

## DEPARTMENT OF THE ARMY PERMIT

Permittee: Exxon Mobil Corporation and PTE Pipeline LLC

Permit No.: POA-2001-1082-M1, Beaufort Sea

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:

To discharge dredged and fill materials into 267.1 acres of waters of the U.S. and to place structures in navigable waters of the U.S. to construct infrastructure for the Point Thomson Project initial production system and Point Thomson Export Pipeline to produce and transport liquid hydrocarbons from the Thomson Sand Reservoir to the Trans-Alaska Pipeline system (TAPS). To retain existing gravel pads at the Point Thomson Unit 3 and the Alaska State C-1 pads.

The placement of structures in navigable waters of the U.S. for eight mooring dolphins and a barge service pier.

To discharge dredged and/or fill material for the construction of gravel pads; infield access roads; an airstrip; a gravel mine and associated gravel stockpile; to place vertical support members (VSM) for in-field pipelines and an export pipeline; a dredged material disposal site; two wildlife corridor fill sites; screeding-type dredging for the maintenance of barge basins; an emergency boat launch; and trenching for electrical lines.

Table 1: Permitted Structures in Section 10 Waters of the U.S.

| Component                   | Footprint (acres) | Type of Material |
|-----------------------------|-------------------|------------------|
| Service Pier Piles (6)      | <0.1              | Steel            |
| Mooring Dolphins (8)        | <0.1              | Steel            |
| Temporary Ramp Supports (6) | <0.1              | Steel            |

**Table 2: Permitted Discharge Material Type, Volume, and Acreages**

| Component  | Approximate Initial Placement Volume (cy)                 | New Fill (acres) | Type of Material Discharged        |
|--|---|------------------|------------------------------------|
| <b>Fill in Section 404 Waters of the U.S.</b>                |   |                  |                                    |
| Central Pad <sup>a</sup>                                     | 576,000   | 42.4             | Pit run gravel fill                |
| Central Pad Access Road (2.7 miles)                          | 152,000   | 19.4             | Pit run gravel fill                |
| East Pad   | 294,000   | 20.9             | Pit run gravel fill                |
| East Pad Access Road (2.3 miles)                             | 137,000   | 17.3             | Pit run gravel fill                |
| West Pad   | 238,000   | 20.6             | Pit run gravel fill                |
| West Pad Access Road (4.4 miles)                             | 275,000   | 33.4             | Pit run gravel fill                |
| Alaska State C-1 Pad <sup>b</sup>                            | 17,000  | 0.0              | Pit run gravel fill                |
| Alaska State C-1 Pad Access Road (0.03 miles)                | 2,200   | 0.4              | Pit run gravel fill                |
| Emergency Boat Launch (onshore)                              | 980   | 0.05             | Pit run gravel fill/concrete       |
| Wildlife Corridor (onshore)                                  | 480   | 0.25             | Dredged material/gravel            |
| Dredged Material Disposal                                    | 3,900   | 1.4              | Dredged material                   |
| Water Source Pad   | 7,100   | 0.7              | Pit run gravel fill                |
| Water Source Pad Access Road (0.03 miles)                    | 1,100   | 0.2              | Pit run gravel fill                |
| Badami Auxiliary Pad   | 2,000   | 0.25             | Pit run gravel fill                |
| Badami Pipeline Crossing Pad                                 | 1,000   | 0.16             | Pit run gravel fill                |
| Airstrip and Helipad   | 414,000   | 42.3             | Pit run gravel fill                |
| Airstrip and Helipad Access Road (0.24 miles)                | 12,000  | 1.7              | Pit run gravel fill                |
| Navaid Pads  | 15,000  | 1.6              | Pit run gravel fill                |
| Navaid Pad Access Roads (0.22 miles)                         | 9,000   | 1.5              | Pit run gravel fill                |
| Electrical Trenching   | 2,670   | 0.41             | Organic/inorganic                  |
| Gathering and Export Pipeline VSMS                           | 3,500   | 0.13             | Sand slurry/steel                  |
| Culvert Scour Protection                                     | -   | 0.09             | Concrete                           |
| Gravel Mine  | 2,296,000 gravel extracted<br>782,000 overburden replaced | 48.9             | Pit run gravel fill/<br>overburden |
| Gravel Mine Access Road (0.14 miles)                         | 8,600   | 1.2              | Pit run gravel fill                |
| Gravel Stockpile   | 135,000   | 5.2              | Pit run gravel fill                |
| Gravel Stockpile Access Road (0.04 miles)                    | 1,700   | 0.65             | Pit run gravel fill                |
| <b>Fill in Section 10 and Section 404 Waters of the U.S.</b> |   |                  |                                    |
| Emergency Boat Launch  | 80  | 0.16             | Pit run gravel fill/concrete       |
| Wildlife Corridor  | 1,580   | 0.35             | Dredged material/gravel            |
| Dredging and Screeding Area                                  | 3,900 CY removed  | 5.5              | Dredged material                   |
| <b>Total</b>   | <b>3,112,890 <sup>c</sup></b>                             | <b>267.10</b>    | <b>-</b>                           |

<sup>a</sup> Central Pad footprint would also include the existing 12.9 acre PTU-3 pad for total acreage of 55.3 acres

<sup>b</sup> Alaska State C-1 Pad would also include the existing 4.1 acre Alaska State C-1 pad

<sup>c</sup> Does not include extracted gravel or removed dredged material

All work will be performed in accordance with the attached plans, sheets 1 - 84, dated October, 2012.

**Project Location:**

Alaska's Beaufort Sea coastline, North Slope Borough (NSB), approximately 60 miles east of Prudhoe Bay and 60 miles west of Kaktovik, Alaska. The locations of individual project components of the project are as follows:

