out of Deering year round as the existing bridge over Smith Creek on Deering Road is not strong enough to support these heavy loads.

PROPOSED ACTION

Borrow Source

Borrow material will come from existing, permitted borrow sites located along Airport Road.

Right Of Way Status

The right-of-way (ROW) and surface rights belong to the Native Village of Deering. The road and bridge ROW will need to be acquired by the City of Deering prior to construction.

Construction

Construction events and descriptions are as follows:

- Geotextile will be placed over the ground surface, followed by placement of fill material to create the desired road shape.

- Placement of Culverts – Culverts will be appropriately placed along the proposed road corridor to ensure drainage patterns are maintained and adjacent to the bridge to increase flow, especially during break-up and flooding conditions.

- Placement of Sub-Base and Base Course –Gravel sub-base course will be used to create the embankment for the road reconstruction/resurfacing. The fill will come from a permitted borrow source.

- Placement of Surface Course –The surface course will be crushed aggregate.

PERMITTING

Permits identified for this project consist of:

- USACE Jurisdictional Determination (JD) and Section 10/404/401 Permit Application
- ADNR, State Historic Preservation Office (SHPO) – Compliance with Section 106 of the National Historic Preservation Act
- ADNR- MLW - Temporary Water Use Permit Application
- ADF&G – Habitat Division Fish Habitat (Title 41) Permit – Water withdrawal
- U.S. Coast Guard Bridge Permit Application

RESPONSE REQUEST

Bristol wishes to solicit comments regarding the potential effects of the project, and requests any comments you may have regarding:

- Additional permits and/or clearances not identified that must be obtained from your agency for the proposed project;
- Information and data with respect to the base floodplains, regulatory floodways, and/or specialized flood hazard area associated with drainages that will be affected by the proposed project;
- Identification of any potential conflicts the project may have with the goals or objectives of the local land use plans, and development;
- Water quality concerns;
- Information or data on sensitive fish and wildlife habitats potentially affected by the proposal;
- Information with respect to public road use, access problems, land use concerns, subsistence issues, and/or any other special conditions that may be affected by the proposed project; and
- The presence of sites, structures and objects of historic, architectural, or cultural sensitivity.

There is no agency meeting planned for this project at this time; however, if sufficient interest is indicated, an agency meeting will be scheduled.

Please share with us any comments or recommendations you may have regarding the described project. **We would appreciate receiving your comments by April 9, 2014**. If you have any questions about the proposed project or would like to comment verbally, please call me at 907-743-9316 or e-mail your comments to sluetters@bristol-companies.com; if you would like to mail in your comments, please mail them to:

Ms. Susan Luetters
Bristol Engineering Services Corporation
111 W. 16th Avenue, Third Floor
Anchorage, Alaska 99501

Thank you for your assistance.

Sincerely,

Bristol Engineering Services Corporation

Susan T. Luetters
Sr. Environmental Scientist

Attachments: Figure 1: Vicinity Map
Figure 2: Site Location Map
Attachment A: Preliminary Research Results

RECIPIENTS:

State of Alaska

Mr. Jim Rypkema	ADEC - Water Quality
Ms. Judith Bittner	ADNR - SHPO
Mr. Gary Mendivil	ADEC - Commissioners Office
Mr. Bill Morris	ADNR – Habitat Division, Fairbanks Office
Ms. Taunnie Boothby	ADNR – DCCED

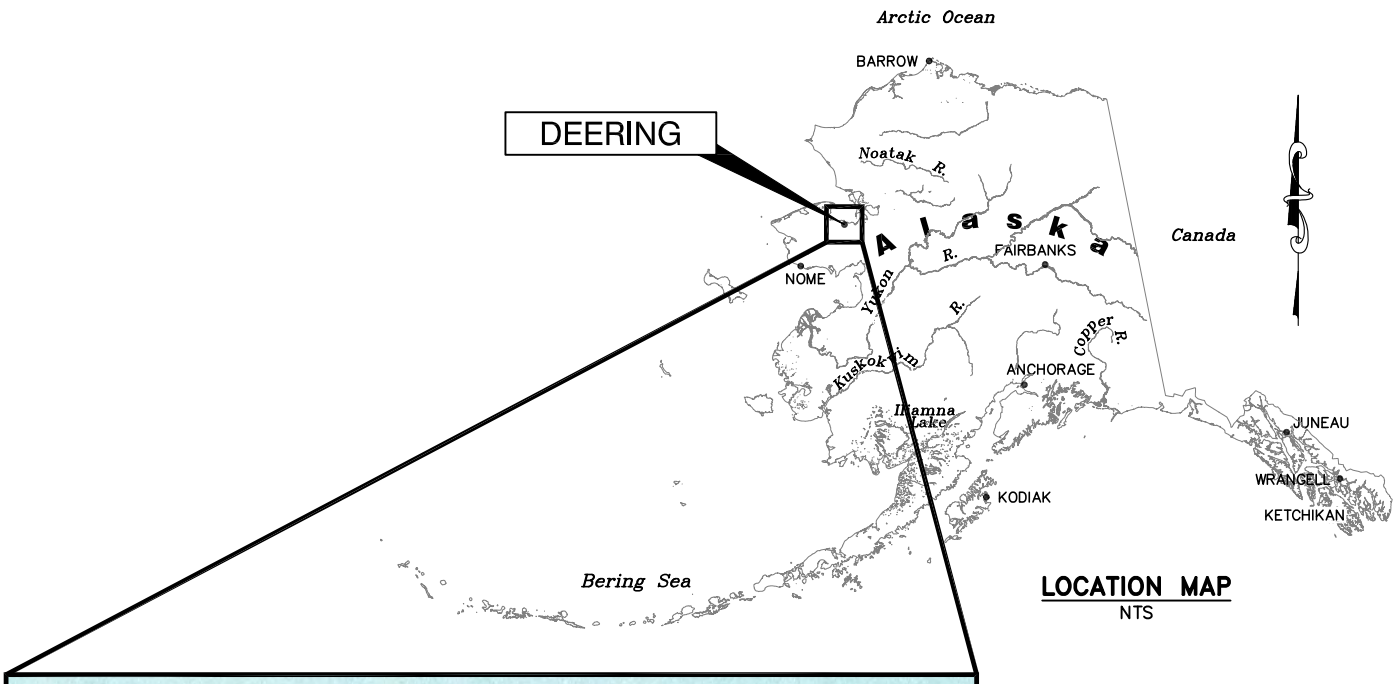
Federal

Mr. Ted Swem	USFWS – Endangered Species
Ms. Jewel Bennett	USFWS – Conservation Planning
Mr. Mike Holley	USACE – Regulatory, North Branch
Ms. Kaiti Ott	USFWS – Threatened & Endangered Species

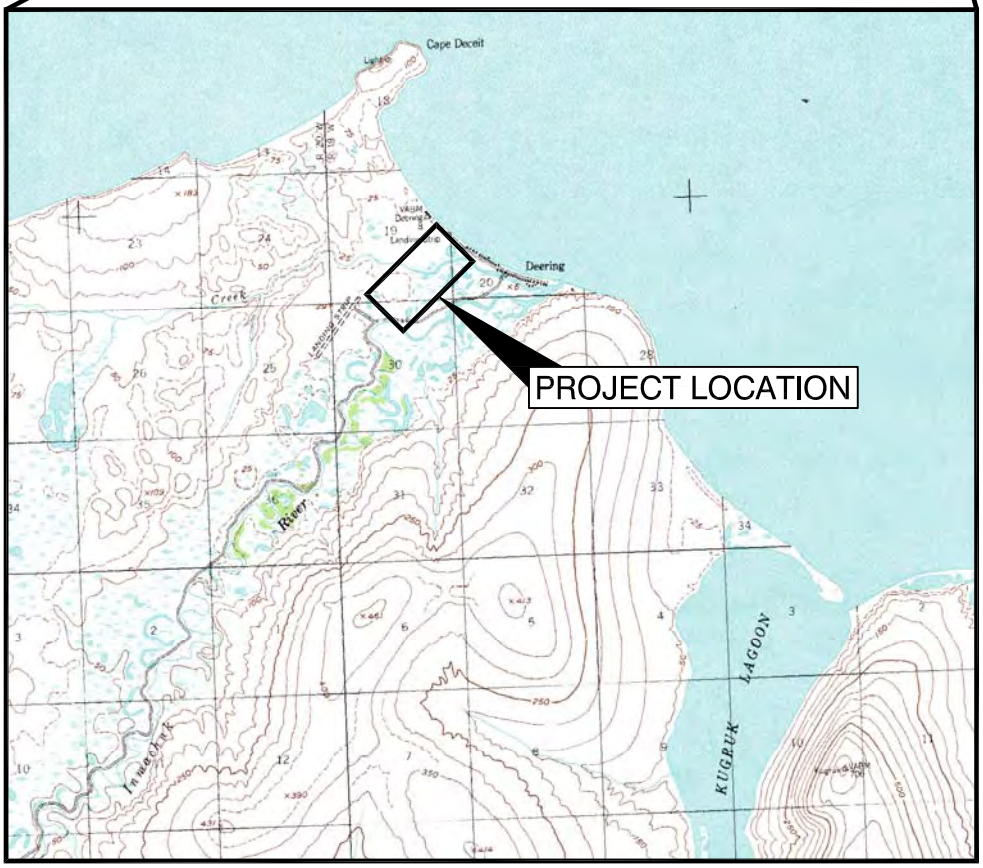
Mr. Ricky Hoff	BIA – Archaeology
Mr. Mark Kahklen	BIA – Environmental
Mr. Kevin Kearny	USCG – Bridge Permitting

Local/Native

Ms. Delores Iyatunguk	Native Village of Deering – Tribal Administrator
Mr. Ronald Moto Sr.	City of Deering – Mayor
Mr. Walter Sampson	NANA Regional Corporation - Lands Manager



LOCATION MAP
NTS



VICINITY MAP
SCALE: NTS
SOURCE: U.S.G.S. QUAD
KOTZEBUE A2

FIGURE 1
DEERING, ALASKA
WEST AIRPORT ROAD PROJECT
VICINITY MAP

Bristol
ENGINEERING SERVICES CORPORATION
Phone (907) 563-0013 Fax (907) 563-6713
Project No. 32140053

DATUM:	DATE FEB 2014	SHEET 1
NONE	DWN. CLC	
PROJECTION:	SCALE SHOWN	of
NONE	APPRVD. TRI	2

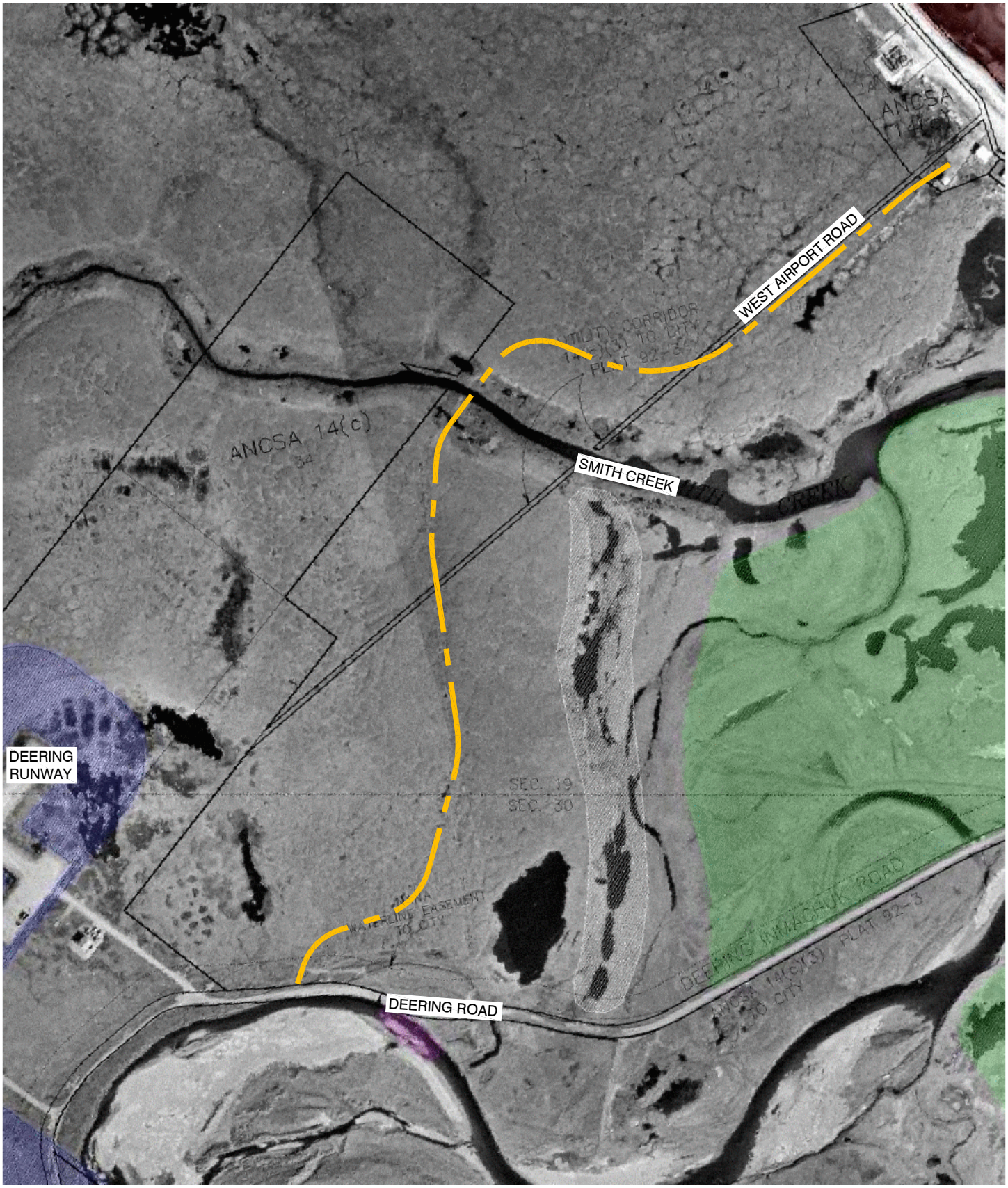


PHOTO SOURCE: 1997 DCED AREA USE MAPPING

0 250 500
SCALE IN FEET

FIGURE 2
DEERING, ALASKA
WEST AIRPORT ROAD PROJECT
SITE PLAN

Bristol
ENGINEERING SERVICES CORPORATION
Phone (907) 563-0013 Fax (907) 563-6713
Project No. 32140053

DATUM: NONE	DATE FEB 2014	SHEET 2
PROJECTION: NONE	DWN. CLC	
	SCALE SHOWN	of
	APPRVD. TRI	2

Drawing: K:\JOBS\32140053 WEST AIRPORT RD\ACAD-ENVIRO\SCOPING\321340053_FIG2.DWG – Layout: FIG2
User: CCHRISTIANSON Feb 07, 2014 – 3:34pm Xrefs: BR_85X11P.DWG – Images: DEERINGAREA-1997.SID

ATTACHMENT A
Preliminary Research Results

Preliminary research results for the proposed West Airport Road Project.

Anadromous Fish Streams: Review of the Alaska Department of Fish & Game (ADFG) Anadromous Fish Distribution Database (FDD) shows the proposed project corridor is located in proximity (~0.5 mile) to the Inmachuk River, which empties into Kotzebue Sound to the north/northeast of the project corridor. The Inmachuk River has been cataloged in the ADFG/FDD with a catalogue number of 331-00-10750, showing the presence of rearing Coho Salmon, Pink Salmon, and Dolly Varden. There is a bridge that is associated with this project will crossover Smith Creek. Though this Creek dumps into the Inmachuk River at the mouth, the ADFG FDD does not identify it as an anadromous stream. The proposed project will take place entirely inland therefore the construction is not anticipated to affect area anadromous fish.

The project's anticipated water needs, for the purpose of compaction and as a dust palliative during construction, will require water withdrawal from the Inmachuk River. Appropriately sized screens will be fitted on all pumps to ensure no fish are impacted by the water withdrawal. The required water withdrawal is not anticipated to negatively affect area anadromous fish.

Coastal Zone Management: The ADNR - Alaska Coastal Management Plan (ACMP) was dismantled; effective July 1, 2011.

Contaminated Sites, Spills and Underground Storage Tanks: According to the DEC Contaminated Sites Program (CSP) Database, there is 1 active contaminated sites listed within Deering, involving fuel contamination at the Old Bulk Fuel Tank Farm. The site appears to be outside the vicinity (>0.5 mile) of the project area. The listed site is not anticipated to negatively affect the proposed project or be a cause for environmental concern.

A search on the online DEC Spills Database yielded results for 4 separate spills in the Deering area. All 4 of the reported spills appear to have not occurred in or near the proposed project corridor and have been assigned the status of "Case Closed, No Further Action" and therefore will not affect the proposed project.

A search of the DEC Underground Storage Tank Database reported no sites for the Deering area.

Critical Habitat and Sanctuaries: The USFWS ECOS Mapper shows that the proposed project is located within the recently vacated by the federal courts, polar bear critical habitat. A review of ADFG webpage of State Refuges, Critical Habitat Areas, and Sanctuaries found no State Refuges, Critical Habitat Areas, and/or Sanctuaries in or near Deering or the proposed project corridor.

Eagles: According to the United States Fish and Wildlife Service (USFWS) Alaska Bald Eagle Nest Atlas no known bald eagle nests occur in or near Nome or the project area. The fact that there were no known nests may be attributed to there having not been any reported nests and therefore no surveys in the area, but due to the habitat type of the

project area it is highly unlikely to attract and support nesting eagles. Prior to construction the contractor will perform a site survey to confirm that nesting eagles are not present. In the event that nesting eagles are present, the contractor will take steps to ensure that temporary disturbances are kept a minimum of 660 feet away from the nest tree, and construction activities are scheduled to avoid times when the birds are nesting (April through September).

Essential Fish Habitat: The NOAA website on Essential Fish Habitat (EFH) was consulted to determine the status of the area of the project. The project will take place entirely on land and therefore EFH will not be encountered.

Floodplain Management: According to FEMA, the area is not mapped for flood data. The USACE flood hazard data showed that Deering is not a participant in the National Flood Insurance Program (NFIP). The proposed project involves summer road and bridge construction, and is not anticipated to be impacted by a coastal flooding event.

Historical, Archaeological, and Cultural Properties: This is a federally funded project, therefore Section 106 is in effect and all requirements will be met prior to construction. An archaeological survey will be completed for the proposed project corridor by Mr. Robert Meinhardt of trueNORTH Sustainable Development Solutions, LLC. The survey will be submitted to BIA-Archaeology for their concurrence and subsequent submittal to SHPO for review and approval.

Local Government: The City of Deering is an unorganized, 2nd Class City with a population of 142. Elected/Appointed Officials include a Mayor and City Council.

Material Source and Disposal Sites: The borrow material for this project will come from an existing, permitted, borrow source. At this time there does not seem to be any material excavation associated with the proposed project.

National Forests: The proposed project corridor is not located within a National Forest.

National Parks, Preserves, and Monuments: The proposed project corridor is not located within or near any National Parks, Preserves or Monuments.

National Wildlife Refuges: The proposed project corridor is not located within a National Wildlife Refuge.

Navigability: Not applicable.

State Parks: The project area is not located within a State Park.

Threatened and Endangered Species: The data from the USFWS Information, Planning and Conservation (IPaC) system was requested as part of this preliminary research. The U.S. Fish and Wildlife Service provides species lists for actions authorized, funded or carried out by federal agencies. The species list fulfills the requirement, under section 7(c) of the Endangered Species Act, to provide a list of threatened and endangered species upon request for federal actions and National Environmental Policy Act (NEPA) compliance. Since this is a new website that is still under development the list generated from IPaC will not deliver information on candidate species in the action area. The IPaC consultation report, tracking number 07CAFB00-2014-SLI-0023, is included as an attachment.

The IPaC information was requested on February 14, 2014 and the following three threatened/endangered species were identified as potentially present in the area:

Polar bear (*Ursus maritiimus*) – Deering is located within the Polar bears distribution/range.

Spectacled eider (*Somateria fischeri*) - Deering is located within the Spectacled eiders historical breeding range but not within their current breeding range or near their wintering/molting areas.

Wetlands: Bristol scientists will perform a wetland delineation along the proposed corridor. The wetland impacts associated with the proposed project will be calculated and submitted to the USACE in the Section 404 Permit Application and Wetland Delineation Report.

Wild and Scenic Rivers: The project will not occur in or near any wild and scenic rivers.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Fairbanks Fish and Wildlife Field Office
101 12TH AVENUE, ROOM 110
FAIRBANKS, AK 99701
PHONE: (907)456-0203 FAX: (907)456-0208

Consultation Tracking Number: 07CAFB00-2014-SLI-0023 February 10, 2014
Project Name: West Airport Rd., Deering

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the

human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: West Airport Rd., Deering

Official Species List

Provided by:

Fairbanks Fish and Wildlife Field Office
101 12TH AVENUE
ROOM 110
FAIRBANKS, AK 99701
(907) 456-0203

Consultation Tracking Number: 07CAFB00-2014-SLI-0023
Project Type: Transportation
Project Description: Road cpnstruction witha bridge over Smith Creek

Project Location Map:

Project Coordinates: MULTIPOLYGON (((-162.7479039 66.078958, -162.735407 66.0818881, -162.735407 66.0822361, -162.7245494 66.0773361, -162.7420846 66.0748475, -162.7527448 66.0678849, -162.7633878 66.0728285, -162.7479039 66.078958)))

Project Counties: Northwest Arctic, AK

Endangered Species Act Species List

There are a total of 3 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed on the **Has Critical Habitat** lines may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Polar bear *(Ursus maritimus)*

Population: Entire

Listing Status: Threatened

Spectacled eider *(Somateria fischeri)*

Population: Entire

Listing Status: Threatened

Has Critical Habitat: Final designated

Steller's Eider *(Polysticta stelleri)*

Population: AK breeding pop.

Listing Status: Threatened

Has Critical Habitat: Final designated

Critical habitats that lie within your project area

There are no critical habitats within your project area.

APPENDIX B

CONSULTATION RESPONSES AND CORRESPONDENCE

Luetters, Susan

From: Wait, Alexander J (DNR) <aj.wait@alaska.gov>
Sent: Tuesday, November 24, 2015 1:09 PM
To: Luetters, Susan
Subject: Deering Smith Creek Project

Ms. Luetters
The Department of Natural Resources, Division of Mining, Land and Water, Northern Region Lands Section received a partial application for a bridge project over Smith Creek within K008N019W19. Within the application, it indicated that the creek was no more than 45' wide between OHW. Based on this information, 11 AAC 51.035 (b), the State of Alaska Navigable Waterbodies Database, and the US Rectangular survey, it appears that Smith Creek is **not** navigable and therefore the bed of the creek was not transferred to the State of Alaska via the Submerged Lands Act, thus no DNR Easement is required. Should Smith Creek be determined to be navigable in the future, and authorization may be required at that time.

Thanks
AJ Wait
Permits and Easements Manager
DNR/DMLW, NRO Lands
451-2777

United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Fairbanks Fish and Wildlife Field Office
101 12th Avenue, Room 110
Fairbanks, Alaska 99701
April 15, 2014

Susan Luetters
Bristol Engineering Services Corporation
111 W. 16th Avenue, Third Floor
Anchorage, AK 99501

Re: POA-2014-121
West Airport Road
Deering, AK

Dear Ms. Luetters:

This letter is in response to your request for informal consultation on endangered and threatened species, and critical habitats pursuant to section 7 of the Endangered Species Act of 1973 (ESA), as amended.

THE PROPOSED ACTION

We understand the Native Village of Deering with funding from the Bureau of Indian Affairs proposes to construct a new road and bridge for improved access to the runway near Deering, Alaska (Figure 1). Gravel placement would occur on approximately 10 acres (0.04 km^2) of wetlands and new gravel infrastructure would be underlain with geotextile fabric. Fill material would be sourced from existing borrow sites along Airport Road. The proposed work is expected to take place from June through September beginning in 2015, with estimated project completion in September 2016. Specific project components include:

West Airport Road
A 1 mi (1.6 km) gravel road would be constructed from the existing Inmachuk Road beginning near the airstrip and terminating northwest of Deering at its intersection with Jeep Road (Figure 1). The road would be approximately 24 ft (7.4 m) wide with one bridge crossing at Smith Creek (Figure 2). Culverts would be placed appropriately to ensure maintenance of drainage patterns.

Smith Creek Bridge
The proposed bridge would likely be a single span/rail car bridge with earthen abutments. The bridge structure would allow a minimum of 6 ft (1.8 m) vertical clearance above the ordinary high water mark.

The Service has reviewed the proposed action to determine if it would adversely affect listed species under our jurisdiction. Three species listed as threatened under the ESA may occur in the project area: spectacled eiders (*Somateria fischeri*), Alaska-breeding Steller's eiders (*Polysticta stelleri*), and polar bears (*Ursus maritimus*).

THE ACTION AREA

The action area is located between the Deering runway and the community of Deering, Alaska near the coast of Kotzebue Sound (Figures 1 and 2).

EFFECTS OF THE ACTION ON LISTED SPECIES

Project effects on listed eiders

The Service listed the spectacled eider on May 10, 1993 (58 FR 27474) and the Alaska-breeding population of the Steller's eider as threatened on June 11, 1997 (62 FR 31748). Listed eiders may migrate through the project area, but neither species currently nests in the region. While migrating eiders may rest and feed in freshwater or terrestrial habitat within the action area, we expect disturbance to migrating eiders would be minor because these birds can respond to human presence or disturbance by moving to a perceived safe distance. Because listed eider density in the action area is extremely low and disturbance to migrating eiders would be so minor that injury or death would not occur, we expect project effects to these birds would be insignificant.

Project effects on polar bears

The Service listed the polar bear as a threatened species under the ESA on May 15, 2008 (73 FR 28212). Polar bears may occasionally pass through or den in the area, although their density is very low and encounters are expected to be rare. Transient (non-denning) bears that enter the action area could be disturbed by the presence of humans or equipment noise. However, we expect disturbances would be minor and temporary because transient bears would be able to respond to human presence or disturbance by departing the area. Furthermore, in the event that personnel encounter polar bears during project activities, they will follow the attached *Polar Bear Interaction Guidelines*.

Due to lack of preferred denning habitat, polar bears rarely den near Deering. Additionally, given that the proposed activity would be limited to snow-free months, effects of the proposed action on denning polar bears would not occur.

Because (1) the density of polar bears in the action area is very low; (2) encounters with polar bears are expected to be rare; (3) behavioral effects to transient bears would be minor and temporary; (4) mitigation measures are included in the interaction guidelines to minimize potential impacts in the event that transient polar bears are encountered; and (5) effects on denning polar bears are not anticipated, we expect effects of the proposed action on polar bears would be insignificant.

CONCLUSION

The proposed action could temporarily disturb listed eiders or polar bears in the project area; however, due to low densities of these species and minimization measures in place, we expect the effects of disturbance to be insignificant. Therefore the Service concludes that the proposed action is not likely to adversely affect listed eiders or polar bears. Preparation of a Biological Assessment or further consultation under section 7 of the ESA is not necessary at this time. Thank you for the opportunity to comment on this project. If you need further assistance, please contact Kaithryn Ott at (907) 456-0277.

Sincerely,

Ted Swem

Ted Swem
Branch Chief
Endangered Species

cc: Estrella Campellone, USACE, Anchorage

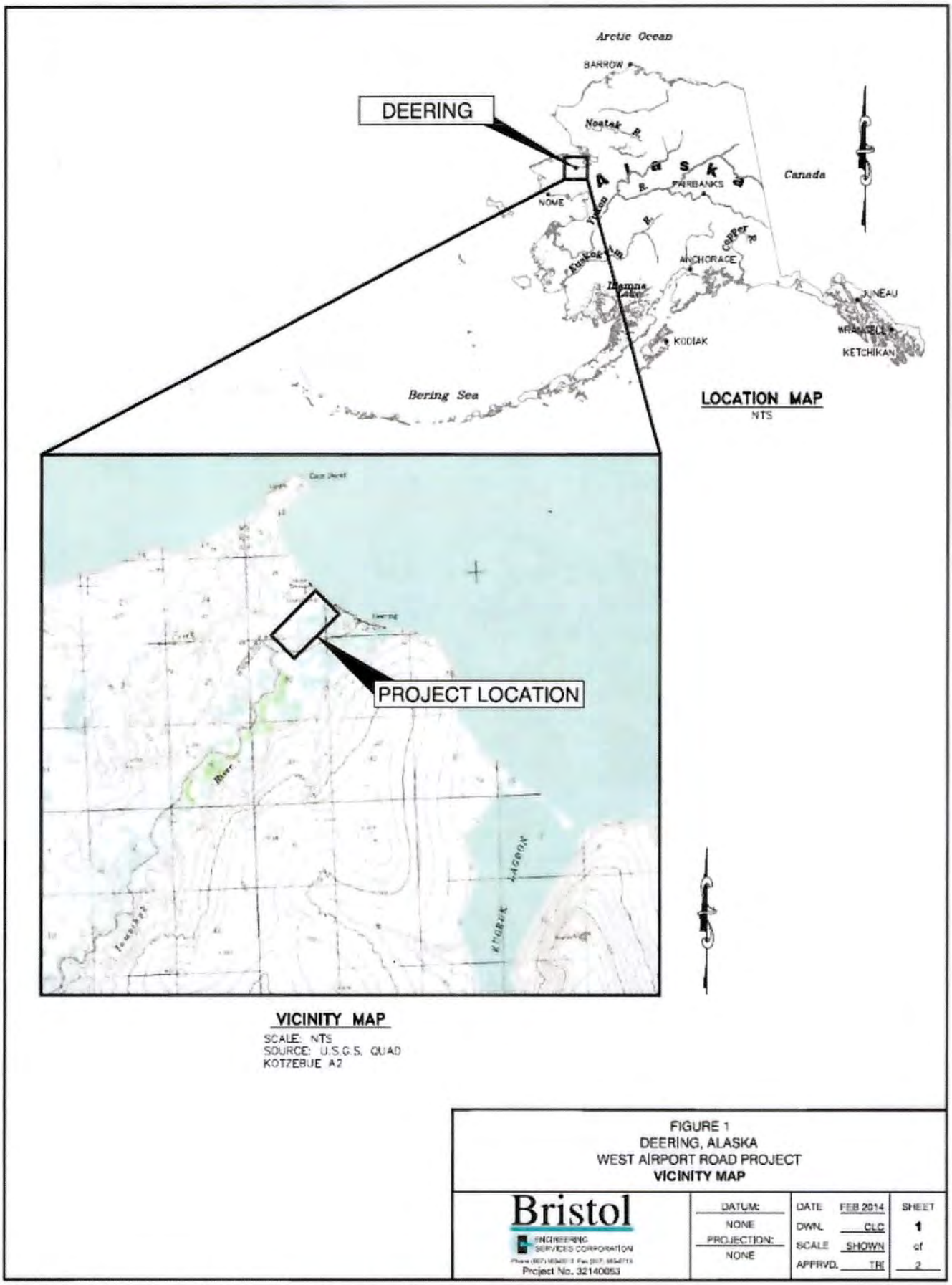


Figure 1. Location of the proposed road project northwest of Deering, Alaska.

Figure 2. Approximate route of the proposed West Airport Road near Deering, Alaska.

15. POLAR BEAR INTERACTION GUIDELINES

These Polar Bear Interaction Guidelines (Guidelines) were developed to ensure that activities are conducted in a manner that avoids conflicts between humans and polar bears. Polar bears are protected under the Marine Mammal Protection Act (MMPA), and were listed as a threatened species under the Endangered Species Act (ESA) in 2008. The MMPA and ESA both prohibit the "take" of polar bears without authorization. Take includes disturbance/harassment, as well as physical injury and killing of individuals.

In addition to sea ice, polar bears use marine waters and lands in northern Alaska for resting, feeding, denning, and seasonal movements. They are most likely to be encountered within 25 miles of the coastline, especially along barrier islands during July-October. Polar bears may also be encountered farther inland, especially females during the denning period (October-April). Polar bears may react differently to noise and human presence. The general methods for minimizing human-bear conflicts are to: 1) avoid detection and close encounters; 2) minimize attractants; and 3) recognize and respond appropriately to polar bear behaviors. These Guidelines provide information for avoiding conflicts with polar bears during air, land, or water-based activities.

Unusual sightings or questions/concerns can be referred to: Susanne Miller or Craig Perham, Marine Mammals Management Office (MMM Office), 1-800-362-5148; or to Sarah Conn (907) 456-0499 of the Fairbanks Fish & Wildlife Field Office (FFWFO).

When operating aircraft:

- If a polar bear(s) is encountered, divert flight path to a minimum of 2,000 feet above ground level or ½ mile horizontal distance away from observed bear(s) whenever possible.

When traveling on land or water:

- Avoid surprising a bear. Be vigilant—especially on barrier islands, in river drainages, along bluff habitat, near whale or other marine mammal carcasses, or in the vicinity of fresh tracks.

- Between October and April special care is needed to avoid disturbance of denning bears. If activities are to take place in that time period the MMM Office should be contacted to determine if any additional mitigation is required. In general, activities are not permitted within one mile of known den sites.

- Avoid carrying bear attractants (such as strongly scented snacks, fish, meat, or dog food) while away from camp; if you must carry attractants away from camp, store foods in air-tight containers or bags to minimize odor transmission until you return them to "bear-resistant" containers.*

- If a polar bear(s) is encountered, remain calm and avoid making sudden movements. Stay downwind if possible to avoid allowing the bear to smell you. Do not approach polar bears. Allow bears to continue what they were doing before you encountered them. Slowly leave the vicinity if you see signs that you've been detected. Be aware that safe viewing distances will vary with each bear and individual situation. Remember that the closer you are to the animal, the more likely you are to disturb it.

- If a bear detects you, observe its behavior and react appropriately. Polar bears that stop what they are doing to turn their head or sniff the air in your direction have likely become aware of your presence. These animals may exhibit various behaviors:

  - *Curious* polar bears typically move slowly, stopping frequently to sniff the air, moving their heads around to catch a scent, or holding their heads high with ears forward. They may also stand up.

  - *A threatened or agitated* polar bear may huff, snap its jaws together, stare at you (or the object of threat) and lower its head to below shoulder level, pressing its ears back and swaying from side to side. These are signals for you to begin immediate withdrawal by backing away from the bear. If this behavior is ignored, the polar bear may charge. Threatened animals may also retreat.

  - In rare instances you may encounter a *predatory* bear. It may sneak or crawl up on an object it considers prey. It may also approach in a straight line at constant speed without exhibiting curious or threatened behavior. This behavior suggests the bear is about to attack. Standing your ground, grouping together, shouting, and waving your hands may halt the bear's approach.

- If a polar bear approaches and you are in the bear's path—or between a mother and her cubs—get out of the way (without running). If the animal continues to approach, stand your ground. Gather people together in a group and/or hold a jacket over your head to look bigger. Shout or make noise to discourage the approach.

- If a single polar bear attacks, defend yourself by using any deterrents available. If the attack is by a surprised female defending her cubs, remove yourself as a threat to the cubs.

When camping:

- Avoid camping or lingering in bear high-use areas such as river drainages, coastal bluffs and barrier islands.

- Store food and other attractants in "bear-resistant" containers*. Consider the use of an electric fence as additional protection. Do not allow the bear to receive food as a reward in your camp. A food-rewarded bear is likely to become a problem bear for you or someone else in the future.

- Maintain a clean camp. Plan carefully to: minimize excess food; fly unnecessary attractants out on a regular basis (i.e. garbage, animal carcasses, excess anti-freeze or petroleum products); locate latrines at least ¼ mile from camp; and wash kitchen equipment after every use.

- If a polar bear approaches you in camp, defend your space by gathering people into a large group, making noise and waving jackets or tarps. Continue to discourage the bear until it moves off. Have people watch the surrounding area in case it returns later, keeping in mind that polar bears are known to be more active at night. Additional measures to protect your camp, such as electric fences or motion sensors can be used.

Harassment of polar bears is not permissible, unless such taking (as defined under the MMPA) is imminently necessary in defense of life, and such taking is reported to FWS within 48 hours.

*Containers must be approved and certified by the Interagency Grizzly Bear Committee as "bear-resistant." Information about certified containers can be found at http://www.igbconline.org/html/container.html.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Fairbanks Fish and Wildlife Field Office
101 12TH AVENUE, ROOM 110
FAIRBANKS, AK 99701
PHONE: (907)456-0203 FAX: (907)456-0208

Consultation Tracking Number: 07CAFB00-2014-SLI-0023 February 10, 2014
Project Name: West Airport Rd., Deering

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

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Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

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We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: West Airport Rd., Deering

Official Species List

Provided by:

Fairbanks Fish and Wildlife Field Office
101 12TH AVENUE
ROOM 110
FAIRBANKS, AK 99701
(907) 456-0203

Consultation Tracking Number: 07CAFB00-2014-SLI-0023
Project Type: Transportation
Project Description: Road cpnstruction witha bridge over Smith Creek

Project Location Map:

Project Coordinates: MULTIPOLYGON (((-162.7479039 66.078958, -162.735407 66.0818881, -162.735407 66.0822361, -162.7245494 66.0773361, -162.7420846 66.0748475, -162.7527448 66.0678849, -162.7633878 66.0728285, -162.7479039 66.078958)))

Project Counties: Northwest Arctic, AK

Endangered Species Act Species List

There are a total of 3 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed on the **Has Critical Habitat** lines may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Polar bear *(Ursus maritimus)*

Population: Entire

Listing Status: Threatened

Spectacled eider *(Somateria fischeri)*

Population: Entire

Listing Status: Threatened

Has Critical Habitat: Final designated

Steller's Eider *(Polysticta stelleri)*

Population: AK breeding pop.

Listing Status: Threatened

Has Critical Habitat: Final designated

Critical habitats that lie within your project area

There are no critical habitats within your project area.

DEPARTMENT OF THE ARMY
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS
REGULATORY DIVISION
P.O. BOX 6898
JBER, ALASKA 99506-0898

APR 14 2014

Regulatory Division
POA-2014-121

U.S. Fish and Wildlife Service
Fairbanks Fish and Wildlife Field Office
Attention: Mr. Ted Swem
101 12th Avenue, Room 110
Fairbanks, AK 99701

Dear Mr. Swem:

This is in regard to the Department of the Army permit application for Bristol Engineering Services Corporation, which proposes the construction of a new 24-foot wide by 1-mile long road and a single span/rail-car bridge with earthen abutments crossing over Smith Creek. The proposed project purpose would be to provide an evacuation route to residents of the Village of Deering and would require placement of fill in approximately 10 acres of wetlands. The proposed project is located within Section 19 and 30, T. 8 N., R. 19 W., Kateel River Meridian; USGS Quad Kotzebue A-2; Latitude 66.0700° N., Longitude -162.7100° W.; Cape Nome Recording District, at approximately 57 miles Southwest of the City of Kotzebue, Alaska. It has been assigned number POA-2014-121, Kotzebue Sound, which should be referred to in all correspondence with us.

The U.S. Army Corps of Engineers (Corps) believes consultation under section 7 of the Endangered Species Act is required for species under your jurisdiction. We hereby designate Ms. Susan Luetters, Sr. Environmental Scientist for Bristol Engineering Services Corporation, as our non-Federal representative to conduct section 7 consultation. Ms. Luetters may be reached via email at sluetters@bristol-companies.com and by phone at (907) 743-9316. The Corps remains responsible for the content of the assessment and for the findings of effect.

Please contact me at Michiel.E.Holley@usace.army.mil, by phone at (907) 753-2777, or Estrella Campellone at Estrella.f.campellone@usace.army.mil, by phone at (907) 753-2518, if you have any questions. For additional information about our Regulatory Program, visit our web site at www.poa.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,

Mike Holley

Mike Holley
North Section Chief

10.10.14 3130-1K BIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
ALASKA REGION

Branch of Regional Archeology
3601 C Street, Suite 1200
Anchorage, Alaska 99503
(907) 271-4003

6 October 2014

Judith E. Bittner
State Historic Preservation Officer
DNR/Division of Parks and Outdoor Recreation
Office of History and Archaeology
550 West 7th Ave., Suite 1310
Anchorage, Alaska 99501

Dear Ms. Bittner,

Enclosed you will find a copy of *2013 Report of Cultural Resources Investigation and Recommendations for Issuing a Section 106 Finding for the Design of West Airport Road, Located in Deering, Alaska.* This report was prepared by Robert L. Meinhardt, Amy Ramierz, Annalisa Heppner, and Phillip T. Ashlock II of True North Sustainable Development Solutions (TNSDS). The Native Village of Deering, the Tribe, has received funds from the Bureau of Indian Affairs' Indian Reservation Roads Program to design an evacuation road from the village center to the airport for flooding, as well as for the movement of heavy machinery in and out of the village. In turn, the Tribe has contracted with Bristol Engineering Services Corporation (BESC) to develop the final design for the West Airport Road Project (BIA Project Number E04117C4). BESC has subcontracted with TNSDS to perform a cultural resource investigation within the proposed APE. The proposed APE consists of a 16 to 20 foot-wide corridor that extends approximately one mile in length for the road itself. Gravel for the project will be sourced locally from two borrow pits; both sources were also included in the APE, and were inventoried as part of this project.

Regional Archeology has reviewed the accompanying cultural resource survey report and finds there are no historic properties within the APE of the project. An on-the-ground cultural resources survey, including subsurface testing, of the APE was conducted. No cultural resources were identified within the project area. If you have any questions regarding this document, please contact me at 271-4003.

No Historic Properties Affected AHP
Alaska State Historic Preservation Officer
Date: 10.10.14 File No.: 3130-1KBIA
Please review: 36 CFR 800.13 / A.S. 41.35.070(d)

Sincerely,

Rita L. Mueglue

ACTING FOR Ricky Hoff
Regional Archeologist

Attachments:
1) Office of History and Archaeology Cover Sheet
2) *2013 Report of Cultural Resources Investigation and Recommendations for Issuing a Section 106 Finding for the Design of West Airport Road, Located in Deering, Alaska (Meinhardt, et al. 2013)*

DEPARTMENT OF THE ARMY
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS
REGULATORY DIVISION
P.O. BOX 6898
JBER, ALASKA 99506-0898

APR 29 2015

Regulatory Division
POA-2014-121

Bristol Engineering Services Corporation
Attention: Ms. Susan Luetters
111 W. 16th Avenue, Third Floor
Anchorage, Alaska 99501-5109

Dear Ms. Luetters:

This is in response to your March 13, 2015, request on behalf of the Native Village of Deering for a Department of the Army (DA) jurisdictional determination for the West Airport Road Project. Your request has been assigned US Army Corps of Engineers (USACE) file number POA-2014-121, the same number established previously with the scoping process you initiated.

The property and project are located within Sections 19 and 30, T. 8 N., R. 19 W., Kateel River Meridian; US Geological Survey Quadrangle Map Alaska Kotzebue A-2; approximate Latitude 66.0734° and Longitude -162.7500° NAD 83 decimal degrees; at Deering, Alaska.