- The Central Pad located at approximate Latitude 70.171° N., Longitude 146.257° W. in Sec. 34, T. 10 N., R. 23 E. and Sec. 3, T. 9 N., R. 23 E., Umiat Meridian.
- The East Pad located at approximate Latitude 70.153° N., Longitude 146.164° W., in Sec. 6, T. 9 N., R. 24 E. and Sec. 7, T. 9 N., R. 24 E. and Sec. 12, T. 9 N., R. 23 E., Umiat Meridian.
- The West Pad located at approximate Latitude 70.178° N., Longitude 146.444° W., in Sec. 36, T. 10 N., R. 22 E., Umiat Meridian.
- The gravel mine located at approximate Latitude 70.146° N. and Longitude 146.254° W., in Sec. 10, T. 9 N., R. 23 E. and Sec. 11, T. 9 N., R. 23 E., Umiat Meridian.
- An equipment and supply staging area located at the existing Alaska State C-1 Pad site located at approximate Latitude 70.139° N. and Longitude 146.244° W., in Sec. 14, T. 9 N., R. 23 E., Umiat Meridian.
- The airstrip located between approximate Latitude 70.139° N., Longitude 146.269° W., in Sec. 15, T. 9 N., R. 23 E., Umiat Meridian and Latitude 70.133° N., and Longitude 146.312° W., in Sec. 16, T. 9 N., R. 23 E., Umiat Meridian.
- A auxiliary pad supporting the junction of the Point Thomson Export Pipeline with the Badami Pipeline located at the existing Badami Site located at approximate Latitude 70.150° N., Longitude 147.100° W., in Sec. 8, T. 9 N., R. 20 E., Umiat Meridian.
- A pipeline crossing pad located at approximate Latitude 70.148° N., Longitude 147.095° W., in Sec. 9, T. 9 N., R. 20 E., Umiat Meridian.
- A water access pad located at approximate Latitude 70.138° N., Longitude 146.252° W., in Sec. 15, T. 9 N., R. 23 E., Umiat Meridian.
- A dredging and screeding area located at approximate Latitude 70.175° N., Longitude 146.257° W., in Sec. 34, T. 10 N., R. 23 E., Umiat Meridian.
- A dredge material disposal site located at approximate Latitude 70.177° N., Longitude 146.289° W., in Sec. 34, T. 10 N., R. 23 E., Umiat Meridian.
- Two dredge material and gravel fill sites to accommodate wildlife movement at approximate Latitude 70.170° N., Longitude 146.250° W., in Sec. 2, T. 9 N., R. 23 E., Umiat Meridian and Latitude 70.173° N., Longitude 146.252° W., in Sec. 34, T. 10 N., R. 23 E., Umiat Meridian.
- An export pipeline extending west 22 miles from the Central Pad (Latitude 70.171° N., Longitude 146.257° W. in Sec. 34, T. 10 N., R. 23 E. and Sec. 3, T. 9 N., R. 23 E., Umiat Meridian) to connect with an existing common carrier pipeline to Badami (Latitude 70.150° N., Longitude 147.100° W., in Sec. 8, T. 9 N., R. 20 E., Umiat Meridian) as shown on Figures 31 through 33 of the attached DA permit figures dated October 2012.
- Infield gathering pipelines connected between the East (Latitude 70.171° N., Longitude 146.257° W. in Sec. 34, T. 10 N., R. 23 E. and Sec. 3, T. 9 N., R. 23 E., Umiat Meridian), Central (Latitude 70.171° N., Longitude 146.257° W. in Sec. 34, T. 10 N., R. 23 E. and Sec. 3, T. 9 N., R. 23 E., Umiat Meridian) and West Pads (Latitude 70.178° N., Longitude 146.446° W., in Sec. 36, T. 10 N., R. 22 E., Umiat Meridian) along the routes shown in Figures 33 and 34 of the attached DA permit figures dated October 2012.

- Infield gravel roads between the pads (locations listed above), gravel mine (Latitude 70.146° N. and Longitude 146.254° W., in Sec. 10, T. 9 N., R. 23 E. and Sec. 11, T. 9 N., R. 23 E., Umiat Meridian), and airstrip (Latitude 70.139° N., Longitude 146.269° W., in Sec. 15, T. 9 N., R. 23 E. and Sec. 16, T. 9 N., R. 23 E., Umiat Meridian) as shown on Figures 21 of the attached DA permit figures dated October 2012.
- Eight mooring dolphins placed in the following approximate locations in Sec. 34, T. 10 N., R. 23 E., Umiat Meridian:
  - Latitude 70.174° N., Longitude 146.255° W.
  - Latitude 70.174° N., Longitude 146.256° W.
  - Latitude 70.175° N., Longitude 146.257° W.
  - Latitude 70.175° N., Longitude 146.258° W.
  - Latitude 70.175° N., Longitude 146.258° W.
  - Latitude 70.175° N., Longitude 146.255° W.
  - Latitude 70.176° N., Longitude 146.254° W.
  - Latitude 70.177° N., Longitude 146.253° W.
- Service pier with six service pier piles located at approximate Latitude 70.175° N., Longitude 146.257° W., in Sec. 34, T. 10 N., R. 23 E., Umiat Meridian.

**Permit Conditions:**

**General Conditions:**

1. The time limit for completing the work authorized ends on October 31, 2017. 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:**

#### ***Pre-construction Meeting***

1. The permittee shall convene a one-time pre-construction meeting with their contractor representatives responsible for work authorized by the Department of the Army permit, a minimum of 15 days prior to commencement of construction in waters of the U.S. The permittee shall notify the Corps 15 days prior to the meeting of the meeting date and time. The permittee shall provide copies of the Department of the Army permit, figures, and other documents incorporated into the permit, to all contractor representatives.

#### ***Navigation***

2. The permittee's use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the U.S.
3. The permittee must install and maintain, at the permittee's expense, any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, on authorized facilities. The U.S. Coast Guard may be reached at the following address and telephone number: Commander (oan), 17th Coast Guard District, P.O. Box 25517, Juneau, Alaska 99802, (907) 463-2272.
4. The permittee understands and agrees that, if future operations by the U.S. require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work will cause unreasonable obstruction to the free navigation of the navigable waters, the permittee shall be required, upon due notice from the Corps, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the U.S. No claim will be made against the U.S. on account of any such removal or alteration.
5. Driving of all offshore piles shall occur during winter, when sea ice is well established in the work area to minimize disturbance to marine mammals, fish, essential fish habitat, and invertebrates. After construction, all temporary ramp supports used in the construction of the sealift facility shall be removed.
6. Construction dredging of the service pier and sealift barge basins shall be done through the ice during the winter.
7. Maintenance dredging of the constructed navigation basins for the sea lift and service barge berths is authorized for 5 years from the date of this permit issuance. The permittee shall advise the Corps in writing, at least two weeks before starting maintenance dredging activities under the authority of this permit. Maintenance dredging (screeding) necessary during the open water season shall be conducted using a suspended silt curtain on floats that reaches to the sea floor and completely surrounds the dredged area. The curtains shall be installed prior to any maintenance dredging (screeding) work in the waters of the Beaufort Sea. The suspended silt curtain shall remain in place until all suspended sediments are settled and the water column returned to pre-dredged clarity. No dredged material shall be allowed to measurably accumulate from the screeding (dredging) process whereby substrates accumulate along the basin margins or elsewhere to prevent navigational hazards and/or environmental impacts.
8. Fill material used for the wildlife corridor shall be pit run gravel from the Point Thomson mine site or, where practicable, dredged material. The wildlife corridor fill shall be protected using standard erosion protection materials such as concrete revetment or armor rock.

#### ***Compensatory Mitigation***

9. As compensatory mitigation, the permittee shall make payment of an in-lieu fee (ILF) to The Conservation Fund (TCF), a Corps approved ILF Sponsor, to compensate for unavoidable direct and indirect impacts to aquatic resources. A ratio of 3 debits per 1 acre (3:1) is required for loss of 267.1 acres of waters of the U.S. A ratio of 3 debits per 1 acre prorated by 10 percent (0.3:1) is required

for the indirect impacts to 1,013.6 acres of waters of the U.S. The total number of credits required to offset the debits of this project is 1,105.4. The fee shall be paid to TCF and proof of payment shall be provided to the Corps prior to commencement of any discharges or work authorized by this permit.

While The Conservation Fund will be responsible for implementation of mitigation, the permittee and the Corps will coordinate with The Conservation Fund to ensure that best efforts are made to utilize coastal land within the North Slope Borough for preservation and include establishment of a conservation easement. The Conservation Fund can hold the permittee's in-lieu fee payment for a maximum of one year to obtain the coastal property and secure the conservation easement on that property. After one year has passed from The Conservation Fund's receipt of the permittee's in-lieu fee payment, The Conservation Fund may use the funds for purchase of another property in the Arctic coastal plain of the North Slope Borough.