Section 404 of the Clean Water Act requires that a DA permit be obtained for the placement or discharge of dredged and/or fill material into waters of the U.S., including jurisdictional wetlands (33 U.S.C. 1344). The USACE defines wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Based on our review of the information you provided, including your Wetland Delineation/Preliminary Jurisdictional Determination Report, West Airport Road, Deering Alaska, Bristol Project No. 32140053, July 2014 (Wetland Delineation Report) and our existing file records, we have determined the proposed project would involve a discharge of dredged and/or fill material into waters of the US under our regulatory jurisdiction.

Please review and sign the enclosed Preliminary Jurisdictional Determination (PJD) Form and return it to our office. This PJD is not appealable. You may request and obtain an Approved Jurisdictional Determination (AJD) for this proposal at any time which can be appealed. If you intend to request an AJD, do not begin work until one is obtained.

A review of our file records, including your Wetland Delineation Report, indicates the proposed road route may not be the least environmentally damaging practicable alternative available for the project. We look forward to reviewing the environmental assessment you are preparing for the Bureau of Indian Affairs to aid in our eventual permit application evaluation process.

Nothing in this letter excuses you from compliance with other Federal, State, or local statutes, ordinances, or regulations.

Please contact me via email at harry.a.baij@usace.army.mil, by mail at the address above, by phone at (907) 753-2784, or toll free from within Alaska at (800) 478-2712, if you have questions or to request paper copies of the regional and/or general conditions. For more information about the Regulatory Program, please visit our website at www.poa.usace.army.mil/Missions/Regulatory.

Sincerely,

H. Baij

Harry A. Baij Jr.
Project Manager
North Section

Enclosure

APPENDIX C

PERMITS

THE STATE of ALASKA
GOVERNOR BILL WALKER

Department of Fish and Game

DIVISION OF HABITAT
Fairbanks Regional Office

1300 College Road
Fairbanks, Alaska 99701-1551
Main: 907.459.7289
Fax: 907.459-7303

FISH HABITAT PERMIT

FH16-III-0022

ISSUED: January 28, 2016
EXPIRES: October 31, 2021

Kevin Moto, President
Native Village of Deering
P.O. Box 36089
Deering, AK 99736

Dear Mr. Moto:

RE: Water Withdrawal for Dust Suppression and Compaction – West Airport Road Project
Inmachuk River (Stream No. 331-00-10750)
Section 30, T8N R19W, KRM; Kotzebue A-2 Quad

Pursuant to AS 16.05.871(b), the Alaska Department of Fish and Game (ADF&G), Division of Habitat, has reviewed your proposal to withdraw water from the Inmachuk River at the referenced location. Project information was taken from the fish habitat permit application received December 2, 2015 and from the A2015-139 temporary water use authorization application, received by email on January 25, 2016.

Project Description

The Native Village of Deering is constructing West Airport Road, a new access road between the airport and the community. Water will be needed to achieve the desired compaction during construction and for dust suppression. Portable pumps with intake sizes from two inches to six inches will be used to pump between 180 and 1700 gallons of water per minute from the Inmachuk River. Up to 10,000 gallons per day and 200,000 gallons per year will be withdrawn.

Anadromous Fish Act

The Inmachuk River has been specified as being important for the spawning, rearing, or migration of anadromous fishes pursuant to AS 16.05.871(a). The river provides spawning and migration habitat for chum salmon, pink salmon, and Dolly Varden, as well as resident fish species including Arctic grayling. Your project as proposed should not have adverse effects on anadromous fish or their habitat and should not obstruct the free passage of fish.

In accordance with AS 16.05.871(d), project approval is hereby given subject to the project description above with the following stipulation:

1) The pump intakes shall be centered in a screened enclosure to exclude fish. The effective screen opening may not exceed ¼ inch. To reduce fish impingement on the screened surfaces, water velocity at the screen surface may not exceed 0.5 feet per second when the pump is operating. When possible, position the intake in the vertical middle third of the water column.

You are responsible for the actions of contractors, agents, or other persons who perform work to accomplish the approved project. For any activity that significantly deviates from the approved plan, you shall notify the Division of Habitat and obtain written approval in the form of a permit amendment before beginning the activity. Any action that increases the project's overall scope or that negates, alters, or minimizes the intent or effectiveness of any stipulation contained in this permit will be deemed a significant deviation from the approved plan. The final determination as to the significance of any deviation and the need for a permit amendment is the responsibility of the Division of Habitat. Therefore, it is recommended you consult the Division of Habitat immediately when a deviation from the approved plan is being considered.

For the purpose of inspecting or monitoring compliance with any condition of this permit, you shall give an authorized representative of the state free and unobstructed access, at safe and reasonable times, to the permit site. You shall furnish whatever assistance and information as the authorized representative reasonably requires for monitoring and inspection purposes.

This letter constitutes a permit issued under the authority of AS 16.05.871 and must be retained on site during project activities. Please be advised that this determination applies only to activities regulated by the Division of Habitat; other agencies also may have jurisdiction under their respective authorities. This determination does not relieve you of your responsibility to secure other permits; state, federal, or local. You are still required to comply with all other applicable laws.

In addition to the penalties provided by law, this permit may be terminated or revoked for failure to comply with its provisions or failure to comply with applicable statutes and regulations. The department reserves the right to require mitigation measures to correct disruption to fish and game created by the project and which was a direct result of the failure to comply with this permit or any applicable law.

You shall indemnify, save harmless, and defend the department, its agents, and its employees from any and all claims, actions, or liabilities for injuries or damages sustained by any person or property arising directly or indirectly from permitted activities or your performance under this permit. However, this

provision has no effect if, and only if, the sole proximate cause of the injury is the department's negligence.

This permit decision may be appealed in accordance with the provisions of AS 44.62.330-630.

Any questions or concerns about this permit may be directed to Habitat Biologist Jim Durst at (907) 459-7254 or emailed to james.durst@alaska.gov.

Sincerely,

Sam Cotten, Commissioner

BY: Audra L. J. Brase, Regional Supervisor
Division of Habitat
Alaska Department of Fish and Game

ecc:

Jim Menard, ADF&G CF, Nome
Al Ott, ADF&G HAB, Fairbanks
Brendan Scanlon, ADF&G SF, Fairbanks
Scott Ayers, ADF&G SF, Anchorage
Tim Pilon, ADEC, Fairbanks
Lesli Schick, ADNR Water, Anchorage
COE Regulatory, Anchorage
NOAA Fisheries, Anchorage
Bob Henszey, USFWS, Fairbanks
Susan Luetters, Bristol Engineering Svcs, Anchorage

AB/jdd

ALASKA DEPARTMENT OF NATURAL RESOURCES
Division of Mining, Land, and Water
Water Resources Section
550 West 7th Avenue, Suite 1020, Anchorage, AK 99501-3562

TEMPORARY WATER USE AUTHORIZATION
TWUA A2015-139

Pursuant to AS 46.15, as amended and the rules and regulations promulgated thereunder, permission is hereby granted to the Native Village of Deering (hereinafter authorization holder), PO Box 36089, Kotzebue, AK 99736, and its contractors, to withdraw up to **10,000 gallons of water per day (subject to a combined seasonal maximum of 200,000 gallons of water) from May 1, 2016 through October 31, 2021 from the below described sources of water.** Water withdrawals are for dust control and compaction associated with the West Airport Road Project in Deering.

SOURCES OF WATER:

Inmachuk River in Section 30 of Township 8 North, Range 19 West, Kateel River Meridian.

STRUCTURES TO BE CONSTRUCTED AND USED:

Certified water intake structure, water trucks, pump with a 1,700 gpm maximum output, hose and/or pipe and other water removal, distribution and discharge equipment.

Changes in the natural state of water are to be made as stated herein and for the purposes indicated.

The authorization holder shall comply with the following conditions:

CONDITIONS:

1. This authorization does not authorize the authorization holder to enter upon any lands until proper rights-of-way, easements, or permission documents, from the appropriate landowner, have been obtained.

2. Follow acceptable engineering standards in exercising the privilege granted herein.

3. Comply with all applicable laws, and any rules and/or regulations issued thereunder.

4. Except for claims or losses arising from negligence of the State, defend and indemnify the State, the State's agents, and the State's employees against and hold each of them harmless from any and all claims, demands, suits, loss, liability, and expense, including attorney fees, for injury to or death of persons and damages to or loss of property arising out of or connected with the exercise of the privileges covered by this authorization.

5. Notify the Water Resources Section upon change of address.

6. The authorization holder is responsible for obtaining and complying with other permits/approvals (state, federal, or local) that may be required prior to beginning activities pursuant to this

authorization including but not limited to fish habitat permits from the Alaska Department of Fish and Game (ADF&G), Habitat Division and any adjacent landowner or agency.

7. The authorization holder shall allow an authorized representative of the Water Resources Section to inspect, at reasonable times, any facilities, equipment, practices, or operators regulated or required under this authorization.

8. Failure to respond to a request for additional information during the term of the authorization may result in the termination of this authorization.

9. This authorization, or a copy thereof, shall be kept at the site of the authorized project described herein. The authorization holder is responsible for the actions of contractors, agents, or other persons who perform work to accomplish the approved project, and shall ensure that workers are familiar with the requirements and conditions of this authorization. For any activity that significantly deviates from the approved project during its siting, construction, or operation, the authorization holder is required to contact the Water Resources Section and obtain approval before beginning the activity.

10. The Water Resources Section may modify this authorization to include different limitations, expand monitoring requirements, evaluate impacts or require restoration at the site.

11. Any false statements or representations, in any application, record, report, plan, or other document filed or required to be maintained under this authorization, may result in the termination of this authorization.

12. Pursuant to 11 AAC 93.220(f), this authorization may be suspended or terminated by the Department of Natural Resources to protect the water rights of other persons or the public interest.

13. Monitor water withdrawals and/or diversions for each day of actual use for each authorized water source and when withdrawals and/or diversions for each authorized water source reached 90% of the authorized limit for that water source submit this information to this office prior to the initiation of any further withdrawals and/or diversions of the respective water source.

14. Operations shall be conducted in such a way as to prevent any petroleum products or other hazardous substances from contaminating surface or ground water. Pumps and equipment will not be fueled or serviced within 100 feet of a pond, lake, stream, or river unless they are situated within a catch basin designed to contain any spills. Vehicles will not be fueled or serviced within 100 feet of a pond, lake, stream or river. In case of accidental spills, absorbent pads shall be readily available at the water collection point. All spills must be reported to the Alaska Department of Environmental Conservation and the Alaska Department of Natural Resources.

15. In-water activity will be limited to placement and removal of the intake structure only. No other in-water activities will occur.

16. Any water intake structure in fish bearing waters, including a screened enclosure, well-point, sump, or infiltration gallery, must be designed, operated and maintained to prevent fish entrapment, entrainment or injury at the maximum diversion rate, unless specifically exempted by the ADF&G Habitat Division.

17. Adequate flow and water levels, as determined by ADF&G Habitat Division, must remain to support indigenous aquatic life and provide for the efficient passage and movement of fish. Issuance of this authorization does not give the authorization holder the right to block or dam a water course.

18. There shall be no wheeled, tracked, excavating, other machinery or equipment (with the exception of the non-motorized screened intake and ice auger) operated in open water below ordinary high water line.

19. All equipment used at or adjacent to water bodies must be clean and free from contamination and invasive species (terrestrial and aquatic) at all times to prevent the introduction of contamination and invasive species to the water body.

20. Any suction hose used should be in water of sufficient depth so that sediments are not disturbed during any water extraction process.

21. Water bodies shall not be altered to facilitate water withdrawal or disturbed in any way. If banks, shores, or beds are inadvertently disturbed, excavated, compacted, or filled by activities attributable to this project, they shall be immediately stabilized to prevent erosion and resultant sedimentation of water body which could occur both during and after operations. Any disturbed areas shall be recontoured and revegetated with native vegetation.

22. Water intake structure must be enclosed and centered within a screened box or cylinder with a maximum screen-mesh size of 0.25 inches or smaller screen mesh size. To reduce fish impingement at the screen/water interface, water velocity may not exceed 0.5 feet per second rate specified by the Alaska Department of Fish and Game when the pump is operating.

23. The authorization holder shall inspect the intake screen for damage (torn screen, crushed screen, screen separated from intake ends, etc.) after each use and prior to each deployment. Any damage observed must be repaired prior to use of the structure. The structure must always conform to the original design specifications while in use.

24. Water discharge (including runoff) shall not be discharged at a rate or location resulting in sedimentation, erosion, or other disruptions to the bed or banks of water bodies, causing water quality degradation.

25. Per 11 AAC 05.010. (a)(8)(M), an annual administrative service fee shall be assessed on this authorization.

This Temporary Water Use Authorization is issued pursuant to 11 AAC 93.220. No water right or priority is established by a temporary water use authorization issued pursuant to 11 AAC 93.220. Water so used is subject to appropriation by others (11 AAC 93.210 (b)).

Pursuant to 11 AAC 93.210 (b), authorized temporary water use is subject to amendment, modification, or revocation by the Department of Natural Resources if the Department of Natural Resources determines that amendment, modification, or revocation is necessary to supply water to lawful appropriators of record or to protect the public interest.

This authorization shall expire on October 31, 2021.

Date issued: February 29, 2016

Approved: Henry CB Cook

Manager, South Central Region, Water Resources Section
ADNR/DMLW

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
ALASKA REGION

Branch of Regional Archeology
3601 C Street, Suite 1100
Anchorage, Alaska 99503
(907) 271-4003

TO: NATIVE VILLAGE OF DEERING
ALVIN IYATUNGUK, SR., PRESIDENT
PO BOX 36089
DEERING, ALASKA 99736

UNDERTAKING: **West Airport Road, Deering, Alaska**

FINDINGS OF SECTION 106 REVIEW: No Historic Properties Affected

RECOMMENDATION: Proceed with the **West Airport Road, Deering, Alaska Project.**

IDENTIFICATION EFFORTS: Identification included a review of records and previous archeological surveys in the area conducted by Robert L. Meinhardt, et al. of True North Sustainable Development Solutions. The archeological review and investigation report, *2013 Report of Cultural Resources Investigation and Recommendations for Issuing a Section 106 Finding for the Design of West Airport Road, Located in Deering, Alaska*, was prepared by Robert L. Meinhardt, Amy Ramirez, Annalisa Heppner, and Phillip T. Ashlock II in September 2013.

AREA OF POTENTIAL EFFECT (APE): The project involves the construction of a new road and bridge, which will serve as the primary evacuation route from the village to the airport during seasonal and tidal flooding, when the existing road is typically washed out. The new road will be between 16 and 20 feet wide, and will include a bridge over Smith Creek with a minimum load capacity of 50,000 pounds. Gravel for the road will be taken from existing gravel borrows along the existing Deering Airport Road. Additional details of the APE are described in the above noted cultural resource survey report.

AHRS SITES: No archeological resources were identified within the APE.

CONSULTED PARTIES: Native Village of Deering
Alaska State Historic Preservation Office (SHPO)
Bureau of Indian Affairs

MANAGEMENT RECOMMENDATIONS: The Bureau of Indian Affairs is issuing a finding of "No Historic Properties Affected" for the proposed **West Airport Road, Deering, Alaska.** These findings are based on the results of a cultural resources inventory, including a pedestrian survey of the subject area by cultural resource professionals from True North Sustainable Development Solutions, under the supervision of Archeologist and Architectural Historian Robert Meinhardt. The report of the investigation (*2013 Report of Cultural Resources Investigation and Recommendations for Issuing a Section 106 Finding for the Design of West Airport Road, Located in Deering, Alaska)*, was prepared by Robert L. Meinhardt, Amy Ramirez, Annalisa Heppner, and Phillip T. Ashlock II in September 2013. In compliance with Section 106 of the National Historic Preservation Act (16 USC 470*f*) of 1966 and 36 CFR §800, the Bureau of Indian Affairs is recommending the **West Airport Road, Deering, Alaska Project** proceed. The Alaska State Historic Preservation Officer's concurrence for no historic properties is on file.

There were no archeological sites identified within the APE of the project and no archeological monitoring will be required. The finding of no historic properties affected only applies to the current project. Any additional work outside of the current project's footprint may require additional section 106 review. In accordance with 36 CFR §800.4 any changes to the project design may require further section 106 review.

The construction contract will include the following language:

"NATIVE VILLAGE OF DEERING will comply with the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470*f*), plus the Native American Graves Protection and Repatriation Act of 1990 (25 U. S. C. 3001-3013), and the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa-mm), and all implementing regulations."

"If any previously unknown archeological or historic remains are discovered, either during the life of this revocable use permit, or in the course of associated activities on this property, the NATIVE VILLAGE OF DEERING shall protect them from disturbance pending further recommendations from the BIA Regional Archeologist (36 CFR §800.13[b])."

"If any previously unknown human remains or associated cultural items are discovered either during the life of this revocable use permit (lease), or in the course of associated activities on this property, the NATIVE VILLAGE OF DEERING shall protect them from disturbance pending further recommendations from the Regional Archeologist. Any person who knows of the discovery of human remains or associated cultural items must provide notification by telephone, and follow up in writing, to the BIA Regional Archeologist (43 CFR §10.4)."

15 October 2014
Ricky Hoff Date
Regional Archeologist

cc: Susan Leutters, Bristol Engineering Services Corporation
Gregory Smith, Civil Engineer, Transportation, Bureau of Indian Affairs, Alaska Region

DEPARTMENT OF THE ARMY
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS
REGULATORY DIVISION
P.O. BOX 6898
JBER, AK 99506-0898

OCT 04 2016

Regulatory Division
POA-2014-121

The Native Village of Deering
Attention: Mr. Kevin Moto
P. O. Box 36089
Deering, Alaska 99736

Dear Mr. Moto:

Enclosed is the signed Department of the Army permit, file number POA-2014-121, Smith Creek, which authorizes the construction of a new evacuation route out of Deering. The project site is located within Sections 19 & 30, T. 8 N., R. 19 W., Kateel River Meridian; USGS Quad Map Kotzebue A-2; Latitude 66.0743° N., Longitude 162.7463° W.; near Deering, Alaska. Also enclosed is a Notice of Authorization which should be posted in a prominent location near the authorized work.

If changes to the plans or location of the work are necessary for any reason, plans must be submitted to us immediately. Federal law requires approval of any changes before construction begins.

Nothing in this letter excuses you from compliance with other Federal, State, or local statutes, ordinances, or regulations.

Please contact me via email at mary.r.romero@usace.army.mil, by mail at the address above, by phone at (907) 753-2773, or toll free from within Alaska at (800) 478-2712, if you have questions. For more information about the Regulatory Program, please visit our website at http://www.poa.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,

Mary Romero
Project Manager

Enclosures

This notice of authorization must be conspicuously displayed at the site of work.

United States Army Corps of Engineers
SMITH CREEK

A permit to: CONSTRUCTION OF A NEW EVACUATION ROUTE OUT OF DEERING

at: SECTIONS 19 & 30, T. 8 N., R. 19 W., KATEEL RIVER MERIDIAN; USGS QUAD MAP KOTZEBUE A-2; LATITUDE 66.0743 N., LONGITUDE 162.7463 W.

has been issued to: NATIVE VILLAGE OF DEERING

on: OCT 0 4 2016 **and expires on:** OCT 0 4 2021

Address of Permittee:

Permit Number:

POA-2014-121

FOR: ***District Commander***
MARY ROMERO
PROJECT MANAGER
REGULATORY DIVISION

ENG FORM 4336, Jul 81 (33 CFR 320-330) EDITION OF JUL 70 MAY BE USED **(Proponent: CECW-O)**

DEPARTMENT OF THE ARMY PERMIT

Permittee: Native Village of Deering

Permit No.: POA-2014-121, Smith Creek

Issuing Office: U.S. Army Engineer District, Alaska

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: The placement of 25,800 cubic yards (cy) of fill material and 2,300 cy of aggregate surface course material into 6.86 acres of jurisdictional wetlands to create a 5,280' x 50' road to the Deering Airport, the road will include a bridge over Smith Creek (avoiding 0.019 acre of R2UB waters) and will provide an evacuation route from the community often stranded when seasonal flooding overflows or washes out the existing road to the airport. The bridge will be a 65' single span structure, with earthen abutments and 125' approaches on either side. The bridge will allow a minimum of 9' of vertical clearance from ordinary high water and a 42.6' navigational opening.
Grubbing of the project will take place either before May 20th or after July 20th in order to not disturb potential migratory bird nests. Placement of fill is expected to take place from June through September 2016 with completion of the project in 2017.

All work will be performed in accordance with the attached plan, sheets **1-14,** dated May17, 2016.

Project Location: The project is located within Sections 19 & 30, T. 8 N., R. 19 W., Kateel River Meridian; USGS Quad Map Kotzebue A-2; Latitude 66.0743° N., Longitude 162.7463° W.; near Deering, Alaska.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **August 31, 2021**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. Prior to initiation of construction activities within waters of the U.S. the permittee shall develop and submit a Mitigation Plan for Corps approval to this office.

2. The Permittee shall install erosion control measures along the perimeter of all work areas to prevent the displacement of fill material outside the authorized work area as detailed on sheets #7-12 of 14. The erosion control measures shall remain in place and be maintained until all authorized work is completed and the work areas are stabilized. Immediately after completion of the final grading of the land surface, all slopes, land surfaces, and filled areas shall be stabilized using sod, degradable mats, barriers, or a combination of similar stabilizing materials to prevent erosion.

3. The Permittee shall use only clean fill material for this project. The fill material shall be free from items such as trash, debris, automotive parts, asphalt, construction materials, concrete blocks with exposed reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act.

4. The permittee shall comply with the United States Fish and Wildlife Service Conditions dated June 9, 2016, and provided as an attachment to this permit. The permittee shall comply with the Federal Endangered Species Act, you must implement all of the mitigating measures identified in the enclosed U.S. Fish and Wildlife Service letter of concurrence (Number FWS POA-2014-121, Smith Creek, dated June 9, 2016) including those ascribed to the Corps therein. If you are unable to implement any of these measures, you must immediately notify the Corps, the U.S. Fish and Wildlife Office so we may consult as appropriate, prior to initiating the work, in accordance with Federal law.

5. Within 10 days from the date of initiating the work authorized by this permit, the Permittee shall provide a written notification of the date of commencement of authorized work to the Corps.

6. Within 60 days of completion of the work authorized by this permit, the Permittee shall submit as-built drawings of the authorized work and a completed "As-Built Certification By Professional Engineer" form to the Corps. The as-built drawings shall be signed and sealed by a registered professional engineer and include the following:

a. A plan view drawing of the location of the authorized work footprint, as shown on the permit drawings, with transparent overlay of the work as constructed in the same scale as the permit drawings on 8½-inch by 11-inch sheets or PDF. The plan view drawing should show all "earth disturbance," including wetland impacts and water management structures.

b. A list of any deviations between the work authorized by this permit and the work as constructed. In the event that the completed work deviates, in any manner, from the authorized work, describe on the attached "As-Built Certification By Professional Engineer" form the deviations between the work authorized by this permit and the work as constructed. Clearly indicate on the as-built drawings any deviations that have been listed. Please note that the depiction and/or description of any deviations on the drawings and/or "As-Built Certification By Professional Engineer" form does not constitute approval of any deviations by the Corps.

c. Include the Department of the Army permit number on all sheets submitted.

7. All contractors involved in this permitted activity shall be provided copies of this permit in its entirety. A copy shall remain on site at all times during construction.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

( ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorization required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a revaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

Ken Hott President — 9.8.16

(PERMITTEE) AND TITLE — (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

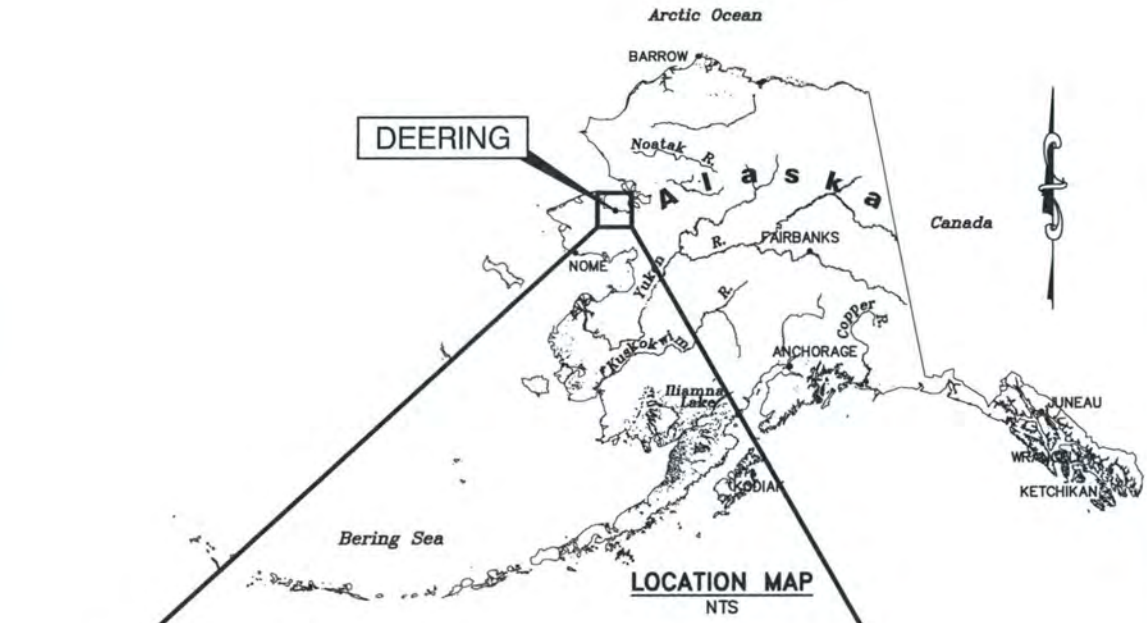
Mary Romero — 3 October 2016

FOR (DISTRICT COMMANDER) — (DATE)
Colonel Michael S. Brooks
Mary Romero, Project Manager
North Branch, Regulatory Division

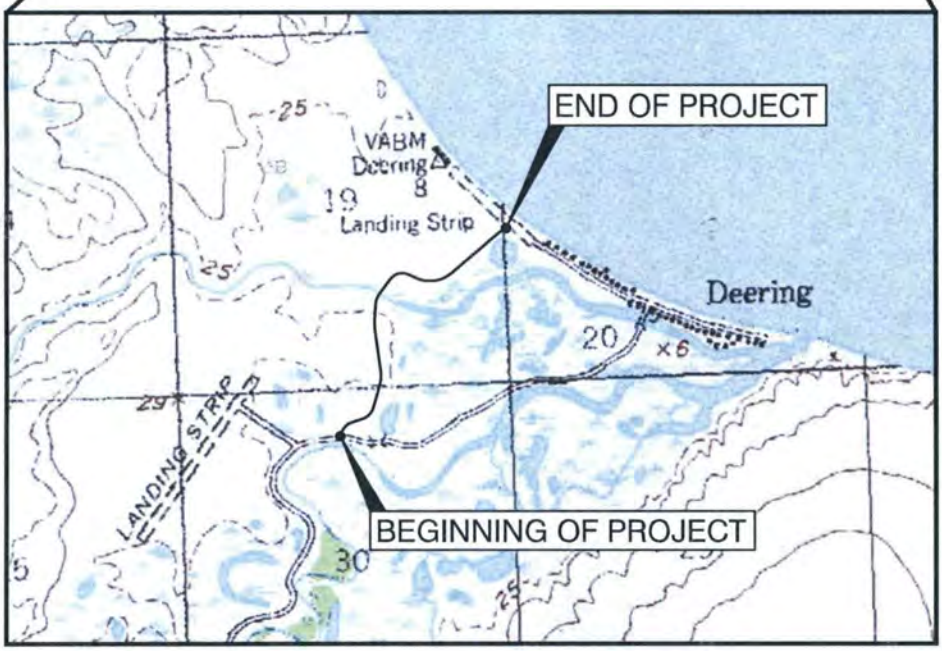
When the structures or work authorized by this permit are still in existence at the time the property is transferred the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions have the transferee sign and date below.

(TRANSFEREE) — (DATE)

VICINITY MAP



LOCATION MAP
NTS

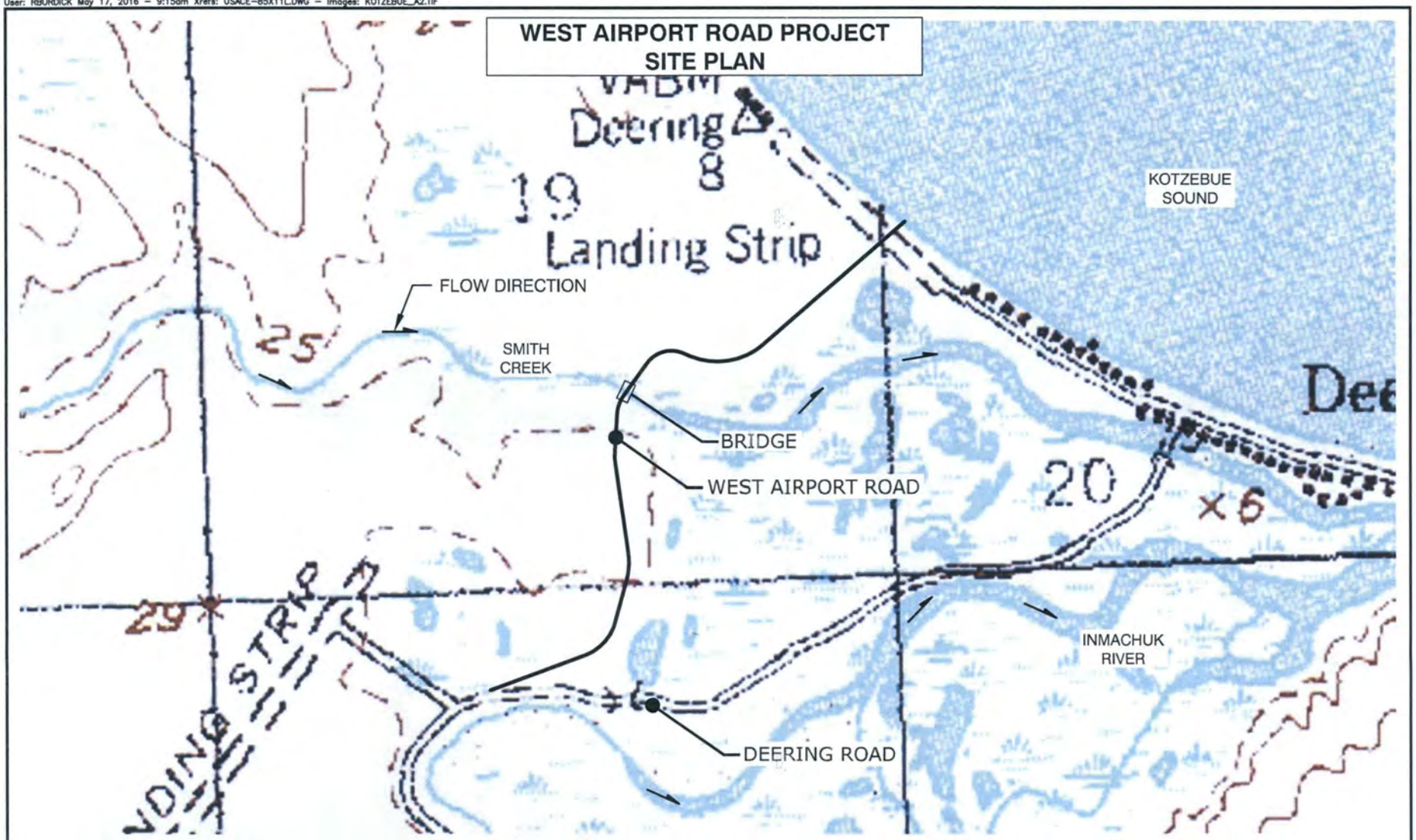


VICINITY MAP
SCALE: NTS
SOURCE: U.S.G.S. QUAD
KOTZEBUE A2

Deering, Alaska
Directions to site: From the airport take Deering Road east for 0.1 miles. The project begins on the north side of Deering Road.

Applicant: NATIVE VILLAGE OF DEERING
File No. : POA-2014-121
Waterway: SMITH CREEK
Proposed activity: WEST AIRPORT ROAD CONSTRUCTION
Sec.19 & 30 T. 08 N R. 19 W M. KATEEL RIVER MERIDIAN
Lat.: N 66.08° Long.: 165.71° W
Sheet 1 of 14 Date: 05 /17 /2016

WEST AIRPORT ROAD PROJECT SITE PLAN



Deering, Alaska
Directions to site: From the airport take Deering Road east for 0.1 miles. The project begins on the north side of Deering Road.

Applicant: NATIVE VILLAGE OF DEERING
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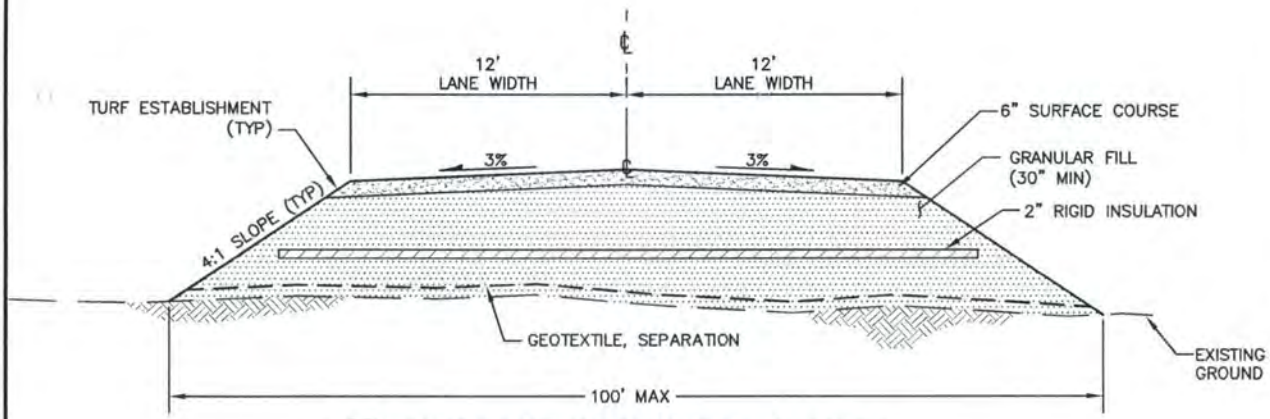
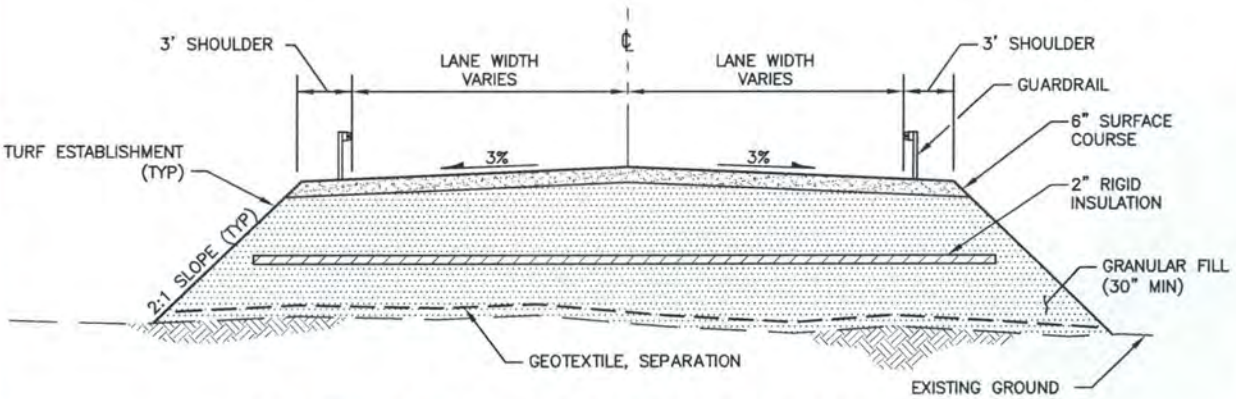
Waterway: SMITH CREEK
Proposed activity: WEST AIRPORT ROAD CONSTRUCTION
Sec.19 & 30 T. 08 N R. 19 W M. KATEEL RIVER MERIDIAN
Lat.: N 66.08° Long.: 165.71° W
Sheet 2 of 14 Date: 05 /17 /2016

WEST AIRPORT ROAD PROJECT
TYPICAL SECTIONS



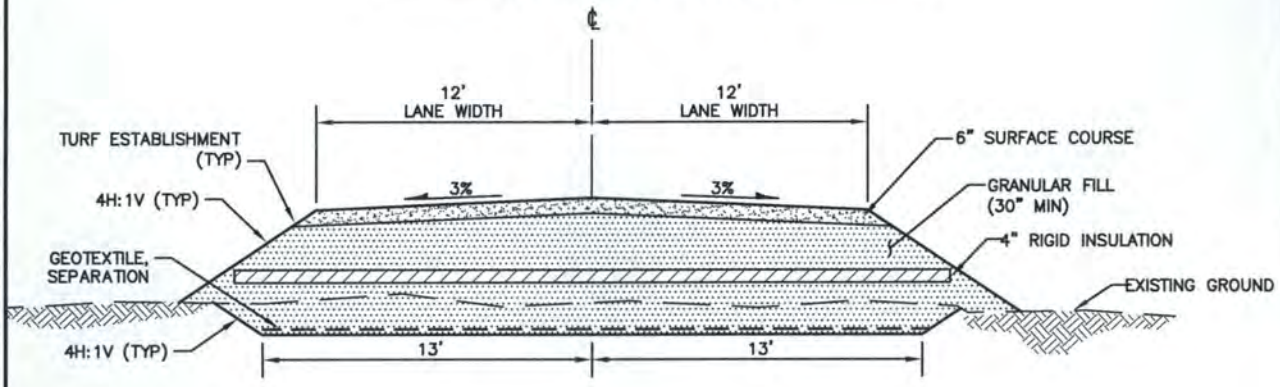
1 — **TWO-LANE CROWN FILL SECTION**
SCALE: NTS



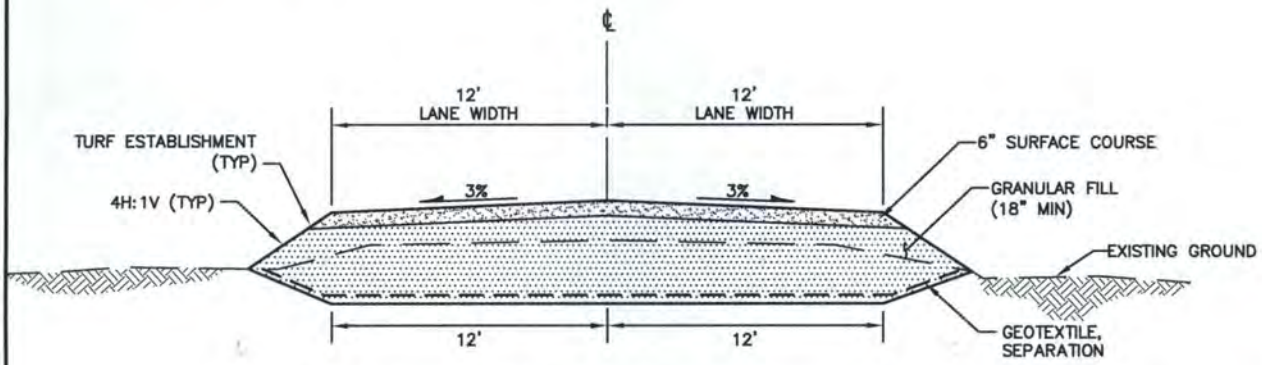
2 — **TWO-LANE CROWN SECTION WITH GUARDRAIL**
SCALE: NTS

Applicant: NATIVE VILLAGE OF DEERING
File No. : POA-2014-121
Waterway: SMITH CREEK
Proposed activity: WEST AIRPORT ROAD CONSTRUCTION
Sec.19 & 30 T. 08 N R. 19 W M. KATEEL RIVER MERIDIAN
Lat.: N 66.08° Long.: 165.71° W
Sheet 3 of 14 Date: 05 /17 /2016

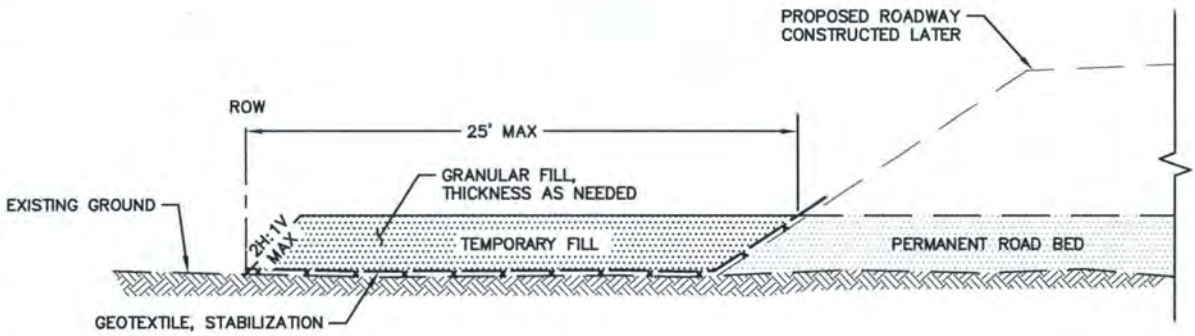
WEST AIRPORT ROAD PROJECT
TYPICAL SECTIONS



1 — **TWO-LANE CROWN FILL SECTION WITH EXCAVATION**
SCALE: NTS



2 — **TWO-LANE CROWN ROAD RECONSTRUCTION**
SCALE: NTS

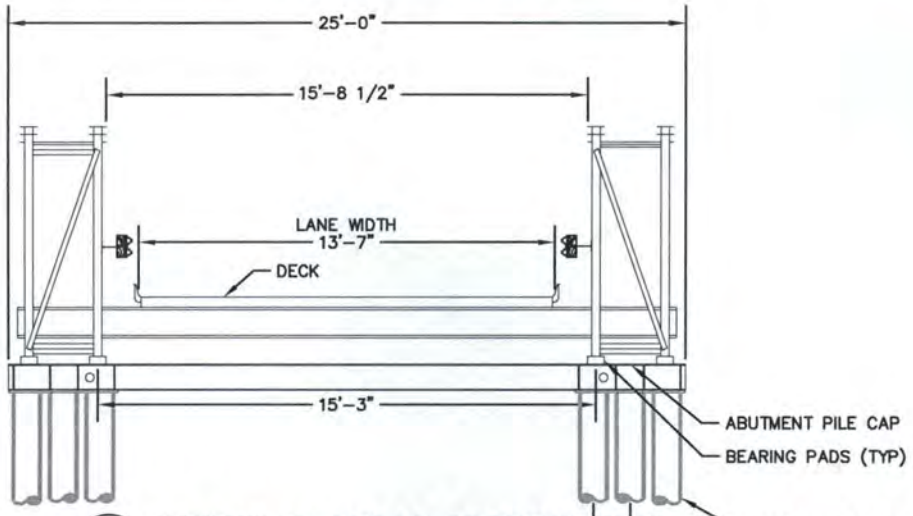


3 — **TEMPORARY CONSTRUCTION PAD**
SCALE: NTS

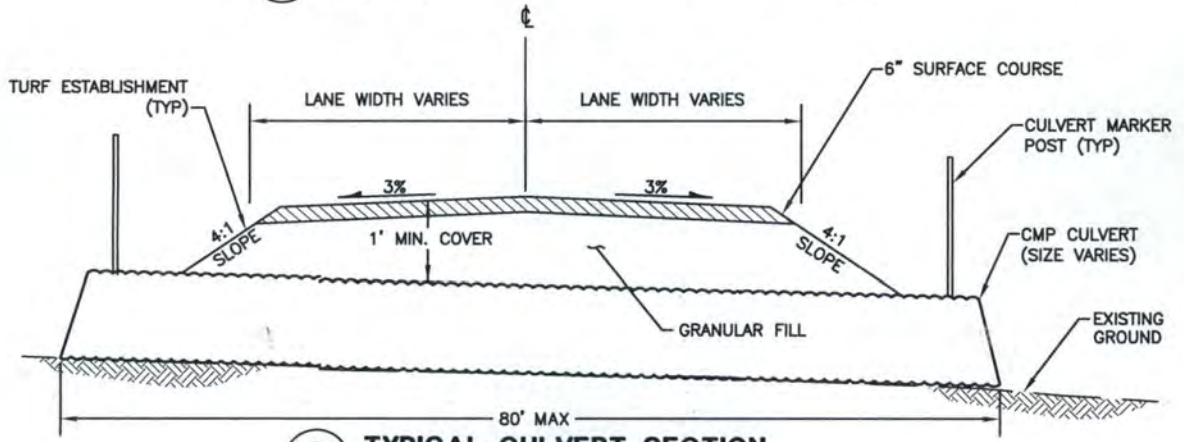
Applicant: NATIVE VILLAGE OF DEERING
File No. : POA-2014-121
Waterway: SMITH CREEK
Proposed activity: WEST AIRPORT ROAD CONSTRUCTION
Sec.19 & 30 T. 08 N R. 19 W M. KATEEL RIVER MERIDIAN
Lat.: N 66.08° Long.: 165.71° W
Sheet 4 of 14 Date: 05 /17 /2016

Drawing: K:_JOBS\32140053 WEST AIRPORT RD\ACAD-ENV\RD\USACE\32140053_FIG3-5_CDE.DWG - Layout: FIG4
User: RBURDICK May 17, 2016 - 9:09am Xrefs: USACE-85X11P.DWG - Images: None

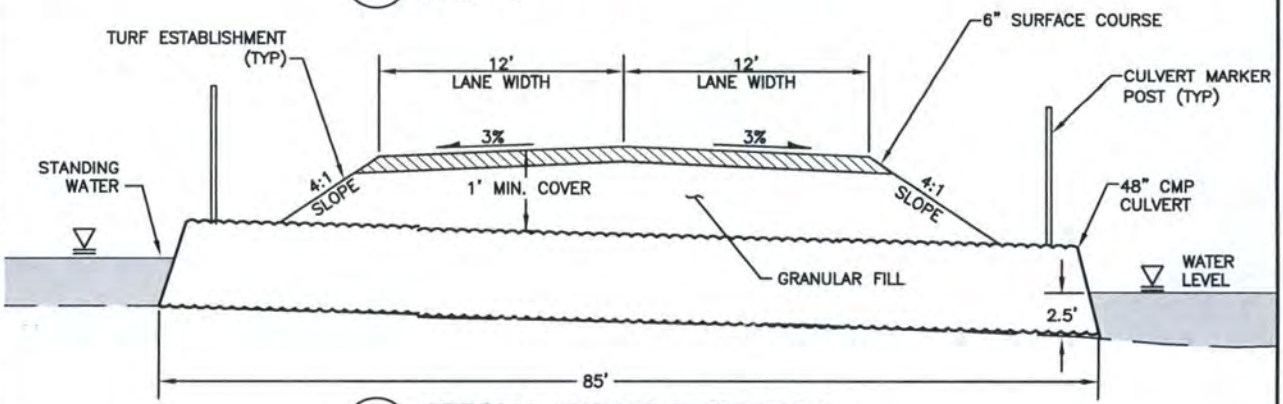
WEST AIRPORT ROAD PROJECT
TYPICAL SECTIONS



1 — **VEHICULAR BRIDGE SECTION**
SCALE: NTS



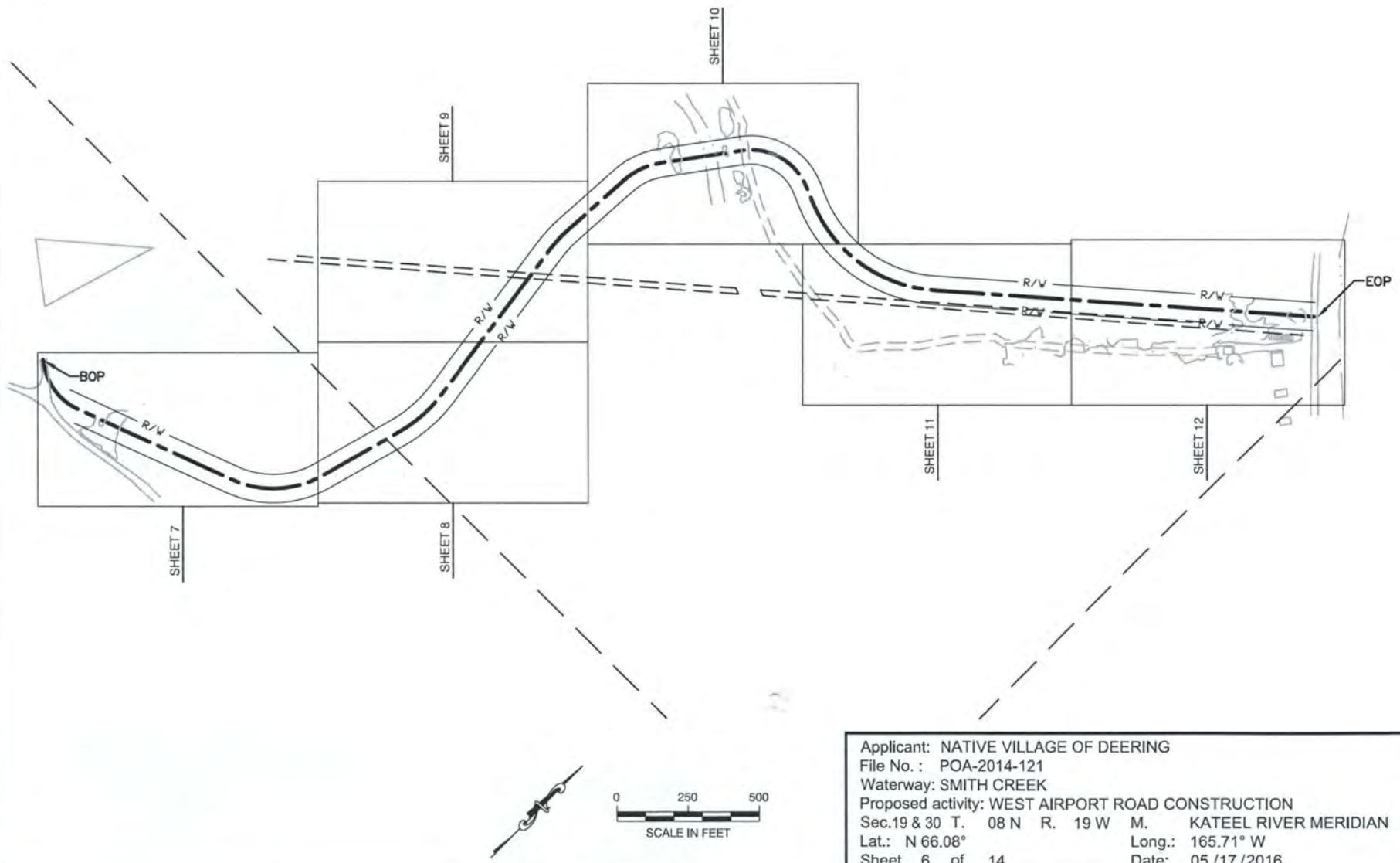
2 — **TYPICAL CULVERT SECTION**
SCALE: NTS



3 — **SPECIAL CULVERT SECTION**
SCALE: NTS

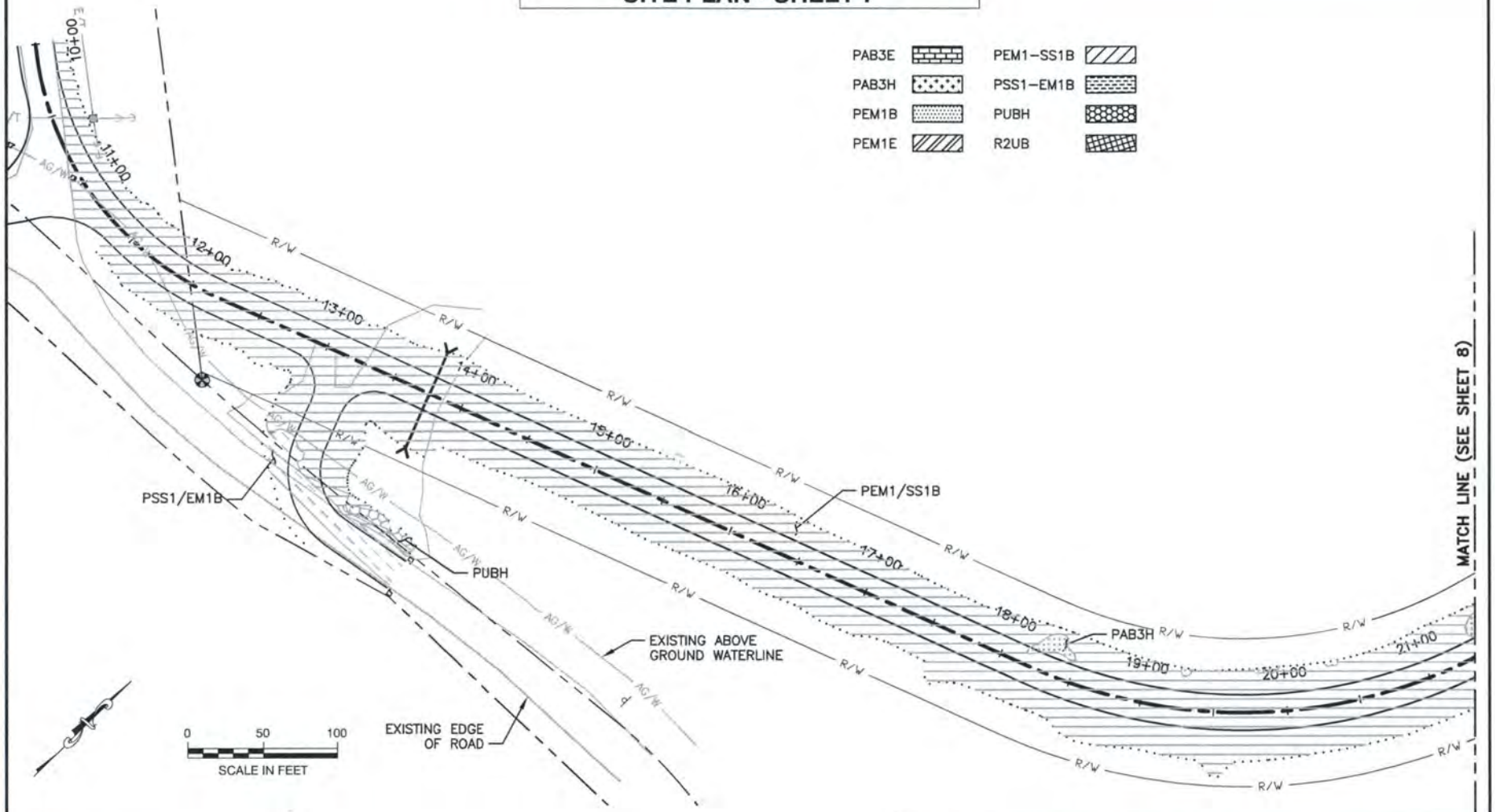
Applicant: NATIVE VILLAGE OF DEERING					
File No. : POA-2014-121					
Waterway: SMITH CREEK					
Proposed activity: WEST AIRPORT ROAD CONSTRUCTION					
Sec.19 & 30 T.	08 N	R.	19 W	M.	KATEEL RIVER MERIDIAN
Lat.: N 66.08°				Long.:	165.71° W
Sheet 5 of 14				Date:	05 /17 /2016

WEST AIRPORT ROAD PROJECT
SITE PLAN - KEY MAP



Applicant: NATIVE VILLAGE OF DEERING
File No. : POA-2014-121
Waterway: SMITH CREEK
Proposed activity: WEST AIRPORT ROAD CONSTRUCTION
Sec.19 & 30 T. 08 N R. 19 W M. KATEEL RIVER MERIDIAN
Lat.: N 66.08° Long.: 165.71° W
Sheet 6 of 14 Date: 05 /17 /2016

WEST AIRPORT ROAD PROJECT
SITE PLAN - SHEET 7

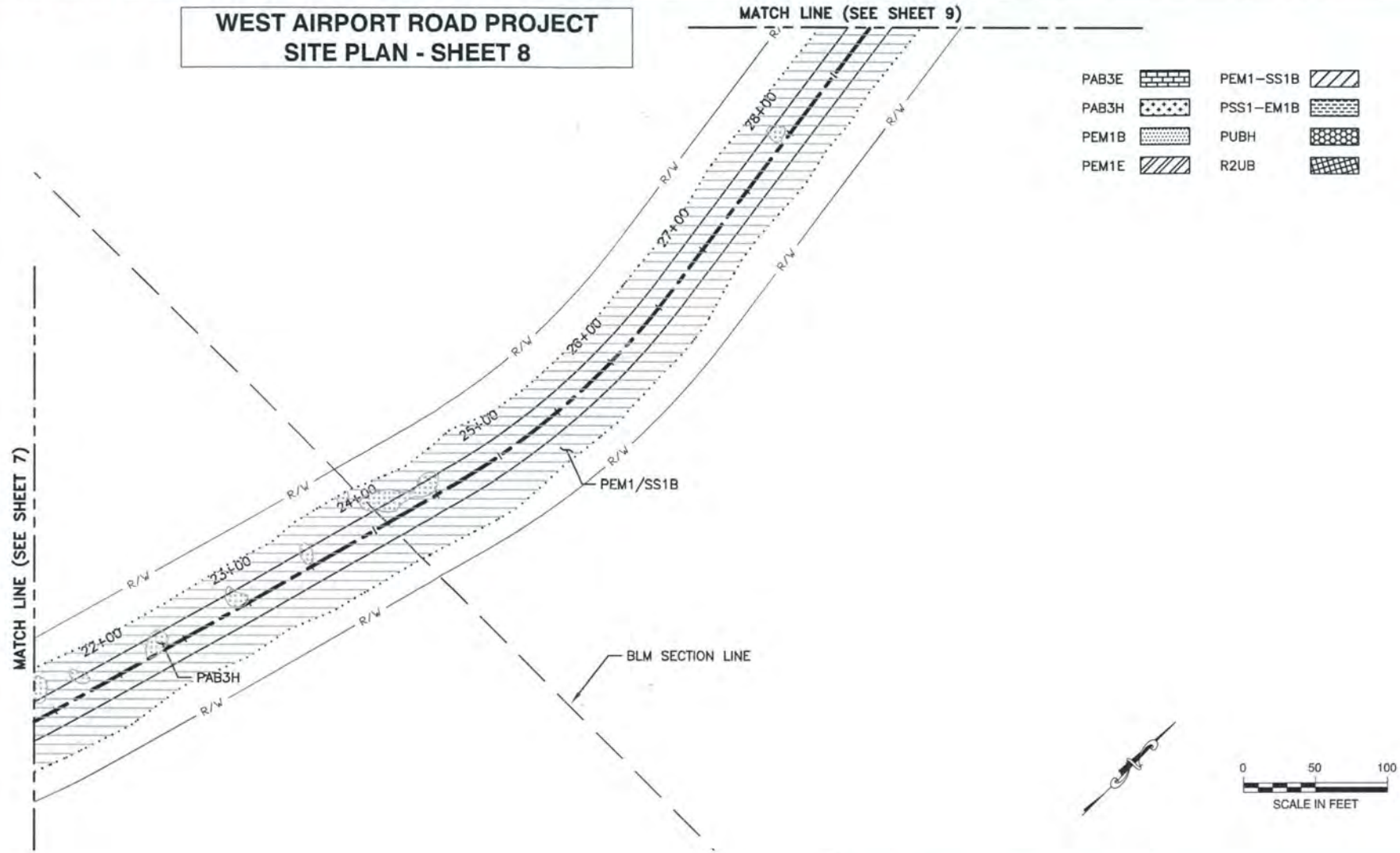


LEGEND

PROPOSED ROAD TOE OF FILL		PROPOSED GUARDRAIL	
PROPOSED ROAD SHOULDER		PROPOSED CMP	
PROPOSED ROAD CENTERLINE		PROPOSED RIGHT OF WAY	R/W
EXISTING RIGHT OF WAY		EXISTING WATER BODY	

Applicant: NATIVE VILLAGE OF DEERING
File No. : POA-2014-121
Waterway: SMITH CREEK
Proposed activity: WEST AIRPORT ROAD CONSTRUCTION
Sec.19 & 30 T. 08 N R. 19 W M. KATEEL RIVER MERIDIAN
Lat.: N 66.08° Long.: 165.71° W
Sheet 7 of 14 Date: 05 /17 /2016

WEST AIRPORT ROAD PROJECT
SITE PLAN - SHEET 8

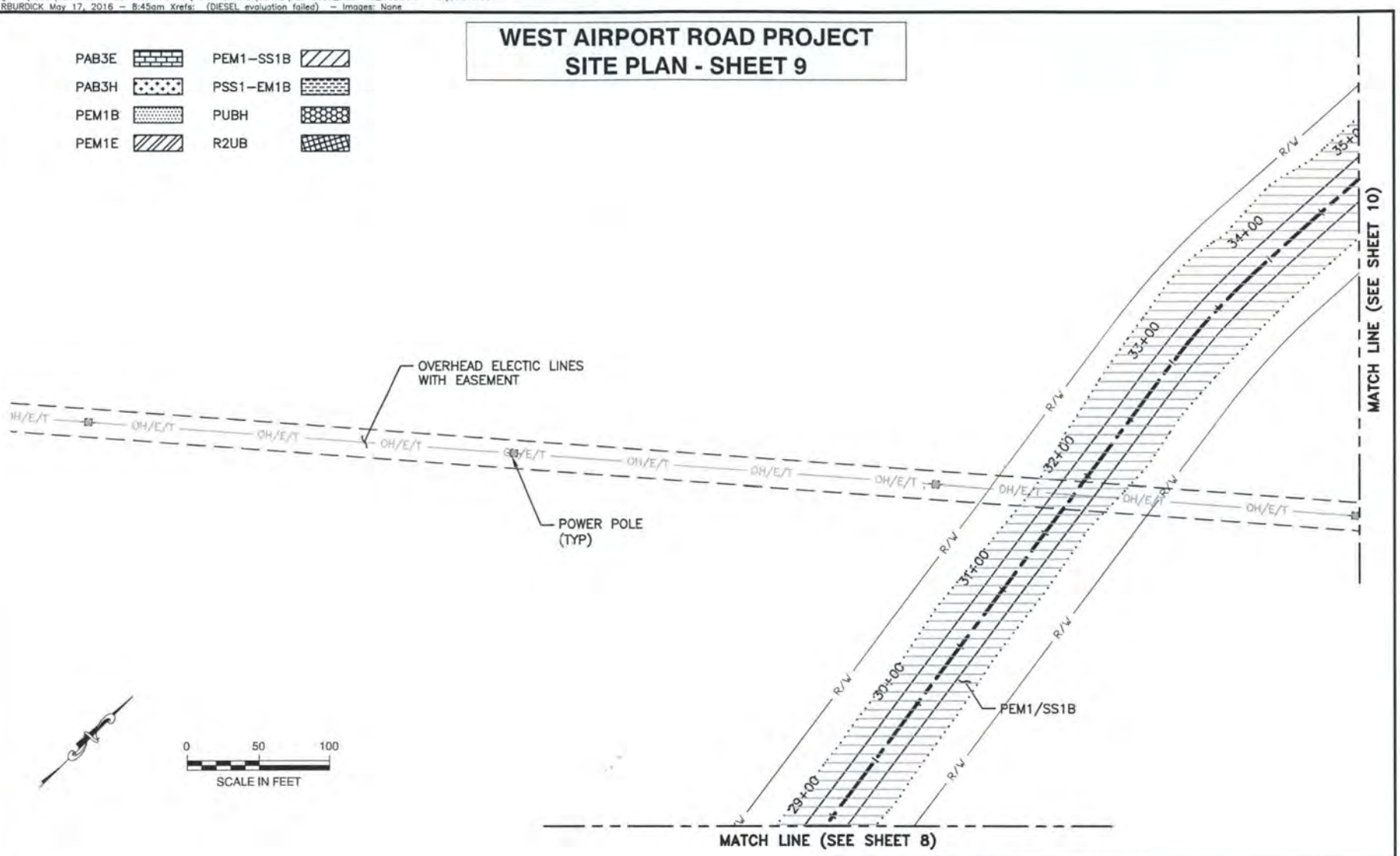


LEGEND

PROPOSED ROAD TOE OF FILL		PROPOSED GUARDRAIL	
PROPOSED ROAD SHOULDER		PROPOSED CMP	
PROPOSED ROAD CENTERLINE		PROPOSED RIGHT OF WAY	R/W
EXISTING RIGHT OF WAY		EXISTING WATER BODY	

Applicant: NATIVE VILLAGE OF DEERING
File No. : POA-2014-121
Waterway: SMITH CREEK
Proposed activity: WEST AIRPORT ROAD CONSTRUCTION
Sec.19 & 30 T. 08 N R. 19 W M. KATEEL RIVER MERIDIAN
Lat.: N 66.08° Long.: 165.71° W
Sheet 8 of 14 Date: 05 /17 /2016

WEST AIRPORT ROAD PROJECT
SITE PLAN - SHEET 9

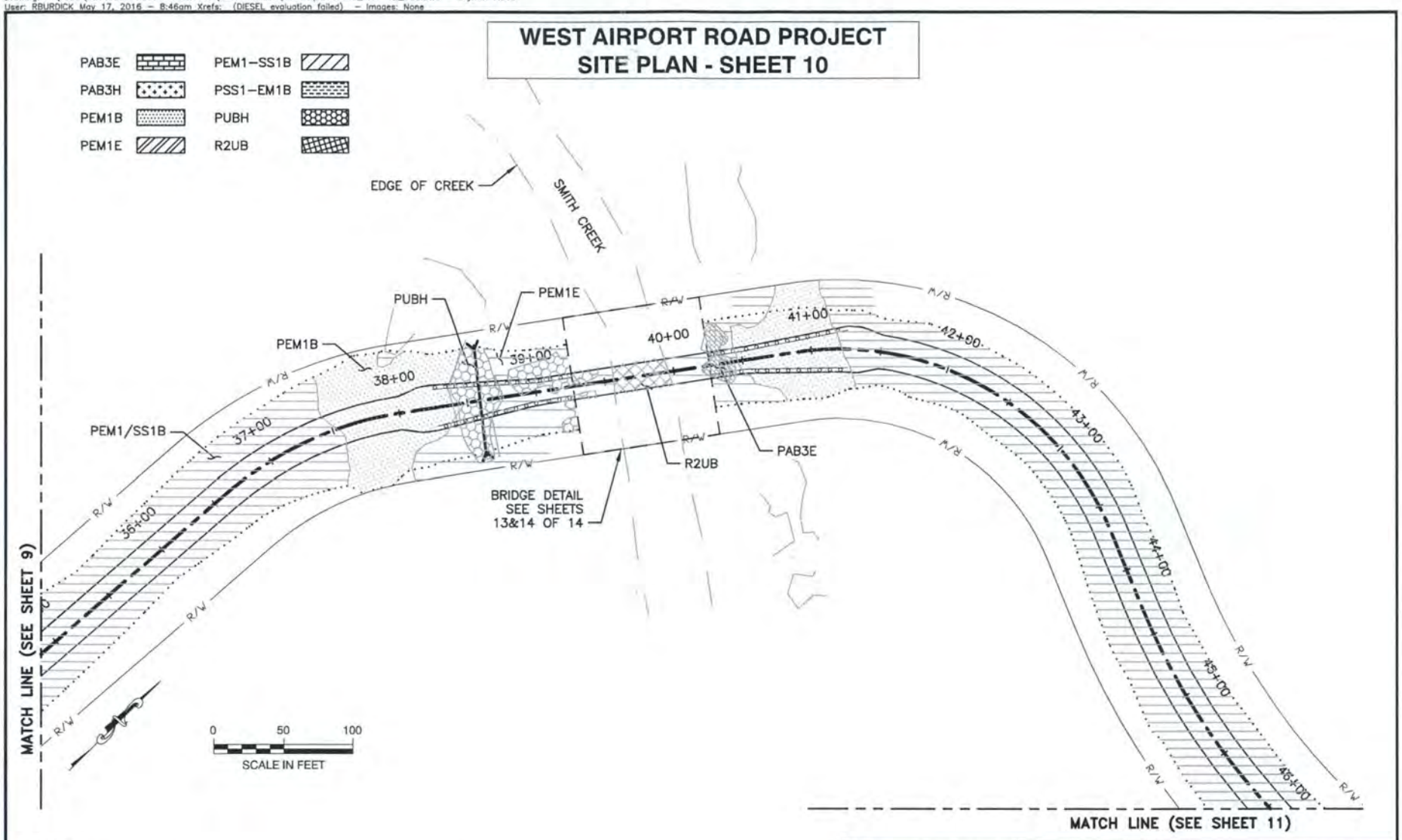


LEGEND

PROPOSED ROAD TOE OF FILL		PROPOSED GUARDRAIL	
PROPOSED ROAD SHOULDER		PROPOSED CMP	
PROPOSED ROAD CENTERLINE		PROPOSED RIGHT OF WAY	R/W
EXISTING RIGHT OF WAY		EXISTING WATER BODY	

Applicant: NATIVE VILLAGE OF DEERING
File No. : POA-2014-121
Waterway: SMITH CREEK
Proposed activity: WEST AIRPORT ROAD CONSTRUCTION
Sec.19 & 30 T. 08 N R. 19 W M. KATEEL RIVER MERIDIAN
Lat.: N 66.08° Long.: 165.71° W
Sheet 9 of 14 Date: 05 /17 /2016

WEST AIRPORT ROAD PROJECT
SITE PLAN - SHEET 10

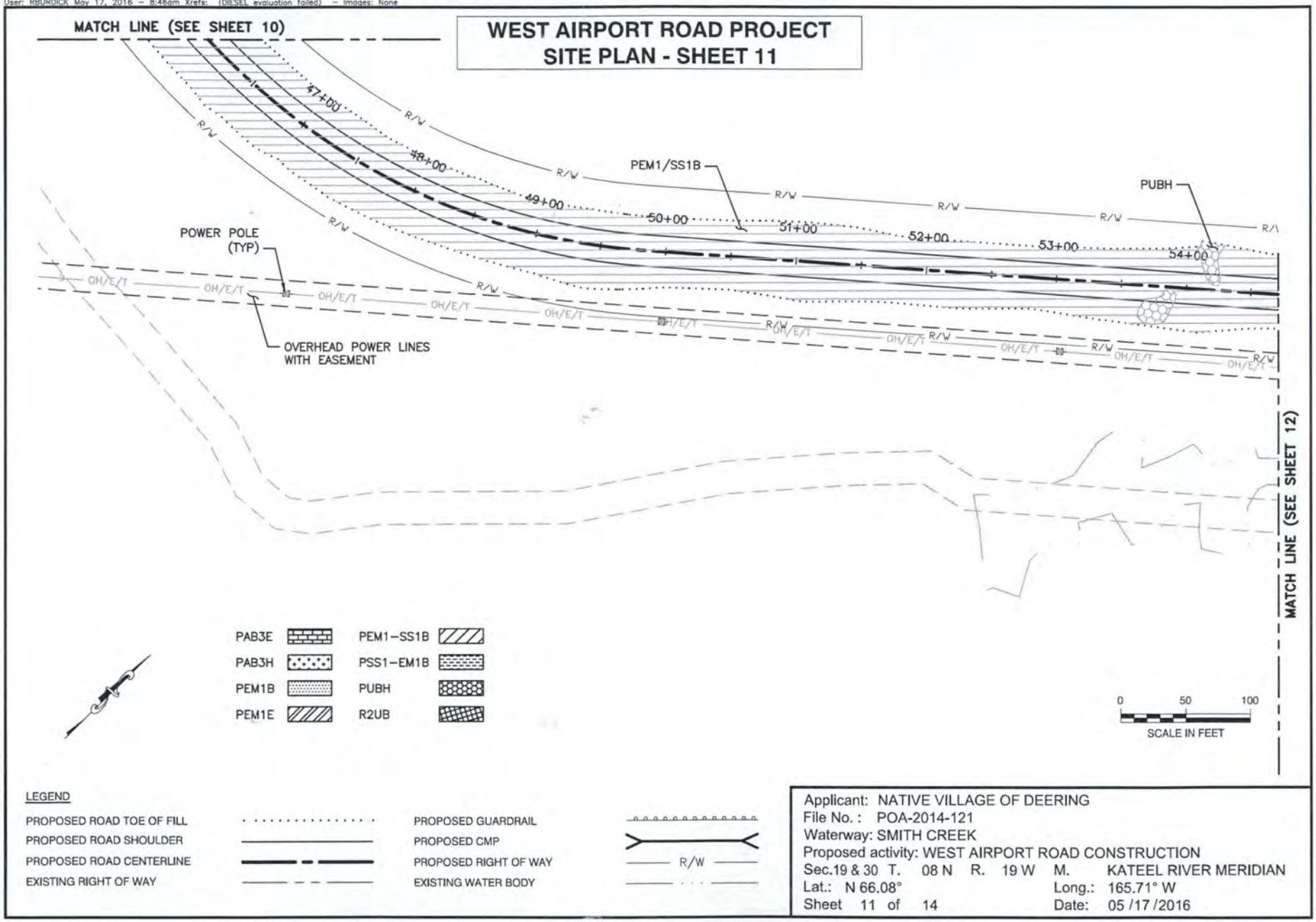


LEGEND

PROPOSED ROAD TOE OF FILL		PROPOSED GUARDRAIL	
PROPOSED ROAD SHOULDER		PROPOSED CMP	
PROPOSED ROAD CENTERLINE		PROPOSED RIGHT OF WAY	R/W
EXISTING RIGHT OF WAY		EXISTING WATER BODY	

Applicant: NATIVE VILLAGE OF DEERING
File No. : POA-2014-121
Waterway: SMITH CREEK
Proposed activity: WEST AIRPORT ROAD CONSTRUCTION
Sec.19 & 30 T. 08 N R. 19 W M. KATEEL RIVER MERIDIAN
Lat.: N 66.08° Long.: 165.71° W
Sheet 10 of 14 Date: 05 /17 /2016

Drawing: K:\JOBS\32140053 WEST AIRPORT RD\ACAD-ENVIRO\USACE\32140053_FIG8-12_COE.DWG - Layout: FIG11
User: RBURDICK May 17, 2016 - 8:46am Xrefs: (DIESEL evaluation failed) - Images: None

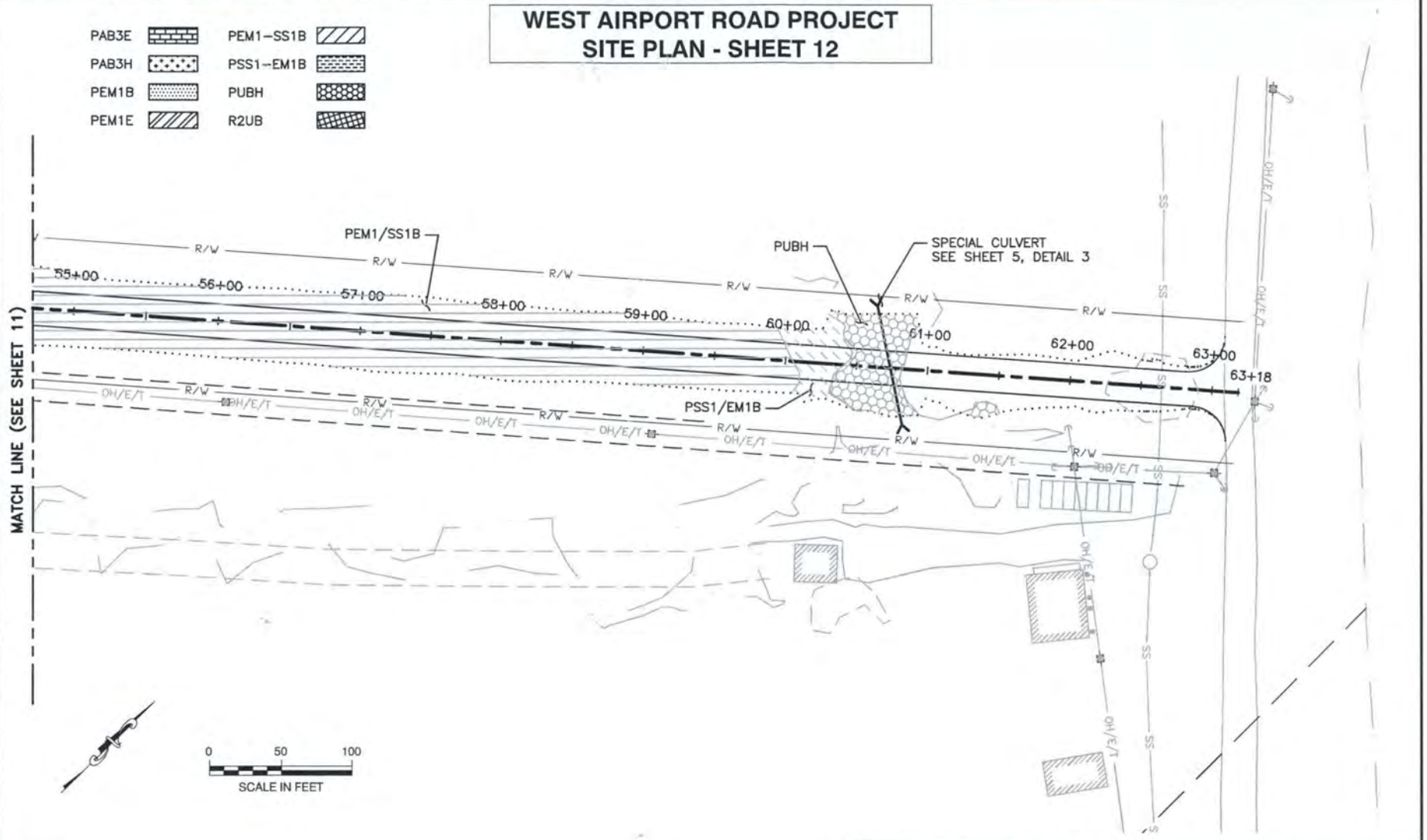


LEGEND

PROPOSED ROAD TOE OF FILL		PROPOSED GUARDRAIL	
PROPOSED ROAD SHOULDER		PROPOSED CMP	
PROPOSED ROAD CENTERLINE		PROPOSED RIGHT OF WAY	R/W
EXISTING RIGHT OF WAY		EXISTING WATER BODY	

Applicant: NATIVE VILLAGE OF DEERING
File No. : POA-2014-121
Waterway: SMITH CREEK
Proposed activity: WEST AIRPORT ROAD CONSTRUCTION
Sec.19 & 30 T. 08 N R. 19 W M. KATEEL RIVER MERIDIAN
Lat.: N 66.08° Long.: 165.71° W
Sheet 11 of 14 Date: 05 /17 /2016

WEST AIRPORT ROAD PROJECT
SITE PLAN - SHEET 12



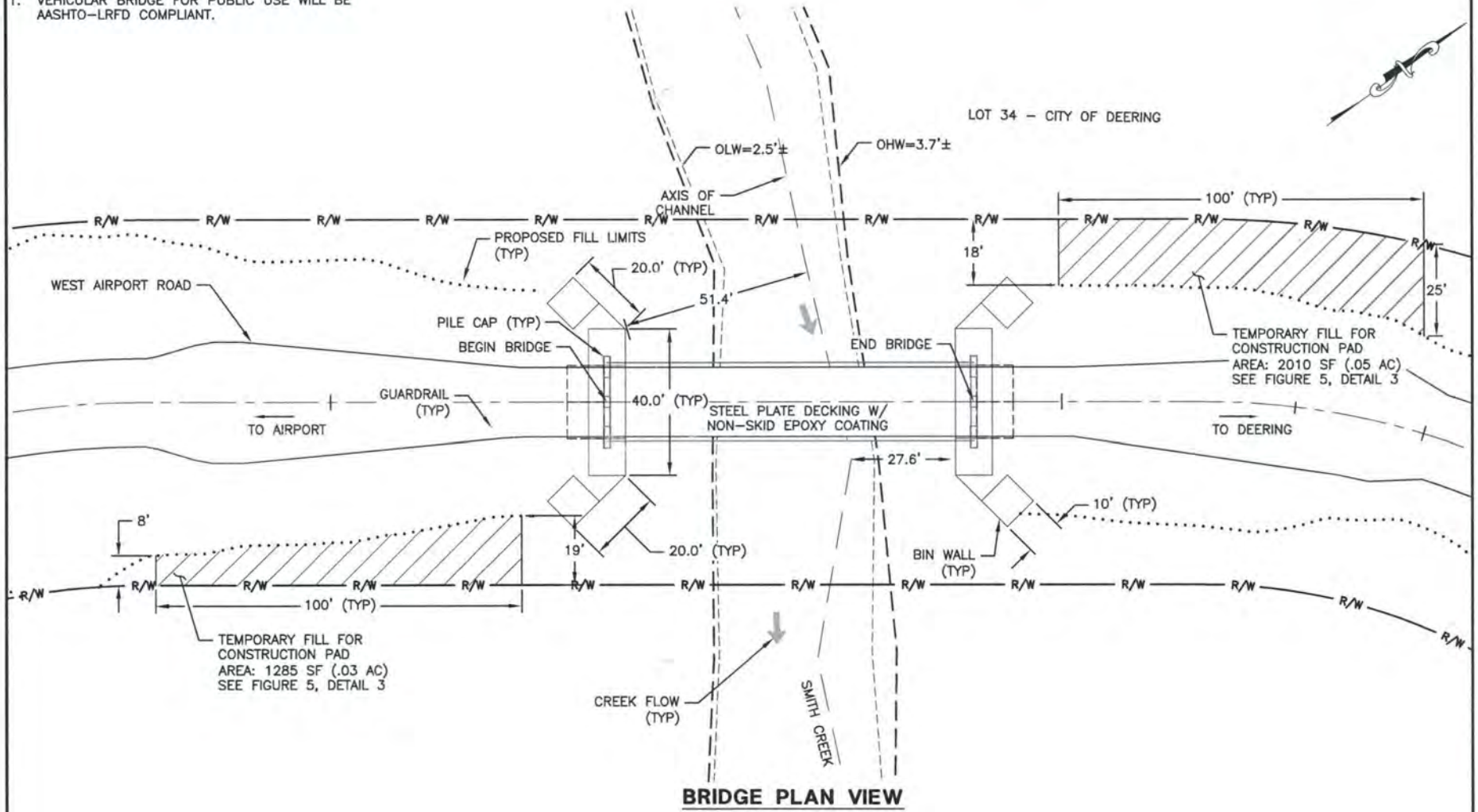
LEGEND

PROPOSED ROAD TOE OF FILL		PROPOSED GUARDRAIL	
PROPOSED ROAD SHOULDER		PROPOSED CMP	
PROPOSED ROAD CENTERLINE		PROPOSED RIGHT OF WAY	R/W
EXISTING RIGHT OF WAY		EXISTING WATER BODY	

Applicant: NATIVE VILLAGE OF DEERING
File No. : POA-2014-121
Waterway: SMITH CREEK
Proposed activity: WEST AIRPORT ROAD CONSTRUCTION
Sec.19 & 30 T. 08 N R. 19 W M. KATEEL RIVER MERIDIAN
Lat.: N 66.08° Long.: 165.71° W
Sheet 12 of 14 Date: 05 /17 /2016

NOTES

1. VEHICULAR BRIDGE FOR PUBLIC USE WILL BE AASHTO–LRFD COMPLIANT.



BRIDGE PLAN VIEW

PARCEL OWNER:
NANA REGIONAL COROPORATION INC.

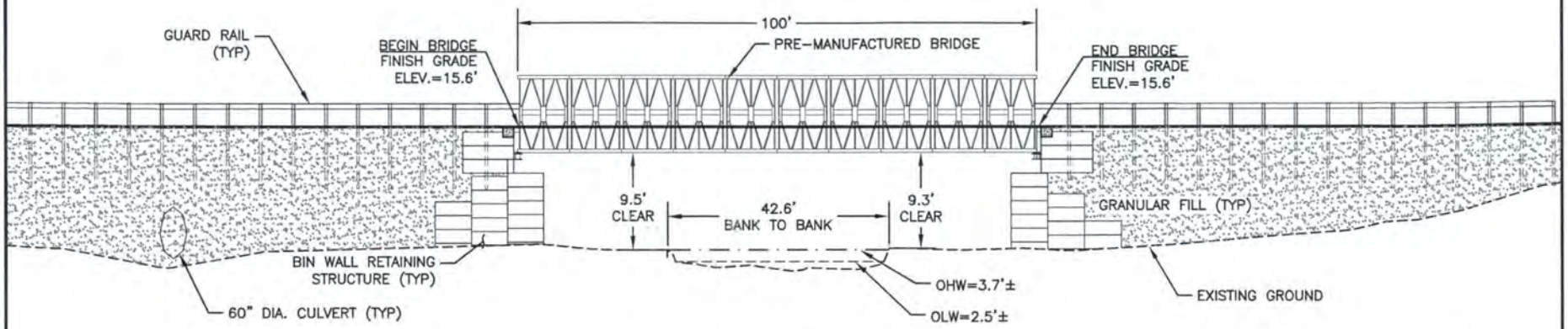
ABBREV:
OHW = ORDINARY HIGH WATER (SEPTEMBER 2013)
OLW = ORDINARY LOW WATER (SEPTEMBER 2013)

NOTES:
NO FILL WILL BE PLACED BELOW OHW.