### **Fill Placement**

10. All fill material authorized under this permit must consist of suitable material free from toxic pollutants in toxic amounts.
11. Transportation vehicles and equipment shall not be operated off of authorized fill placement areas, except as authorized by state and local permits to operate on winter ice pads/roads or for tundra travel.
12. With the exception of the gravel roads which shall be staked at centerline, all authorized fill placement area boundaries shall be clearly delineated (staked, flagged, or otherwise) prior to the placement of fill.
13. Surface water flow throughout the project area shall be monitored for impoundments caused by roads, pads, or other gravel fill and additional culverts shall be installed to facilitate spring break-up sheet flow throughout the authorized project area. Natural drainage patterns shall be maintained using appropriate culverts to prevent ponding or drying outside the permitted authorized fill project boundaries. Evidence of ponding in wetlands areas, dewatering of wetlands, erosion, or stream channel changes shall be indicators of wetland areas requiring corrective action.
14. All discharges of fill material into waters of the U.S., including wetlands, shall be completed in the winter. An exception to this condition is for installation of fish passage culverts as authorized by Alaska Department of Fish and Game. All fill slopes according to project design shall be stabilized during summer to prevent erosion into streams and wetlands. Active sloughing of fill material or on-going erosion, sedimentation, and erosion scars (on slopes or around culverts) shall be indicators that stabilization is not adequate. Where specified in the attached figures, sideslopes to be vegetated shall be seeded with seed mixes containing only plant species native (i.e., indigenous) to the project area.
15. Dust reduction and snow removal plans shall be developed and submitted to the Corps for approval within 60 days of permit issuance. Any plan to be provided under these conditions shall be considered approved in 30 days after submission by the permittee unless the Corps provides written notice to the contrary.
  - a. Dust reduction – the plan for dust suppression on all gravel surfaces shall be described and criteria established for implementation. Visible dust accumulation on vegetation shall be a clear indicator that further dust suppression is needed.
  - b. Snow removal – the plan shall identify locations where snow will be pushed off of permitted fill surfaces and disclose how the gravel content in the snow shall be minimized. The snow removal plan shall also describe how any fill material that is inadvertently discharged into areas beyond the project footprint shall be removed the following spring.

## **Utilities**

16. Buried utility installation in the tundra wetlands shall be conducted in winter. The permittee shall use trenching, cable placement, and backfilling methods that minimize snow in the trench. The permittee shall remove snow from the trench before backfilling to minimize settling impacts and the subsequent effort needed for rehabilitation. The material removed from the trench shall be used as backfill. All sand and gravel backfill material shall be reduced in size to clumps no greater than 3 inches in diameter for backfill. The permittee shall mound excess excavated material over the trench following backfilling to ensure that the trench is filled to ground level after settlement.

Hand tools shall be used to move excess excavated materials remaining on the tundra wetlands back into the trench during the first spring following trenching completion. Mechanized equipment shall not be used to perform final clean up on adjacent tundra wetland surfaces. Remedial work shall be completed, as needed, to restore pre-project ground contours, to prevent surface water from flowing along the surface of the backfilled trench. Revegetation shall be completed using transplanted sprigs, cultivars, or seed either gathered onsite or otherwise obtained that match the native plant species that occur in the habitat adjacent to the trenched area. Revegetation work shall be completed by the end of the first growing season following the utility installation.

17. Placement of pipeline VSMS in ponds and in active low flow stream channels (defined by July/August flows) shall not occur except where necessary at East Badami Creek, L Stream, and E Stream.

## **Gravel Mine**

18. In the construction and rehabilitation of the gravel mine site, the following special conditions shall apply:

- a. The permittee shall provide the Corps a final gravel mining and rehabilitation plan. The mining and rehabilitation plan must be approved by the Corps prior to the permittee commencing construction of the gravel mine. The final gravel mine plan shall include the following details:
  - i. Vegetated areas along the north, west, and south sides of the mine shall be constructed with the placement of at least 6 inches of organic overburden over inorganic overburden at a slope of 3H:1V to a depth of 3 feet below the target water level at full capacity. Materials placed shall be roughly placed, thereby creating an irregular shoreline, and only roughly graded by equipment as needed to reach target slopes.
  - ii. A littoral shelf shall be constructed on the east side of the reservoir using inorganic overburden, to the extent available from the mine site, top dressed with no less than 6 inches of organic overburden. The littoral shelf shall have a slope of 5H:1V or flatter and the side slope from the edge of the littoral shelf to the bottom of the pit shall be 3H:1V. A berm shall be constructed along the western edge of the littoral shelf to facilitate water retention on the shelf. The berm shall be 3 to 4 feet in height greater than the target bottom elevation (this berm may be up to 1-foot below the target water elevation). After initial placement, further maintenance of the berm will not be required. The material for the berm shall be gravel or gravel with a 6-inch cover of organic overburden. Once the target water level has been reached in all areas of the mine site, then the berm shall be breached or otherwise modified to allow for a static water level between the deep water portion of the reservoir and fish passage into the deep water habitat.
  - iii. Landforms in the larger littoral area on the east side of the mine site shall include a general depth of no more than 3 feet below the surface of the adjacent tundra; five or more appropriately sized, irregularly shaped islands, designed to emerge above the final water level, shall have slopes no steeper than 3H:1V. The west-facing slope from the larger littoral area to the deeper basin shall be no steeper than 3H:1V.

- iv. Terrestrial areas shall be vegetated with a mix of *Poa glauca* (40 percent), *Arctagrostis latifolia* (40 percent), and *Poa alpina* (20 percent). *Deschampsia caespitosa* will be considered as an alternate to *P. alpina* based on availability. The seed mix shall be applied at a rate of 20 lbs/acre on slopes and islands, and 5-10 lbs/acre on relatively level surfaces. Fertilizer in terrestrial areas shall be applied at an appropriate rate based on site specific analysis conducted after mining is completed. In wet and/or shallowly flooded areas, transplanting (sprigging) of native (indigenous) plant species from the project area (i.e., the Arctic coastal plain) shall be used. As deemed necessary, a 0-45-0 NPK slow release tablet may be applied with aquatic sprigs. Progress reports shall describe seeding and fertilizing activities as appropriate.
  - v. By the tenth year following the application of the cultivation treatments, terrestrial areas will be expected to support at least 10 percent total live vascular cover comprised of at least five naturally colonizing species with at least 0.2 percent cover each.
  - vi. Monitoring shall be performed in Years 1, 2, 3, and biennially afterward until following initiation of rehabilitation. Reports shall be submitted to the Corps at the address specified on the accompanying transmittal letter. The rehabilitation and revegetation of the mine site shall not be complete until approved by the Corps in writing.
- b. Withdrawal of water from the mine site shall not occur, except as required for dewatering in between gravel mining seasons, until the site is filled to capacity and the habitat in the littoral zone of the reservoir is established to the satisfaction of the Corps. Following complete filling of the reservoir, the permittee shall place the intake end of a water withdrawal pipe in the reservoir deep water zone.
19. The permittee shall direct discharge of mine dewatering water and hydrostatic test water down gradient toward a natural drainage and prevent scouring and erosion from occurring.