HORIZONTAL DATUM:
ALASKA STATE PLANE NAD83, ZONE 7, U.S. FEET

VERTICAL DATUM:
NAVD88

Applicant: NATIVE VILLAGE OF DEERING
File No. : POA-2014-121
Waterway: SMITH CREEK
Proposed activity: WEST AIRPORT ROAD CONSTRUCTION
Sec.19 & 30 T. 08 N R. 19 W M. KATEEL RIVER MERIDIAN
Lat.: N 66.08° Long.: 165.71° W
Sheet 13 of 14 Date: 05 /17 /2016

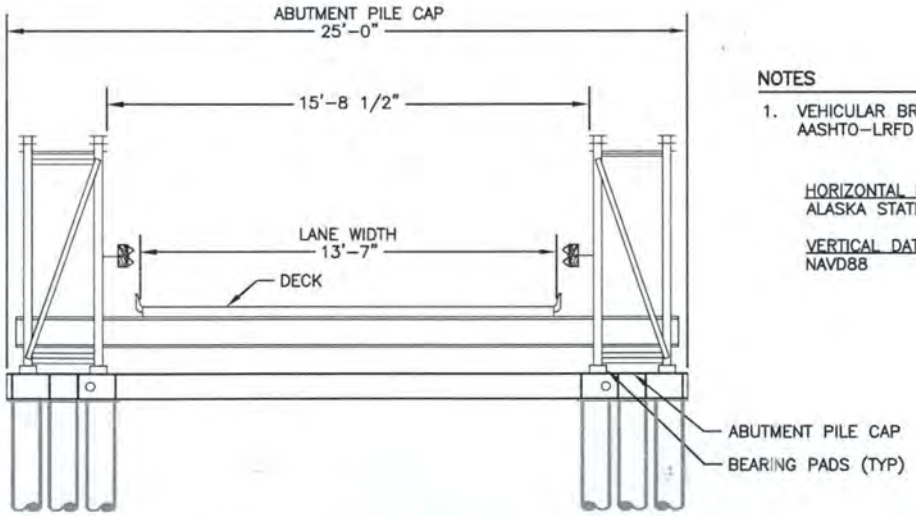


BRIDGE ELEVATION

AT BRIDGE ℄

0 15 30

SCALE IN FEET



VEHICULAR BRIDGE SECTION

SCALE: NTS

NOTES

1. VEHICULAR BRIDGE FOR PUBLIC USE WILL BE AASHTO-LRFD COMPLIANT.

HORIZONTAL DATUM:
ALASKA STATE PLANE NAD83, ZONE 7, U.S. FEET

VERTICAL DATUM:
NAVD88

Applicant: NATIVE VILLAGE OF DEERING
File No. : POA-2014-121
Waterway: SMITH CREEK
Proposed activity: WEST AIRPORT ROAD CONSTRUCTION
Sec.19 & 30 T. 08 N R. 19 W M. KATEEL RIVER MERIDIAN
Lat.: N 66.08° Long.: 165.71° W
Sheet 14 of 14 Date: 05 /17 /2016

THE STATE
of ALASKA
GOVERNOR BILL WALKER

Department of Environmental Conservation

DIVISION OF WATER
Wastewater Discharge Authorization Program

555 Cordova Street
Anchorage, Alaska 99501-2617
Main: 907.269.6285
Fax: 907.334.2415
www.dec.alaska.gov/water/wwdp

July 8, 2016

Native Village of Deering
Attention: Kevin Moto
P.O. Box 36089
Deering, Alaska 99736

Re: Native Village of Deering, Deering Airport Road
POA-2014-121, Smith Creek

Dear Mr. Moto:

In accordance with Section 401 of the Federal Clean Water Act of 1977 and provisions of the Alaska Water Quality Standards, the Department of Environmental Conservation (DEC) is issuing the enclosed Certificate of Reasonable Assurance for placement of dredged and/or fill material in waters of the U.S., including wetlands and streams, associated with the development of a new road route to the Deering Airport, also serving as an emergency evacuation route, in Deering, Alaska.

DEC regulations provide that any person who disagrees with this decision may request an informal review by the Division Director in accordance with 18 AAC 15.185 or an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340. An informal review request must be delivered to the Director, Division of Water, 555 Cordova Street, Anchorage, AK 99501, within 15 days of the permit decision. Visit http://dec.alaska.gov/commish/ReviewGuidance.htm for information on Administrative Appeals of Department decisions.

An adjudicatory hearing request must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, PO Box 111800, Juneau, AK 99811-1800, within 30 days of the permit decision. If a hearing is not requested within 30 days, the right to appeal is waived.

By copy of this letter we are advising the U.S. Army Corps of Engineers of our actions and enclosing a copy of the certification for their use.

Sincerely,

James Rypkema
Program Manager, Storm Water and Wetlands

Enclosure: 401 Certificate of Reasonable Assurance

cc: (with encl.)
Mary Romero, USACE, Anchorage
Eric Lindeen, Bristol Eng. Service Corp.
Jack Winters, ADF&G
USFWS Field Office Fairbanks
Gayle Martin, EPA Operations, Anchorage

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CERTIFICATE OF REASONABLE ASSURANCE

In accordance with Section 401 of the Federal Clean Water Act (CWA) and the Alaska Water Quality Standards (18 AAC 70), a Certificate of Reasonable Assurance, is issued to Native Village of Deering, attention: Kevin Moto, at P.O. Box 36089, Deering, Alaska 99736, for placement of dredged and/or fill material in waters of the U.S. including wetlands and streams in association with the development of a new road to the Deering Airport which also serves as an evacuation route from the community which is stranded when seasonal flooding overflows or washes out the existing road to the airport.

The project would discharge 25,800 cubic yards (cy) of fill material and 2,300 cy of aggregate surface course material into 6.86 acres of jurisdictional wetlands to create a 5,280 foot by 50 foot road to the Deering Airport. The road would include a bridge over Smith Creek. The bridge would be a 65 foot single span structure, with earthen abutments and 125 foot approaches on either side.

A state issued water quality certification is required under Section 401 because the proposed activity will be authorized by a U.S. Army Corps of Engineers permit (POA-2014-121) and a discharge of pollutants to waters of the U.S. located in the State of Alaska may result from the proposed activity. Public notice of the application for this certification was given as required by 18 AAC 15.180 in the Corps Public Notice POA-2014-121 posted from May 19, 2016 to June 20, 2016.

The proposed activity is located within Sections 19 and 30, T. 8 N., R. 19 W., Kateel River Meridian; Latitude 66.0743° N., -162.7463° W., in Deering, Alaska.

The Department of Environmental Conservation (DEC) reviewed the application and certifies that there is reasonable assurance that the proposed activity, as well as any discharge which may result, will comply with applicable provisions of Section 401 of the CWA and the Alaska Water Quality Standards, 18 AAC 70, provided that the following additional measures are adhered to.

1. Reasonable precautions and controls must be used to prevent incidental and accidental discharge of petroleum products or other hazardous substances. Fuel storage and handling activities for equipment must be sited and conducted so there is no petroleum contamination of the ground, subsurface, or surface waterbodies.
2. During construction, spill response equipment and supplies such as sorbent pads shall be available and used immediately to contain and cleanup oil, fuel, hydraulic fluid, antifreeze, or other pollutant spills. Any spill amount must be reported in accordance with Discharge Notification and Reporting Requirements (AS 46.03.755 and 18 AAC 75 Article 3). The applicant must contact by telephone the DEC Area Response Team for Northern Alaska at (907) 451-2121 during work hours or 1-800-478-9300 after hours. Also, the applicant must contact by telephone the National Response Center at 1-800-424-8802.
3. Runoff discharged to surface water (including wetlands) from a construction site disturbing one or more acres must be covered under Alaska's General Permit for Storm Water Discharges from Large and Small Construction Activities in Alaska (AKR100000). This permit requires a Storm Water Pollution Prevention Plan (SWPPP). For projects that disturb more than five acres, this SWPPP must also be submitted to DEC (William Ashton, 907-269-6283) prior to construction.

4. During the work on the culverts and bridges, construction equipment shall not be operated below the ordinary high water mark if equipment is leaking fuel, oil, hydraulic fluid, or any other hazardous material. Equipment shall be inspected and recorded in a log on a daily basis for leaks. If leaks are found, the equipment shall not be used and pulled from service until the leak is repaired.
5. All work areas, material access routes, and surrounding wetlands involved in the construction project shall be clearly delineated and marked in such a way that equipment operators do not operate outside of the marked areas.
6. Natural drainage patterns shall be maintained, to the extent practicable, without introducing ponding or drying.
7. Excavated or fill material, including overburden, shall be placed so that it is stable, meaning after placement the material does not show signs of excessive erosion. Indicators of excess erosion include: gullying, head cutting, caving, block slippage, material sloughing, etc. The material must be contained with siltation best management practices (BMPs) to preclude reentry into any waters of the U.S., which includes wetlands.
8. Include the following BMPs to handle storm water and total storm water volume discharges as they apply to the site:
    a. Divert storm water from off-site around the site so that it does not flow onto the project site and cause erosion of exposed soils;
    b. Slow down or contain storm water that may collect and concentrate within a site and cause erosion of exposed soils;
    c. Place velocity dissipation devices (e.g., check dams, sediment traps, or riprap) along the length of any conveyance channel to provide a non-erosive flow velocity. Also place velocity dissipation devices where discharges from the conveyance channel or structure join a water course to prevent erosion and to protect the channel embankment, outlet, adjacent stream bank slopes, and downstream waters.
9. Fill material (including dredge material) must be clean sand, gravel or rock, free from petroleum products and toxic contaminants in toxic amounts.
10. Any disturbed ground and exposed soil not covered with fill must be stabilized and re-vegetated with endemic species, grasses, or other suitable vegetation in an appropriate manner to minimize erosion and sedimentation, so that a durable vegetative cover is established in a timely manner.

This certification expires five (5) years after the date the certification is signed. If your project is not completed by then and work under U.S Army Corps of Engineers Permit will continue, you must submit an application for renewal of this certification no later than 30 days before the expiration date (18 AAC 15.100).

Date: July 8, 2016

James Rypkema, Program Manager
Storm Water and Wetlands

United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Fairbanks Fish and Wildlife Field Office
Planning and Consultation Branch
101 12th Avenue, Room 110
Fairbanks, Alaska 99701
June 9, 2016

U.S. Army Corps of Engineers
Alaska District
Attn: Colonel Michael Brooks
P.O. Box 6898
JBER, Alaska, 99506-0898

Re: POA-2014-121
Smith Creek

Dear Colonel Brooks:

The U.S. Fish and Wildlife Service (Service) has reviewed the referenced Public Notice of Application (PN) by The Native Village of Deering (applicant) to place about 25,800 cubic yards of gravel into 6.86 acres (0.03 km^2) of wetlands for the purpose of constructing an emergency access road from Deering, Alaska, to their airport.

The proposed project would construct a 5,280 ft × 50 ft (1.6 km × 15.2 m) road between the community of Deering and the existing airport (Figure 1). The project would also include a 65 ft (19.8 m) single-span bridge with earthen abutments over Smith Creek (Figure 2). The bridge would allow a minimum of 9 ft (2.7 m) vertical clearance from ordinary high water and 42.6 ft (13 m) navigational opening. Grubbing of the project area would take place before May 20 or after July 20 to avoid impacts to nesting migratory birds. Placement of fill would occur from June through September 2016, with project completion expected in 2017. The proposed mitigation for aquatic-resource impacts includes avoidance and minimization measures, and partial compensatory mitigation.

Recommendations: The Service appreciates the applicant's proposed plans to help conserve wetlands; including reducing the original wetland fill from 10 acres to 6.86 acres, proposing a new road alignment outside the floodplain of Smith Creek, and constructing a full-span bridge rather than a culvert at the Smith Creek crossing. We offer the following recommendations to help further reduce adverse impacts from the proposed project to fish and wildlife habitat.

Threatened and Endangered Species: The proposed project is within the range of three species listed as threatened under the Endangered Species Act of 1973 (ESA), as amended: spectacled eiders (*Somateria fischeri*), Alaska-breeding Steller's eiders (*Polysticta stelleri*), and polar bears (*Ursus maritimus*). The Service originally consulted on this project in a letter dated April 15, 2014. The project description and timing have changed, however, because the description of the proposed activities has not changed substantially, and the size of the proposed wetland impact area has decreased (10 acres reduced to 6.86 acres), we would not expect additional appreciable

impacts to listed species. This letter acknowledges the proposed changes, and constitutes an amendment to the Service's April 2014, consultation pursuant to section 7 of the ESA. Preparation of an additional Biological Assessment or further consultation regarding this project is not necessary at this time.

Migratory Birds: Migratory bird nests, eggs, or nestlings could be destroyed if work is conducted in nesting habitats during the spring and summer breeding season, which is generally May 20 through July 20 in the proposed project area. The Migratory Bird Treaty Act (MBTA) prohibits the willful killing or harassment of migratory birds. To minimize disturbance to nesting birds and help comply with the MBTA, we recommend land disturbing activities (e.g., clearing, excavation, fill, brush hogging, etc.) not occur from May 20 to July 20. For more information on timing guidelines for land disturbance activities, please refer to the following link: http://www.fws.gov/alaska/fisheries/fieldoffice/anchorage/pdf/vegetation_clearing.pdf (please also note these guidelines are currently under revision).

We appreciate the applicant's plans to disturb (grub) the project area either before May 20 or after July 20 to avoid and minimize impacts to ground-nesting migratory birds.

Mitigation: Service policy regarding impacts to fish and wildlife habitat includes first avoiding, then minimizing, and finally compensating for any remaining unavoidable impacts. These impacts include direct, indirect, and temporal impacts. If there are unavoidable project impacts, then the Service recommends compensatory mitigation for the unavoidable impacts by restoring or permanently protecting equal or higher-value wetlands as described in the 2008 Final Compensatory Mitigation Rule (33 CFR 325 and 332).

We appreciate the applicant's proposed avoidance (e.g., road alignment outside the floodplain), and minimization measures (e.g., culverts where appropriate and a full-span bridge over Smith Creek). We also recognize appropriate compensatory mitigation opportunities are limited in much of rural Alaska, such as mitigation banks and in-lieu fee programs. We appreciate the proposed permittee-responsible mitigation; including removal and disposal of refuse and debris from within and adjacent to the project area, removal and disposal of abandoned equipment and vehicles near the southern terminus of the proposed alignment, and removal of about 7,700 square feet (0.18 acres) of gravel from the existing Deering Road.

We recommend the applicant consider additional permittee-responsible compensatory mitigation opportunities if practicable to match the proposed unavoidable wetland impacts. These opportunities might include salvaging gravel and reclaiming additional portions of the existing Deering Road which may no longer be used, or reclaiming exhausted material sites along the Smith River south of Deering.

Conclusion: The Service does not object to permit issuance provided the following conditions are included in the permit.

1. Land disturbing activities (e.g., clearing, excavation, fill, brush hogging, etc.) not occur from May 20 to July 20 to minimize the likelihood of disturbing nesting migratory birds.

2. Refuse and debris, and abandoned equipment and vehicles are removed from wetlands within and adjacent to the project area; and abandoned portions of the existing Deering

road are reclaimed by salvaging gravel and restored to their native plant-community condition.

3. No fill, equipment or construction materials shall be stockpiled or stored on wetlands that do not have DA authorization for those activities.

4. Natural drainage patterns shall be maintained to the extent practicable by the installation of culverts in sufficient number and size under access roads and trails to prevent ponding, diversion, or concentrated runoff that would result in adverse impacts to adjacent wetlands and other fish and wildlife habitats.

5. All disturbed, stockpile and fill areas shall be stabilized to prevent erosion. Increased water turbidity and accumulation of sediment in drainages, sloughs, and other wetlands shall be evidence of insufficient stabilization.

These comments are submitted in accordance with provisions of the Endangered Species Act of 1973 (87 Stat. 844), the Fish and Wildlife Coordination Act (48 Stat. 401, as amended: 16 U.S.C. 661 et esq.), and constitute the report of the Department of Interior. These comments are also for your use in your determination of 404 (b)(1) guidelines compliance (40 CFR 230), and in your public interest review (33 CFR 320.4) relating to protection of fish and wildlife resources.

We appreciate this opportunity for comment. If you need further assistance, please contact Kaithryn Ott at 907-456-0277 or *kaithryn_ott@fws.gov*.

Sincerely,

Robert J. Henszey
Branch Chief
Planning and Consultation

ecc: Mary Romero, USACE, JBER
Kevin Moto, Native Village of Deering
Eric Lindeen, Bristol Engineering, Anchorage
Audra L.J. Brase, ADF&G Division of Habitat, Fairbanks
James Rypkema, ADEC, Anchorage
Gayle Martin, EPA, Anchorage

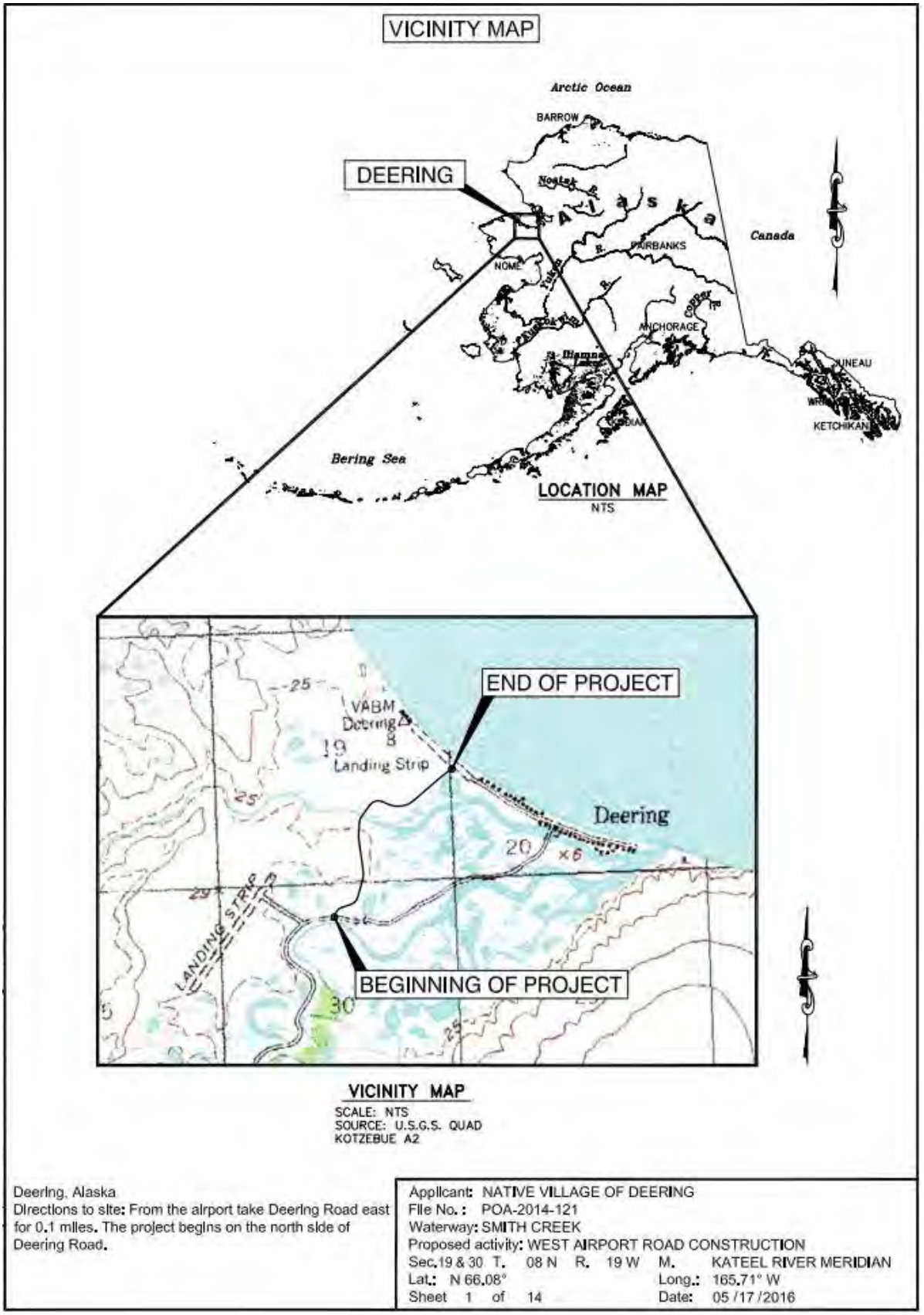


Figure 1. Location of the proposed road construction project in between the community of Deering, Alaska, and the nearby landing strip.

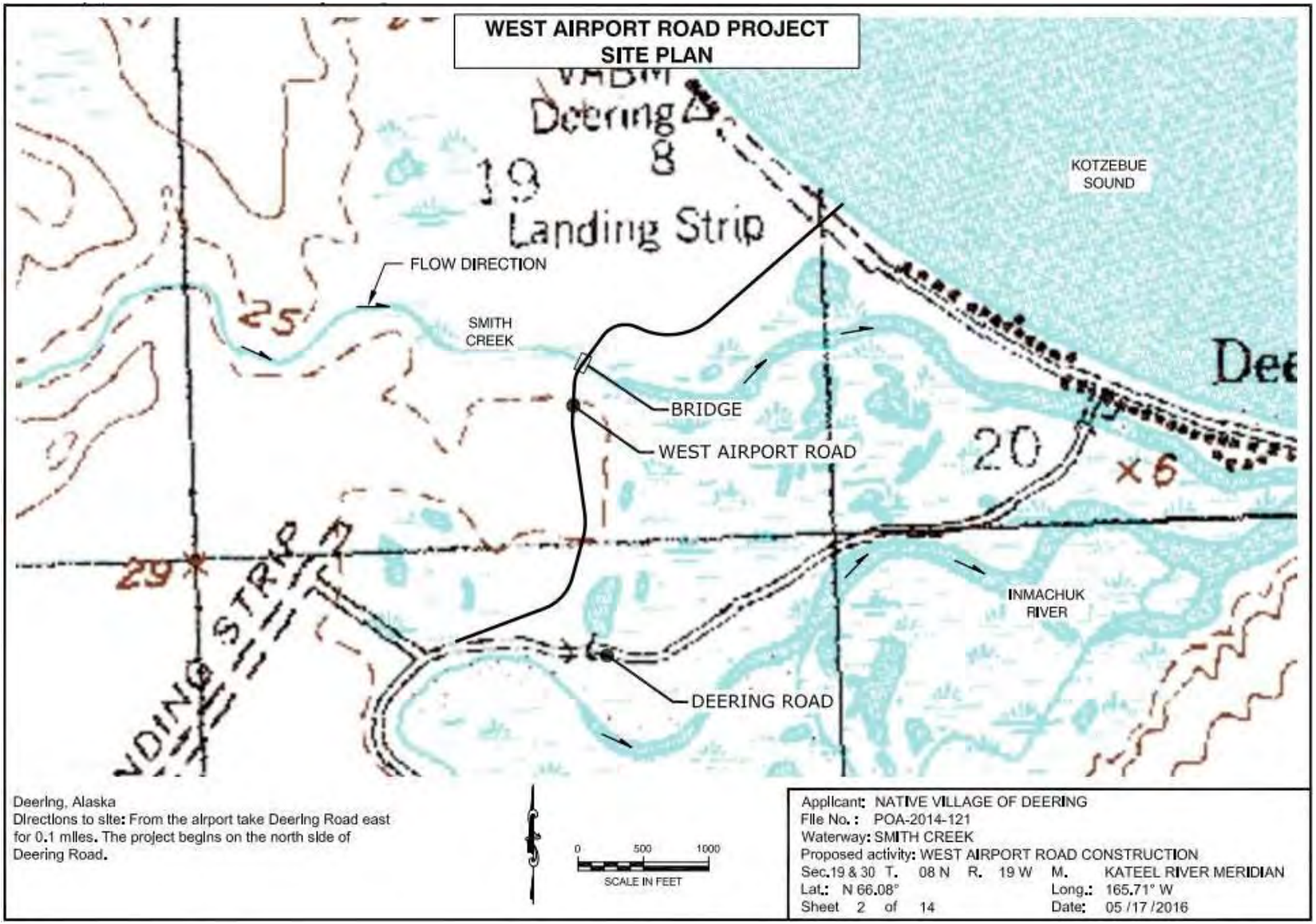


Figure 2. Detail of the proposed Smith Creek bridge and road alignment between the community of Deering, Alaska, and the nearby landing strip.

APPENDIX D

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

West Airport Road Project
Deering, Alaska 99736

Bristol Project No. 32140053

May 2017

Prepared For:

The Native Village of Deering
P.O. Box 30689
Deering, AK 99736

Prepared By:

Bristol
ENGINEERING SERVICES CORPORATION

111 W. 16th Avenue, Third Floor
Anchorage, Alaska 99501-5109
Phone (907) 563-0013
Fax (907) 563-6713

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1.0 SUMMARY

This report presents the results of a Phase I Environmental Site Assessment (ESA) for the construction of the approximately one-mile West Airport Road, which includes a bridge that will span Smith Creek in Deering, Alaska. The ESA report was prepared in May 2017 by Bristol Engineering Services Corporation (Bristol) for the Native Village of Deering. The ESA services included the limited research and data reviews specified herein and a site reconnaissance.

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2.0 INTRODUCTION

Bristol Engineering Services Corporation (Bristol) has been contracted to prepare a Phase I ESA Report for the construction of the West Airport Road and bridge over Smith Creek in Deering, Alaska.

The Village of Deering is a second-class city located in the Northwest Arctic Borough situated on a thin spit of land along the southern edge of Kotzebue Sound within the northern coast of the Seward Peninsula. Deering is located at the mouth of the Inmachuk River, 57 miles southwest of Kotzebue. Deering is located at approximately 66.08° North Latitude and -162.71° West Longitude (Sections19, 20, 30, and 29 T8N R19W, Kateel River Meridian) (ADCED 2013).

The proposed new road will begin near the city garage/maintenance building and extend southwest for approximately 1,620 feet, then continue west for 500 feet, then southwest for 500 feet including a 100-foot span over Smith Creek. Crossing over the bridge the road will then extend south for 1,150 feet, then southwest for 600 feet, then west for the last 950 feet to the terminus at the intersection with Airport Road to the Deering Airport (See Figures). Deering Road will intersect with West Airport Road approximately 300 feet before the terminus at Unnamed Road.

The proposed road corridor will have a 24-foot wide driving surface and will be approximately 5,320 feet in length, including a bridge crossing over Smith Creek. Additionally, the proposed project will have a total project footprint of approximately 7.2 acres.

The bridge spanning Smith Creek will be a 100-foot single span pre-manufactured modular steel bridge stabilized with thermal helix piles and metal bin-wall abutments. The driving surface of the bridge will consist of steel plate decking coated with a non-skid epoxy. There will be 125-foot approaches on either side of the bridge. The road on both sides of the bridge will be two-lane roads that, at the approaches on the north and south sides, will flair first to 35 feet across at the widest point to accommodate pullouts for vehicles to allow oncoming traffic over the bridge to pass.

2.1 PURPOSE

The purpose of conducting the Phase I ESA was to estimate the potential, as of the date of the assessment, for hazardous substances to be present on the project corridor at levels likely to warrant mitigation under the current State of Alaska environmental laws and regulations.

2.2 DETAILED SCOPE-OF-SERVICES

An ESA comprises a number of individual elements whose basic nature and extent are determined in accordance with the standard of care for ESAs. The standard of care is commonly defined as the care applied by the ordinary practitioner in the area where the ESA was performed. It is Bristol's belief that we have complied with the applicable standard of care in performing this ESA.

The basic scope of services included the limited research and data reviews specified herein and a site reconnaissance. The activities performed to obtain information about the project corridor included the following:

- A Site Reconnaissance of the project corridor was conducted by Bristol personnel on July 29, 2014.
- A review of data obtained from a search of federal, state, and local databases performed by Environmental Data Resources Inc. (EDR). The resulting data was compiled into a report by EDR that is given in Appendix C. A discussion of the prominent databases consulted and subsequent search results is presented in Section 5.0, Records Review.
- Historical Aerial Photo Review from the years 1962, 1974, 1984, 1998 and 2013.

2.3 SIGNIFICANT ASSUMPTIONS

See Sections 2.2, Detailed Scope-of-Services and 2.4, Limitations and Expectations.

2.4 LIMITATIONS AND EXPECTATIONS

Generally, our services intentionally do not include specific surveys for asbestos containing materials (ACM), radon, methane gas, wetland delineation, lead in paint, lead in domestic water supply, polychlorinated biphenyls (PCBs) in caulk, or the investigation or detection of any Biological Pollutants present in or around any structure. The term "biological pollutants"

includes, but is not limited to; molds, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organism.

Although the scope of this work included searching the governmental databases listed in Section 4.4, Table 1, for indications of nearby properties documented under these systems, it did not include reviews of the individual files for these entries. No other environmental sampling or research work was included in the ESA activities unless specifically referenced in this report.

The findings presented in Section 8.0 of this report are based solely upon the information obtained during the ESA. Furthermore, the conclusions and recommendations include our assessment of the potential for the project corridor to have been environmentally impacted from past activities on or near the project corridor. Although the findings and considerations represent Bristol's best judgment, they do not represent a *certification* of the environmental status of the project corridor. American Society for Testing and Materials (ASTM) E 1527-13 states that, generally, an ESA has a shelf life of 180 days from the publication of the report.

Conditions and information observed by Bristol during these activities are subject to change. Indicators of the presence of hazardous materials that were latent at the time of this ESA may subsequently become observable. Information and representations obtained from individuals interviewed for this report were relied on unless incidents of conflicting data were noted. Bristol accepts no responsibility for inaccuracies or deficiencies in this report resulting from omissions or misrepresentations by the persons interviewed. Additionally, records or other information sources that Bristol did not review, because the research effort commonly associated with an ESA did not indicate their existence, may contain important information that could not have been considered in the formulation of the conclusions found in this report.

2.5 SPECIAL TERMS AND CONDITIONS

This ESA report (Report), which includes all of the supporting information gathered for purposes of the ESA, was prepared for the benefit of the Client. The Client may also distribute the Report to third parties, who may then use it at their discretion. However, any reliance upon the Report by a party other than the Client shall be solely at the risk of such third party and without legal recourse against Bristol. The Report shall not be used by any third party that does not agree to the conditions in this paragraph.

2.6 USER RELIANCE

See Sections 2.4, Limitations and Expectations and 2.5, Special Terms and Conditions.

3.0 SITE DESCRIPTION

The Native Village of Deering is located on Kotzebue Sound at the mouth of the Inmachuk River, approximately 57 miles southwest of Kotzebue. It is built on a flat sand and gravel spit approximately 300 feet wide and approximately half-mile long. It lays at approximately 66.07° North Latitude and -162.71° West Longitude (Sections 19, 20, and 30, Township 008 North, Range 019 West, Kateel River Meridian). See Figures 1 and 2, Vicinity Map and Site Location Map.

The proposed West Airport Road project corridor is currently undeveloped. Historically there was a trail and bridge in the general vicinity and a very faint trace of the former trail is discernable in aerial photographs; however, the bridge is no longer in place and, for all intents and purposes, neither is the road.

The proposed new road will begin near the city garage/maintenance building and extend southwest for approximately 1,620 feet, then continue west for 500 feet, then southwest for 500 feet to the proposed bridge approach, which will span Smith Creek. Crossing over the bridge the road will then extend south for 1,150 feet, then southwest for 600 feet, then west for the last 950 feet to the terminus at the intersection with an Unnamed Road to the airport (See Figures). Deering Road will intersect with West Airport Road approximately 300 feet before the terminus at Unnamed Road.

The proposed road corridor will have a 24-foot wide driving surface and will be approximately 5,320 feet in length, including a 100-foot bridge crossing over Smith Creek. Additionally, the proposed project will have a total project footprint of approximately 7.2 acres.

The bridge spanning Smith Creek will be a 100-foot single span pre-manufactured modular steel bridge stabilized with thermal helix piles and metal bin-wall abutments. The driving surface of the bridge will consist of steel plate decking coated with a non-skid epoxy. There will be 125-foot approaches on either side of the bridge. The road on both sides of the bridge will be two-lane roads that, at the approaches on the north and south sides, will flair first to 35 feet across at the widest point to accommodate pullouts for vehicles to allow oncoming traffic over the bridge to pass.

3.1 RECORDED DOCUMENTS

No recorded documents were obtained for the Report. For a list of federal and state records consulted for the Report see Section 2.2, Detailed Scope of Services.

3.2 SITE AND VICINITY GENERAL CHARACTERISTICS

The project corridor extends in a southwesterly direction following the utility corridor located at the western end of the village. At approximately 1,620 feet the road will curve to the west for about 500 feet where it will connect to the bridge crossing. The bridge crossing over Smith Creek will be a single span pre-manufactured modular steel bridge. Once on the other side the road will continue on west-southwest, avoiding FAA property, where it will meet up with Airport Road. The proposed road will also intersect with Deering Road, which is the other road leading out of the village. See Site Reconnaissance Notes and Photo Log in Appendices A & B, respectively.

The proposed project will acquire new right-of-way (ROW) over lands that are owned by the Native Village of Deering and managed by the Northwest Arctic Borough. Subsurface rights are owned by the NANA Regional Corporation, Inc.

3.3 CURRENT USE OF THE *PROJECT CORRIDOR*

The project corridor is currently undeveloped.

3.4 DESCRIPTION OF STRUCTURES, ROADS, AND OTHER IMPROVEMENTS ON THE PROJECT CORRIDOR

There are no structures located within the proposed project corridor.

3.5 CURRENT USES OF THE ADJOINING PROPERTIES

The properties adjacent to the project corridor consist of undeveloped land.

4.0 USER PROVIDED INFORMATION

Most of the information contained in the Report was gathered by Bristol and was not provided by the client.

4.1 TITLE RECORDS

No Title Records were obtained for the project corridor, at the time of this Report's generation. A review of historical aerial photographs dating back to 1966 indicates that the property adjacent to the project corridor has not been developed in modern times and therefore has a low probability of having been subjected to contamination.

4.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

No environmental liens were found to apply to the proposed project corridor.

4.3 SPECIALIZED KNOWLEDGE

All knowledge used in the preparation of the Report is commonly known or reasonably ascertainable information.

4.4 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

See Sections 2.2, Detailed Scope of Services and 5.1, Standard Environmental Record Sources for a list of sources, including federal and state databases and lists, consulted for the preparation of the Report.

Bristol contracted EDR to perform a search of federal, state, and local databases. A records search for the project corridor was conducted (Appendix C). The search radius was the industry standard one-mile radius and originated from the approximate center of the project corridor.

The EDR report includes a list of "orphan" records that have "poor or inadequate" location information. Because the location of these sites cannot be mapped/determined due to inadequate information, a discussion of orphan list records is not included in this Report. The orphan records are listed in the EDR Report (Appendix C).

The results of the EDR search were compiled into a report, which is located in Appendix C, and are listed in Tables 1-3 of this report.

Table 1 – Federal Agency Findings Summary

List Name	Acronym	Status
National Priority List	NPL	No Listing
Delisted NPL	Delisted NPL	No Listing
Comprehensive Environmental Response, Compensation, and Liability Information Systems	CERCLIS FEDERAL FACILITY	No Listing No Listing
CERCLIS No Further Remedial Action Planned	CERCLIS-NFRAP	No Listing
Resource Conservation and Recovery Act - Corrective Action Report	RCRA-CORRACTS	No Listing
RCRA Non-CORRACTS Treatment, Storage and Disposal	RCRA-CORRACTS TSD	No Listing No Listing
RCRA Generators	RCRA-LQG RCRA-SQG RCRA-CESQG	No Listing No Listing No Listing
Institutional Controls / engineering Controls registry	US ENG Controls US INST Control LUCIS	No Listing No Listing No Listing
Emergency Response Notification System	ERNS	No Listing

Table 2 – State Agency Findings Summary

List Name	Acronym	Status
State- and Tribal – equivalent CERCLIS	SHWS	No Listing
State and tribal landfill and/or solid waste disposal site lists	SWF/LF	No Listing
State and tribal leaking storage tank lists	LUST INDIAN LUST	No Listing
State and tribal registered storage tank lists	UST, AST, INDIAN UST, FEMA UST	No Listing
State and tribal intuitional control/engineering control registries	ENG CONTROLS INST CONTROLS	No Listing
State and tribal Brownfield sites	BROWNFIELDS	No Listing

Table 3 - Additional Environmental Findings Summary

List Name	Acronym	Status
Local Brownfields lists	US BROWNFIELDS	No Listing
Local lists of Landfill/ Solid waste Disposal Sites	ODI, DEBRIS REGION 9, SWRCY, INDIAN ODI	No Listing

Local Lists of Hazardous Waste / Contaminated Sites	US CDL, CDL,US HIST CDL	No Listing
Local Land Records	LEINS 2	No Listing
Records of Emergency Release Reports	HMIRS, SPILLS	No Listing
Other Ascertainable Records	RCRA-Non Gen	No Listing
	DOT OPS	No Listing
	DOD	No Listing
	FUDS	No Listing
	CONSENT	No Listing
	ROD	No Listing
	UMTRA	No Listing
	MINES	No Listing
	TRIS	No Listing
	TSCA	No Listing
	FTTS	No Listing
	HIST FTTS	No Listing
	SSTS	No Listing
	ICIS	No Listing
	PADS	No Listing
	MLTS	No Listing
	RADINFO	No Listing
	FINDS	1*
	RAATS	No Listing
	UIC	No Listing
	DRYCLEANERS	No Listing
	NPDES	No Listing
	AIRS	No Listing
	INDIAN RESERV	No Listing
	SCRD DRYCLEANERS	No Listing
	FINANCIAL ASSURANCE	No Listing
	COAL ASH	No Listing
	PBC TRANSFORMER	No Listing
	COAL ASH EPA	No Listing
	US FIN ASSUR	No Listing
	EPA WATCH LIST	No Listing
	PRP	No Listing
	2020 COR ACTION	No Listing
	COAL ASH DOE	No Listing
	COAL ASH EPA	No Listing
	Financial Assurance	No Listing
	COAL ASH	No Listing
	US AIRS	No Listing
	LEAD SMELTERS	No Listing
	2020 CO ACTION	No Listing

*= Site(s) were determined to be of sufficient distance from the project corridor as to not pose a threat.

4.5 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

No major environmental issues were encountered in local, state, or federal records reviews of the proposed project corridor.

During the July 29, 2014 site reconnaissance visit, some issues of environmental concern were encountered at the beginning of the proposed road corridor in proximity to the City garage/maintenance building, which are discussed in further detail in Section 6.3.

4.6 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

The project corridor is unoccupied. The surface rites reside with the Native Village of Deering and the subsurface rites residing with NANA Regional Corporation.

4.7 REASON FOR PERFORMING *PHASE I*

The purpose of conducting the ESA was to estimate the potential, as of the date of the assessment, for hazardous substances to be present within and adjacent to the project corridor at levels likely to warrant mitigation under the current State of Alaska environmental laws and regulations.

4.8 OTHER

Not applicable.

5.0 RECORDS REVIEW

Bristol contracted Environmental Data Resources Inc. (EDR) to search federal, state, and local databases and prepare a report detailing their findings (Appendix C). A list of federal, state, and local records/databases EDR consulted for the preparation of the Report is listed in Section 5.1, Standard Environmental Record Sources. Additionally, the online ADEC GIS based Contaminated Site database was accessed to assist with determining the potential for contaminated sites within proximity to the project corridor.

5.1 STANDARD ENVIRONMENTAL RECORD SOURCES

The following are the standard environmental record sources that were consulted for the preparation of the Report.

5.1.1 Federal Records Review

Federal National Priorities List (NPL) Site List: This includes the NPL, the proposed NPL sites, and NPL liens (federal Superfund liens). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. There are no NPL sites, NPL proposed sites, or NPL liens located within the project corridor or search radius. The NPL site list and proposed NPL site list were consulted for this report on March 3, 2013.

Federal Delisted NPL Site List: Sites may be deleted from the NPL when no further response is appropriate. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. No federally delisted NPL sites have been reported within the project corridor or search radius. The Federal Delisted NPL site list was consulted for this report on March 3, 2013.

Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List: The CERCLIS contains data on potential hazardous waste sites that have been reported to the EPA by states, municipalities, private companies, and private persons. The CERCLIS list contains sites which are either proposed to or on the NPL and sites which are in the screening and assessment phase for possible inclusion on the NPL. No

CERCLIS listed sites have been reported within the project corridor or search radius. The CERCLIS list was consulted for this report on March 3, 2013.

Federal CERCLIS No Further Remedial Action Planned (NFRAP) Site List: The CERCLIS-NFRAP site list is comprised of archived sites, which are sites that have been removed and archived from the inventory of CERCLIS sites. The decision to archive a site does not necessarily mean that there is no hazard associated with the site; it only means that, based upon available information, the location is not judged to be a potential NPL site. No CERCLIS-NFRAP listed sites have been reported within the project corridor or search radius. The CERCLIS-NFRAP listed was consulted for this report on March 3, 2013.

Federal Resource Conservation and Recovery Act (RCRA) Corrective Action Report (CORRACTS) Facilities List: The RCRA CORRACTS identifies hazardous waste handlers with RCRA corrective action activity. No RCRA CORRACTS listed facilities have been reported within the project corridor or search radius. The RCRA-CORRACTS facilities list was consulted for this report on March 3, 2013.

Federal RCRA non-CORRACTS Treatment, Storage, and Disposal (TSD) Facilities List: The RCRA non-CORRACTS TSD facilities list includes non-CORRACTS TSD facilities that treat, store, or dispose of waste. No such facilities have been reported within the project corridor or search radius. The list can be accessed via the EPA's comprehensive information system, RCRAInfo, which provides access to data supporting the RCRA and Hazardous and Solid Waste Amendments (HSWA). The RCRA non-CORRACTS TSD facilities list was consulted for this report on March 3, 2013.

Federal RCRA Generators List: The RCRA generators list includes information about large quantity generators (LQGs), small quantity generators (SQGs), and conditionally exempt small quantity generators (CESQGs). No LQGs, SQGs, or CESQGs have been reported within the assessment site or search radius. The list can be accessed via the EPA's comprehensive information system, RCRAInfo, which provides access to data supporting the RCRA and Hazardous and Solid Waste Amendments (HSWA). The RCRA generators list was consulted for this report on March 3, 2013.

Federal Institutional Controls/Engineering Controls Registries: The Engineering Controls Sites List (US ENG CONTROLS) is a listing of sites with engineering controls in place,

which may include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health. The Institutional Controls Sites List (US INST CONTROLS) is a listing of sites with institutional controls in place, which may include administrative measures (such as groundwater use restrictions), construction restrictions, property use restrictions, deed restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining onsite. No US ENG CONTROLS or US INST CONTROLS listed sites have been reported within the project corridor or search radius. The US ENG CONTROLS or US INST CONTROLS list was consulted for this report on March 3, 2013.

Federal Emergency Response Notification System (ERNS) List: The ERNS records and stores information on reported releases of oil and hazardous substances. No ERNS records have been reported within the project corridor or search radius. The ERNS list was consulted for this report on March 3, 2013.

Federal Hazardous Materials Information Reporting System (HMIRS): The HMIRS contains information on hazardous material spill incidents reported to U.S. Department of Transportation (USDOT). No HMIRS records have been reported within the project corridor or search radius. The HMIRS was consulted for this report on March 3, 2013.

Federal Facility Index System (FINDS): The FINDS provides an inventory of over one million facilities regulated by the EPA. FINDS acts as an index to the facility's name, address, EPA ID, and the programs which regulate or contain more detailed information about the facility. According to the EDR Report, 1 FINDS record was found to be located within the 1-mile search radius, located at the Deering Airport. The site is located outside the proposed project corridor and is not anticipated to negatively affect the proposed project. The FINDS inventory was consulted for this report on March 3, 2013.

5.1.2 State Records Review

Alaska Department of Conservation (ADEC) Contaminated Sites Database: The ADEC contaminated sites database is the state's equivalent to CERCLIS. These sites may or may not have been listed on the federal CERCLIS list. A search of the contaminated sites database revealed 3 records for the Deering area. Of the reported sites, only one is located within the 1-mile search radius. The Old Bulk Fuel Tank Farm is located down gradient from the

proposed project corridor, and separated by Smith Creek; therefore, the site is not anticipated to negatively affect the proposed project. The date the Contaminated Sites Database was consulted for this report was March 3, 2014.

State and Tribal Leaking Storage Tank Lists: The lists included the ADEC Leaking Underground Storage Tank (LUST) database and the EPA's Indian Land LUST lists. The LUST records contain an inventory of reported leaking underground storage tank incidents. No reported LUST incidents are located on or adjacent to the project corridor, or within the search radius. The date the LUST list was consulted for this report was March 3, 2014.

State and Tribal Registered Storage Tanks Lists: The lists included the ADEC Underground Storage Tank (UST) database, ADEC Aboveground Storage Tank (AST) records, and the EPA's Indian Land UST lists. The UST records contain an inventory of registered underground storage tanks. The AST records contain information regarding "regulated" facilities with storage capacities of above 10,000 barrels. No ASTs or USTs are reported to be located on or adjacent to the project corridor, or within the search radius. The ADEC UST/AST database records, and the EPA's Indian Land UST lists were independently verified by Bristol for this report on March 3, 2014.

State Institutional Control/Engineering Control Registries: The lists include contaminated sites with either engineering controls (ENG CONTROLS) or institutional controls (INST CONTROLS) in place. No contaminated sites with either engineering controls or institutional controls in place are located along or within the project corridor or within the search radius. The State INST CONTROLS/ENG CONTROLS registries were consulted for this report on March 3, 2014.

State Brownfield Sites: This includes proposed or identified Brownfield sites, which are properties that may have difficulty being reused due to the presence or potential of a hazardous substance, pollutant, or contamination. No proposed or identified Brownfield sites are located within the project corridor or search radius. The State Brownfield site list was consulted for this report on March 3, 2014.

5.2 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

Additional environmental record sources were not used for the preparation of the Report.

5.3 PHYSICAL SETTING SOURCE(S)

The physical setting source was limited to the observations made by Bristol during the July 29, 2014 site reconnaissance visit.

5.4 HISTORICAL USE INFORMATION ON THE *PROJECT CORRIDOR*

An archaeological assessment of the project area was conducted by Mr. Robert Meinhardt with TrueNORTH Sustainable Development Solutions, LLC in September, 2013. The final report was sent to BIA for their review. BIA submitted the report to the State Historic Preservation Office (SHPO) for their concurrence with the report's findings. According to the report, no archaeological remains or historical buildings were observed in the project corridor. BIA/SHPO concurred with the report's findings as of October 15, 2014. The archaeological assessment and SHPO Section 106 letter can be found in Appendix D.

5.5 HISTORICAL USE INFORMATION ON ADJOINING PROPERTIES

Deering was established in 1901 as a supply station for Interior gold mining near the historic Malemiut Eskimo village of "Inmachukmiut." The name Deering was probably taken from the 90-ton schooner "Abbey Deering," which was in nearby waters around 1900. The city was incorporated in 1970 (DCCED 2014).

5.6 HISTORICAL AERIAL PHOTOGRAPH REVIEW

No signs of environmental concerns were observed in a review of aerial photography from 1965, 1974, 1984, 1998, and 2013. Purchased photographs used in the aerial photograph review will be retained in Bristol's aerial photograph file and are not included in the Report. The following is a brief description of what was observed the aerial photograph:

- **1965:** The 1965 aerial photograph shows that the project corridor is undeveloped and in its natural state. No road or trail access to the project corridor is visible in the photograph. One small airstrip is visible along the beach line. Additionally, minimal development is visible throughout the larger area; consisting of only residential and municipal development. The aerial photograph did not indicate any signs of fuel contamination or spills; clearing for additional construction/ road infrastructure projects is visible. Overall, no discernable environmental concerns are visible in the 1965 aerial photograph.
- **1974:** The 1974 aerial photograph shows the project corridor is still undeveloped and in a natural state. The aerial photograph shows extensive development throughout Deering and the larger area, including: expanded road infrastructure, clearing new

airstrip with access road, and expansion of residential, municipal and commercial buildings. Scattered trails are visible adjacent to the project corridor and larger area. Areas of clearing for additional construction project are visible throughout the larger area. The aerial photograph did not indicate any signs of fuel contamination or spills. Overall, no discernable environmental concerns are visible in the 1974 aerial photograph.

- **1984:** The 1984 aerial photograph shows the proposed project corridor is still undeveloped and in its natural state The aerial photograph shows extensive development throughout Deering and the larger area, including: expanded road infrastructure, new airstrip with access road, borrow site expansion, new landfill with access road, and expansion of residential, municipal and commercial buildings. The aerial photograph did not indicate any signs of fuel contamination or spills. Overall, no discernable environmental concerns are visible in the 1984 aerial photograph.
- **1998:** The 1998 aerial photograph shows the proposed project corridor is still undeveloped and in its natural state The aerial photograph shows extensive development throughout Deering and the larger area, including: the expansion of residential along the former air strip, a new sewage lagoon and clearing for municipal and/or commercial buildings. The aerial photograph did not indicate any signs of fuel contamination or spills. Overall, no discernable environmental concerns are visible in the 1998 aerial photograph.
- **2013:** The 2013 aerial photograph shows the proposed project corridor and surrounding area as it exists today. Scarring from the historic trail that previously extended over partial areas of the proposed project corridor is visible. The aerial photograph did not indicate any signs of fuel contamination or spills. Overall, no discernable environmental concerns are visible in the 1998 aerial photograph.

6.0 SITE RECONNAISSANCE

The site reconnaissance visit was performed by Bristol environmental personnel on July 29, 2014. See site reconnaissance notes and photo log in Appendices A & B.

6.1 METHODOLOGY AND LIMITING CONDITIONS

The site reconnaissance took place along the entire length of the proposed project corridor (Figure 2). Bristol personnel surveyed the site taking notes, pictures, and probing the soil as they proceeded throughout the surrounding property and buildings. There were no climatological or physical barriers that prevented assessment of the entire proposed project corridor.

6.2 GENERAL SITE SETTING

The site reconnaissance took place along the proposed road alignment (See Figure 2).

6.3 EXTERIOR OBSERVATIONS

The overall appearance of the majority of the project corridor exterior surfaces during the reconnaissance was clean, with no discolored vegetation, unusual odors or indications of pits, unnatural ponds or lagoons. The exception being near the City garage/maintenance building located at the northern terminus of the proposed project corridor. Surface staining in multiple locations throughout the shop yard, approximately 75 abandoned 55-gallon fuel drums, 5 decommissioned day tanks, soaked utility poles, and abandoned machinery were noted throughout the developed pad during the site reconnaissance visit. See the site reconnaissance notes and photo log in Appendices A and B, respectively.

6.4 INTERIOR OBSERVATIONS

Not applicable. Two structures are located within the developed city garage/maintenance shop yard. No interior observations were made during the site reconnaissance visit.

7.0 INTERVIEWS

No interviews were conducted for the Report.

8.0 FINDINGS

A review of federal and state records indicates no signs of environmental concern within the project corridor or on the adjacent properties. The results of federal and state record searches revealed that no potential Superfund or hazardous waste sites are listed for the project corridor and adjacent areas; no EPA currently designated nonattainment areas for all criteria of pollutants are listed for the project corridor and adjacent areas; no records of the project corridor and adjacent areas were encountered in the CERCLIS database; no leaking underground storage tank records were encountered for the project corridor or adjacent areas. A search of the ADEC Spills Database indicated 4 spills within Deering; however, all 4 spills have been issued the classification of "Case Closed-Cleanup Complete", therefore are not anticipated to negatively affect the proposed project. A search of the ADEC Contaminated Sites Database indicated 1 site is located within the 1-mile search radius. However, the Old Bulk Fuel Tank Farm is located down gradient from the proposed project corridor, and separated by Smith Creek; therefore, the site is not anticipated to negatively affect the proposed project.

8.1 SUMMARY OF FINDINGS

No environmental concerns were observed by Bristol within the project corridor during the site reconnaissance visit on July 29, 2014. Bristol found the project corridor to be concurrent to what was seen in aerial photographs. The following potential signs of environmental contamination were not observed on the project corridor: modified waterbodies, stained areas/discolored stream banks, oil slicks/unusual colors on water, or dump areas. No fuel odors were detected within the project corridor. However, signs of environmental contamination were observed on adjacent properties during the site visit, associated with the City garage/maintenance building pad located south of the northern terminus of the proposed project corridor. Observations indicated the potential for contamination is moderate to high. The proposed project corridor will not interface with the existing garage pad and no excavation of material is associated with the proposed project; therefore any environmental compromise associated with the proposed project is low. Photographs from the site reconnaissance are provided in Appendix B, Site Reconnaissance Photo Log.

8.2 DATA GAPS

No significant data gaps, concerning environmental conditions within the subject property, were encountered by Bristol scientists during the compilation the Report.

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9.0 OPINION

The environmental concerns and potential for environmental compromise associated with the City garage/maintenance building pad located south of the northern terminus of the proposed project corridor is moderate to high. The proposed project corridor will not interface with the existing garage pad and no excavation of material is associated with the proposed project; therefore any environmental compromise associated with the proposed project is low. For any future development that should take place on the city garage/maintenance building pad that involves excavation, it is Bristol's recommendation that a Phase II Environmental Site Assessment be performed. A review of site history, regulatory records, and the conditions at the time of the site visit indicates a low probability of environmental compromise on the remainder of the project corridor that would warrant significant mitigation.

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10.0 CONCLUSIONS

No signs of environmental contamination, including discolored vegetation, were observed on the project corridor in aerial photographs. During the July 29, 2014 site reconnaissance visit, the overall appearance of the project corridor was clean. No environmental concerns were encountered in a review of federal and state records for the project corridor and adjacent properties. The findings of the Report indicate that the existing city garage/maintenance building pad located south of the northern terminus of the proposed project corridor has a moderate to high potential for environmental contamination. The remainder of the proposed project corridor is likely free of environmental contamination.

We have performed a *Phase I Environmental Site Assessment* in conformance with the scope and limitations of ASTM Practice E 1527-13 of the project corridor located at approximately 66.07° North Latitude and -162.71° West Longitude (Sec. 19&20, T08N, R019W, Kateel River Meridian). Any exceptions to, or deletions from this practice are described in Section 11 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the project corridor.

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11.0 DEVIATIONS

There were no deviations from the ASTM 1527-13 template.

12.0 ADDITIONAL SERVICES

Not Applicable.

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13.0 REFERENCES

Alaska Department of Commerce, Community, and Economic Development (DCCED). 2014. Alaska Community Database website, Community Profiles Online: Deering, AK. Website: http://www.commerce.state.ak.us/dca/commdb/CF_BLOCK.cfm

ADEC. 2014a. Contaminated Sites Program Database. Website: http://www.dec.state.ak.us/SPAR/CSP/db_search.htm

ADEC. 2014b. Spills Database. Website: http://www.dec.state.ak.us/spar/perp/search/search.asp

ADEC, 2014c. Underground Storage Tanks (UST) Database. Website: http://www.dec.state.ak.us/applications/spar/SpillsDBQuery/search.asp

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EPA. 2014a. CERCLIS Hazardous Waste Sites. Search. Website: http://www.epa.gov/superfund/sites/cursites/index.htm

EPA, 2014b. Envirofacts. Website: http://www.epa.gov/enviro/

EPA, 2014c. National Priorities List. Website: http://www.epa.gov/superfund/sites/npl/where.htm

EPA, 2014d. Currently Designated Nonattainment Areas for All Criteria Pollutants List. Website: http://www.epa.gov/oar/oaqps/greenbk/ancl.html

Meinhardt, R. and Ramirez, A., 2012. *2012 Report of Cultural Resources Investigation and Recommendations for Issuing a Section 106 Finding for the Cottonwood Subdivision Indian Reservation Roads (IRR) Project, Located in Sleetmute, Alaska.*

U.S. Army Corps of Engineers, Alaska District, 2013. Alaska Community Flood Hazard Data. Website: http://www.poa.usace.army.mil/About/Offices/Engineering/FloodplainManagement.aspx

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14.0 SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONAL(S)

We declare that, to the best of our professional knowledge and belief we meet the definition of Environmental professional as defined by §312.10 of 40 CFR 312.

We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set for the in 40 CFR Part 312.

Prepared By:

Name: Jaclyn Wander Date: 5/2/2017

Signature: Jaclyn Wander Title: Civil Engineer II

Reviewed/Approved By:

Name: Isaac Pearson, P.E. Date: 5/2/2017

Signature: Isaac Pearson Title: Project Manager

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15.0 QUALIFICATION(S) OF ENVIRONMENTAL PROFESSIONAL(S)

Ms. Jaclyn Wander, E.I.T., Civil Engineer

Ms. Wander is an Alaskan resident and has been involved with Civil Engineering since 2013. Her design experience includes civil design, drafting, and as-built survey and plan sets for various infrastructure projects. Ms. Wander's design experience includes road projects, civil site design projects, water and sewer utility projects, water treatment plants, and surface drainage design. Jaclyn has a B.S. in Civil Engineering from the University of Nevada, Reno.

Mr. Isaac Pearson, P.E., Project Manager/Senior Civil Engineer

Mr. Pearson is a lifelong Alaskan resident, with a M.S. in Engineering Management from the University of Alaska Anchorage and over 20 years of planning, design, and construction experience. He has managed civil design projects throughout Alaska. Mr. Pearson is skilled in the use of drafting software, such as AutoCAD Civil 3D for the design and preparation of construction plans, and is experienced and knowledgeable in regard to design projects, site investigations, coordinating multiple design disciplines, and on-site engineering support during construction. Mr. Pearson is very experienced in a wide variety of design projects, report writing, public meetings, producing bid documents, and on-site supervision. Mr. Pearson's design experience includes road projects, civil site design projects, water and sewer utility projects, specialized design projects involving water problems and foundations, watershed analysis, drainage studies, surface drainage design, and geotechnical engineering.

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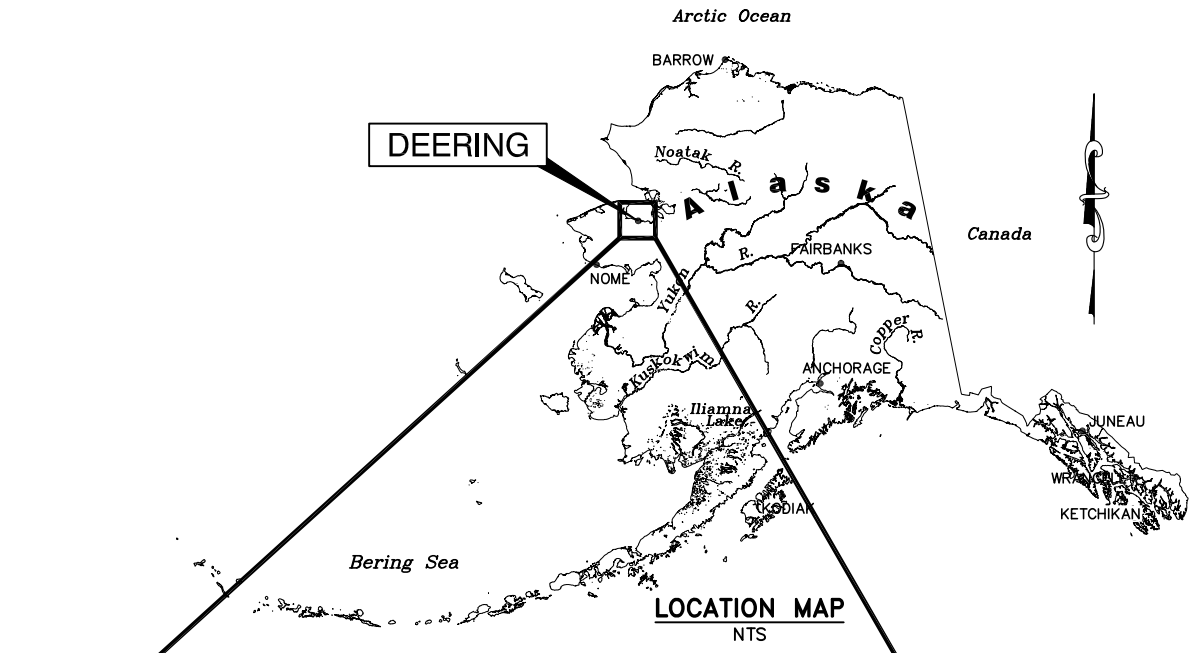
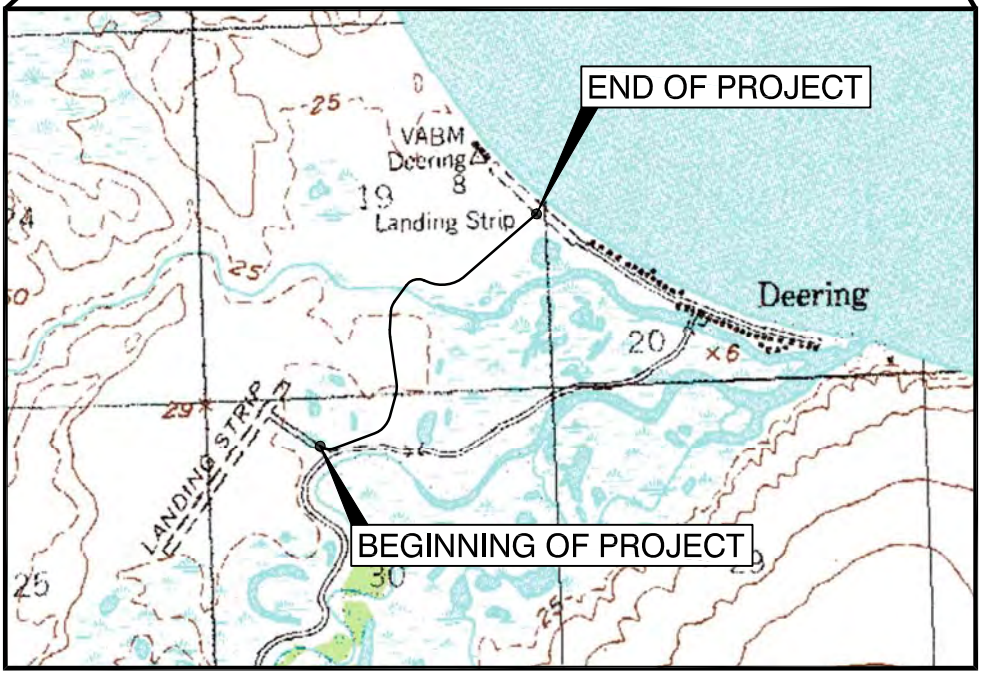
FIGURES



LOCATION MAP
NTS



VICINITY MAP
SCALE: NTS
SOURCE: U.S.G.S. QUAD
KOTZEBUE A2

FIGURE 1
DEERING, ALASKA
WEST AIRPORT ROAD PROJECT
VICINITY MAP

Bristol
ENGINEERING SERVICES CORPORATION

DATUM: -	DATE MAY 2017	SHEET 1
PROJECTION: -	DWN. JDW	of
PROJECT No. 32140053	SCALE SHOWN	7
	APPRVD. IPP	

PHOTO SOURCE: 2013 DCCED AEROMETRIC PHOTO

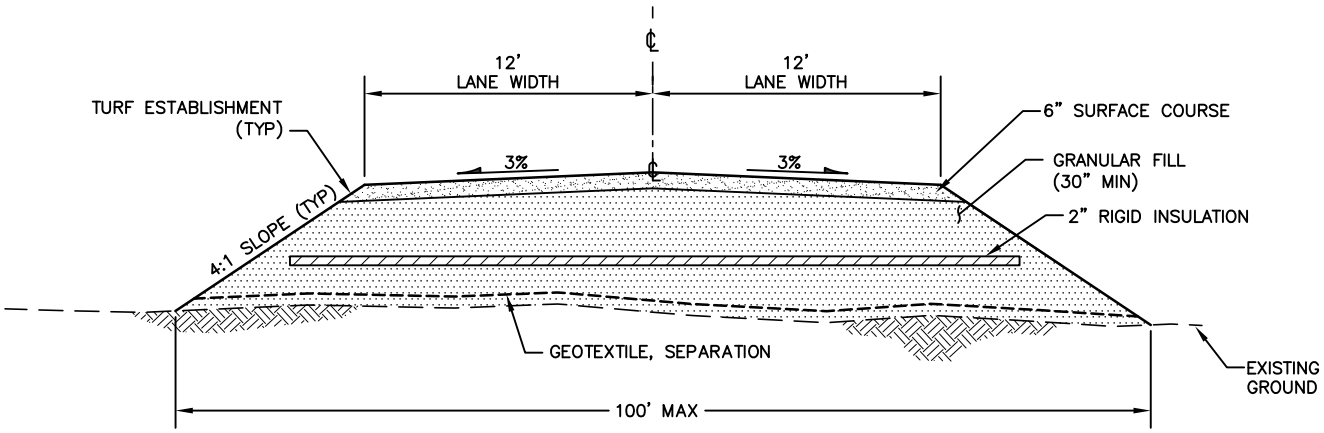
0 250 500
SCALE IN FEET

FIGURE 2
DEERING, ALASKA
WEST AIRPORT ROAD PROJECT
SITE PLAN

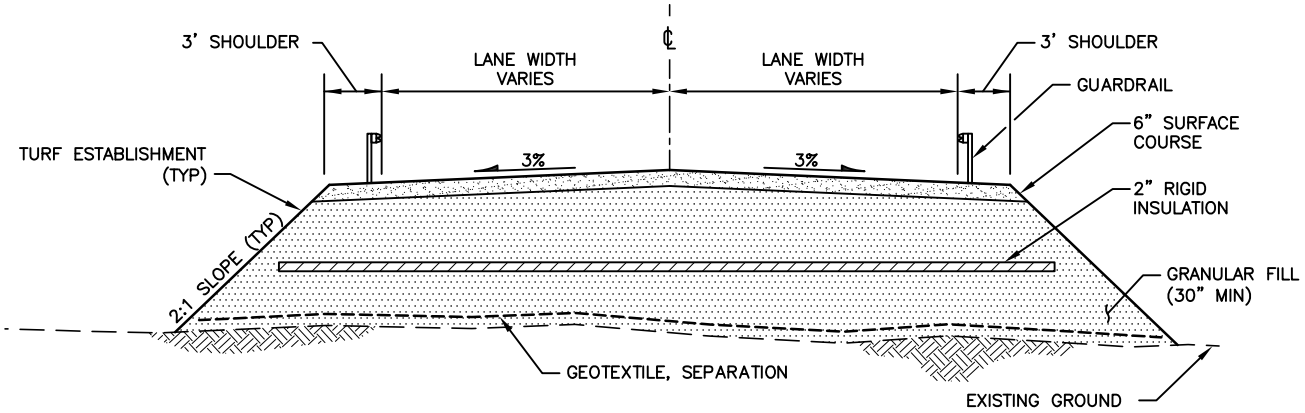
Bristol
ENGINEERING SERVICES CORPORATION

DATUM: -	DATE	MAY 2017	SHEET 2
PROJECTION: -	DWN.	JDW	of
PROJECT No. 32140053	SCALE	SHOWN	7
	APPRVD.	IPP	

Drawing: K:\JOBS\32140053 WEST AIRPORT RD\ACAD-ENVIRO\EA & ESA FIGS\32140053_FIG2_EA.DWG – Layout: FIG2
User: JWANDER Apr 27, 2017 – 3:59pm Xrefs: BR_85X11P.DWG – Images: DEERINGAREAN2013.TIF



1 — TWO–LANE CROWN FILL SECTION
SCALE: NTS



2 — TWO–LANE CROWN SECTION WITH GUARDRAIL
SCALE: NTS

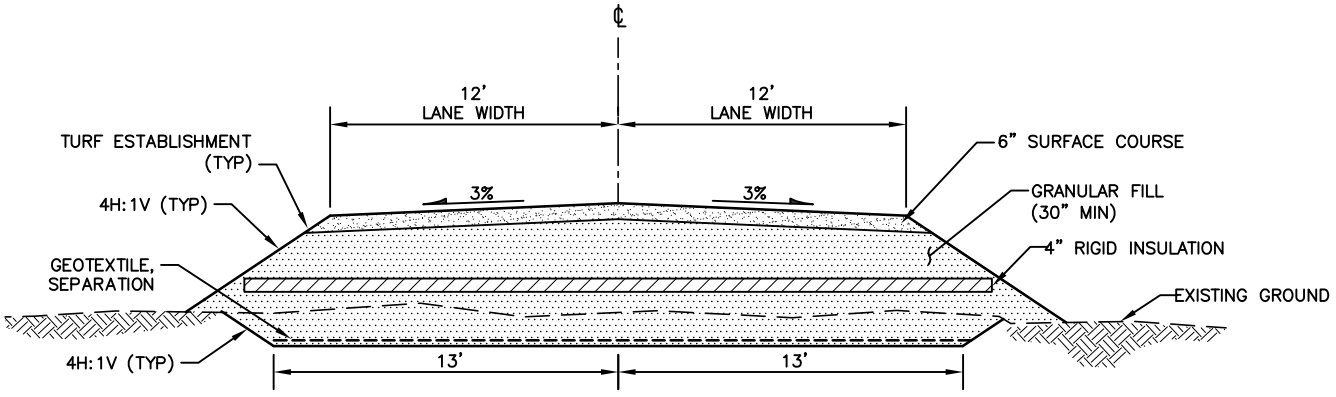
FIGURE 3
DEERING, ALASKA
WEST AIRPORT ROAD PROJECT
TYPICAL SECTIONS

Bristol
ENGINEERING SERVICES CORPORATION

DATUM: -
PROJECTION: -
PROJECT No. 32140053

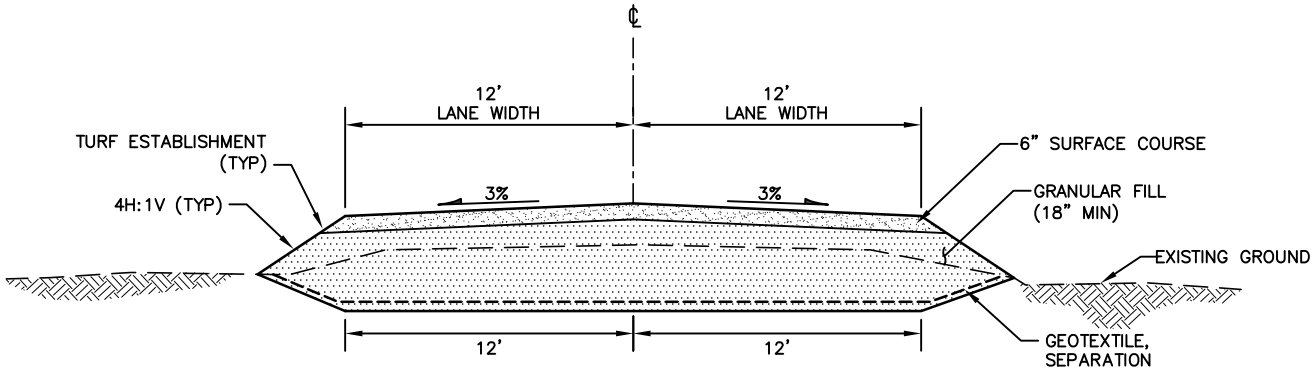
DATE MAY 2017
DWN. JDW
SCALE SHOWN
APPRVD. IPP

SHEET 3 of 7



1 — TWO–LANE CROWN FILL SECTION WITH EXCAVATION

SCALE: NTS



2 — TWO–LANE CROWN ROAD RECONSTRUCTION

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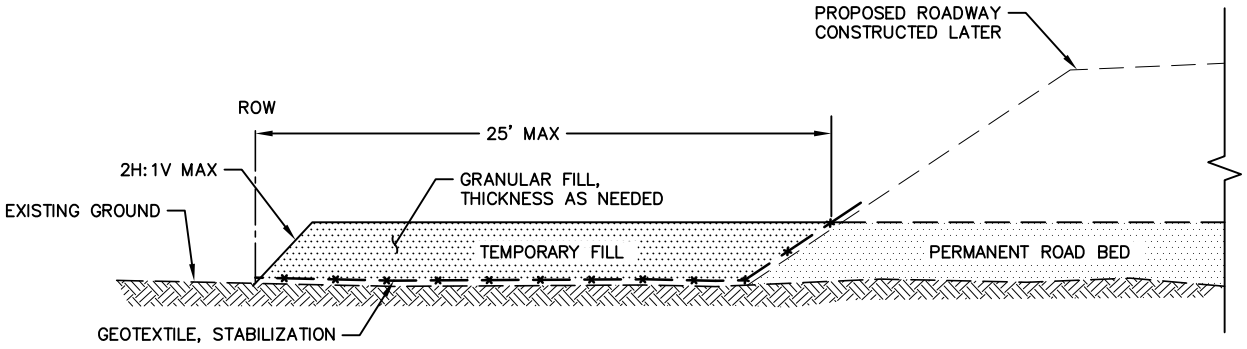


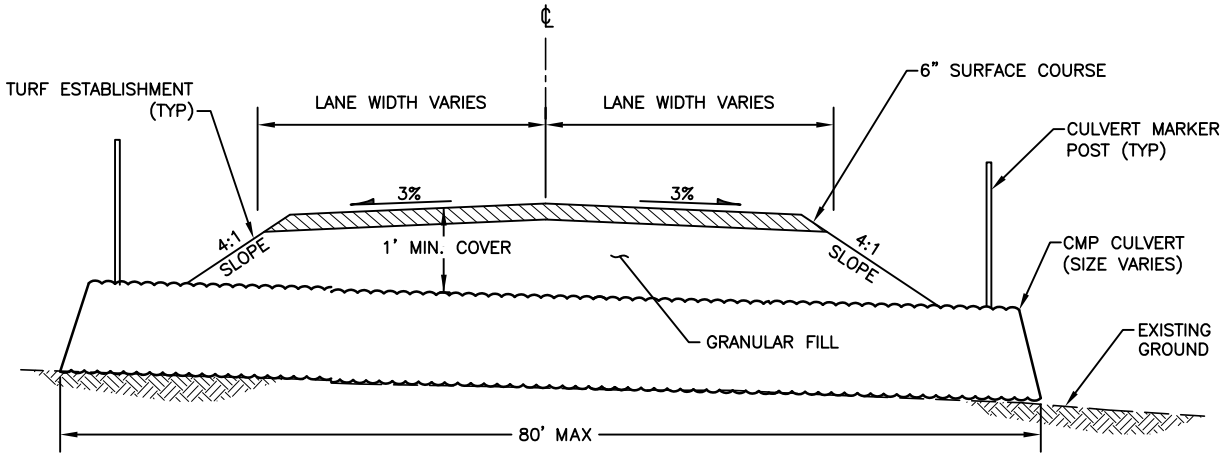
3 — TEMPORARY CONSTRUCTION PAD

SCALE: NTS

FIGURE 4
DEERING, ALASKA
WEST AIRPORT ROAD PROJECT
TYPICAL SECTIONS

Bristol
ENGINEERING
SERVICES CORPORATION

DATUM: -	DATE	MAY 2017	SHEET 4
PROJECTION: -	DWN.	JDW	of
PROJECT No. 32140053	SCALE	SHOWN	7
	APPRVD.	IPP	



1 — TYPICAL CULVERT SECTION
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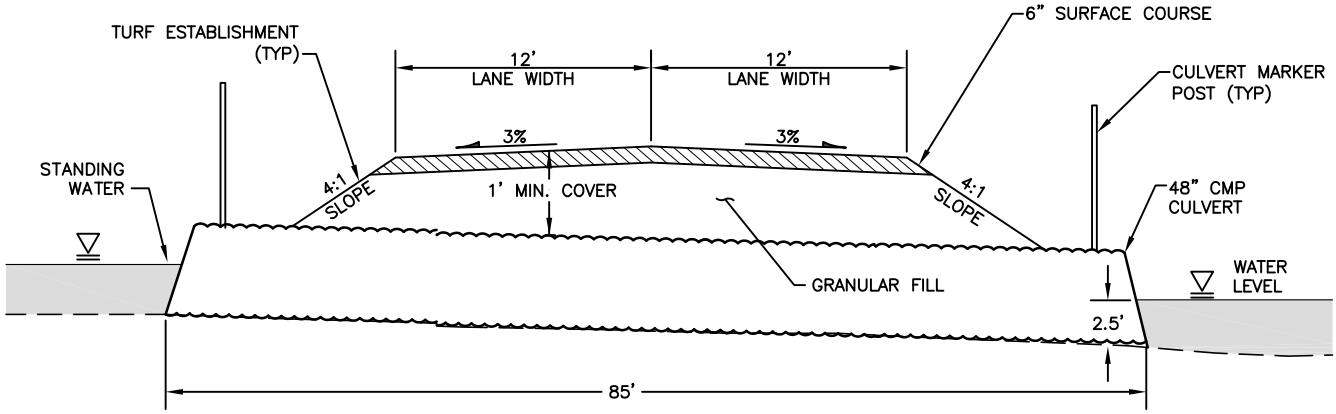
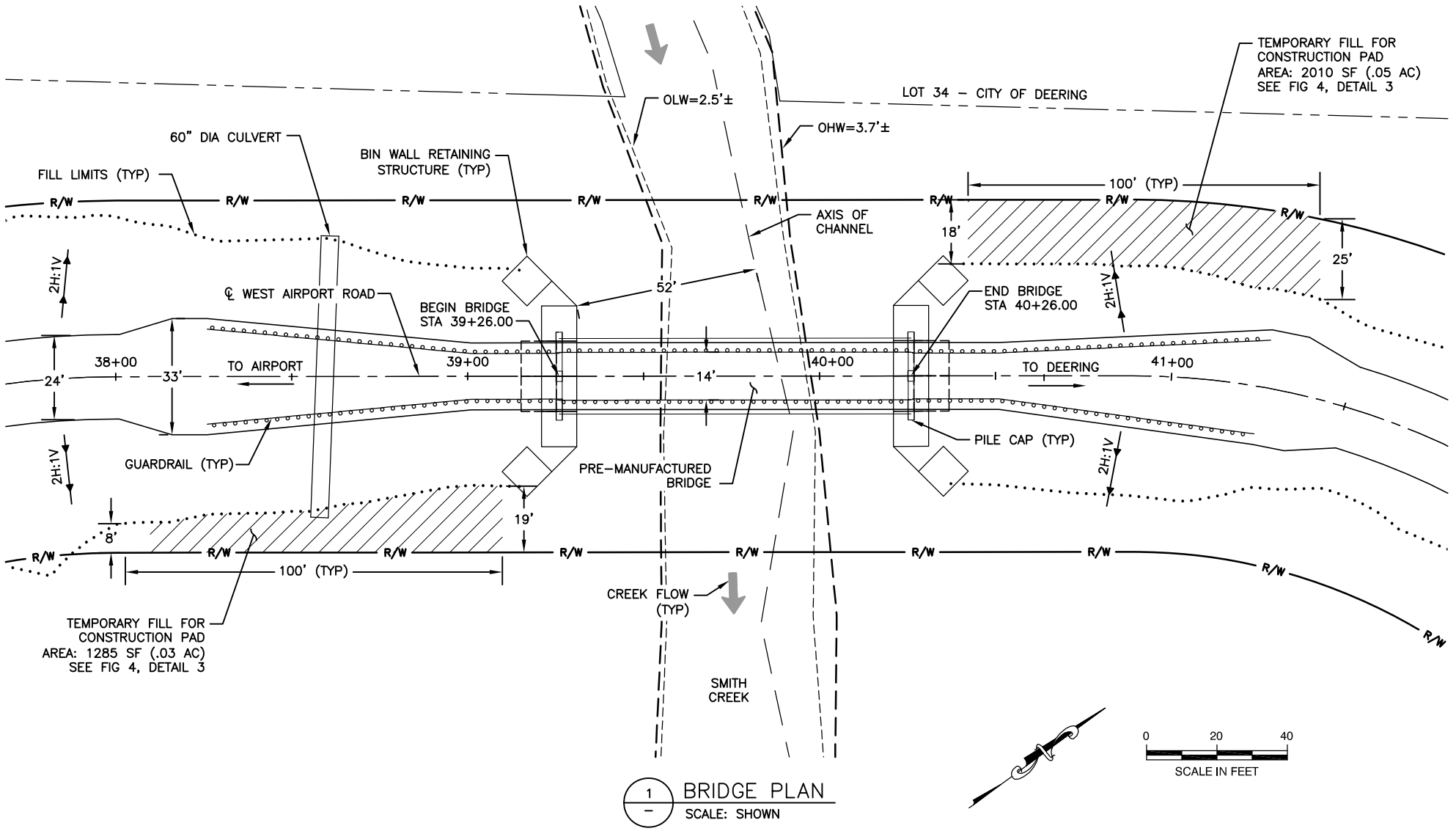


2 — SPECIAL CULVERT SECTION
SCALE: NTS

FIGURE 5
DEERING, ALASKA
WEST AIRPORT ROAD PROJECT
TYPICAL SECTIONS

Bristol ENGINEERING SERVICES CORPORATION

DATUM: -	DATE MAY 2017	SHEET 5
PROJECTION: -	DWN. JDW	of
PROJECT No. 32140053	SCALE SHOWN	7
	APPRVD. IPP	



1 / - BRIDGE PLAN
SCALE: SHOWN

NOTES

1. VEHICULAR BRIDGE FOR PUBLIC USE WILL BE AASHTO-LRFD COMPLIANT.
2. NO FILL WILL BE PLACED BELOW OHW.

ABBREVIATIONS

OHW = ORDINARY HIGH WATER (SEPTEMBER 2013)
OLW = ORDINARY LOW WATER (SEPTEMBER 2013)

MAP INFO

PARCEL OWNER
NANA REGIONAL CORPORATION INC.

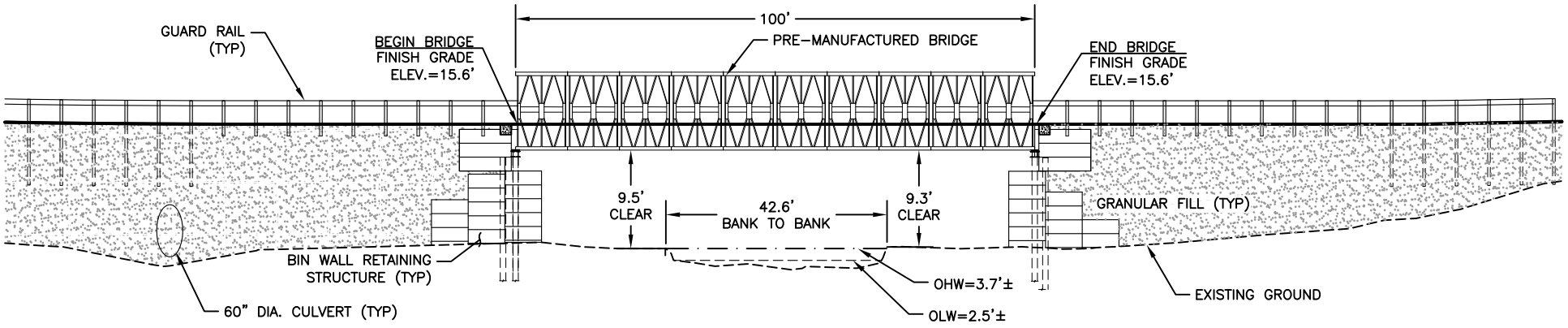
HORIZONTAL DATUM:
ALASKA STATE PLANE NAD83, ZONE 7, U.S. FEET

VERTICAL DATUM:
NAVD88

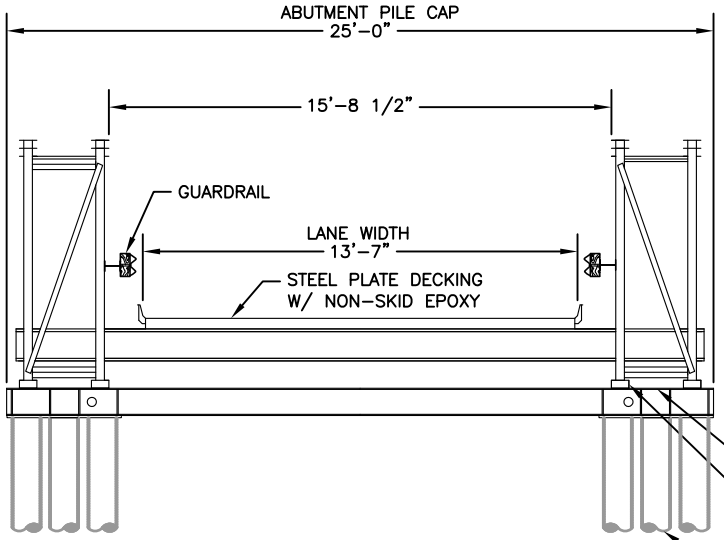
FIGURE 6
DEERING, ALASKA
WEST AIRPORT ROAD PROJECT
BRIDGE PLAN

Bristol ENGINEERING SERVICES CORPORATION

DATUM: -	DATE MAY 2017	SHEET 6
PROJECTION: -	DWN. JDW	of
PROJECT No. 32140053	SCALE SHOWN	7
	APPRVD. IPP	



1 – BRIDGE ELEVATION AT BRIDGE ℄
SCALE: SHOWN



2 – VEHICULAR BRIDGE SECTION
SCALE: NTS

NOTES

1. VEHICULAR BRIDGE FOR PUBLIC USE WILL BE AASHTO-LRFD COMPLIANT.

HORIZONTAL DATUM:
ALASKA STATE PLANE NAD83, ZONE 7, U.S. FEET

VERTICAL DATUM:
NAVD88

FIGURE 7
DEERING, ALASKA
WEST AIRPORT ROAD PROJECT
BRIDGE ELEVATION & SECTION

Bristol ENGINEERING SERVICES CORPORATION

DATUM: -	DATE MAY 2017	SHEET 7
PROJECTION: -	DWN. JDW	of
PROJECT No. 32140053	SCALE SHOWN	7
	APPRVD. IPP	

APPENDIX A

Site Reconnaissance Notes

Site Reconnaissance Notes

Project: **West Airport Road (Deering) (#32140053)**
Subject: **Phase I Environmental Site Assessment Site Reconnaissance**

Date of Visit: July 29, 2014

This trip report summarizes the Site Reconnaissance visit to Deering, Alaska on July 29, 2014. During the visit, Susan Luetters and Eric Lindeen with Bristol Engineering Services Corporation, traversed the entire length of the proposed project corridor, taking notes and pictures and probing the soil as they proceeded throughout the surrounding property and buildings. There were no climatological or physical barriers preventing assessment of the entire corridor. The weather was clear and sunny. Only exterior observations were made; no building interiors were inspected during the visit.