### **Endangered Species**

- 20. The barge offloading area, which connects the Central Pad with the sealift bulkhead and service pier, shall be kept free of materials and equipment except while barges are being loaded or offloaded and this area is being used for short term (< 24 hours) storage of cargo. This area shall not be used for long term (>24 hours) storage of cargo, equipment, or materials. When large modules are offloaded, it may be necessary to store material for longer than 24 hours. However, this will be infrequent and the permittee shall provide the U.S. Fish and Wildlife Service a report when this occurs. The report, which shall be included as part of the annual report of polar bear observations to the U.S. Fish and Wildlife Service, shall briefly describe the type of materials stored, the length of time the offload area was used for storage, and any observations of polar bears that occurred during this time period.
- 21. The permittee shall comply with all sections of the Incidental Take Statement, including the Reasonable and Prudent Measures and the Terms and Conditions, in the "Biological Opinion for ExxonMobil's Point Thomson Project," signed September 14, 2012 by the U.S. Fish and Wildlife Service, Alaska Region. The U.S. Fish and Wildlife Service, Alaska Region shall be informed of, and responsible for enforcing, any known violations of the incidental take statement.
- 22. The permittee shall comply with all sections of the "Letter of Concurrence for ExxonMobil's Point Thomson Project," signed September 14, 2012 by the National Marine Fisheries Service, Alaska Region. The permittee shall comply with all mitigative measures described in the "Biological Assessment of the Bowhead Whale (*Balaena mysticetus*), Ringed Seal (*Phoca hispida*) and Bearded Seal (*Erignathus barbatus*)" dated November 2011.
- 23. The permittee shall coordinate with the U.S. Fish and Wildlife Service to locate and avoid, to the maximum extent practicable as described in applicable Letters of Authorizations, active polar bear dens prior to winter construction activities.
- 24. The permittee shall construct a portion of and maintain a 100-foot corridor from the extent of fill areas to the high tide line, as depicted in figure 83, for polar bear movement by placing pit run gravel, and if practicable dredged material, along the shoreline and lagoon adjacent to the east side of the proposed

Central Pad. The corridor shall be maintained for the life of the project. This area shall be left vacant to allow for polar bear movements. Note: no dredged material will be placed seaward of the baseline, therefore not subject to the Marine Protection Research and Sanctuaries Act.

### ***Cultural Resources***

25. All conditions contained within the Programmatic Agreement made under the National Historical Preservation Act shall apply to the construction of this project.

### ***Fish and Wildlife***

26. If placement of road fill material is not completed within any winter season, sufficient openings shall be incorporated into the road to maintain cross-drainage. Side slopes of temporary road openings shall be stabilized and maintained to prevent erosion of the fill material. Road opening widths shall be of sufficient length to prevent scour of the adjacent tundra. Roads shall be maintained without pushing material off of the embankments and into waters of the U.S., including wetlands.
27. Prior to the first spring season following commencement of winter construction, the permittee shall submit to the Corps, a Bird Strike Avoidance and Lighting Plan for approval by the Corps in consultation with the U.S. Fish and Wildlife Service. This plan shall be considered approved after 30 days of receipt by the Corps unless the Corps provides written notice to the contrary.
  - a. Windows on the east sides of buildings and all lighting shall be shaded so that light is cast downward. Light emanating from east-facing windows shall be shielded during the migratory bird season. Any protocol developed shall be in compliance with Federal Aviation Administration regulations.
  - b. Permanent communications towers shall be located on facility pads, be less than 200 feet above ground level (AGL), and be constructed without guy wires. Strobe lighting shall be used during the day and beacons shall be used at night. The permittee shall remove all bird nests from all towers and other structures annually prior to egg-laying to discourage nesting.
  - c. The permittee shall build all structures associated with the development in such a manner as to discourage nesting of avian predators such as gulls and ravens, and to discourage fox denning.
  - d. Temporary towers requiring guy wires for support shall have bird diverters on the wires to minimize collisions.
  - e. The permittee shall prepare and implement an Air Traffic Plan to be provided to the U.S. Fish and Wildlife Service and the Corps, prior to start of construction. This plan shall be considered approved after 30 days of receipt by the Corps unless the Corps provides written notice to the contrary. The plan shall include procedures for hazing waterfowl and seabirds from the vicinity of the airstrip. The plan shall also include how flights will be routed to avoid caribou calving areas during caribou calving period, large post-calving caribou aggregations, and insect relief habitats. Overflights shall be restricted to more than 1,000 feet during caribou calving and to more than 500 feet in spring and fall except during takeoffs and landings and as required to protect human safety and to meet specific operation requirements such as Forward Looking Infrared surveys for polar bear den detection or monitoring of the export pipeline.
  - f. The permittee shall, to the extent practicable, coordinate vessel, aircraft, and vehicle trips during construction, drilling, and operations to minimize the number of trips.
  - g. The permittee shall summarize barge operations in a report to be submitted to the Corps and the U.S. Fish and Wildlife Service by December 1 each year, for the life of the project. This report shall include numbers and types of barge trips, dates of operations, and routes utilized.
  - h. Before construction begins the permittee shall submit a Predator Management Plan, including a waste management strategy, to the Corps and U.S. Fish and Wildlife Service.

28. Ground disturbing activities such as mechanized land clearing and filling of wetlands within the permit area shall not be conducted between June 1 and July 31. If off-pad/road activities must be conducted during the June 1 – July 31 time window, the permittee shall notify the Corps, U.S. Fish and Wildlife Service, and the State of Alaska to evaluate potential effects of these activities to migratory birds. In such case, ground disturbing activities shall not take place until authorized by the Corps.
29. The permittee shall develop a bird mortality reporting process in consultation with the U.S. Fish and Wildlife Service to assess bird mortality associated with project facilities. The permittee shall report documented sea duck and other migratory bird mortalities to the Endangered Species Branch, Fairbanks Fish and Wildlife Field office on a monthly basis.
30. The permittee shall comply with the following provisions to minimize wildlife impacts from visual and lighting aspects during construction of the project:
  - a. Hard-sided external facilities buildings enclosures shall utilize the pre-approved “Pacific Blue” color. The soft sided warehouse shall be an off-white color. External airstrip building colors shall be dictated by Federal Aviation Administration requirements. Any other external building siding colors used shall be low-reflective and generally minimize contrast with the natural landscape, except where another color may be required to meet safety and/or industry standard requirements.
  - b. All building and stack heights shall be designed at the minimum height and footprint needed to perform their functions. All pilot flames for gas flares shall be shielded where practicable and established as low as possible on towers. Large flares and smoke plumes associated with flaring shall be minimized.
  - c. All power lines and fiber optic cables must be buried or supported by VSMS to avoid additional overhead structures except for the airstrip lighting cables that may be placed on timber sleepers due to Federal Aviation Administration requirements prohibiting VSMS in this area.
  - d. The permittee shall implement the noise mitigation measures described in Section 4.17 of their Environmental Mitigation Report (June 17, 2011).

### **Hydrology**

31. The permittee shall notify the Corps within 24 hours if failure of any section of road (i.e., washout) or culvert is discovered.
32. The permittee shall prepare and submit an annual culvert monitoring report to the Corps prior to December 31. The report shall include an evaluation of areas where additional culverts are necessary to retain existing drainage patterns and where culvert maintenance, repair, or replacement is necessary. Evidence of ponding in wetlands areas, dewatering of wetlands, erosion, or stream channel changes are indicators of areas and locations requiring corrective action.
33. The permittee shall develop and implement an environmental monitoring plan that includes monitoring of watersheds for Streams 22A and 24B where they may be affected by construction of the airstrip. These areas include: 1) waters of the U.S., including wetlands, up and down gradient of the airstrip; 2) the Stream 22A channel upstream of the West Pad Access Road bridge; 3) the lagoon west of the Central Pad that is the receiving water for Stream 22; and 4) the Stream 24B channel downstream of the airstrip.

Following the first winter of civil construction but prior to March 31, 2014 the permittee shall submit the environmental monitoring plan to be approved by the Corps. The environmental monitoring plan shall detail sampling methodology, frequency, and locations needed to document potential changes in the physical, chemical, and biological (vegetative) features of the watersheds associated with airstrip construction. Characteristics of concern should include, but are not limited to, the following:

- a. Observations regarding breakup events and water flow in all areas of concern. This shall include documentation of ponding, coverage of water, erosion, sediment deposition, and general water flow

direction and magnitude collected in such a manner to allow comparison of changes through the 5 year monitoring period.