The overall appearance of the project corridor exterior surfaces appeared clean, with no discolored vegetation, unusual odors or indications of pits, unnatural ponds, or lagoons. However, Bristol personnel encountered one location that showed signs of potential environmental issues. Surface staining was visible in multiple locations throughout the shop yard of the city garage/maintenance building located at the northern terminus of the proposed corridor. Additionally, various equipment and debris were noted including approximately 75 abandoned 55-gallon fuel drums, 5 decommissioned day tanks, soaked utility poles, and abandoned machinery.

Observations made during the site visit indicated the potential for environmental contamination to be moderate to high. However, the proposed road will terminate at the interface with the existing garage pad, and no excavation of material is associated with the proposed project; therefore any environmental compromise associated with the proposed project is low. No additional signs of potential environmental contamination were encountered including modified waterbodies, stained areas/discolored stream banks, oil slicks/unusual colors on water, or dump areas. No fuel odors were detected within the project corridor.

Overall, Bristol found the project corridor to be concurrent to what was seen in aerial photographs. Conditions during the site visit indicate a low probability of environmental compromise on the project corridor, except at the city garage/maintenance building, that would warrant significant mitigation. For any future development that should take place on the city garage/maintenance building pad that involves excavation, it is Bristol's recommendation that a Phase II Environmental Site Assessment be performed.

APPENDIX B

Site Reconnaissance Photo Log

Phase I ESA Site Reconnaissance Photolog
West Airport Road Project – Deering, AK

Photo 1: Northern view of the City Maintenance yard from the proposed road alignment.

Photo 2: Northeastern view from proposed alignment. City Maintenance yard storage building and old equipment in foreground; City shop can be seen in the back left of photo.

Photo 3: Northern view from alignment. Debris scattered throughout the City shop yard. Connex storage boxes are visible in back right of photo.

Photo 4: Northwest view from City Maintenance yard/shop.

Photo 5: Western view from City Maintenance yard.

Photo 6: Southwestern view from City Maintenance yard/shop. Surface staining is visible in foreground.

Photo 7: Southern view from City Maintenance yard; the proposed alignment with extend south from this point.

APPENDIX C

Environment Data Resources Report

West Airport Road Project
West Airport Road
Deering, AK 99736

Inquiry Number: 3773872.2
October 31, 2013

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

10/31/13

Site Name:
West Airport Road Project
West Airport Road
Deering, AK 99736

Client Name:
Bristol Engineering Services
111 W. 16th Avenue
Anchorage, AK 99501

EDR Inquiry # 3773872.2

Contact: Eric Lindeen

EDR® Environmental Data Resources Inc

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by Bristol Engineering Services Corporation were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name: West Airport Road Project
Address: West Airport Road
City, State, Zip: Deering, AK 99736
Cross Street:
P.O. # NA
Project: West Airport Road Project
Certification # 24E6-440F-9C4A

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results
Certification # 24E6-440F-9C4A

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✓ Library of Congress
- ✓ University Publications of America
- ✓ EDR Private Collection

The Sanborn Library LLC Since 1866™

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West Airport Road Project
West Airport Road
Deering, AK 99736

Inquiry Number: 3773872.1s
October 31, 2013

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

WEST AIRPORT ROAD
DEERING, AK 99736

COORDINATES

Latitude (North):	66.0787000 - 66° 4' 43.32''
Longitude (West):	162.7486000 - 162° 44' 54.96''
Universal Tranverse Mercator:	Zone 3
UTM X (Meters):	601855.0
UTM Y (Meters):	7330322.0
Elevation:	24 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:	N/A
Source:	USGS 7.5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

EXECUTIVE SUMMARY

Federal CERCLIS list

CERCLIS ..... Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP ..... CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS ..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ..... RCRA - Large Quantity Generators
RCRA-SQG ..... RCRA - Small Quantity Generators
RCRA-CESQG ..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROL ..... Sites with Institutional Controls
LUCIS ..... Land Use Control Information System

Federal ERNS list

ERNS ..... Emergency Response Notification System

State- and tribal - equivalent CERCLIS

SHWS ..... Contaminated Sites Database

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ..... Solid Waste Facilities

State and tribal leaking storage tank lists

LUST ..... Leaking Underground Storage Tank Database
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

UST ..... Underground Storage Tank Database
AST ..... Regulated Aboveground Storage Tanks
INDIAN UST ..... Underground Storage Tanks on Indian Land
FEMA UST ..... Underground Storage Tank Listing

State and tribal institutional control / engineering control registries

ENG CONTROLS ..... Engineering Controls Site Listing

INST CONTROL ..... Contaminated Sites with Institutional Controls

State and tribal voluntary cleanup sites

INDIAN VCP ..... Voluntary Cleanup Priority Listing
VCP ..... Voluntary Cleanup Program sites

State and tribal Brownfields sites

BROWNFIELDS ..... Identified and/or Proposed Brownfields Sites

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
ODI ..... Open Dump Inventory
SWRCY ..... Recycling Facilities
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ..... Clandestine Drug Labs
CDL ..... Illegal Drug Manufacturing Sites
US HIST CDL ..... National Clandestine Laboratory Register

Local Land Records

LIENS 2 ..... CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
SPILLS ..... Spills Database
SPILLS 90 ..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR ..... RCRA - Non Generators
DOT OPS ..... Incident and Accident Data
DOD ..... Department of Defense Sites
FUDS ..... Formerly Used Defense Sites
CONSENT ..... Superfund (CERCLA) Consent Decrees
ROD ..... Records Of Decision
UMTRA ..... Uranium Mill Tailings Sites
US MINES ..... Mines Master Index File
TRIS ..... Toxic Chemical Release Inventory System
TSCA ..... Toxic Substances Control Act
FTTS ..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
RMP	Risk Management Plans
UIC	UIC Information
DRYCLEANERS	Drycleaner Facility Listing
NPDES	Wastewater Discharge Permit Listing
AIRS	AIRS Facility Listing
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
COAL ASH	Coal Ash Disposal Sites
Financial Assurance	Financial Assurance Information Listing
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
COAL ASH DOE	Steam-Electric Plant Operation Data
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
PRP	Potentially Responsible Parties
2020 COR ACTION	2020 Corrective Action Program List

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were not identified.

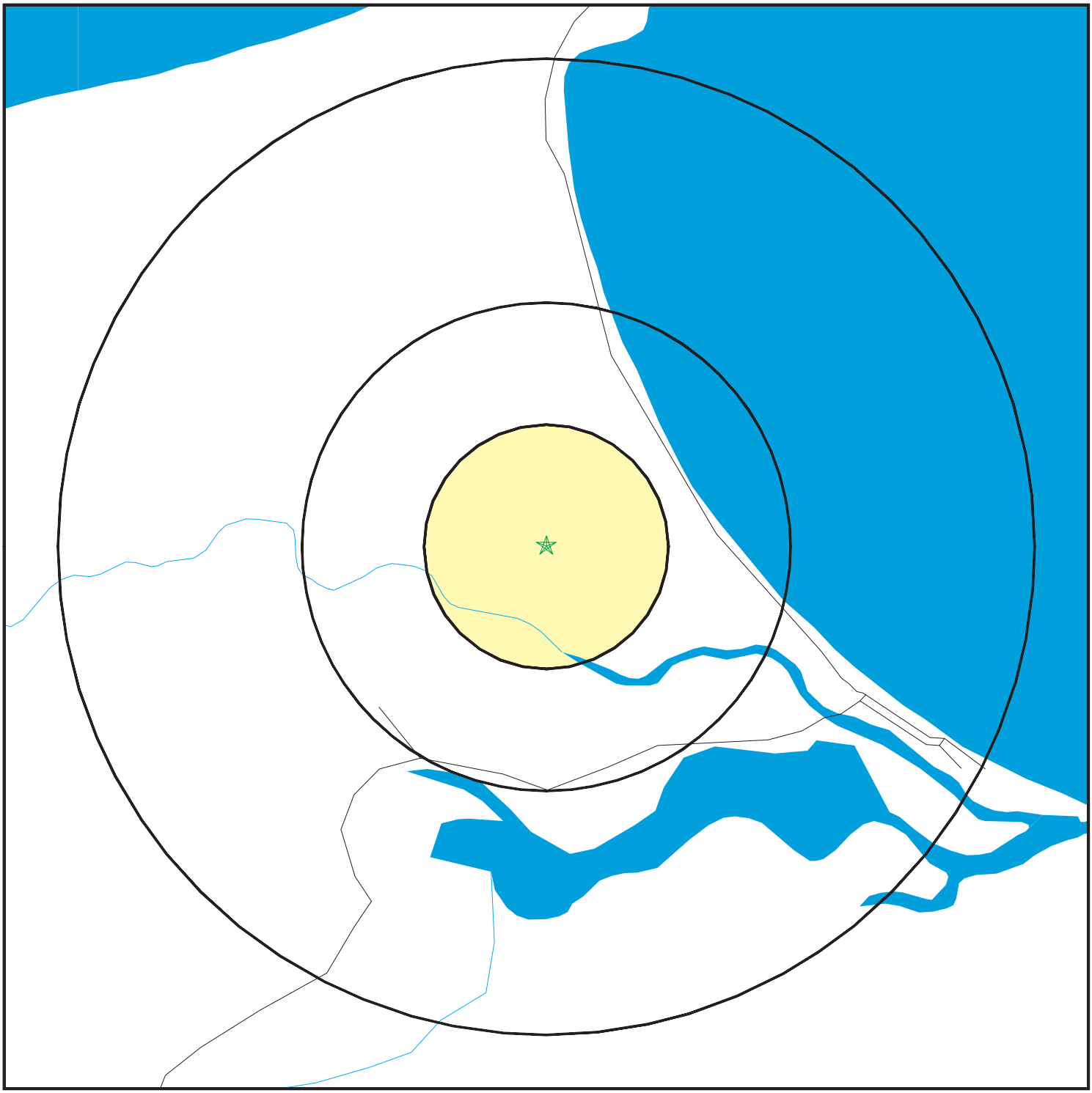
Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

Site Name	Database(s)
DEERING AIRPORT	FINDS

OVERVIEW MAP - 3773872.1s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA

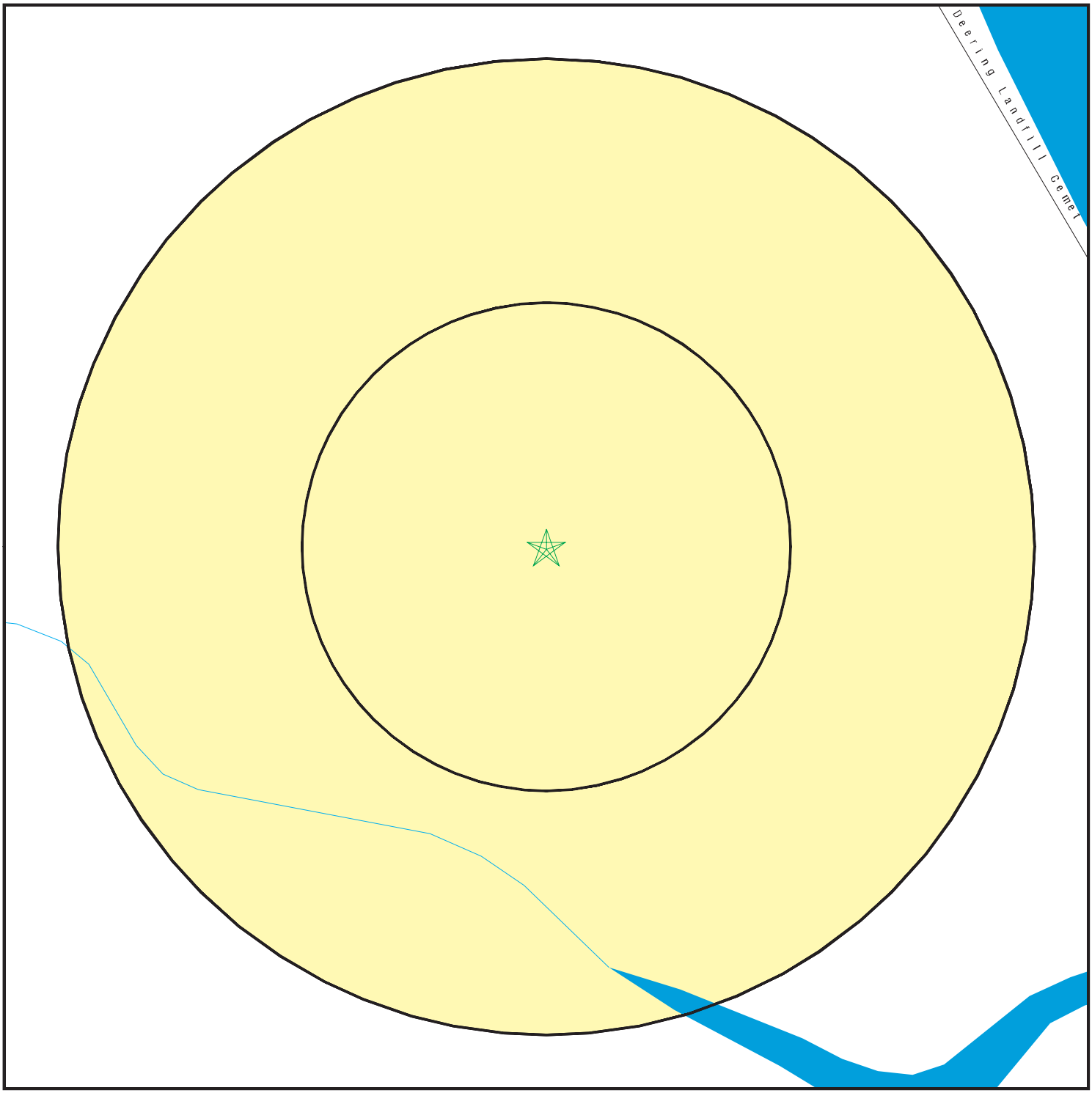
0 1/4 1/2 1 Miles

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	West Airport Road Project	CLIENT:	Bristol Engineering Services Corporation
ADDRESS:	West Airport Road Deering AK 99736	CONTACT:	Eric Lindeen
		INQUIRY #:	3773872.1s
LAT/LONG:	66.0787 / 162.7486	DATE:	October 31, 2013 7:21 pm

DETAIL MAP - 3773872.1s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	West Airport Road Project	CLIENT:	Bristol Engineering Services Corporation
ADDRESS:	West Airport Road Deering AK 99736	CONTACT:	Eric Lindeen
		INQUIRY #:	3773872.1s
LAT/LONG:	66.0787 / 162.7486	DATE:	October 31, 2013 7:22 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	0	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number

NO SITES FOUND

Count: 1 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
DEERING	1011988010	DEERING AIRPORT	UNKNOWN		FINDS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/09/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 10/11/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/09/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 10/11/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/09/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 10/11/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/29/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 72

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 10/09/2012
Date Made Active in Reports: 12/20/2012
Number of Days to Update: 72

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 10/11/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/29/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 72

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/02/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 10/02/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 10/02/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 10/02/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 10/02/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 06/17/2013
Date Data Arrived at EDR: 06/21/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 104

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 06/17/2013
Date Data Arrived at EDR: 06/21/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 104

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/15/2013
Next Scheduled EDR Contact: 09/02/2013
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/17/2013
Date Made Active in Reports: 02/15/2013
Number of Days to Update: 29

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/01/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: Contaminated Sites Database

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 11/27/2012
Date Data Arrived at EDR: 11/28/2012
Date Made Active in Reports: 12/28/2012
Number of Days to Update: 30

Source: Department of Environmental Conservation
Telephone: 907-451-2143
Last EDR Contact: 10/01/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 06/26/2013
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 9

Source: Department of Environmental Conservation
Telephone: 907-269-7632
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Semi-Annually

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 08/19/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/04/2013
Number of Days to Update: 46

Source: Department of Environmental Conservation
Telephone: 907-465-5301
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 11/01/2012
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 162

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/02/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 02/08/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Semi-Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 59

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 02/05/2013
Date Data Arrived at EDR: 02/06/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 65

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 43
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 03/01/2013
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 42
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 08/19/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45
Source: Department of Environmental Conservation
Telephone: 907-269-7504
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Semi-Annually

AST: Regulated Aboveground Storage Tanks
The list covers "regulated" facilities with storage capacities above 10,000 barrels (or 5,000 barrels of crude).

Date of Government Version: 01/05/2005
Date Data Arrived at EDR: 01/06/2005
Date Made Active in Reports: 02/02/2005
Number of Days to Update: 27
Source: Department of Environmental Conservation
Telephone: 907-465-5231
Last EDR Contact: 09/03/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 02/21/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 45
Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 11/07/2012
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 156

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/02/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 02/08/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 43

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/10/2011
Date Data Arrived at EDR: 05/11/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 08/02/2012
Date Data Arrived at EDR: 08/03/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 94

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 02/05/2013
Date Data Arrived at EDR: 02/06/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 65

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/17/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Controls Site Listing

A listing of sites with engineering controls in place included in the Contaminated Sites.

Date of Government Version: 11/27/2012
Date Data Arrived at EDR: 11/28/2012
Date Made Active in Reports: 12/28/2012
Number of Days to Update: 30

Source: Department of Environmental Conservation
Telephone: 907-451-2143
Last EDR Contact: 10/01/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Quarterly

Inst Control: Contaminated Sites with Institutional Controls

Contaminated sites that have institutional controls.

Date of Government Version: 11/27/2012
Date Data Arrived at EDR: 11/28/2012
Date Made Active in Reports: 12/28/2012
Number of Days to Update: 30

Source: Department of Environmental Conservation
Telephone: 907-451-2143
Last EDR Contact: 10/01/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Semi-Annually

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Program sites

Sites involved in the Voluntary Cleanup Program.

Date of Government Version: 09/03/2013
Date Data Arrived at EDR: 09/03/2013
Date Made Active in Reports: 10/04/2013
Number of Days to Update: 31

Source: Department of Environmental Conservation
Telephone: 907-451-2143
Last EDR Contact: 09/03/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 10/02/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 14

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 10/01/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Identified and/or Proposed Brownfields Sites
Brownfield properties are defined by U.S Environmental Protection Agency (EPA) as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contamination." DEC is developing resources to assist eligible entities in Alaska in applying for EPA brownfields grants. The program also will provide technical assistance and perform some site assessments, The purpose of these assessments is to assist local redevelopment efforts on previously contaminated properties that are vacant or underused.

Date of Government Version: 11/27/2012
Date Data Arrived at EDR: 11/28/2012
Date Made Active in Reports: 12/28/2012
Number of Days to Update: 30

Source: Department of Environmental Conservation
Telephone: 907-451-2166
Last EDR Contact: 10/01/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/24/2013
Date Data Arrived at EDR: 06/25/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/24/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWRCY: Recycling Facilities

A listing of Recycling centers in the state of Alaska.

Date of Government Version: 06/26/2013
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 9

Source: Department of Environmental Conservation
Telephone: 907-269-7802
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/31/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 08/06/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 22

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 09/04/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: Quarterly

CDL: Illegal Drug Manufacturing Sites

A list of properties that have been determined to be illegal drug manufacturing sites.

Date of Government Version: 06/08/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Environmental Conservation
Telephone: 907-269-7543
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 04/25/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 55

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/01/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Annually

SPILLS: Spills Database

Oil and hazardous substance releases to be reported to the Department of Environmental Conservation.

Date of Government Version: 07/18/2013
Date Data Arrived at EDR: 07/19/2013
Date Made Active in Reports: 08/07/2013
Number of Days to Update: 19

Source: Department of Environmental Conservation
Telephone: 907-465-5242
Last EDR Contact: 10/07/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Semi-Annually

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 07/21/2010
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/08/2013
Number of Days to Update: 36

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 10/02/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 15

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2013
Date Data Arrived at EDR: 08/07/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 57

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/18/2012
Date Data Arrived at EDR: 03/13/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 30

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/13/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 09/05/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 28

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/05/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/31/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 44

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/30/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/24/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/22/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/22/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/20/2011
Date Data Arrived at EDR: 11/10/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 10/09/2014
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/01/2012
Date Data Arrived at EDR: 01/16/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 114

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/14/2013
Date Data Arrived at EDR: 03/20/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 112

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 04/09/2013
Date Data Arrived at EDR: 04/11/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 29

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/09/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 03/08/2013
Date Data Arrived at EDR: 03/21/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 111

Source: EPA
Telephone: (206) 553-1200
Last EDR Contact: 09/11/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 05/08/2012
Date Data Arrived at EDR: 05/25/2012
Date Made Active in Reports: 07/10/2012
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 08/26/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Biennially

UIC: UIC Information
A listing of underground injection control wells.

Date of Government Version: 09/11/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/04/2013
Number of Days to Update: 23

Source: Oil & Gas Conservation Commission
Telephone: 907-793-1224
Last EDR Contact: 09/11/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Quarterly

DRYCLEANERS: Drycleaner Facility Listing
A listing of drycleaning facilities in Alaska.

Date of Government Version: 02/15/2006
Date Data Arrived at EDR: 02/16/2006
Date Made Active in Reports: 03/15/2006
Number of Days to Update: 27

Source: Department of Environmental Conservation
Telephone: 907-269-7577
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: No Update Planned

NPDES: Wastwater Discharge Permit Listing
A listing of permitted wastewater facilities.

Date of Government Version: 09/23/2013
Date Data Arrived at EDR: 09/24/2013
Date Made Active in Reports: 10/04/2013
Number of Days to Update: 10

Source: Department of Environmental Conservation
Telephone: 907-465-5480
Last EDR Contact: 09/24/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: Varies

AIRS: AIRS Facility Listing
A listing of permitted airs facilities.

Date of Government Version: 07/15/2013
Date Data Arrived at EDR: 07/16/2013
Date Made Active in Reports: 08/07/2013
Number of Days to Update: 22

Source: Department of Environmental Conservation
Telephone: 907-451-2103
Last EDR Contact: 10/09/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing
The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 10/21/2013
Next Scheduled EDR Contact: 02/03/2014
Data Release Frequency: Varies

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 11/11/2011
Date Data Arrived at EDR: 05/18/2012
Date Made Active in Reports: 05/25/2012
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/16/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Varies

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 04/15/2013
Date Data Arrived at EDR: 07/03/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 72

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 10/04/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: N/A

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/29/2013
Date Data Arrived at EDR: 02/14/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 09/24/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

Financial Assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 04/24/2007
Date Data Arrived at EDR: 04/26/2007
Date Made Active in Reports: 05/14/2007
Number of Days to Update: 18

Source: Department of Environmental Conservation
Telephone: 907-269-7802
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH: Coal Ash Disposal Sites
A listing of coal ash disposal site locations.

Date of Government Version: 10/01/2013
Date Data Arrived at EDR: 10/02/2013
Date Made Active in Reports: 10/08/2013
Number of Days to Update: 6

Source: Department of Environmental Conservation
Telephone: 907-451-2135
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Varies

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)
The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 01/23/2013
Date Data Arrived at EDR: 01/30/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-5962
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 01/23/2013
Date Data Arrived at EDR: 01/30/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-5962
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Annually

EPA WATCH LIST: EPA WATCH LIST
EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 06/30/2013
Date Data Arrived at EDR: 08/13/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

US FIN ASSUR: Financial Assurance Information
All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/04/2013
Date Data Arrived at EDR: 03/15/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/27/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Quarterly

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/02/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 10/15/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 08/17/2010
Date Data Arrived at EDR: 01/03/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/13/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 08/19/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/04/2013
Number of Days to Update: 46

Source: Department of Environmental Conservation
Telephone: 907-269-8149
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/07/2013
Date Made Active in Reports: 09/10/2013
Number of Days to Update: 34

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Facilities Database
Source: Department of Education & Early Development
Telephone: 907-465-2800

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory Data
Source: Department of Fish & Game
Telephone: 907-465-4100

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

2008 TIGER© Map, produced by the U.S. Census Bureau.

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

WEST AIRPORT ROAD PROJECT
WEST AIRPORT ROAD
DEERING, AK 99736

TARGET PROPERTY COORDINATES

Latitude (North):	66.0787 - 66° 4' 43.32''
Longitude (West):	162.7486 - 162° 44' 54.96''
Universal Tranverse Mercator:	Zone 3
UTM X (Meters):	601855.0
UTM Y (Meters):	7330322.0
Elevation:	24 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property:	N/A
Source:	USGS 7.5 min quad index

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

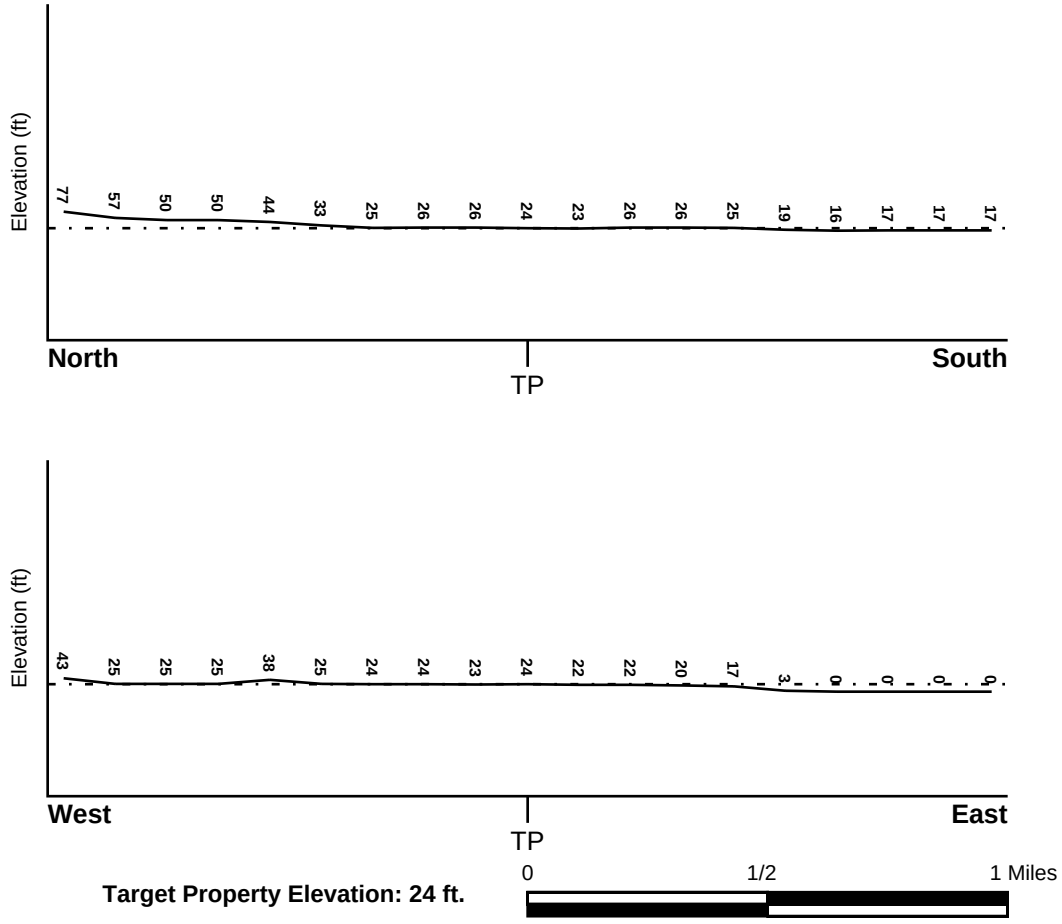
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General ENE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 24 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
NORTHWEST_ARCTIC, AK	Not Available

Flood Plain Panel at Target Property: Not Reported

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
Not Reported	N

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	-
System:	-
Series:	-
Code:	N/A *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: -

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

No detail available.

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

PHYSICAL SETTING SOURCE MAP - 3773872.1s

- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

0 1/4 1/2 1 Miles

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location

N

SITE NAME:	West Airport Road Project	CLIENT:	Bristol Engineering Services Corporation
ADDRESS:	West Airport Road Deering AK 99736	CONTACT:	Eric Lindeen
		INQUIRY #:	3773872.1s
LAT/LONG:	66.0787 / 162.7486	DATE:	October 31, 2013 7:22 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory Data
Source: Department of Fish & Game
Telephone: 907-465-4100

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

RADON

State Database: AK Radon
Source: University of Alaska Fairbanks
Telephone: 907-474-7201
Radon Information

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

STREET AND ADDRESS INFORMATION

2008 TIGER© Map, produced by the U.S. Census Bureau.

APPENDIX D

BIA/SHPO Consultation Letter

10.10.14 3130-1K BIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
ALASKA REGION

Branch of Regional Archeology
3601 C Street, Suite 1200
Anchorage, Alaska 99503
(907) 271-4003

6 October 2014

Judith E. Bittner
State Historic Preservation Officer
DNR/Division of Parks and Outdoor Recreation
Office of History and Archaeology
550 West 7th Ave., Suite 1310
Anchorage, Alaska 99501

Dear Ms. Bittner,

Enclosed you will find a copy of *2013 Report of Cultural Resources Investigation and Recommendations for Issuing a Section 106 Finding for the Design of West Airport Road, Located in Deering, Alaska.* This report was prepared by Robert L. Meinhardt, Amy Ramierz, Annalisa Heppner, and Phillip T. Ashlock II of True North Sustainable Development Solutions (TNSDS). The Native Village of Deering, the Tribe, has received funds from the Bureau of Indian Affairs' Indian Reservation Roads Program to design an evacuation road from the village center to the airport for flooding, as well as for the movement of heavy machinery in and out of the village. In turn, the Tribe has contracted with Bristol Engineering Services Corporation (BESC) to develop the final design for the West Airport Road Project (BIA Project Number E04117C4). BESC has subcontracted with TNSDS to perform a cultural resource investigation within the proposed APE. The proposed APE consists of a 16 to 20 foot-wide corridor that extends approximately one mile in length for the road itself. Gravel for the project will be sourced locally from two borrow pits; both sources were also included in the APE, and were inventoried as part of this project.

Regional Archeology has reviewed the accompanying cultural resource survey report and finds there are no historic properties within the APE of the project. An on-the-ground cultural resources survey, including subsurface testing, of the APE was conducted. No cultural resources were identified within the project area. If you have any questions regarding this document, please contact me at 271-4003.

No Historic Properties Affected AHP
Alaska State Historic Preservation Officer
Date: 10.10.14 File No.: 3130-1KBIA
Please review: 36 CFR 800.13 / A.S. 41.35.070(d)

Sincerely,

Rita L. Mueglue

ACTING FOR Ricky Hoff
Regional Archeologist

Attachments:
1) Office of History and Archaeology Cover Sheet
2) *2013 Report of Cultural Resources Investigation and Recommendations for Issuing a Section 106 Finding for the Design of West Airport Road, Located in Deering, Alaska (Meinhardt, et al. 2013)*

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
ALASKA REGION

Branch of Regional Archeology
3601 C Street, Suite 1100
Anchorage, Alaska 99503
(907) 271-4003

TO: NATIVE VILLAGE OF DEERING
ALVIN IYATUNGUK, SR., PRESIDENT
PO BOX 36089
DEERING, ALASKA 99736

UNDERTAKING: **West Airport Road, Deering, Alaska**

FINDINGS OF SECTION 106 REVIEW: No Historic Properties Affected

RECOMMENDATION: Proceed with the **West Airport Road, Deering, Alaska Project.**

IDENTIFICATION EFFORTS: Identification included a review of records and previous archeological surveys in the area conducted by Robert L. Meinhardt, et al. of True North Sustainable Development Solutions. The archeological review and investigation report, *2013 Report of Cultural Resources Investigation and Recommendations for Issuing a Section 106 Finding for the Design of West Airport Road, Located in Deering, Alaska*, was prepared by Robert L. Meinhardt, Amy Ramirez, Annalisa Heppner, and Phillip T. Ashlock II in September 2013.

AREA OF POTENTIAL EFFECT (APE): The project involves the construction of a new road and bridge, which will serve as the primary evacuation route from the village to the airport during seasonal and tidal flooding, when the existing road is typically washed out. The new road will be between 16 and 20 feet wide, and will include a bridge over Smith Creek with a minimum load capacity of 50,000 pounds. Gravel for the road will be taken from existing gravel borrows along the existing Deering Airport Road. Additional details of the APE are described in the above noted cultural resource survey report.

AHRS SITES: No archeological resources were identified within the APE.

CONSULTED PARTIES: Native Village of Deering
Alaska State Historic Preservation Office (SHPO)
Bureau of Indian Affairs

MANAGEMENT RECOMMENDATIONS: The Bureau of Indian Affairs is issuing a finding of "No Historic Properties Affected" for the proposed **West Airport Road, Deering, Alaska.** These findings are based on the results of a cultural resources inventory, including a pedestrian survey of the subject area by cultural resource professionals from True North Sustainable Development Solutions, under the supervision of Archeologist and Architectural Historian Robert Meinhardt. The report of the investigation (*2013 Report of Cultural Resources Investigation and Recommendations for Issuing a Section 106 Finding for the Design of West Airport Road, Located in Deering, Alaska)*, was prepared by Robert L. Meinhardt, Amy Ramirez, Annalisa Heppner, and Phillip T. Ashlock II in September 2013. In compliance with Section 106 of the National Historic Preservation Act (16 USC 470*f*) of 1966 and 36 CFR §800, the Bureau of Indian Affairs is recommending the **West Airport Road, Deering, Alaska Project** proceed. The Alaska State Historic Preservation Officer's concurrence for no historic properties is on file.

There were no archeological sites identified within the APE of the project and no archeological monitoring will be required. The finding of no historic properties affected only applies to the current project. Any additional work outside of the current project's footprint may require additional section 106 review. In accordance with 36 CFR §800.4 any changes to the project design may require further section 106 review.

The construction contract will include the following language:

"NATIVE VILLAGE OF DEERING will comply with the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470*f*), plus the Native American Graves Protection and Repatriation Act of 1990 (25 U. S. C. 3001-3013), and the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa-mm), and all implementing regulations."

"If any previously unknown archeological or historic remains are discovered, either during the life of this revocable use permit, or in the course of associated activities on this property, the NATIVE VILLAGE OF DEERING shall protect them from disturbance pending further recommendations from the BIA Regional Archeologist (36 CFR §800.13[b])."

"If any previously unknown human remains or associated cultural items are discovered either during the life of this revocable use permit (lease), or in the course of associated activities on this property, the NATIVE VILLAGE OF DEERING shall protect them from disturbance pending further recommendations from the Regional Archeologist. Any person who knows of the discovery of human remains or associated cultural items must provide notification by telephone, and follow up in writing, to the BIA Regional Archeologist (43 CFR §10.4)."

15 October 2014
Ricky Hoff Date
Regional Archeologist

cc: Susan Leutters, Bristol Engineering Services Corporation
Gregory Smith, Civil Engineer, Transportation, Bureau of Indian Affairs, Alaska Region

APPENDIX E

ARCHAEOLOGICAL REPORT

trueNORTH
sustainable development solutions

2013 REPORT OF CULTURAL RESOURCES INVESTIGATION AND RECOMMENDATIONS FOR ISSUING A SECTION 106 FINDING FOR THE DESIGN OF WEST AIRPORT ROAD, LOCATED IN DEERING, ALASKA

SEPTEMBER 2013

Prepared for:
Bristol Engineering Services Corporation

Prepared by:
Robert L. Meinhardt, M.A.
Amy Ramirez
Annalisa Heppner
Phillip T. Ashlock II, Ph.D

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The Native Village of Deering has acquired funds from the Bureau of Indian Affairs (BIA) Indian Reservation Roads (IRR) Program to design an evacuation road from the village center to the airport for flooding and the movement of heavy machinery in and out of the village. Bristol Engineering Services Corporation (BESC) is contracted by the Native Village of Deering to develop a final design for the West Airport Road Project (BIA Project Number E04117C4). Given the West Airport Road Project is undertaken by the Native Village of Deering with financial assistance from BIA, compliance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36CFR§800) is required prior to development of a final design for the evacuation road. As the lead federal agency, the BIA Branch of Regional Archaeology is responsible for carrying out consultation per the Act, and they have contracted BESC to provide recommendations on whether or not the project will result in adverse effects to historic properties. To assist with the consultation process per 36CFR§800, BESC will need to propose an Area of Potential Effects (APE), identify any cultural resources within the APE that may constitute historic properties per the Act, and make recommendations to the lead federal agency for issuing a finding for the undertaking.

BESC does not have professional expertise on staff to provide Section 106 findings and recommendations. As such, True North Sustainable Development Solutions (TNSDS), LLC, was sub-contracted to perform a cultural resource investigation within a proposed APE, and provide recommendations for issuing a Section 106 finding. TNSDS Principal Preservation Consultant Robert L. Meinhardt, III, M.A., and Archaeologist Annalisa Heppner carried out the investigation. A comprehensive report intended to provide BESC with information necessary for making recommendations to the BIA Branch of Regional Archaeology for compliance with Section 106 of the NHPA was prepared by TNSDS after the field work was complete. A summary of the results from the literature review, archival research and archaeological survey is included in this report, as well as context statements for the prehistory and history of the Seward Peninsula and Deering, a description of survey methodology, and an evaluation for inclusion in the National Register of Historic Places (NRHP) for those properties identified as being historic in age.

TNSDS initiated its cultural resources investigation by conducting a literature and archival review of previous cultural resources surveys and sites in the area that have been recorded in the Alaska Heritage Resources Survey (AHRS) database, which facilitated the definition of a proposed APE and the completion of an intensive survey. Neither the survey nor a more extensive literature and archival review revealed any cultural resources that constitute historic properties pursuant to Section 106 of the NHPA, and thus a finding of no historic properties affected is recommended for the design of the West Airport Road Project.

INTRODUCTION

Project Location and Physical Setting

The small, coastal village of Deering is roughly 205 miles east of Russia, 57 miles south of Kotzebue, and 510 miles northwest of Anchorage. It is within sections 19, 20, 30, and 29 of Township 8 North, Range 19 West of the Kateel River Meridian (ADCED 2013).

Deering is situated on a thin spit along the southern edge of Kotzebue Sound, which is on the northern coast of the Seward Peninsula. To the south of the village is the Smith Creek Marsh – a tributary stream of the Inmachuk River and an expanse of wetlands. Deering Airport Road goes beyond the airport, paralleling Inmachuk River for nearly 20 miles, where it ends at the abandoned mining town of Utica.

The project area extends approximately one mile south from Deering, at the current city garage located near the west end of town, and terminates at its intersection with Deering Airport Road, just north of the airport cut-off (Figure 1). The landscape is composed of low-lying wetlands, tundra, tundra grass, tussocks, blueberries, crowberries, cloudberries, tundra moss and small alder thickets in disturbed areas. Terraces paralleling the Smith Creek Marsh are the most elevated areas in the project area. Two remnant trails are present within and near the project area – one located to the west of the garage and the other follows portions of the proposed road corridor. The trail to the west of the garage, which consists of mostly overgrown vegetation and gravel fill, likely functioned as an access road to the former dump. The other trail is difficult to observe because extreme high tides, active flooding of Smith Creek, and permafrost movement have compromised its physical attributes.

Figure 1. Project location – West Airport Road Project located in Deering, Alaska.

Project Description

Bristol Engineering Services Corporation (BSEC) was contracted by the Native Village of Deering to design West Airport Road in Deering, Alaska. This new road will serve as the primary evacuation route from the village to the airport during seasonal and tidal flooding, when the existing Deering Airport Road is typically washed out. A new bridge over Smith Creek will have the load-bearing capacity necessary to move heavy equipment in and out of Deering year round, as the existing bridge over Smith Creek on Deering Road is not strong enough to support heavy loads. The proposed evacuation road will measure between 16 and 20 feet wide and will include a bridge over Smith Creek with a minimum load capacity of 50,000 lbs. Gravel for the road will be taken from existing gravel sources and borrow pits along Deering Airport Road.

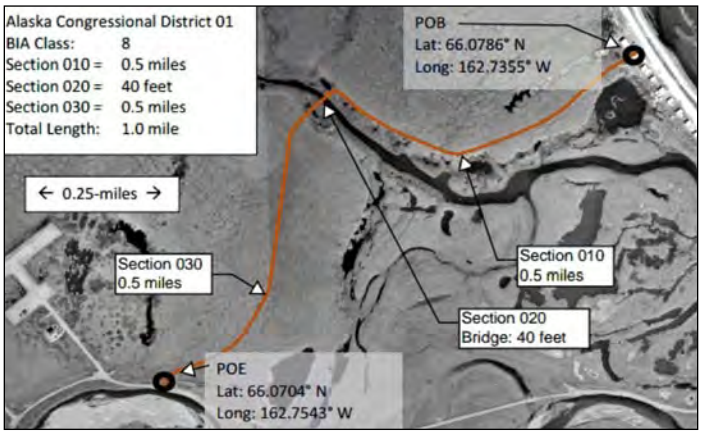


Figure 2. Project specifications showing proposed road route and Smith Creek crossing.

Project Purpose

The West Airport Road will provide Deering residents with a crucial evacuation route during times of flooding, as well as provide heavy equipment access for the village and airport. The purpose of this report is to provide BESC recommendations on whether or not the proposed location of West Airport Road will adversely affect historic properties in the proposed APE.

Federal funding for the project is being provided by BIA's IRR Program, thereby requiring the federal agency to carry out consultation per Section 106 of the NHPA and its implementing regulations (36CFR §800) to determine if there are historic properties within the proposed project area that may be adversely affected. As such, TNSDS was sub-contracted by BESC to assist them and the Native Village of Deering by preparing a report containing recommendations for establishing an APE and issuing a finding pursuant to the Act. Principal Preservation Consultant Robert Meinhardt, M.A. and Archaeologist Annalisa Heppner conducted a cultural resources investigation aimed at providing the City with such recommendations. Preservation Assistant Amy Ramirez provided assistance with background research and file searches necessary for proposing an APE for the West Airport Road, identifying previously recorded cultural resources and developing a historic context statement for Deering. Dr. Phillip T. Ashlock, Archaeologist, provided technical support for this project by importing Global Positioning System (GPS) coordinates into ArcGIS and creating maps for the report.

PROPOSED AREA OF POTENTIAL EFFECTS (APE)

A proposed APE consisting of a 16 to 20 foot-wide corridor that extends approximately one mile in length is proposed for the West Airport Road Project (Figure 2). The road travels through sections 19, 20, and 30 of Township 8 North, Range 19 West of the Kateel River Meridian. The road will begin in the village of Deering and traverse southwest 0.5 miles to Smith Creek. The proposed APE at both sides of the Smith Creek crossing expands to 40 feet, giving adequate survey coverage for any slight sifts in placement of a 50,000-pound capacity bridge. South of the Smith Creek crossing, the proposed APE narrows to 16 to 20 feet in width and continues to the southwest for another 0.5 miles. Project specifications call for vegetation removal and gravel fill. The gravel will be sourced locally from two open pits southwest of Deering, along the Inmachuk River. The two gravel sources, or borrow pits, are located in sections 10 and 11 of Township 7 North, Range 20 West of the Kateel River Meridian, and are existing. Both sources are included as part of the proposed APE.

METHODOLOGY

Methods used to conduct a cultural resources investigation for the design of West Airport Road included a literature review of relevant studies and various file searches, including those held at the Alaska Office of History and Archaeology (OHA) and the BIA Branch of Regional Archeology. The file searches were followed-up by a pedestrian survey of the proposed APE including archaeological reconnaissance with limited subsurface testing and soil strata analysis during shovel test excavations. Precursory research focused on the location, size, and age of cultural resources reported within and/or near the proposed project area, thus providing context for the prehistoric and historic development and/or cultural patterns of Deering. Information gathered from this research also directed the cultural resources survey and aided in developing a predictive model for identifying resources within the proposed APE.

Literature Review and Archival Research

TNSDS reviewed multiple-agency, online resources, and public records in an effort to determine if there was a potential for previously documented cultural resources to exist within the proposed APE. Prior to fieldwork, the Integrated Business Suite (IBS) online database at OHA was reviewed to determine the extent of previous cultural resource work in the area. The purpose of the file search was to identify any previous cultural resources studies and documented prehistoric and/or historic archaeological sites located within or around the proposed APE. In addition, reports not readily available at OHA were obtained from Anchorage area libraries and reviewed for relevance to the project.

Literature Review

A literature review was conducted in coordination with project background research. As a part of this process, relevant sources including archives, agency file searches, and local libraries were consulted and reviewed in an effort to yield information pertinent to the project. The IBS online at OHA was reviewed to determine the extent of previous archaeological research and surveys that were conducted in the area. This review helped to better understand the types of resources that might be encountered within the APE during the survey and to develop a context from which such resources can be evaluated for inclusion in the NRHP.

Archival Research

The search of the IBS at the OHA covered all available modules: Alaska Heritage Resources Survey (AHRS) Location Editor, AHRS cards, OHA Citations Database, Determinations of Eligibility and National Register Nomination Status, Surveys, RS-2477 Historic Trails Data Layer, BIA Numbers Data Layer, and the Document Repository (OHA 2012). The search area focused on the proposed APE, which included one mile of proposed roadway, travelling southwest from Deering towards the airport. The search was then expanded to gain an understanding of the prehistoric and historic trends and settlement patterns within and adjacent to the proposed APE. The reviewed data was used to better understand and develop contexts for the types of resources that might be encountered within the APE during the cultural resource survey.

Cultural Resources Survey

The cultural resources survey methodology was borrowed from National Register Bulletin 24, *Guidelines for Local Surveys: A Basis for Preservation Planning*, which outlines the vocabulary and techniques for both historical and archaeological survey methodology preferred by the National Register.

A cultural resources survey of the proposed road corridor involved an intensive survey carried out by Robert Meinhardt, M.A. and Annalisa Heppner on September 2-3, 2013. Initial pedestrian reconnaissance revealed that the area is largely wet, boggy tundra. Areas identified during the systematic survey as having a higher probability for cultural resources, such as high ridges and along what may be the remnants of a historic trail were tested for archaeological resources. The proposed area was divided into three areas, initially identified on the map provided by the Native Village of Deering. Section 010 (0.5 miles) stretches south from the city garage to the bridge crossing. Section 020 (40 feet) encompasses the north and south banks of Smith Creek. Section 030 (0.5 miles) stretches from the south bank of Smith Creek westward to join with the existing Deering Airport Road. To simplify the survey, Test Areas 1 through 3 were aligned with the sections provided by the Native Village of Deering. Based on previous investigations identified in the precursory literature review and file searches, it was determined that most of the cultural resources previously recorded in the area were prehistoric and located near the beach in the center of Deering. Since Deering is within the boundaries of an archaeological district and the proposed road only totals just over one mile, the project area was determined to have a moderate to high probability for containing cultural resources that may constitute historic properties pursuant to Section 106 of the National Historic Preservation Act of 1966.

The entire proposed APE was surveyed for cultural resources, with elevated landforms and the possible remnants of a historic trail receiving the most attention. The Native Village of Deering expressed particular concern with the historic trail, so GPS coordinates were recorded using a Garmin *Etrek* at higher elevations where possible trail remanents were observed.. These areas were also examined for historic mining debris, which may have been associated with historic trail use. The proposed APE is located in a low-lying wetland consisting of grasses and tundra. Elevated landforms or those that appeared to have been created or modified were intensively surveyed and a few locales were tested for prehistoric and/or historic archaeological resources.

Each test area received a series of shovel probes or shovel tests, which were placed using random sampling. Shovel probes were 30 cm in diameter. Shovel tests ranged in diameter from 50 to 70 cm wide. Depths in both shovel probes and shovel tests were determined by the natural stratigraphy of the area.

Additionally, a windshield survey by ATV was conducted to examine proposed gravel sources along Deering Airport Road at Mile 6.5 and Mile 8. GPS coordinates and photographs were taken to document the two existing borrow sites.

CONTEXT STATEMENTS

Context statements are an important aspect of conducting a cultural resources survey. Such statements aid in evaluating the significance of a resource and, therefore, identifying whether or not it is a historic property that may be adversely affected by a federal undertaking. As is the case for the West Airport Road Project, context statements will direct the planning process to avoid, minimize, or mitigate potential effects to resources that are eligible for inclusion in the National Register of Historic Places (NRHP).

Prehistoric Context

The northwestern arctic is noted for its contribution to the development of early American Arctic cultures, and more recently the development of recent Arctic Eskimo cultures (Anderson 1984). Archaeological evidence on the Seward Peninsula reflects influences from the northern arctic region and the Bering Sea regions. Below is a review of the cultural chronology of the Seward Peninsula and the Kotzebue Sound region (Table 1).

Paleoarctic Tradition

The earliest dated sites in southwest Alaska date back to 10,000 years ago (Ackerman 1996) with some suggestive evidence of even earlier occupation. The Paleoarctic Tradition proposed by Anderson (1970) groups early artifact assemblages that show resemblances to materials found in northeast Asia, suggesting connections across the Bering Land Bridge. Paleoarctic Tradition assemblages include microblades, wedge-shaped cores, bifacial tools, burins, endscrapers, and expedient tools made on blades (Ackerman 1994). Groups were highly mobile, with seasonal encampments in opportune locations for hunting late Pleistocene-early Holocene fauna (NLUR 2004). The tradition is based on materials originally found at Onion

Table 1. Cultural Traditions on the Seward Peninsula.

TRADITION	CULTURAL PHASE	AGE (BEFORE PRESENT)	MATERIAL ITEMS
Paleoarctic	Paleoarctic	10,000 B.P. – 6,000 B.P.	Microblades, wedge-shaped cores, bifacial tools, burins, endscrapers
Northern Archaic	Northern Archaic	6,000 B .P. – 4,000 B.P.	Wedge-shaped cores, side-notched projectile points/bifaces, minimal microblade use
Arctic Small Tool		4,700 B.P. – 1,000 B.P.	Abundant microblades, finely detailed end and side scrapers, chipped stone
	Denbigh	4,700 B.P. – 3,500 B.P.	Flaked projectile points, end-blade and side-blade insets, burins
	Choris	3,600 B.P. – 2,500 B.P.	Pottery, burins, flaked stone projectile points, endblades and sideblades, ground stone, barbed darts, labrets
	Norton	2,500 B.P. – 1,000 B. P.	Slab-knives, fire tempered pottery, toggling harpoons, ground slate tools, stone net sinkers, oil lamps, and endblades and sideblades
	Ipiutak	1,500 B.P. – 200 B.P.	Birch bark containers, open-work carvings, tools with decorative incising
Northern Maritime		1,500 B.P. – 200 B.P.	Bone and ivory harpoons, ulus, pottery
	Birnirk	1,500 B.P. – 1,000 B.P.	Flaked side blades and end blades, flaked semi-lunar knives, burin-like tools, ground slate ulus, open socket harpoon heads, ground slate harpoon blades, sand/gravel tempered pottery
	Western Thule	1,000 B.P. – 200 B.P.	Pottery, thin open socket harpoons, large whaling harpoons, umiaks, kayaks, ground slate tools, fish lures, carved ivory figurines, baleen wolf-killers, decorated needle cases, leisters, net-sinkers, and fish hooks

**Adapted from Dumond 1984; Anderson 1984; NLUR 2007; Eldridge 2012*

Portage in northwestern Alaska (Anderson 1970) and at Trail Creek Caves on the Seward Peninsula (Larsen 1968). Sites belonging to this tradition have also been found elsewhere in northwest Alaska (McClenahan 1993:133-138).

Northern Archaic Tradition

A warming climate and the extinction of megafauna, such as mammoth, ushered in a new cultural period with a higher population density across North America (Mobley 2010). In Alaska, the correlating Northern Archaic Tradition shows an increased use of marine resources, primarily salmon, with continued use of big game species. Side-notched projectile point/biface forms begin to appear in Alaskan archaeological assemblages (Braund 2001), as well as incised pebbles and declining use of microblade technology. Dwellings consisted of willow frames covered with skins and had semi-subterranean floors that contain thick midden deposits. The middens commonly consist of caribou bone and oxidized lenses of sand and charcoal. Similar to the Paleoarctic Tradition, Northern Archaic material was represented at the Onion Portage Site (Anderson 1988) and at sites along the Yukon River to the east of St. Michael Island (NLUR 2007), at Cape Krusenstern (Pipkin 2005), and in various interior Alaska locations in the Kobuk and Noatak River drainages. Components have also been identified as far south as Ugashik Lakes (Henn 1978), Kagati Lake (Ackerman 1980), and Lake Minchumina (Holmes 1986).

Arctic Small Tool Tradition (ASTt)

This tradition is marked by a distinctive stone tool kit, which included small, finely made endblades and sideblades, distinctive burins and the abundant use of microblades; all of which intensified as the tradition continued to develop. There is a notable lack of ground or polished stone tools (Irving 1962, 1964). The progressive increase in tool workmanship culminated in the introduction of composite tools and the introduction of the bow and arrow (NLUR 2004). Near the end of the tradition, salmon is intensely harvested (Irving 1964: 77). Dwellings early in the tradition are square, semi-subterranean sod enclosures, which gradually became round in floor plan. Excavation of dwelling floors indicates distinct activity areas within the houses. Habitation sites were seasonal, with coastal areas being inhabited in the spring and summer, and interior tundra sites in the fall and winter. Linguists have suggested that the earliest ASTt language was the root from which a split occurred, leading into Yupik and Inupiaq languages (Lutz 1982; Woodbury 1984; Krauss 1988).

The tradition has been further refined into four sequential cultures, each with similar tool assemblages. Their primary differences include the presence/absence of pottery, stylistic differences in pottery and organic artifacts, and subsistence systems (Giddings 1957, 1964; Larsen and Rainey 1948). For the vicinity of Kotzebue Sound, Giddings and Anderson (Giddings and Anderson 1986) have refined the ASTt to include Denbigh, Choris, Norton, and Ipiutak, and reflect Bering Sea cultural influences.

Denbigh

Denbigh component sites are among the oldest coastal sites yet identified in Norton Sound; however, their proximity to the coast may be a byproduct of rising seas (Anderson 1984). They indicate seasonal coastal occupation, possibly late summer or early spring, with emphasis on terrestrial and riverine resources, such as caribou and fish species (Dumond 1987: 83-84). Artifacts recovered from Denbigh complex sites include small bi-pointed end and side blades for insertion into arrow and spearheads, cuboid microblade cores and abundant microblades, tanged end scrapers, large semi-lunar bifacial knives, and net sinkers (Anderson 1984). Dwellings were shallow semi-subterranean sod houses with short entrance tunnels (Eldridge 2012). House floors were square or round with large stone-lined hearths that were centrally placed, and seasonal housing was comprised of skin-covered tents (Anderson 1984). Archaeological sites on the Seward Peninsula with Denbigh components include Cape Espenberg, Trail Creek Caves, Kuzitrin Lake, and Agulaak Island (Eldridge 2012). A small assemblage of Denbigh lithic materials was identified at the Old Beach Site on Cape Nome (Bockstoce 1979).

Choris

Artifact assemblages from Choris sites include pottery, burins, flaked stone projectile points, endblades and sideblades, and the appearance of ground slate tools later in the complex (Harritt 1994). Choris sites have also contained fixed-shaft toggle points and barbed darts for

sea mammal hunting, and bifurcate tanged arrowheads for caribou hunting. Decorative and ornamental items were made from bone, wood and ivory, and stone labrets were fashioned for personal wear. Dwellings were large semi-subterranean sod homes with stone-lined, floors and stone-lined hearths. Seasonal housing was comprised of round, skin-covered tents (Anderson 1984). The first Choris knives and points were identified at Trail Creek Caves, with additional finds at Cape Krusenstern, Onion Portage, and the Choris Peninsula (Anderson 1984). Subsistence efforts for Choris sites utilized readily available resources, such as fishing and caribou hunting at Onion Portage, seal species hunting at Cape Krusenstern, and fish, birds, seals, and whales on the Chorus Peninsula. Choris sites on the Seward Peninsula are located at Cape Espenberg and near Teller (Schaff 1988; NLUR 2007).

Norton

The Norton cultural complex reflects many traits of the Choris complex, as well as new technological innovations. Subsistence patterns were broadened with a greater emphasis on marine and riverine resources (Pipkin 2005). Early Norton complex assemblages seem to indicate a heavy reliance on net fishing, sealing, and caribou hunting, while later assemblages show a decreased reliance on fishing and a possible increase in sealing and caribou hunting (Bockstoce 1979). Artifacts associated with Norton sites include slab-knives, fire tempered pottery, toggling harpoons, ground slate tools, stone net sinkers, oil lamps, and endblades and sideblades (Mason 2010). Dwellings varied in size and composition, depending on region. Houses ranged from large, semi-subterranean sod houses with long entrance tunnels to small semi-subterranean sod houses with short entrance tunnels. House floors ranged from round to oval, with centrally placed hearths (Anderson 1984). Sites with Norton complex components on the Seward Peninsula have been found at Trail Creek Caves, Kugzruk Island, Ikpek, Cape Espenberg, and Cape Nome (Eldridge 2012).

Ipiutak

The northwestern Alaska Norton cultural complex was replaced by the Ipiutak complex. Archaeological evidence suggests the complex may have had its origins on the eastern Siberian coast and the Bering Sea Islands (Anderson 1984). Ipiutak sites are known for their elaborate burial goods and the earliest known use of iron in arctic Alaska. The artifact assemblage is notably lacking in ground slate tools, pottery, and oil lamps (Eldridge 2012), but does contain birch bark containers, open-work carvings of bone, wood, and ivory, and tools with decorative incising (Harritt 1994; Mason 2010). Dwellings were semi-subterranean sod structures, which were square to round in shape and had short entrance tunnels. Seward Peninsula sites with Ipiutak components are found both along the coast and inland. They include Trail Creek Caves, Cape Espenberg, and Deering.

The Ipiutak remains in Deering are few but significant. A *qargi*, or ceremonial house, a house and cache pit, as many as three additional house features, and a number of burials with spectacular grave goods make up a world-class assemblage of features and artifacts. The most well-known of these artifacts is the "maskoid" of which only three exist in the world. Exotic artifacts at Deering include obsidian from Batza Tena, smelted iron from Sibera, and structural timber, indicating a complex and wide-ranging Ipiutak trade network (Bowers and Mason 2009:286-287).

Northern Maritime Tradition

The broadly defined cultural tradition covered the arctic from Greenland to Siberia (Collins 1964) and includes three interrelated cultures: Punuk, Birnirk, and Western Thule (Giddings and Anderson 1986). Punuk site types have been identified in the Bering Sea islands, particularly the Punuk Islands near St. Lawarence, and correlate roughly as existing during the time of land-based Birnirk complex people. However, the area of the Norton Sound and the Seward Peninsula are considered to be within Western Thule, and to a lesser degree Birnirk, cultural influence (NLUR 2007). These cultures include maritime-oriented dwellers of northern coastlines and their descendants throughout the arctic, who may not show such an intensive reliance on marine subsistence (Dumond 1984). Subsistence strategies included sea mammal hunting from specific locations, and an increased reliance on marine resources in general (Collins 1964; Bockstoce 1979; NLUR 2007). The maritime resource interest can be used to account the rise of the Birnirk peoples in northern Arctic, and the Western Thule in Bristol Bay. The Northern Maritime Tradition can be thought of as "Prehistoric Eskimo Culture" and many

artifact assemblages are similar to those of the later-dating historic Inupiaq Eskimos (Anderson 1984). Bone and ivory harpoons and other tools reflecting an emphasis on marine mammal hunting and fishing characterize the period, and many such sites have been recorded along the northwest Alaska coast. Variations in tool type and art have been used to further subdivide the tradition (Anderson 1984:56-57).

Birnirk

The Birnirk cultural complex reflects a coastal, cultural group. Artifact assemblages commonly include flaked side blades and end blades, flaked semi-lunar knives, burin-like tools, ground slate ulus, open socket harpoon heads, ground slate harpoon blades, and sand/gravel tempered pottery (Harritt 1994; Mason 2010). Dwellings were small semi-subterranean sod houses with long entrance tunnels, square in shape, with some having small, attached kitchen rooms. Skin tents were used seasonally. Birnirk in the Kotzebue Sound area has a relatively late occurrence at around 800 A.D. (Giddings and Anderson 1986) Birnirk components have been found at archaeological sites at Cape Nome, Cape Prince of Wales, Cape Krusenstern, and the Birnirk Burial Mound in Wales, prior to its destruction (Eldridge 2012).

Western Thule

Western Thule culture is thought to have directly evolved from Birnirk culture (Anderson 1984), as evidenced in its material goods. The term "Thule" refers to a cultural complex, which ranges from northwestern Alaska, across the arctic region, to Greenland. The culture was first defined in eastern Canada by Mathiassen in 1927 during data collection for the Fifth Thule Expedition across Canada. He noted the peoples were an advanced culture, with artifacts containing some Asian traits and a reliance on whaling. An increased emphasis on specialized tool types can be seen, which intensifies later in the complex. The term "Western Thule" has been used to distinguish between Alaskan Thule culture and those Thule cultures of northern Canada and Greenland (Bockstoce 1979). Western Thule subsistence was highly diversified and consisted of land hunting, fishing, and a heavy reliance on small seals. Evidence suggests that open water hunting and the use of boats were employed seasonally, with an emphasis on whaling in fall and spring, and winter sealing on the sea ice (Anderson 1984; Dumond 1984). Artifact assemblages include pottery, thin open socket harpoons, large whaling harpoons, umiaks, kayaks, ground slate tools, fish lures, carved ivory figurines, baleen wolf-killers, decorated needle cases, leisters, net-sinkers, and fish hooks. Settlements were both coastal and inland, with dwellings of deep, semi-subterranean sod houses with long entrance tunnels. House floors had single and multiple room plans with central hearths. Skin tents were used seasonally (Eldridge 2012).

Giddings and Anderson identify the Kotzebue Period as a form of Western Thule that saw a subsistence shift from whale hunting to a more dispersed subsistence base. There is a lack of whaling implements, a wider subsistence season, smaller houses, and a settlement pattern of small villages with only one or two winter houses, and a movement into previously uninhabited areas (Giddings and Anderson 1986).

Archaeological sites located on Seward Peninsula with Western Thule and Kotzebue Period components include, Kotzebue, Cape Nome, Cape Espenberg, Trail Creek Caves, Nuk, and the Snake River Spit Site located at the mouth of the Snake River in Nome. Linguistically, the culture was divided by region; Yupik was spoken in the Bering Sea Islands, while Inupiaq was spoken in all other areas, including the coastal Seward Peninsula (Woodbury 1984; Dumond 1984; Giddings and Anderson 1986).

Historic Context

Early EuroAmerican Contact 1778-1880

Prior to the Russian Period of Alaska's recent history, western trade goods entered Alaska via the Seward Peninsula as a result of well-established, interconnected trade among various indigenous groups of the Bering Strait region (VanStone 1984: 154). Early EuroAmerican presence in northwestern Alaska was annual, with sustained contact in the form of trading posts and settlements occurring near the turn of the century.

The first European explorer to travel the Seward Peninsula was Captain James Cook, who travelled as far north as Kotzebue Sound in 1778. The sound was later named for Otto Von Kotzebue, who explored the sound area in 1816 in search of the Northwest Passage on behalf of the Russian-American Company. Kotzebue

traded with the native people he encountered and noted they already had western trade goods and a keen sense of trading practices (VanStone 1984). In 1825, British interests entered the region under the guise of the Franklin Expedition, which was attempting to cross the arctic coast. Frederick Beechy, commander of the sloop H.M.S. Blossom, arrived in Kotzebue Sound in September of 1826 in an unsuccessful attempt at meeting the Franklin Expedition. Beechy noted that the coast along the sound was sparsely populated. He observed abandoned settlements at Cape Epsenberg and noted that the burial platforms near the settlements were greatly different than those he had seen along the eastern side of Kotzebue Sound (Beechy 1831: 451).

The Russian-American Company began annual voyages between St. Michael and Kotzebue Sound in 1833 (Ray 1984). Sustained contact in the region did not occur until the turn of the century. Major impacts to the native communities were not felt until much later than they were in southwest and southeast Alaska, where permanent EuroAmerican trading posts and settlements were already established (NLUR 2007). The trading posts of the Bering Strait region were, more often than not, ships that went to people in their traditional locations, rather than established communities on land (Nelson 1983:23). The increased presence of outside interests brought illness to the native populations, which were decimated in 1838 by small pox (Ray 1975: 127). Whaling expeditions arrived from New York in 1848, shortly followed by large fishing flotillas from the already established North Pacific fishery in southwest Alaska (Ray 1975; VanStone 1984).

Missionary Influence and the Gold Rush 1880-1920

The Russian Orthodox Church established a mission in St. Michael in 1884 (Ray 1975: 213); however, the church had little influence north of Unalakleet. Protestant missionaries entered the Seward Peninsula in 1887 and began converting the native peoples to Christianity. Swedish Evangelicals also entered the region and established missions in Unalakleet in 1887 and Golovin in 1893 (Ray 1975: 212). By 1910, nearly all Inupiat in northwest Alaska had been converted to Christianity (Burch 1994: 1). The evangelical missionary (Figure 3) in Deering was established between 1901 and 1905 by the Society of Friends, who are more commonly known as Quakers. The name Deering was probably taken from the 90-ton schooner "Abbey Deering," which was in nearby waters around 1900.

Figure 3. Society of Friends Church 1929 (Alaska State Library 2013a; Asset# ASL-PCA-45-0057).

The Protestant missionary, Sheldon Jackson, promoted reindeer herding on the Seward Peninsula as a profitable industry for the native peoples of the region. Reindeer were first brought from Siberia aboard the revenue cutter Bear in 1892. The first herd was established at Teller, with others started later in Golovin and Unalakleet. Eskimo apprentices gradually learned the skill from Siberian and later Norweigan herders, until they could acquire their own reindeer. Herds were dispersed widely across the region (Figure 4), and it is thought that the establishment of reindeer stations influenced the migration of indigenous peoples to areas such as Nome, Teller, and ultimately Deering. Reindeer herding was established in Deering in 1905, with the herd animals having been loaned to the local population by the Society of Friends (Lomen 1954.). Two herders from Shishmaref accompanied the animals. Additional herds were established in 1911 and 1913 (Stern 1980: 31). The U.S. Census of 1920 indicates that nearly all inhabitants of Deering were from either Shishmaref or Wales, and that roughly half of those households made their living from herding (U.S. Census 1920).

Figure 4. Reindeer herd near Deering, Alaska (Alaska State Library 2013b; Assec# ASL-PCA-112-110).

The Klondike Gold Rush began in 1897, triggering a massive migration into the northern reaches of Canada and Alaska. The Klondike was not the only destination; its discovery provided inspiration for searching widely for gold in Alaska. Other strikes were made, including in April of 1898, at Council City on the Seward Peninsula (Eldridge 2012: 3). Prospectors discovered gold in the Niukluk River and on the beaches of Nome in 1899 (Ray 1975). The following years witnessed numerous other strikes throughout the region including the Imnachuk and Kiwalik rivers. These discoveries lead to the establishment of the modern communities of Deering and Candle around 1901. Candle was situated a few miles upstream from Deering on the Kiwalik River, and numerous smaller mining operations were located along the Inmachuk River north of Inmachuk Lake. The entire area from Inmanchuk Lake to Candle was called the Fairhaven Mining Precinct. The precinct was largely mined using placer methods, which required an abundant source of water. An elaborate system of over 500 miles of irrigation ditch (Figure 5) was constructed in the early 1900s. The largest ditch, the Fairhaven Ditch, measured 11 feet wide at the bottom and 38 feet wide at the top, with sides rising to four feet. The ditch carried water 38 miles from Imaruk Lake north to the Inmachuk River to enable the full exploration of gold deposits along the river. It was constructed between 1905 and 1907 by the Fairhaven Water Company and was in use until 1920, when the deposits along the Inmachuk River claims were exhausted.

Figure 5. Water flume ditch for mining operations near Deering (UAF 2013a, Assec# UAF-1999-132-CO).

Inmanchuk River mining operations were located in the Inmachuk Mining District, which was located approximately 20 miles south of Deering and included the former Utica Mine. The former gold mine began operation in 1903 along the Inmachuk River (Alaska DEC 2013). These early mining activities were likely the primary incentive for native peoples to migrate to the current location of Deering. It was a key supply center for the mining camps, and nearly 200 individuals lived in Deering by 1907. Supplies were transferred to Utica via the Deering-Inmachuk River Wagon Road, AEC Road 27. Portions of the road were constructed in 1907, with the connection of all segments completed by 1911, when the road was turned over to the Alaska Territorial Road Commission. It was estimated that in 1910 over 800 tons of freight was hauled over the wagon road (AEC 1910). In 1908, nearly a half of a million dollars of gold was mined from the Inmachuk River, while Candle Creek yielded two million dollars of gold (Henshaw and Parker 1913: 366). By 1930, the Fairhaven Precinct had produced $5,727,100 worth of gold (Alaska OHA 1987). Hydraulic and dredge mining occurred along a seven-mile length of the Inmachuk River until about 1980, when GEM Exploration, Inc. abandoned the site (DEC 2013). NANA Regional Corporation acquired the land and mine in 1991 through the Alaska Native Claims Settlement Act (ANCSA) of 1971.

A government school was established in Deering in 1905, which enrolled 42 students and 28 adults (Figure 6; Hadley 1969: 191). In 1910, the native population of Deering totaled 102 (U.S. Census 1910). The community had a roadhouse, two saloons, a Society of Friends mission, and a government reindeer station (Polk 1907-1908: 185). Increasing numbers of miners and prospectors were taking a toll on the native population due to illness, alcoholism, and rumors of improper relations with young native girls. In 1914, the school and part of the population of Deering moved to the Bureau of Education funded town of Noorvik in an attempt to remove the influences of the miners on the native lifestyle (Ducker 1996).

Figure 6. Interior of Bureau of Education school in Deering, c. 1910 (UAF 2013b, Assec# UAF-1973-203-7).

Many of the people who remained in Deering worked in the mines or provided supplies needed in mining camps. Deering also became a trade center for native trappers, where they could get a higher price than in their villages (Keithahn 1963: 71). In 1922, a landing strip was established at Deering, possibly the first on the Seward Peninsula, by Norwegian explorer Roald Amundsen. The field was to be used as a staging area for a circum-polar flight. The field was expanded in 1945 to enable commercial traffic (Larsen 2001: 15). By 1928, the reindeer herds had increased to more than 4,000 animals in the Deering area. A small pox epidemic hit the region the same year. Many residents became ill, but the loss of life was greatly reduced from previous epidemics (Andrews 1939: 193).

Deering 1930-Present

Military presence in Deering was first felt with the onset of World War II in 1939. Alaska Natives served during the war, giving them their first exposure to life outside the village. Many residents of the Seward Peninsula participated in the Alaska Territorial Guard (Salisbury 2002). The Cold War era saw the establishment of airfields and communication systems across Alaska, including the construction of a White Alice Communications System (WACS) tropospheric station on Granite Mountain, located between Deering and Koyuk and completed between 1955 and 1956 (Figure 7).

Figure 7. Construction of a White Alice Communications System (WACS) station (UAA 2013, Assec# UAA-HMC-1064).

The Indian Reorganization Act of 1934 helped to establish local control over village lands. The Village of Deering organized under the Act in 1945, becoming an IRA entity.

In 1966, the Northwest Alaska Native Association (NANA) was founded to help settle the native's land claims issues. This non-profit organization soon became an advocate for all native issues, including health, housing, and political rights. The village of Deering was incorporated as a second-class city in 1970. With the passing of the Alaska Native Claims Settlement Act (ANCSA) in 1971, a for-profit native corporation was established and named the NANA Regional Corporation. To avoid confusion, the non-profit Northwest Alaska Native Association was renamed the Mauneluk Association, and was later changed to the more traditional name, Maniilaq (Maniilaq Association 2013). NANA is fully owned by more than 13,000 shareholders and is governed by an elected Board of Directors drawn

from 11 villages. The Kotzebue Area Health Corporation was formed in 1973. This corporation was to care for the health needs of the area, and it soon became apparent that Maniilaq and KAHC were performing similar functions. In 1975, the two organizations merged. Maniilaq began the construction of a new health facility in 1980 to house and consolidate its rapidly expanding public service programs. By the time it was completed in 1981, the Association had grown from a handful of programs and staff to a multi-million dollar organization. Maniilaq assumed management of the Indian Health Service (IHS) hospital and renamed it the Maniilaq Medical Center. The Maniilaq Association now manages the 80,000 square foot, $42 million hospital, as well as smaller clinics in all the villages.

Today, employment opportunities are available in local government, the school system, the regional and village corporations, and with the Karmun-Moto reindeer herd, which now boasts over 1,400 animals. Other sources of income include commercial fishing and the manufacture of art and handicrafts (Bowers 2009).

RESULTS OF CULTURAL RESOURCES INVESTIGATION

Previous Investigations

Previous investigations in Deering have been primarily conducted to satisfy regulatory requirements for compliance with Section 106 of the NHPA. Smaller investigations with academic focus began as early as 1949 and were associated more recently with the compliance-driven Village Safe Water (VSW) Program. The investigations have taken place within the core town area of Deering and many have been in anticipation of infrastructure improvements (Table 2). Such investigations show that small portions of the northeastern extent of the proposed APE may have been investigated for cultural resources in the past. However, the majority of the proposed APE has not been the subject of either an archaeological or historic structures survey.

As early as 1949, archaeological research was undertaken in Deering. Helge Larsen, from the National Museum of Denmark, began excavations of an Ipiutak ceremonial house on the shores of the Kotzebue Sound, site KTZ-00299 (Larsen 1951). The site consisted of semi-subterranean sod house with entrance tunnel and a cache. Over 6,000 animal bones and 1,750 artifacts were recovered from this site (OHA 2006). In 1997, a team from the Museum of Denmark continued excavations at the site. Larsen also excavated site KTZ-00023 in 1950, which was also an Ipiutak ceremonial house. Artifacts included sled and snowshoe parts and a Western Thule toggling harpoon head (OHA 2000). Larsen published a book entitled *Deering: A Men's House from Seward Peninsula, Alaska* in 2001 (Larsen 2001).

In 1974, Melchoir and Bennett collected data from two archeological sites KTZ-00025 and KTZ-00003, and included the data in the Chukchi-Imuruk Biological Report (Melchoir and Bennett 1974). In 1982, the data they collected was presented in a chapter on Archaeological Observations in The Bering Land Bridge National Preserve (Powers et al 1982).

Review of the IBS system revealed that compliance-driven investigations began in the early 1980s in the Deering area (Table 2). In 1982, Chuck Holmes and Richard Stern completed an archaeological survey for gravel material sites for the Deering airport (Holmes and Stern 1982). No archaeological resources were identified.

In 1994, fieldwork was completed for the installation of new sewer lines and the construction of a sewage treatment plant (Dixon 1994) by the Alaska Department of Environmental Conservation, Village Safe Water Program. The efforts focused on the previously identified site KTZ-00023, which is an Ipiutak ceremonial house site known as the Deering Qualgi/Kazgi Site. Dixon revisited the site and found it to consist only of a shallow hole in the ground in a grass and willow covered area. Two new depressions were found at the site and a shovel test produced 70 items, including 24 EuroAmerican artifacts, 17 mammal bones, sawn whale bone, decayed wood fragments, and 21 splintered bird bone fragments. Dated materials revealed the following radiocarbon dates: BP 1280+/-40 (Beta-113142) and BP 1230+/-40 (Beta-138562) (OHA 2000). This first investigation into the potential for archaeological resources in Deering found in conjunction with the sewage line installation revealed that Deering is rich in buried cultural materials. It became apparent to all involved that a systematic approach would

Table 2. Previous Investigations

SURVEY ID	LEVEL	TITLE	REFERENCE
	Level II - Reconnaissance Survey	Cultural Resources Survey: Deering Airport Material Site	Holmes and Stern 1982
	Level II - Reconnaissance Survey	An Archaeological Reconnaissance of Lands to be Effected by the Proposed Construction of a Sewer Line and Treatment Plant in Deering, Alaska	Dixon 1994
	Level II - Reconnaissance Survey	Report of 1997 Field Discoveries City of Deering Village Safe Water Cultural Resources Project	Reanier et al 1998
15958266 15958267 15958268	Level I - Literature Review Level II - Reconnaissance Survey Level III - Intensive survey	Preliminary Report on the 1999 Deering Village Safe Water Archaeological Program	Bowers et al 1999
	Level II - Reconnaissance Survey	Archaeological Monitoring of NWIHA House Lot Sewer Line Installation and Adjustment	Williams 2000
	Level II - Reconnaissance Survey	2000 Interim Report on the Deering Village Safe Water Archaeological Program	Bowers 2000
	Level II - Reconnaissance Survey	2001 Interim Report on the Deering Village Safe Water Archaeological Program	Bowers 2001
	Level II - Reconnaissance Survey	2002 Interim Report on the Deering Village Safe Water Archaeological Program	Bowers 2002a
	Level IV - Mitigative	Emergency Excavation of Human Remains in Deering (letter report)	Bowers 2002b
	Level II - Reconnaissance Survey	2003 Interim Report on the Deering Village Safe Water Archaeological Program	Bowers et al 2003
15959285	Level II - Reconnaissance Survey	2005 Interim Report on the Deering Village Safe Water Archaeological Program	Bowers et al 2005
	Level II - Reconnaissance Survey	2006 Interim Report on the Deering Village Safe Water Archaeological Program	Bowers et al 2006
	Level II - Reconnaissance Survey	2007 Interim Report on the Deering Village Safe Water Archaeological Program	Bowers et al 2007
15987166	Level II - Reconnaissance Survey	The Archaeology of Deering, Alaska Final Report on the Deering Village Safe Water Archaeological Program	Bowers 2009
	Level II - Reconnaissance Survey	Archaeological Survey of Deering Landfill and Gravel Sources	Williams 2001
	Level II - Reconnaissance Survey	Report of Cultural Resources Investigations: The Deering Road Project No. 466, Deering, Alaska	Allison 2002
	Level II - Reconnaissance Survey	Archaeological Monitoring of Sediment Testing for a New Tank Farm in Deering, Alaska	Williams 2002a
	Level II - Reconnaissance Survey	Cultural Resources Survey of Landfill Improvements in Deering, Alaska	Williams 2002b
	Level II - Reconnaissance Survey	Archaeological Monitoring of Fuel Line Trenches in Deering, Alaska.	Williams 2004
	Level I - Literature Review	Cultural Resources Assessment of the Proposed Deering Bulk Fuel Upgrade	Bowers and Legge 2002
	Level II - Reconnaissance Survey	Archaeological Monitoring of New Health Clinic Construction in Deering, Alaska	Bowers 2004
16055121	Level II - Reconnaissance Survey	BIA 2004 Native Allotment Surveys	BIA 2004
	Level II - Reconnaissance Survey	Cultural Resource Survey of Proposed Material Source and Monitoring of Road Improvements in the Vicinity of Deering, Alaska	Bowers 2007
	n/a	Alaska Baseline Erosion Assessment, Erosion Information Paper- Deering, Alaska	USACE 2007
	Level II - Reconnaissance Survey	Archaeological Survey and Monitoring of Water Main Line Replacement, Deering, Alaska	Stern 2009
16074818	Level IID - Remote Sensing	Ground Penetrating Radar Survey of a Proposed Community Building Lot in Deering, Alaska	NLUR 2012

be necessary in order to install a sewer and drinking water system in the village without destroying precious cultural materials and history. The Deering Village VSW Archaeological Program was created in 1997 to excavate and interpret buried cultural material uncovered during sewer line installation, as well as during the construction of a new Post Office building. Excavations were carried out between 1997 and 1999, with monitoring and survey efforts being completed between 2000 and 2009. The archaeological work for the VSW project was undertaken by Bering Straits Foundation (BSF) in 1997, Ukpeagvik Inupiat Corporation (UIC) in 1998, and Northern Land Use Research, Inc. (NLUR) in 1999-2009.

Work in 1997 identified site KTZ-00299, Deering Ipuiutak House and Cache, which is a buried Ipiutak house and associated cache (Reanier 1998). The house has been radiocarbon dated to BP 1230+/-40 and the associated cache pit dates to about BP 1620+/-80. Over 6,000 animal bones and 1,750 artifacts were recovered from the site, which is presently covered by the new Post Office in Deering (OHA 2006). The density of identified buried cultural material in conjunction with the close geographic proximity to other archaeological sites of the same age indicated that the potential for more discovery was very high, thus leading to the establishment of an archaeological district in Deering, KTZ-00169, as well as a historic district, KTZ-00170. In 1998, a Programmatic Agreement was established to address VSW project impacts to the archaeological district (Deering Programmatic Agreement 1998). The agreement included the Native Village of Deering; the Deering City Council; the Alaska State Historic Preservation Officer; the Indian Health Service; the Alaska Area Native Health Service; the U.S. Department of Agriculture, Office of Rural Development; the U.S. Army Corps of Engineers, Alaska District; the National Park Service; the Northwest Alaska Native Association; the Northwest Arctic Borough; and the Advisory Council on Historic Preservation.

Work continued through 1999, with the discovery of two Western Thule pit houses (Bowers et al 1999). Site KTZ-00300 is a square house with two rooms and entrance tunnel. A total of four radiocarbon dates were obtained, the most reliable of which was from charcoal located beneath the main house floorboards, yielding a date of BP 910+/-40 (Beta-138568). Site KTZ-00301 is also a square house with two rooms and entrance tunnel, constructed of driftwood, sod, and whalebone. A single radiocarbon age was determined from a sample of wood from a subfloor cache at BP 820+/-40 (Beta-189091).

Survey and monitoring efforts were completed between 2000 and 2003 for the VSW Program (Williams 2000; Bowers 2009). Interim reports were generated in 2000, 2001, 2002, 2003, 2005, 2006, and 2007 to report of the status of the project (Bowers 2000; Bowers 2001; Bowers 2002a; Bowers et al 2003; Bowers et al 2005; Bowers et al 2006; Bowers et al 2007). Upon project completion, NLUR was tasked with compiling all information gathered during the VSW Program, and it was synthesized into a final report in 2009 (Bowers 2009).

Compliance-driven investigative efforts not directly tied to the Deering Village VSW Archaeological Program included road improvements, material sourcing, fuel storage and building construction. In 2001 proposed material sites for gravel sources were investigated along the Imakchurik River (Williams 2001).

BIA completed an archaeological survey for road improvements through their IRR Program in 2002; no cultural resources were identified (Allison 2002). Also in 2002, proposed fuel system upgrades created a need for extensive review by archaeological personnel. NLUR provided monitoring activities for sediment testing at a new tank farm (Williams 2002a). A complete assessment for the bulk fuel upgrade was prepared by NLUR for the Alaska Industrial Development and Export Authority, which covered the entire fuel system (Bowers and Legge 2002). A side project was also completed by NLUR, which included a cultural resource survey completed for a landfill improvement project (Williams 2002b). During all four efforts, no significant features or cultural resources were discovered. An emergency excavation of eroding human remains was completed by Pete Bowers of NLUR late in 2002 on a *pro bono* basis (Bowers 2002b). The remains were precipitously falling from a cut bank due to erosion and were recovered for reinterment.

Archaeological monitoring was completed in 2004 by NLUR during the digging of trenches for new fuel lines in the village (Williams' 2004). Later the same year, NLUR completed survey for a proposed health clinic in Deering (Bowers 2004).

The BIA completed archaeological survey for Native allotment selections and conveyance in the Deering area in the summer of 2004. Two allotments under the name Betha Olanna were investigated; F17474A and F17474B (BIA 2004). Both tracts of land are located well beyond the current project area and are at least six miles from the Deering townsite.

In 2007, road improvements and material sourcing efforts were underway. An archaeological survey was again completed by NLUR, and road construction efforts were monitored (Bowers 2007). No archaeological resources were identified.

Shoreline erosion has always been a concern in Deering, and in 2007 the U.S. Army Corps of Engineers completed a baseline erosion assessment for the community of Deering. In the assessment, an archaeological sensitivity area was proposed along the western edge of town. The area was proposed in an attempt to slow the environmental factors, which were destroying buried cultural remains (USACE 2007) and covered nearly 500 feet of shoreline. A crude sea wall of riprap was placed at the location.

An archaeological survey and monitoring project was completed in 2009 by NLUR related to the replacement of a water main. No cultural resources were identified (Stern 2009).

Design work on a new multi-use facility for the community of Deering began in the summer of 2012. The property was partially surveyed by NLUR using ground-penetrating radar (GPR) to determine if, and possibly where, any buried anomalies may be located within the property boundaries (NLUR 2012). Two areas of interest were found and have yet to be investigated further since the project is currently in progress (Alaska OHA 2012).

Previously Documented Resources

The project area for the current investigation is located in sections 19, 20, and 30 of Township 8 North, Range 19 South, and Sections 10 and 11 of Township 7 North, Range 20 West of the Kateel River Meridian. The proposed APE is a one-mile corridor ranging between 16 to 40 feet in width, as well as two previously existing borrow sites. The corridor traverses from the Deering townsite to the southwest, crossing Smith Creek and continuing on towards the airport; borrow sites are located further south, along the Inmachuk River (Figure 8). The proposed APE and adjacent lands were reviewed to obtain an understanding of the cultural context of the area and to gauge the types and likelihood of encountering undocumented resources (Figure 9; Table 3).

Figure 8. Previously documented resources search area; red outline denotes extent.

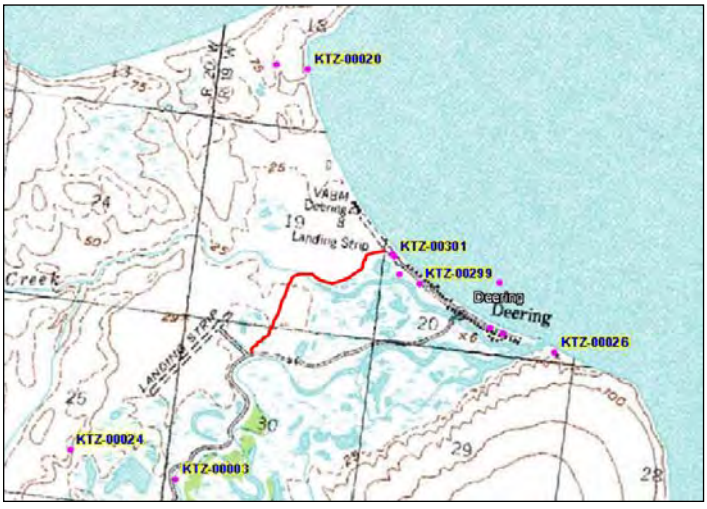


Figure 9. Map depicting AHRS search results for previously documented resources located within the Village of Deering boundaries; site KET-00034, a historic trail, is not mapped in the IBS GIS data layer as a line-feature. The proposed APE is depicted in red.