- b. Existing vegetation and changes in vegetation types (species composition and density) shall be monitored 1) immediately upgradient of the airstrip within 200 feet; 2) immediately downgradient from the airstrip within 200 feet; and 3) in the lagoon west of the Central Pad that is a receiving water for Stream 22A. Field data shall be collected in such a manner to allow comparison of changes through the 5 year monitoring period. The scope of the monitoring shall be adjusted if material effects on the study areas are observed.
- c. Changes in stream channel morphology including sedimentation and erosion conditions in Streams 22A and 24B collected in such a manner to allow comparison of changes through the 5 year monitoring period.
- d. Flow volume, flow velocity, and water depth throughout breakup in Streams 22A and 24B.
- e. Water depth, ponding duration, and drainage patterns in the vicinity of the airstrip collected in such a manner to allow comparison of changes through the 5 year monitoring period.
- f. Water velocities and volumes at the two cross drainage culverts in the Central Pad access road located immediately south of the junction of the airstrip access road, the three cross drainage culverts in the airstrip access road, and at the Stream 24B bridge crossing throughout break up. The first spring following completion of the mine excavation, subject to applicable State permit approval, the three cross drainage culverts in the airstrip access road shall be plugged to prevent breakup water flows and to establish the volume of diverted flow through the Central Pad cross drainage culverts, discussed above.

Existing conditions and potential changes in physical, chemical, and biological conditions shall be documented through regular sampling (i.e. sampling at peak stage during break up, immediately following break up; and at regular intervals as necessary to establish baseline conditions and identify changes in existing conditions). Physical, chemical and biological conditions shall also be documented through aerial and ground photography of all areas of concern noted above.

Following approval of the monitoring plan, the permittee shall perform monitoring annually for a minimum of five years. The permittee shall submit an annual report prior to December 31. After five years, the Corps will decide whether to continue monitoring or direct corrective actions. Should the Corps determine that degradation of Stream 22A or Stream 24B watersheds has occurred, corrective action shall be directed.

34. The permittee shall remove all gravel fill down to the underlying tundra grade from the southeast corner of the C-1 Pad to create a 100-foot, vegetated buffer between the existing pad and Stream 24A. The permittee shall submit a fill removal and revegetation plan for the fill removal area to the Corps for approval by December 1, 2013. The rehabilitation plan shall include fill removal and disposal areas, placement of organic overburden onto the fill removal area to maintain the thermal stability of the underlying permafrost to reestablish vegetation in the fill removal area. The fill shall be removed by June 1, 2014. The permittee shall thereafter be given two years to complete the initial revegetation efforts.

#### ***As Built Figures***

35. As-built figures for all discharges and construction of all structures authorized under this permit shall be submitted to the Corps for determination of permit compliance. Figures shall be submitted by December 31 of the year following completion of construction activities authorized by this permit. State Plane Coordinates at the centerline shall be provided for all roads and pipeline routes authorized under this permit. As built figures for all structures in marine waters authorized under this permit shall also be provided.

## **Abandonment**

36. To ensure any portions of fills and structures authorized under this permit are not abandoned, a report shall be submitted to the Corps every five years, beginning after the completion of construction of facilities authorized by this permit, detailing hydrocarbon production plans. If any sites are determined to be abandoned, a rehabilitation plan shall be submitted to the Corps within 90 days of abandonment. The plan shall include, at a minimum: goals and objectives, site treatments, performance standards, reporting, remedial work plans, and monitoring to ensure performance standards are met. An assessment and decision of potential site abandonments will be made every five years by the Corps, in consultation with the State of Alaska and the permittee.

## **Existing DA Permits**

37. Previously approved discharges of dredged and/or fill material placed into waters of the U.S. by the permittee, as detailed below and authorized herein, are incorporated into this permit. The existing fill placed at the PTU-3 (Central Pad) site is also incorporated into this permit. All terms and conditions of Beaufort Sea 81,204, and 204 modification are expressly adopted into this permit. Henceforth, any modifications or actions concerning these permits or their conditions must be based on this permit.
1. Permit number 071-OYD-4-800015, Beaufort Sea 81;
  2. Permit number 071-OYD-4-810264, Beaufort Sea 204;
  3. Permit number 071-OYD-4-810264, Beaufort Sea 204 permit modification;
  4. The existing fill material from development of the PTU-3 exploration well pad

## **Special Information:**

Any condition incorporated by reference into this permit by General Condition 5, remains a condition of this permit unless expressly modified or deleted, in writing, by the District Engineer or his authorized representative.

Cubic yardages outside of navigable waters are for informational purposes only.

## **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).

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 reevaluation 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.



\_\_\_\_\_  
(PERMITEE) AND TITLE

Lee Bruce

Senior Project Manager, Point Thomson Project

As Agent and Attorney-in-Fact on Behalf of Exxon Mobil Corporation and PTE Pipeline LLC

10/25/2012

\_\_\_\_\_  
(DATE)

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



\_\_\_\_\_  
Christopher D. Lestochi

Colonel, Corps of Engineers

District Commander

26 OCT 2012

\_\_\_\_\_  
(DATE)

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.

\_\_\_\_\_  
(PERMITEE) AND TITLE

\_\_\_\_\_  
(DATE)

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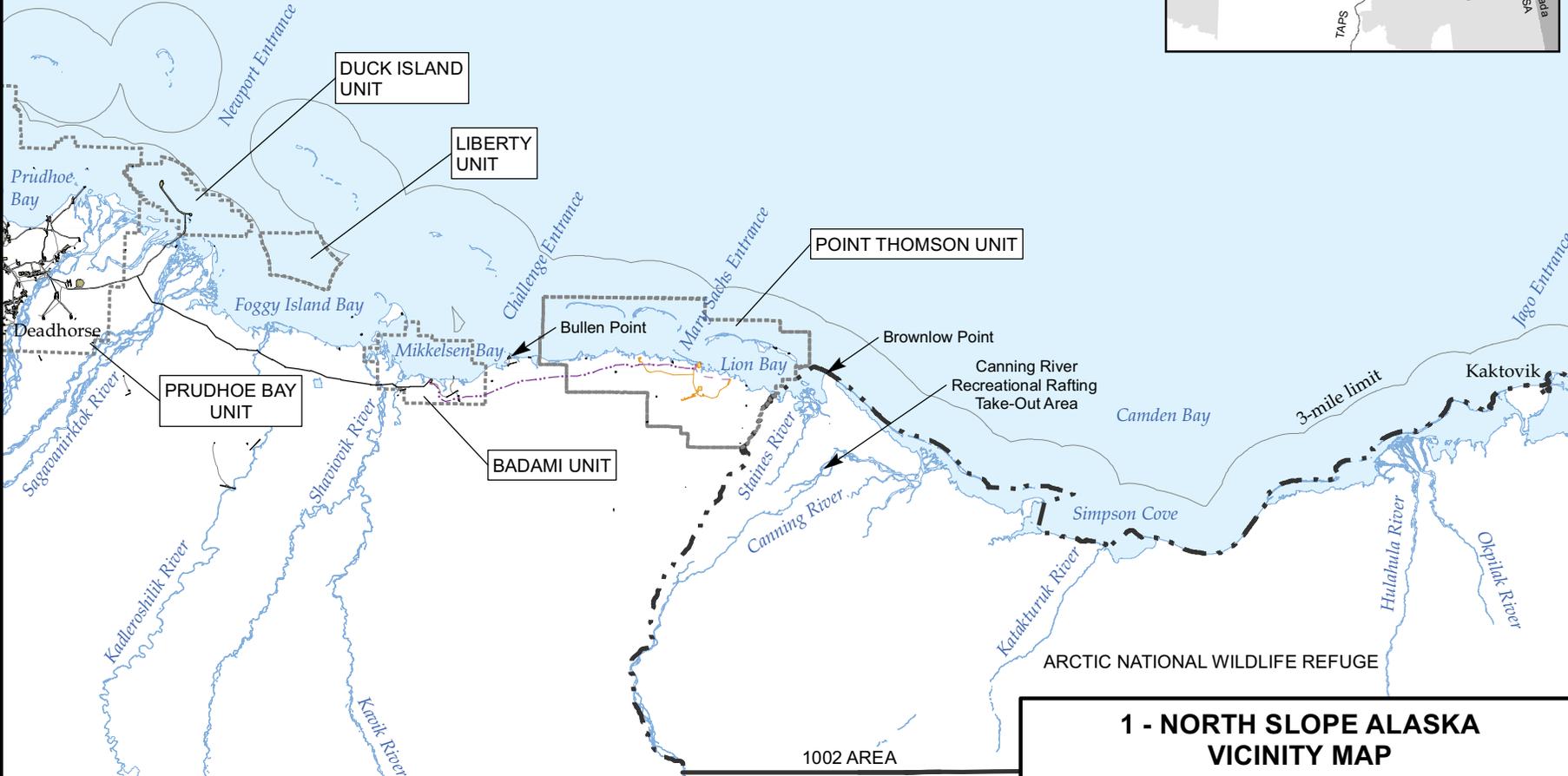
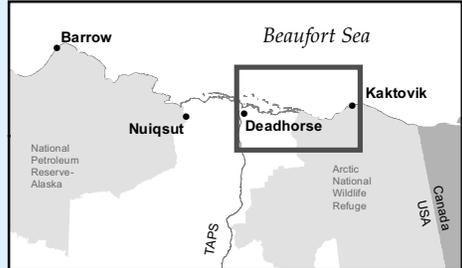
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Beaufort Sea