Table 3. Previously Documented Resources

AHRS NO.	SITE NAME	RESOURCE TYPE	CULTURAL AFFILIATION	NRHP STATUS
KTZ-00003	Inmachukmiu / Imnatchiagmiut	Prehistoric Village (destroyed)	Inupiat	Unevaluated
KTZ-00020	Kipalut/Kip-pel-lik	Prehistoric/Historic House Pits	Inupiat	Unevaluated
KTZ-00023	Deering Qualgi/Kazgi Site	Prehistoric Depressions, Burials, Middens	Ipiutak, Thule	Unevaluated
KTZ-00024	Imnatchiagmiut Burials	Historic Cemetery	Inupiat	Unevaluated
KTZ-00025	KTZ-00025	Historic Burial	Inupiat	Unevaluated
KTZ-00026	KTZ-00026	Historic Site	Inupiat	Unevaluated
KTZ-00034	Deering to Inmachuk Trail	Historic Wagon Road	EuroAmerican	Unevaluated
KTZ-00168	KTZ-00168	Historic Cellar	EuroAmerican	Unevaluated
KTZ-00169	Deering Archaeological District	Prehistoric/Historic District	Ipiutak, Thule	Determined Eligible 1998
KTZ-00170	Deering Historic District	Historic Distric	Ipiutak, Thule, EuroAmerican	Considered Eligible 1998*
KTZ-00299	Deering Ipuiutak House and Cache	Prehistoric House, Cache	Ipiutak, Thule	Unevaluated
KTZ-00300	Deering Western Thule House 1	Prehistoric Multi-Room House Pit	Ipiutak, Thule	Unevaluated
KTZ-00301	Deering Western Thule House 2	Prehistoric House Pit	Ipiutak, Thule	Unevaluated

**Under a 1998 Programmatic Agreement for the Deering Village Safe Water Program, the resource was treated as eligible for NRHP inclusion. However, it is noted in the IBS system that the resource has not received a formal determination of eligibility.*

Area of Potential Effects (APE)

Review of the OHA's IBS System indicates that no previously documented archaeological sites, historic buildings or structures are present in the proposed APE. Two districts are present within Deering that do not have defined boundaries. The Deering Archaeological District (KTZ-00169) and the Deering Historic District (KTZ-00170) both presumably cover the Deering townsite. The Deering Archaeological District is comprised of four archaeological sites (KTZ-00023, KTZ-00168, KTZ-00300, and KTZ-00301) containing an Ipiutak ceremonial house, a cold storage celllar, and two Western Thule sod houses. The Deering Historic District contains two resources, sites KTZ-00023 and KTZ-00169. Both resources have structural elements and occupation history dating to historic time periods. Both of the districts were determined eligible in 1998 by the U.S. Public Health Service and received Alaska SHPO concurrence (OHA 2013). No documentation to support the finding of either district, such as justified boundaries, can be found in the IBS system; however, both resources are part of the 1998 Deering Programmatic Agreement Regarding Actions Affecting Deering Archaeological District (KTZ-00169) and the Deering Historic District (KTZ-00170) (Deering Programmatic Agreement 1998). Given the high density of culturally significant materials buried in Deering, it is possible that both districts have undiscovered buried components. However, since no defined boundaries exist, it is not presently known whether portions of either district are present in the proposed APE, which begins within the townsite (Figure 10).

Figure 10. Aerial imagery from the IBS system depicting the location of AHRS sites in relation to the northern end of the proposed APE. The satellite imagery for Deering is of poor quality, while the Deering Archaeological District (KTZ-00169) and the Deering Historic District (KTZ-00170) do not have boundaries.

Greater Area/Project Vicinity

Beyond the limits of the proposed APE and within the city limits of Deering, there are a total of 13 resources recorded in the AHRS database, including the two aforementioned districts (OHA 2013). All 13 resources are considered archaeological, with both prehistoric and historic periods represented. Aside from the two districts, there is one burial, one cemetery, three houses, two sites with house pits, one house with cache, one cold storage cellar, one wagon road, and one destroyed village site. The two districts, KTZ-00169 and KTZ-00170, have been determined eligible for NRHP inclusion. The remaining 10 resources have not been formally evaluated for NRHP eligibility.

NRHP Resources

No NRHP listed resources are present within the boundaries of Deering or within the proposed APE. One resource, the Fairhaven Ditch (BEN-00069), is erroneously listed in the National Register as being located in the Deering area (NPS 2013); however, only the portion of the ditch located within the boundaries of the Bering Land Bridge National Monument is included in the NRHP listing. That portion of the ditch is located nearly 16 miles to the southwest of Deering. The historic ditch is the largest of more than 500 miles of ditch constructed on the Seward Peninsula to carry water to placer gold mines during the early 1900s.

Historic Trails

A review of the RS-2477 Historic Trails Data Layer in the IBS database was conducted to ascertain the presence of any historic transportation routes within or adjacent to the proposed APE. The review indicated that no documented RS2477 historic routes are located within or adjacent to the proposed APE (OHA 2013). The nearest trail is the Candle-Deering Trail (RST 1737), which is at the eastern edge of the Deering townsite and is approximately 0.75 miles east of the proposed APE. The route begins at Candle and runs northwest to the coast of the Kotzebue Sound, then west to Deering. The trail was used as a postal delivery route and for general transportation (Alaska DNR 2013).

The Alaska Heritage Resource Survey (AHRS) component of the IBS database revealed that a previously documented resource, the Deering to Inmachuk Trail, is located within city boundaries. The wagon road is 25 miles in length, with portions initially constructed in 1907 and entire road completion by 1911. The road is still used today to access the Utica Mine claim area and the Inmachuk River. No formal NRHP evaluation has been completed for the resource.

CULTURAL RESOURCES SURVEY RESULTS

Survey Coverage

The proposed road corridor was divided into three test areas that correspond to the engineering plans for the proposed road route, which were provided by the Native Village of Deering (Figure 11).

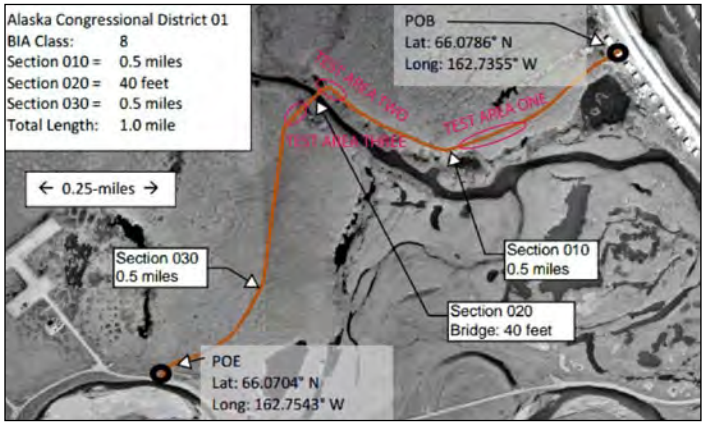


Figure 11. Engineering plans depicting proposed APE, Sections, and Test Areas 1 – 3.

The proposed road corridor was not strictly defined and ranged in width from 16 to 20 feet, prompting a wider survey coverage to allow for slight shifts in planning, should they occur, and prevent the need for additional survey of altered future routes. The river crossing portion of the survey area is 40 feet wide, so the field archaeologists expanded the survey area approaching the north and south banks of Smith Creek to 40 feet. The survey area was largely empty of cultural material. However, oil drums, Styrofoam associated with the construction of the Deering Road, driftwood, and modern trash was scattered across all three test areas. Waypoints were collected for the survey route, shovel probes, non-natural features, and gravel sources (Table 4).

Table 4. Field Work Waypoints

WAYPOINT NAME / #	DESCRIPTION	LATITUDE	LONGITUDE
DE01	Gravel pack/road remnant near city of Deering shed	66.07806	-162.73802
DE02	Shovel Probe 1	66.07800	-162.73811
DE03	Shovel Probe 2	66.07813	-162.373830
DE04	Gravel pack/road remnant	66.07783	-162.73874
DE05	Gravel pack/road remnant	66.07771	-162.73878
DE06	North end of ridge in section 010 .5 miles "Test area 1"	66.07626	-162.74133
DE07	Section 020 Bridge crossing	66.07681	-162.74841
DE08	City owned barn at north end of trail	66.07835	-162.73697
DE09	South Side of 020 Bridge crossing	66.07579	-162.74996
DE10	Raised trail remnant	66.07810	-162.73644
DE11	Raised trail remnant	66.07767	-162.73711
DE12	Raised trail remnant	66.07714	-162.73796
DE13	Raised trail remnant	66.07701	-162.73831
DE14	Raised trail remnant	66.07673	-162.73911
DE15	Raised trail remnant	66.07638	-162.74044
DE16	Raised trail end	66.07623	-162.74086
DE17	Shovel Test 1 at end of trail	66.07623	-162.74115
DE18	Shovel Test 2	66.07635	-162.74058
DE19	Shovel Test 3	66.07652	-162.73989
DE20	Shovel Probe 3	66.07679	-162.74826
DE21	Shovel Probe 4	66.07678	-162.74828
DE22	Shovel Probe 5	66.07680	-162.74844
DE23	Shovel Test 4	66.07050	-162.75274
DE24	Shovel Test 5	66.07071	-162.75173
DE25	Shovel Test 6	66.0769	-162.75037
DE26	Shovel Test 7	66.07065	-162.75040
DE27	Shovel Probe 6	66.07077	-162.75061
DE28	Possible gravel source 1	66.02814	-162.82539
DE29	Possible gravel source 2	66.01720	-162.84238

Test Area One

In Test Area One, the majority of the modern trash was concentrated in the northern portion of the survey area nearest the city garage. Local informants said that the garage stood on the site of the old city dump, and that the soil around the dump was severely contaminated (Figure 12). The presence of fifty to eighty 55-gallon oil drums and slicks of oil in the bog ponds supported the assertion that the area was contaminated from activities related to the dump.

Figure 12. City-owned garage with 55-gallon drums and dump debris. (©TNSDS)

Test Area One included the remnants of a trail (Figure 13). The Native Village of Deering indicated in their Request for Proposal (RFP) that the new road corridor followed a historic trail used by horse drawn wagons during early morning days. The literature review revealed a possible AHRS site corresponding to the reported historic trail – KTZ-00034 is the Inmachuk-Deering Wagon Trail. However, the remnant trail identified during the survey cannot be definitively identified as historic or as the mining trail specifically. The trail was only visible through slightly raised pads and disturbance vegetation and was discontinuous. The remnants were interrupted by swaths of marshes, ponds, and wet tundra grasses. Furthermore, there were no historic remains near or on the raised trail remnants. There was no mining debris, historic structures, or metal artifacts present on the surface, or in test units. Waypoints were taken at the high points of what may be the historic trail.

Figure 13. Raised trail remnant in center of image; view facing south. (©TNSDS)

Additionally confusing the question of the historic trail was the presence of another remnant gravel trail to the west of the city garage and just outside the proposed road corridor. The more westerly trail had similar vegetation and discontinuous raised pads separated by low, wet bogs and small ponds. Only the suggestion in the RFP indicated that the remnant trail mapped during survey was part of the KTZ-00034, and on the ground findings did not clearly identify the remnant trail as historic. Even if this portion represents the Deering side of the Inmachuk-Deering trail, it has been destroyed by stream and tidal activity to the point that its physical integrity has been compromised beyond recognition. The route of the trail was mapped (Figure 14) using GPS waypoints along its center-line (Table 5).

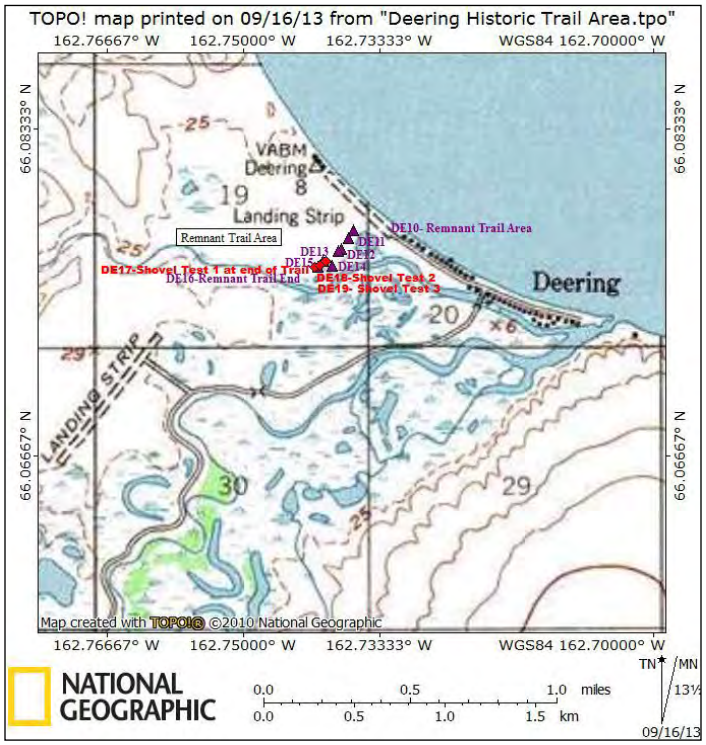


Figure 14. Mapped location of trail remnant waypoints , depicted as purple triangles

Table 5. Trail Remnants Waypoints

WAYPOINT NAME / #	DESCRIPTION	LATITUDE	LONGITUDE
DE10	Trail remnant	66.07810	-162.73644
DE11	Trail remnant	66.07767	-162.73711
DE12	Trail remnant	66.07714	-162.73796
DE13	Trail remnant	66.07701	-162.73831
DE14	Trail remnant	66.07673	-162.73911
DE15	Trail remnant	66.07638	-162.74044
DE16	Trail remnant end	66.07623	-162.74086
DE17	Shovel Test 1 at end of trail	66.07623	-162.74115
DE18	Shovel Test 2	66.07635	-162.74058
DE19	Shovel Test 3	66.07652	-162.73989

Test Area Two

Test Area Two was comprised of the low-lying areas on both the north and south banks of Smith Creek. The Native Village of Deering specified that the bridge crossing should be about 40 feet long. However, the area designated for the crossing was much longer than the estimated 40 feet. The terrain of Test Area Two was the wettest and lowest-lying portion of the survey area (Figure 15). It consisted mostly of wet tundra grasses, and subsurface tests rapidly filled with water. Modern trash, wooden debris, and driftwood concentrated around the area suggested they were displaced through tidal and flooding activity (Figure 16). No artifacts or historic structures were found in Test Area Two.

Figure 15. View facing south, overlooking the southern end of the proposed APE from the Smith Creek crossing in Test Area Two. (©TNSDS)

Figure 16. Modern debris observed in Test Area Two. (©TNSDS)

Test Area Three

Test Area Three extended from the south bank of Smith Creek in a southeasterly direction to the proposed intersection with the existing Deering Airport Road. This test area consisted of large, wet tracts of boggy tundra and small ponds, with only one area of testable land. Test Area Three was similarly scattered with debris and driftwood like Test Areas One and Two. Subsurface tests in Test Area Three were placed on benches paralleling the existing Deering Airport Road and the Inmachuk River (Figure 17).

Figure 17. Ridges paralleling the Inmachuk River, view facing southwest. (©TNSDS)

Gravel Sources

Gravel for the proposed evacuation road will be borrowed from two existing gravel sites. The first is stocked and the second is not. However, the unstocked gravel is easily

accessible with good road access, even during high tide. The first borrow site is at mile 6.5 of the Deering Airport Road and the second borrow site is at mile 8 (Figure 18).

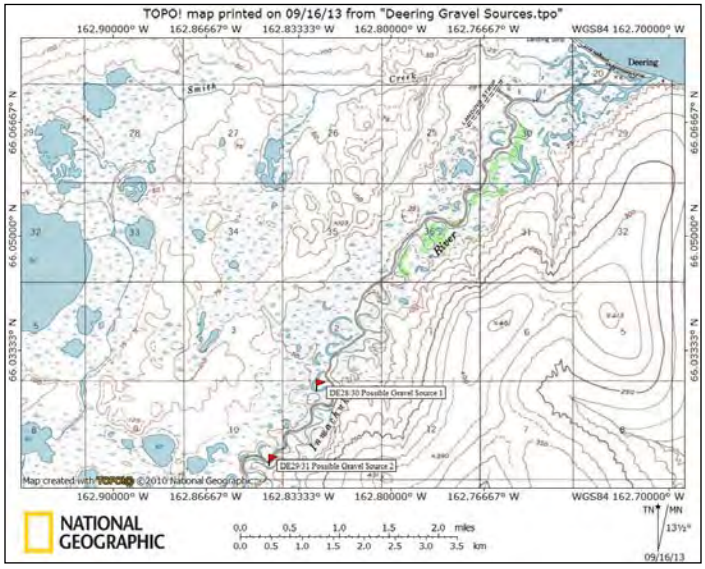


Figure 18. Map of proposed gravel sources for the project.

Results of Subsurface Testing and Soils Analysis

Test Area One

Two localities were tested in Test Area One (Figure 19). The first was the raised gravel pad nearest the city garage and a control probe to the west of the gravel pad. The second locality was a portion of the raised trail remnants. Tests were placed at the point where the alleged trail was no longer visible.

Table 6. Test Area One Shovel Probes and Shovel Tests

WAYPOINT NAME / #	DESCRIPTION	LATITUDE	LONGITUDE
DE02	Shovel Probe 1	66.07800	-162.73811
DE03	Shovel Probe 2	66.07813	-162.373830
DE17	Shovel Test 1 at end of trail	66.07623	-162.74115
DE18	Shovel Test 2	66.07635	-162.74058
DE19	Shovel Test 3	66.07652	-162.73989

Figure 19. Test Area One shovel probe and testing areas.

The first test locality with the two shovel probes revealed a sandy gravel fill to 32 cmbs. The control probe was typical of tundra soils with a rich organic layer, dense roots toward the top, which thinned at greater depths. The soils were well saturated and dense, and the lowest level was very wet (Table 6).

Test Area One shovel tests were placed on the high points of the remnant trail (Table 7). Shovel Test 1 was placed where the trail became indiscernible from the rest of the tundra. The thick levels of grey silt and clay indicate river flooding activity that washed away the trail (Figure 20). In Shovel Test 2, the grey silt did not form a full layer, but was mixed thinly from 41-50 cmbs. A level of light reddish brown silt became evident in Shovel Tests 2 and 3, and Shovel Test 3 had a thin layer of the grey river silt. These three shovel tests indicate an active stream with flooding episodes contributing to the destruction of the remnant trail. This is further supported by the lack of artifacts in or around the shovel tests and the distribution of modern debris around the overall test area. No artifacts were recovered or observed in Test Area One.

Table 7. Test Area One Shovel Tests

SHOVEL TEST	LOCATION: LAT/LONG	DIAMETER	DEPTH	MUNSELL	SOIL DESCRIPTION
1	WPT DE17 N: 66.07623 W: -162.74115	55 cm	0-52 cmbs	0-16 cmbs: 10YR 2/2 17-29 cmbs: 10YR 4/1 30-33 cmbs: 10YR 2/2 34-52 cmbs: 10YR 4/1	0-16: Sterile: Organic mat w/roots and wet texture, very dark brown 17-29: Sterile: Grey river silt wet clay 30-33: Sterile: Thin organic stain with sparse roots similar in color and texture to 0-16 34-52: Sterile: Grey river silt, wet clay.
2	WPT DE18 N: 66.07635 W: -162.74058	70 cm	0-53 cmbs	0-19 cmbs: 10YR 2/2 20-40 cmbs: 10YR 5/6 41-50 cmbs: 10YR 2/2 51-53 cmbs: 10YR 5/6	0-19 cmbs: Sterile: Thick organic mat with roots and wet texture, very dark brown 20-40 cmbs: Sterile Light reddish brown fine silt with fewer roots than organic level, but fine roots still present 41-50 cmbs: Sterile: Dense dark level with roots similar to 0-19 51-53 cmbs: Light reddish brown silt interspersed with permafrost
3	WPT DE19 N: 66.07652 W: -162.73989	60 cm	0-50 cmbs	0-10 cmbs-10YR 2/2 11-18 cmbs -10YR 3/4 19-26 cmbs- 10YR 2/2 27-29 cmbs: Grey sand 30-50 cmbs: 10YR 5/6 with 10 YR 5/2 mottling	0-10 cmbs: Sterile: Thick organic mat with roots and wet texture, very dark brown 11-18 cmbs:Sterile: Dark root staining just below organic level 19-26 cmbs: Sterile: Dense, dark level similar to 0-10 cmbs 27-29 cmbs: Very thin level of grey river sand 30-50 cmbs: Lighter brown silt mottled with thick staining similar to 11-18cmbs with a frozen floor

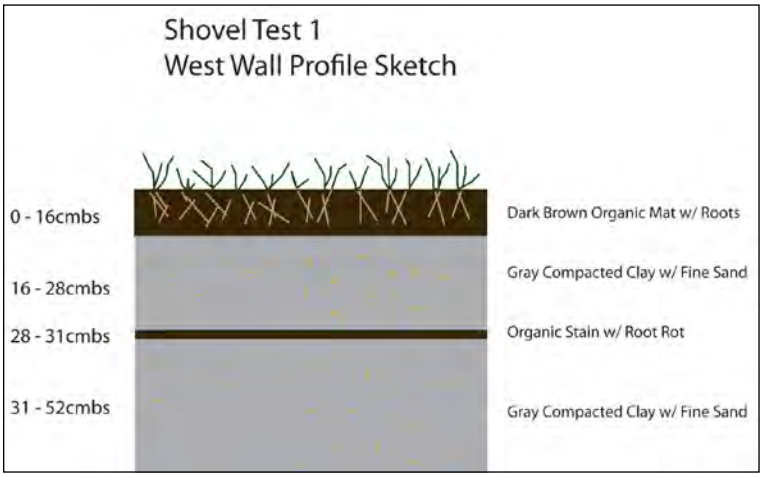


Figure 20. Test Area One, Shovel Test One wall profile. (©TNSDS)

Test Area Two

Subsurface testing in Test Area Two consisted of three shovel probes (Figure 21). The probes rapidly filled with water (Figure 22) and all soils were heavily saturated due to their close proximity to the river. No artifacts were observed or recovered in any of the shovel probes in Test Area Two (Table 8).

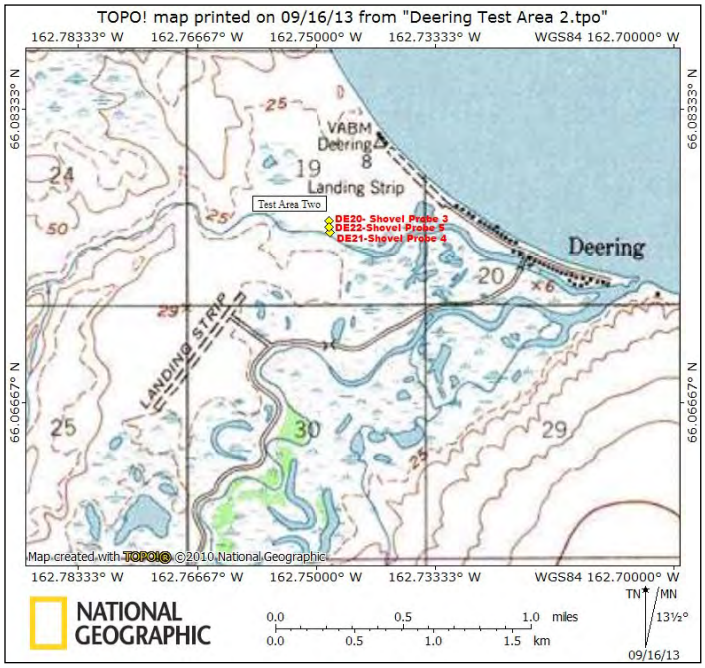


Figure 21. Test Area Two shovel probe locations.

Figure 22. Example of a flooded shovel probe in Test Area Two. (©TNSDS)

Table 8. Test Area Two Shovel Probes

WAYPOINT NAME / #	DESCRIPTION	LATITUDE	LONGITUDE
DE20	Shovel Probe 3	66.07679	-162.74826
DE21	Shovel Probe 4	66.07678	-162.74828
DE22	Shovel Probe 5	66.07680	-162.74844

Test Area Three

Shovel tests in Test Area Three were placed along a bench that runs north-south parallel to the existing Deering Road (Figure 23). The ridge represents the highest point in the test area and is parallel to the Inmachuk River. Shovel Test 4 and 5 were consistent with the rest of the shovel tests from Test Area One with the mix of dark, root-rich soils and lighter brown fine silts with fewer roots (Table 9). Shovel Tests 6 and 7 had inclusions of non-cultural charcoal, extremely thin mottling of permafrost and a consistent level of permafrost at the bottom of the units. The presence of charcoal was inconsistent with other shovel tests, so an additional shovel probe was placed to determine if the charcoal was a continuous horizon or if it was indicative of a cultural site (Table 10).

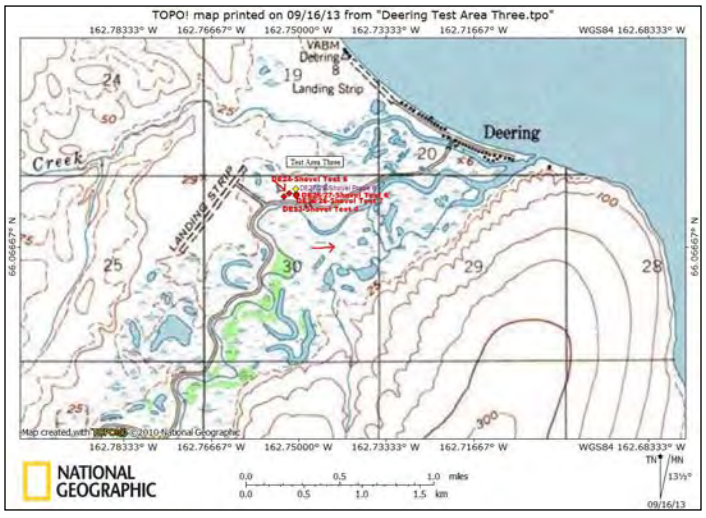


Figure 23. Test Area Three shovel probe and shovel test locations.

Charcoal mottling was present in Shovel Tests 6 (Figure 24) and 7, as well as Shovel Probe 7, in conjunction with permafrost layers. There are no large pieces of wood, and all organic remains in the charcoal area were medium sized roots.

Table 9. Test Area Three Shovel Tests

SHOVEL TEST	LOCATION: LAT/LONG	DIAMETER	DEPTH	MUNSELL	SOIL DESCRIPTION
4	WPT DE 23 N: 66.07050 W: 162.75274	50 cm	0-56cmbs	0-10 cmbs: 10 YR 2/2 11-18 cmbs: 10 YR 2/2 19-25 cmbs: 10 YR 5/6 26- 37 cmbs: 10 YR 2/2 38-50 cmbs: 10 YR 5/6	0-10 cmbs: Sterile: Organic mat w/roots and wet texture, very dark brown 11-18 cmbs: Sterile: Dark wet texture, very dark brown with fewer roots 19-25 cmbs: Sterile: Light reddish brown fine silt with roots and root damage present 26- 37 cmbs: Sterile: Dark brown with very few roots present 38-50 cmbs: Sterile: Light reddish brown fine silt with mottled permafrost
5	WPT DE 24 N: 66.07071 W:162.75173	53 cm	0-55 cmbs	0-10 cmbs: 10 YR 2/2 11-34 cmbs: 10 YR 5/6 w/ 2 cm 10 YR 2/2 inclusions 35-53 cmbs: 10 YR 2/2	0-10 cmbs: Sterile: Organic mat w/roots and wet texture, very dark brown 11-34 cmbs: Sterile: Light reddish brown fine silt with roots and 2 cm of dark brown mottling 35-53 cmbs: Sterile: Dark brown with sparse roots and permafrost
6	WPT DE 25 N: 66.0769 W: 162.75037	54 cm	0-63 cmbs	0-12 cmbs: 10 YR 2/2 13-52 cmbs: 10 YR 5/6 with 10 YR 2/1 inclusions ranging from 5 to 8 cm 53-63 cmbs: 10 YR 1/1	0-12 cmbs: Sterile: Organic mat w/roots and wet texture, very dark brown 13-53 cmbs: Sterile: Light reddish brown fine silt with roots and inclusions of dark, dry, non-cultural charcoal 53-63cmbs: Sterile: Dark, semi frozen soil combined with black charcoal just above a continuous permafrost layer with thick root chunks
7	WPT DE 26 N: 66.07065 W: 162. 75040	50 cmbs	0-63 cmbs	0-15 cmbs: 10 YR 2/2 16-34 cmbs: 10 YR 5/6 with an 8cm inclusion of grey river silt and 10YR 1/1 35-63 cmbs: 10 YR 1/1	0-15cmbs: Sterile: Organic root mat with roots and wet texture 16-34cmbs: Sterile: Light reddish brown fine silt with an 8 cm inclusion of grey river silt and large 5cm-15cm inclusions of dark dry non-cultural charcoal. 35-63 cmbs: Sterile: Dark, semi frozen soil combined with black charcoal just above a continuous permafrost root layer with thick root chunks

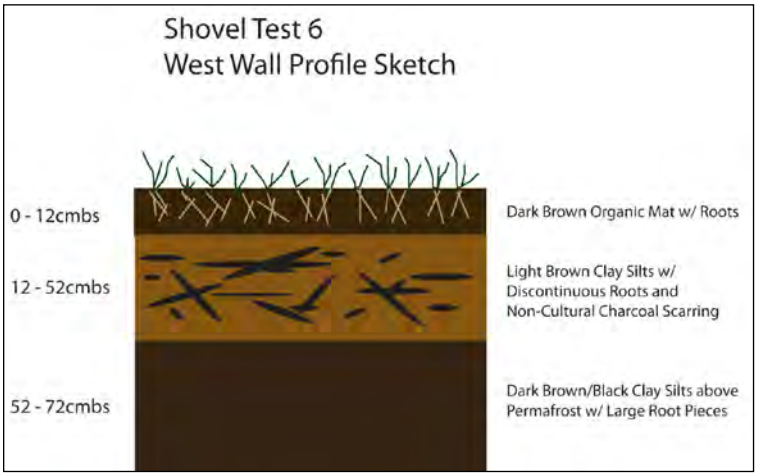


Figure 24. Shovel Test 6 wall profile. Note the non-cultural charcoal. (©TNSDS)

Table 10. Test Area Three Shovel Probe

WAYPOINT NAME / #	DESCRIPTION	LATITUDE	LONGITUDE
DE27	Shovel Probe 6: Negative	66.07077	-162.75061

SUMMARY OF CULTURAL RESOURCES SURVEY RESULTS

The cultural resources survey yielded no archaeological materials and no historic structures. The remnant trail located during the survey could not be definitively identified as the Deering portion of the Inmachuk-Deering Trail (KTZ-036). There were no artifacts in the shovel tests or cultural materials associated with the trail. Moreover, debris scattered around the total survey area was concentrated near the river and suggested tidal and flooding activity. The debris consisted of wooden pallets, Styrofoam, modern trash, and 50-gallon oil drums. The permafrost is mottled throughout the middle levels and continuously present throughout the lowest level of soils in shovel tests excavated on the remanent trail. Along with the saturated soils and silt clay deposits, these conditions further suggest an active tidal and flooding area, which contributed to the destruction of any possible archaeological material. Although the areas with highest probability were tested, nothing indicative of prehistoric and/or historic use and occupation was identified.

SECTION 106 RECOMMENDATIONS

The cultural resources investigation for the West Airport Road Project involved a literature and archival review followed by a pedestrian survey within the proposed APE, which consists of the road right of way and two gravel sources. Background research revealed a substantial presence of cultural resources within the village of Deering, including two districts. The point of beginning for the proposed road is located in the village of Deering; however, an on-site inspection revealed that this portion of the proposed APE is in an area of heavy disturbance and contaminated soils. Communication with local residents indicated that the area was at one time used as a dump. The West Airport Road Project will not result in effects to the archaeological district, site KTZ-00169. Beyond the village, the proposed APE traverses a swampy tundra landscape with high water content. The area is seasonally impacted by flooding, with evidence of abundant subsurface fluvial activity. This suggests that stable, intact soils are not present in many areas of the proposed APE. The two gravel sources have been previously used and were surveyed for cultural resources; none were identified. Although archaeological resources are present in the vicinity of the project area, no artifacts or cultural remains were uncovered in the proposed APE either through surface survey or subsurface investigations. As such, it is recommended that a finding of no historic properties adversely affected be issued for the West Airport Road Project pursuant to Section 106 of the NHPA and its implementing regulations (36CFR Part 800).

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APPENDICES

APPENDIX A. SHOVEL PROBE FORMS

trueNORTH
sustainable development solutions
www.truenorthsds.com

Project: West Airport Road
Date: 2-3 September 2013
Supervisor: RM

Shovel Probe Form

Shovel Probe #	Diameter	Depth	Artifacts		Soil Matrix Munsell	Comments/Initials
1	30 cmbs	32 cmbs	none	None	Sandy Gravel Fill 10YR 5/2	Sandy gravel fill just south of City owned shed-possibly associated with old city dump WPT: DE02 UTMS: N: 66.07806 W: -162.73802
2	30 cmbs	32 cmbs	none	None	Typical tundra soils with river silts present—overall Munsell color is very dark brown 10yr 2/2. Wet at the bottom	Typical tundra landscape "control" probe. WPT: DE03 UTMS: N: 66.70800 W: -162.73811
3	30 cmbs	45 cmbs	none	None	Wet, floods while digging Dark brown 10 YR 2/2 with 8cm inclusion of 10 YR 4/1 clay	North side of bridge crossing. WPT: DE20 UTMS: N: 66.07679 W: -162.74826
4	30 cmbs	45 cmbs	none	None	Red brown with dense roots 10 YR 5/6 , 11cm of rooty 10 YR 2/2 4 cm irregular inclusion of red roots 10YR 4/1 clay layer mottled with 10YR 2/2 rooty soil to bottom. Also extremely wet	North side of bridge crossing WPT: DE 21 UTMS: N 66.07678 W: -162.74828
5	30 cmbs	40 cmbs	none	None	10YR 4/1 clay beneath brief 10 YR 2/2 root mat with reddish brown mottling. Very wet.	North side of bridge crossing WPT DE 22 UTMS: N: 66.07680 W: -162.74844
6	30 cmbs	60 cmbs	none	None	Very dark brown 10YR 2/2 with non-cultural charcoal mottling about 1.5-3cm with permafrost at the bottom.	Test area three, on terraces near existing road. WPT: DE27 UTMS: N 66. 07077 W -162.75061

APPENDIX B. SHOVEL TEST FORMS

Phase 1 Archaeological Investigation	trueNORTH sustainable development solutions www.truenorthsds.com	Waypoint No. DE 17
Shovel Test Record	**LAT/LONG:**	N 66.07623 W -162.74115

Project Name: Deering IRR		Excavated By:	RM/AH
Field Number: NA		**Date: 9/2/2013**	
Site Number: NA		**Depth:**	55 cmbs
Shovel Test Number:	1	**Diameter:**	50cm x 50cm
Describe Position on Landscape: **At Southern end of remnant trail**		**Screen Size**:	1/8”
Describe Position in Relation to Surface Scatter: NA		**Surface Visibility:** **Ground Coverage:**	100% NA

Level:	Depth (cm)	Cultural Materials:	Features:	Soil Description:		
				Munsell Color	**Soil Texture/ pH**	**Soil Sample Collected**
O Horizon	0-16	None	None	10YR2-2	Thick wet, humus	No
A/B Horizon	17-29	None	None	10YR4-1	Fine silt clay	No
E Horizon	30-33	None	None	10YR2-2	Wet, thick	No
C Horizon	34-52	None	None	10YR4-1	Fine silt clay	No

Comments: Pic # 0038

Phase 1 Archaeological Investigation	trueNORTH sustainable development solutions www.truenorthsds.com	Waypoint No. DE 18

Shovel Test Record

LAT/LONG: N 66.07635 / W -162.74058

Project Name: Deering IRR		Excavated By:	RM/AH
Field Number: NA		**Date: 9/2/2013**	
Site Number: NA		**Depth:**	53 cmbs
Shovel Test Number:	2	**Diameter:**	70cm x 70cm
Describe Position on Landscape: **On raised remnant trail**		**Screen Size**:	1/8”
Describe Position in Relation to Surface Scatter: NA		**Surface Visibility:** **Ground Coverage:**	100% NA

Level:	Depth (cm)	Cultural Materials:	Features:	Soil Description:		
				Munsell Color	**Soil Texture/ pH**	**Soil Sample Collected**
O Horizon	0-19	None	None	10YR2-2	Thick wet, humus	No
A/B Horizon	20-40	None	None	10YR5-6	Fine silt	No
E Horizon	41-50	None	None	10YR2-2	Wet, thick humus	No
C Horizon	51-53	None	None	10YR5-6	Fine silt with permafrost	No

Comments: Pic # 0039

Phase 1 Archaeological Investigation	trueNORTH sustainable development solutions www.truenorthsds.com	Waypoint No. DE 19

Shovel Test Record

LAT/LONG: N 66.07635 W -162.73989

Project Name: Deering IRR		Excavated By:	RM/AH
Field Number: NA		**Date: 9/2/2013**	
Site Number: NA		**Depth:**	50 cmbs
Shovel Test Number:	3	**Diameter:**	60cm x 60cm
Describe Position on Landscape: **On raised remnant trail**		**Screen Size**:	1/8”
Describe Position in Relation to Surface Scatter: NA		**Surface Visibility:** **Ground Coverage:**	100% NA

Level:	Depth (cm)	Cultural Materials:	Features:	Soil Description:		
				Munsell Color	**Soil Texture/ pH**	**Soil Sample Collected**
O Horizon	0-10	None	None	10YR2-2	Thick wet, humus	No
A/B Horizon	11-18	None	None	10YR3-4	Fine silt	No
B Horizon	19-26	None	None	10YR2-2	Wet, thick humus	No
E Horizon	27-29	None	None	10YR4-1	Grey sand	No
C Horizon	30-50	None	None	10YR5-6 10YR 2-2	Organic stain and fine silt mottled	No

Comments: Pic # 0040

Phase 1 Archaeological Investigation	trueNORTH sustainable development solutions www.truenorthsds.com	Waypoint No. DE 23

Shovel Test Record

LAT/LONG: N 66.07050 W -162.75274

Project Name: Deering IRR		Excavated By:	RM/AH
Field Number: NA		**Date: 9/2/2013**	
Site Number: NA		**Depth:**	56 cmbs
Shovel Test Number:	4	**Diameter:**	50cm x 50cm
Describe Position on Landscape: **On low lying ridge facing river**		**Screen Size**:	1/8”
Describe Position in Relation to Surface Scatter: NA		**Surface Visibility:** **Ground Coverage:**	100% NA

Level:	Depth (cm)	Cultural Materials:	Features:	Soil Description:		
				Munsell Color	**Soil Texture/ pH**	**Soil Sample Collected**
O Horizon	0-18	None	None	10YR2-2	Thick wet, humus	No
A/B Horizon	19-25	None	None	10YR5-6	Fine silt	No
E Horizon	26-37	None	None	10YR2-2	Wet, thick humus	No
C Horizon		None	None	10YR5-6	Fine silt with permafrost	No

Comments: Pic # 0046

Phase 1 Archaeological Investigation	trueNORTH sustainable development solutions www.truenorthsds.com	Waypoint No. DE 24

Shovel Test Record

LAT/LONG: N 66.07071 / W -162.75173

Project Name: Deering IRR		Excavated By:	RM/AH
Field Number: NA		**Date: 9/2/2013**	
Site Number: NA		**Depth:**	53 cmbs
Shovel Test Number:	5	**Diameter:**	50cm x 50cm
Describe Position on Landscape: **On low lying ridge facing river**		**Screen Size**:	1/8”
Describe Position in Relation to Surface Scatter: NA		**Surface Visibility:** **Ground Coverage:**	100% NA

Level:	Depth (cm)	Cultural Materials:	Features:	Soil Description:		
				Munsell Color	**Soil Texture/ pH**	**Soil Sample Collected**
O Horizon	0-10	None	None	10YR2-2	Thick wet, humus	No
A/B Horizon	11-34	None	None	10YR5-6	Fine silt	No
E Horizon	35-53	None	None	10YR2-2	Wet, thick humus with permafrost	No

Comments: Pic # 0047

Phase 1 Archaeological Investigation	trueNORTH sustainable development solutions www.truenorthsds.com	Waypoint No. DE 25

Shovel Test Record

LAT/LONG: N 66.0769 W -162.75037

Project Name: Deering IRR		Excavated By:	RM/AH
Field Number: NA		**Date: 9/2/2013**	
Site Number: NA		**Depth:**	63 cmbs
Shovel Test Number:	6	**Diameter:**	54cm x 54cm
Describe Position on Landscape: **On low lying ridge facing river**		**Screen Size**:	1/8”
Describe Position in Relation to Surface Scatter: NA		**Surface Visibility:** **Ground Coverage:**	100% NA

Level:	Depth (cm)	Cultural Materials:	Features:	Soil Description:		
				Munsell Color	**Soil Texture/ pH**	**Soil Sample Collected**
O Horizon	0-12	None	None	10YR2-2	Thick wet, humus	No
A/B Horizon	13-53	None	None	10YR5-6	Fine silt	No
E Horizon	53-63	None	None	10YR1-1	Partially frozen with organic material and non-cultural charcoal over permafrost	No

Comments: Pic # 0048

Phase 1 Archaeological Investigation	trueNORTH sustainable development solutions www.truenorthsds.com	Waypoint No. DE 25

Shovel Test Record

LAT/LONG: N 66.07065 W -162.75040

Project Name: Deering IRR		Excavated By:	RM/AH
Field Number: NA		**Date: 9/2/2013**	
Site Number: NA		**Depth:**	63 cmbs
Shovel Test Number:	7	**Diameter:**	50cm x 50cm
Describe Position on Landscape: **On low lying ridge facing river**		**Screen Size**:	1/8”
Describe Position in Relation to Surface Scatter: NA		**Surface Visibility:** **Ground Coverage:**	100% NA

Level:	Depth (cm)	Cultural Materials:	Features:	Soil Description:		
				Munsell Color	Soil Texture/ pH	Soil Sample Collected
O Horizon	0-15	None	None	10YR2-2	Thick wet, humus	No
A/B Horizon	16-34	None	None	10YR5-6	Fine silt	No
E Horizon	35-63	None	None	10YR1-1	Partially frozen with organic material and non-cultural charcoal over permafrost	No

Comments: Pic # 0049