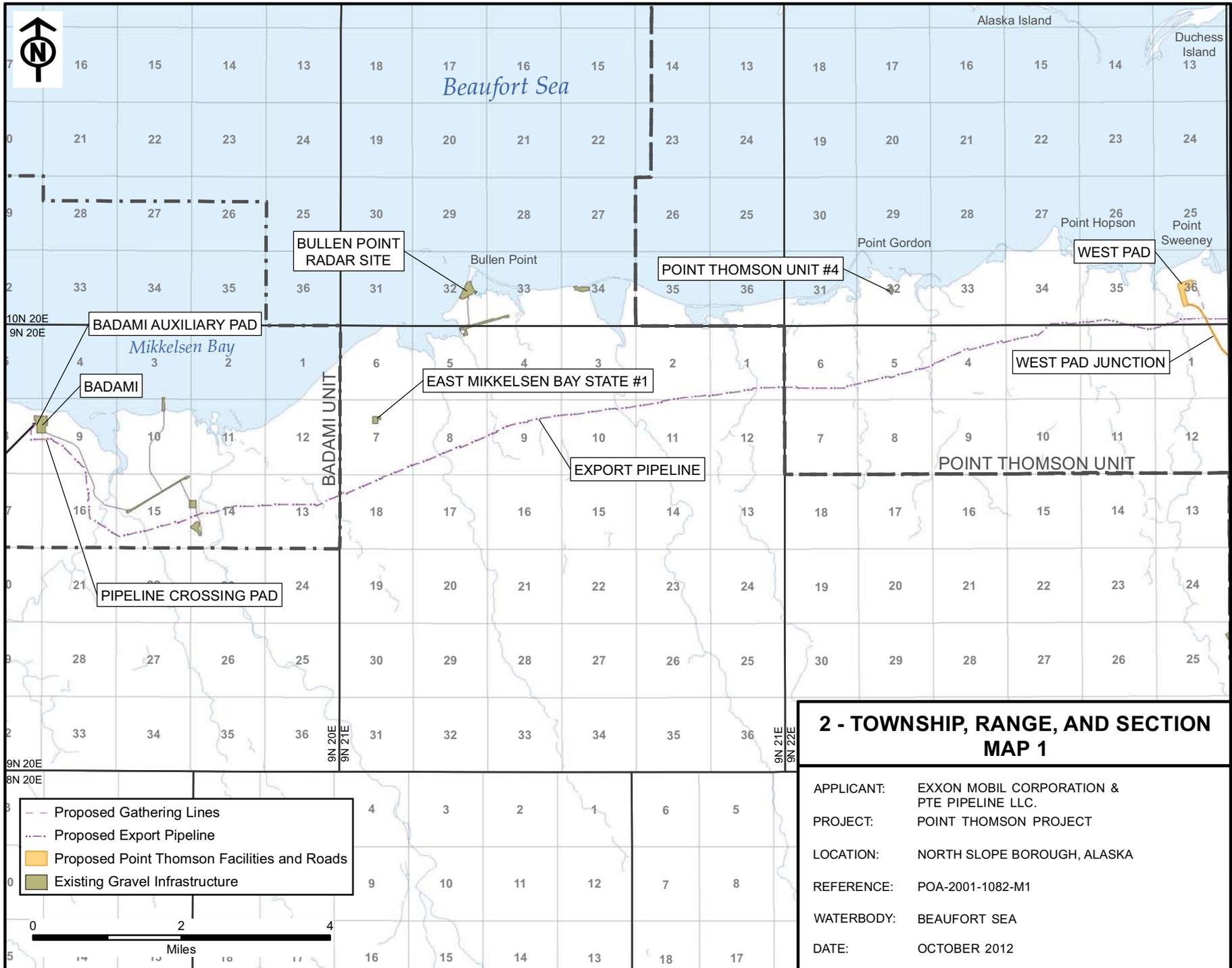


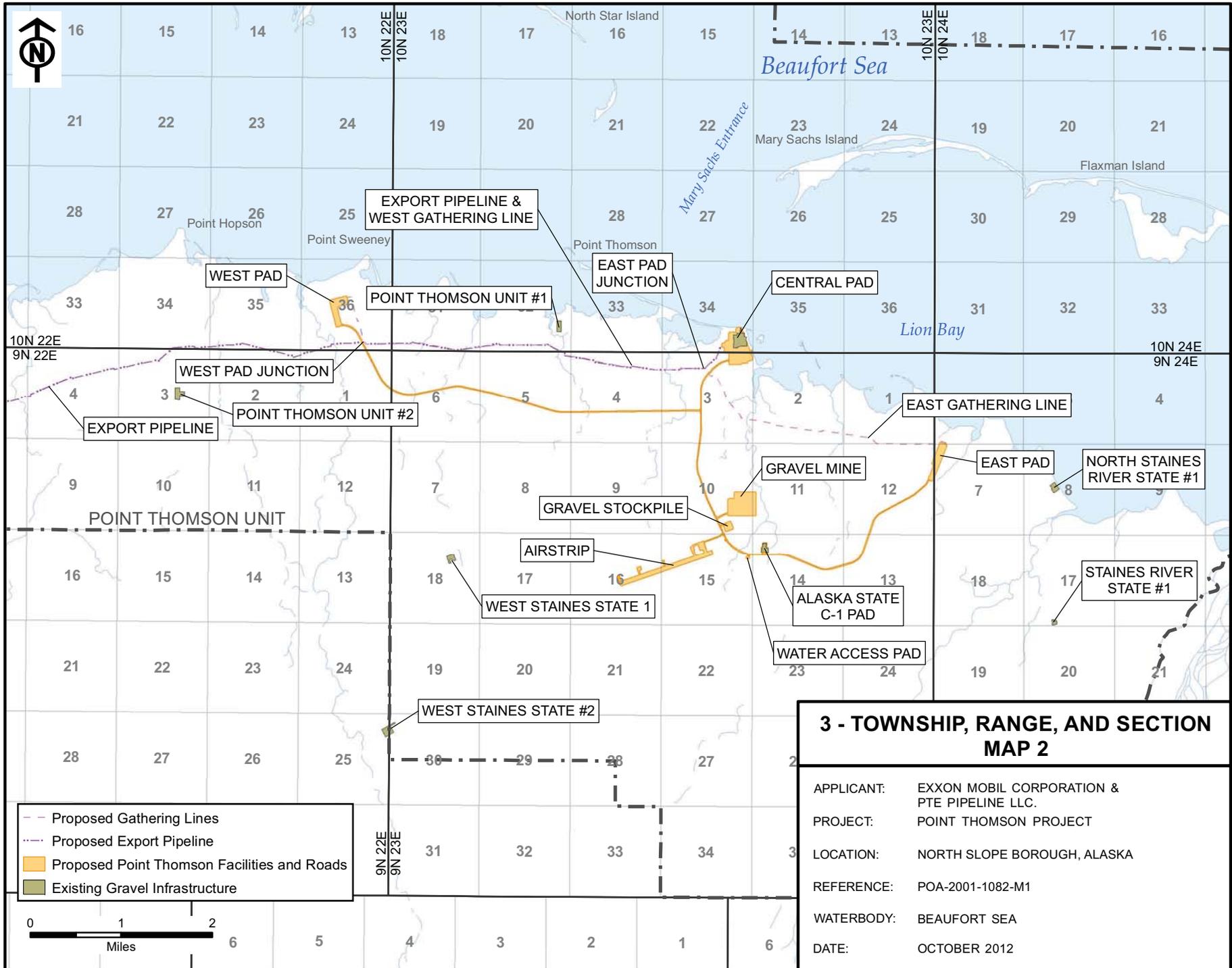
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- Oil and Gas Units

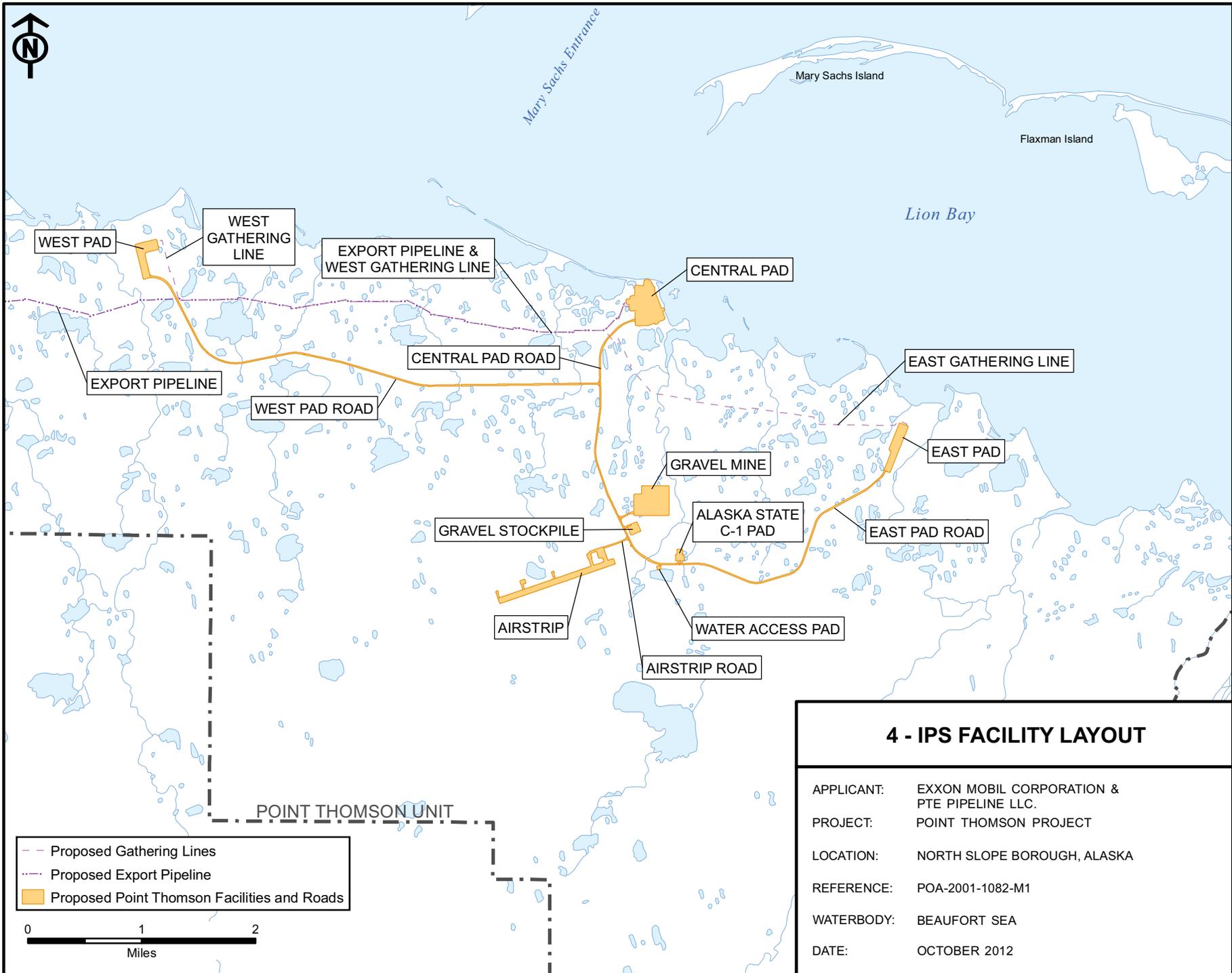


### 1 - NORTH SLOPE ALASKA VICINITY MAP

|            |   |
|------------|---|
| APPLICANT: | EXXON MOBIL CORPORATION & PTE PIPELINE LLC. |
| PROJECT:   | POINT THOMSON PROJECT                       |
| LOCATION:  | NORTH SLOPE BOROUGH, ALASKA                 |
| REFERENCE: | POA-2001-1082-M1                            |
| WATERBODY: | BEAUFORT SEA                                |
| DATE:      | OCTOBER 2012                                |

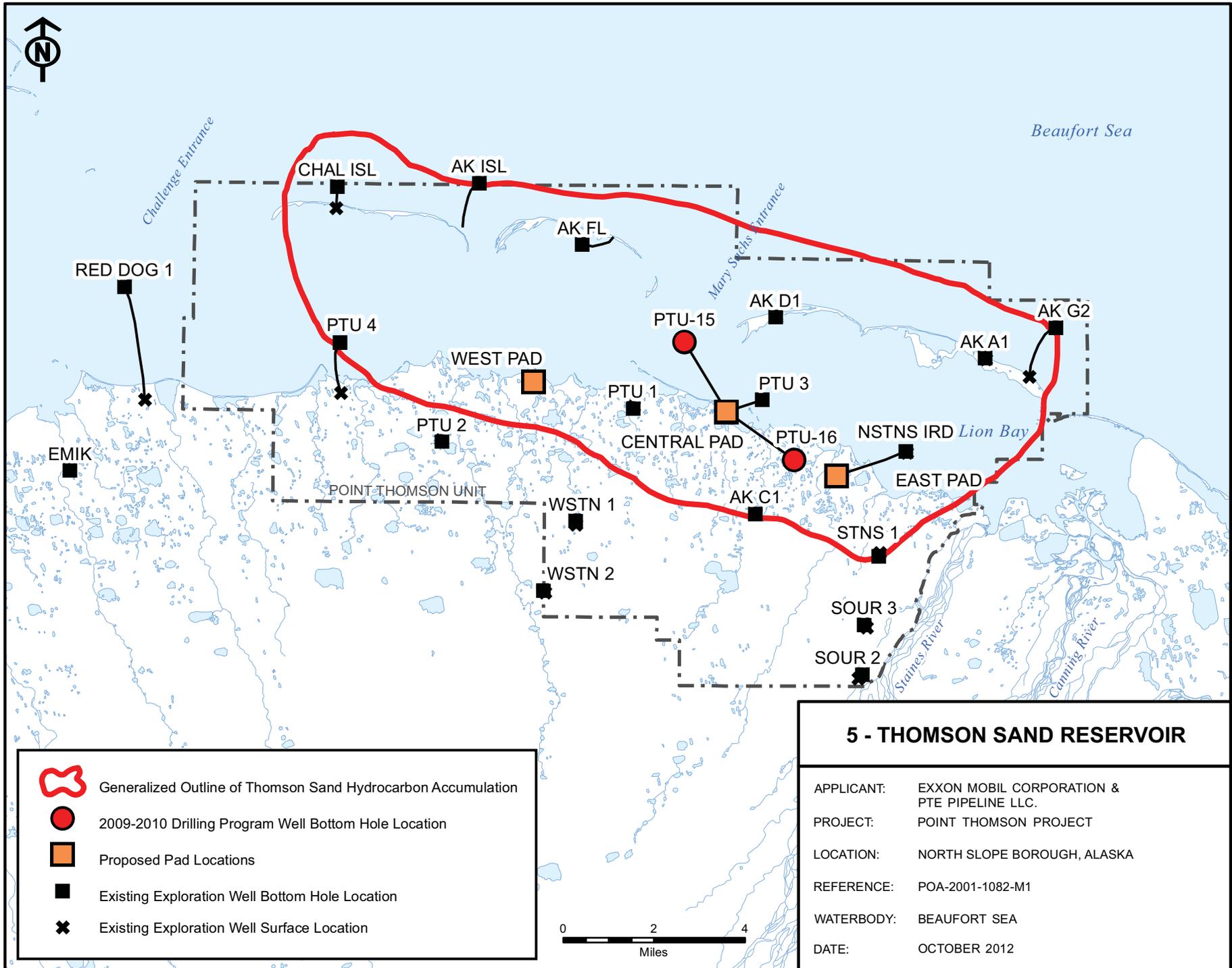






#### 4 - IPS FACILITY LAYOUT

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012



**CENTRAL PAD/ACCESS ROAD**

ACCESS ROAD LENGTH \_\_\_\_\_ 2.7 MILES  
 ACCESS ROAD FOOTPRINT \_\_\_\_\_ 19.4 ACRES  
 PAD FOOTPRINT 1 \_\_\_\_\_ 55.3 ACRES  
 ACCESS ROAD FILL QUANTITY \_\_\_\_\_ 152,000 CY  
 PAD FILL QUANTITY \_\_\_\_\_ 576,000 CY

**EAST PAD/ACCESS ROAD**

ACCESS ROAD LENGTH \_\_\_\_\_ 2.3 MILES  
 ACCESS ROAD FOOTPRINT \_\_\_\_\_ 17.3 ACRES  
 PAD FOOTPRINT \_\_\_\_\_ 20.9 ACRES  
 ACCESS ROAD FILL QUANTITY \_\_\_\_\_ 137,000 CY  
 PAD FILL QUANTITY \_\_\_\_\_ 294,000 CY

**WEST PAD/ACCESS ROAD**

ACCESS ROAD LENGTH \_\_\_\_\_ 4.4 MILES  
 ACCESS ROAD FOOTPRINT \_\_\_\_\_ 33.4 ACRES  
 PAD FOOTPRINT \_\_\_\_\_ 20.6 ACRES  
 ACCESS ROAD FILL QUANTITY \_\_\_\_\_ 275,000 CY  
 PAD FILL QUANTITY \_\_\_\_\_ 238,000 CY

**ALASKA STATE C-1 PAD/ACCESS ROAD**

ACCESS ROAD LENGTH \_\_\_\_\_ 0.03 MILES  
 ACCESS ROAD FOOTPRINT \_\_\_\_\_ 0.4 ACRES  
 PAD FOOTPRINT 2 \_\_\_\_\_ 4.1 ACRES  
 ACCESS ROAD FILL QUANTITY \_\_\_\_\_ 2,200 CY  
 PAD FILL QUANTITY \_\_\_\_\_ 17,000 CY

**BOAT LAUNCH RAMP (ONSHORE PORTION)3**

ONSHORE BOAT LAUNCH FILL QUANTITY \_\_\_\_\_ 980 CY  
 DREDGE QUANTITY \_\_\_\_\_ 100 CY  
 ONSHORE BOAT LAUNCH FOOTPRINT \_\_\_\_\_ 2,200 SQ FT

**DREDGE MATERIAL**

DREDGE MATERIAL PLACEMENT FOOTPRINT \_\_\_\_\_ 1.4 ACRES  
 DREDGING AND SCREEDING FOOTPRINT \_\_\_\_\_ 3.2 ACRES  
 SCREEDING FOOTPRINT \_\_\_\_\_ 2.3 ACRES  
 TOTAL DREDGING QUANTITY (YEAR 1 - YEAR 5) \_\_\_\_\_ UP TO 3,900 CY

**WATER SOURCE PAD/ACCESS ROAD**

ACCESS ROAD LENGTH \_\_\_\_\_ 0.03 MILES  
 ACCESS ROAD FOOTPRINT \_\_\_\_\_ 0.2 ACRES  
 PAD FOOTPRINT \_\_\_\_\_ 0.7 ACRES  
 ACCESS ROAD FILL QUANTITY \_\_\_\_\_ 1,100 CY  
 PAD FILL QUANTITY \_\_\_\_\_ 7,100 CY

**BADAMI PADS**

BADAMI AUXILIARY PAD FOOTPRINT \_\_\_\_\_ 0.25 ACRES  
 BADAMI PIPELINE CROSSING PAD FOOTPRINT \_\_\_\_\_ 0.16 ACRES  
 BADAMI AUXILIARY PAD FILL QUANTITY \_\_\_\_\_ 2,000 CY  
 BADAMI PIPELINE CROSSING PAD FILL QUANTITY \_\_\_\_\_ 1,000 CY

**EXISTING GRAVEL FACILITIES**

PTU-3 PAD FOOTPRINT 1 \_\_\_\_\_ 12.9 ACRES  
 ALASKA STATE C-1 PAD FOOTPRINT 2 \_\_\_\_\_ 4.1 ACRES

1. THE 55.3 ACRE FOOTPRINT SHOWN FOR CENTRAL PAD INCLUDES 12.9 ACRES OF THE EXISTING PTU-3 FOOTPRINT. ALSO INCLUDES TUNDRA IMPACT DUE TO GRAVEL BAG SLOPE PROTECTION.
2. THE 4.1 ACRE FOOTPRINT SHOWN FOR ALASKA STATE C-1 PAD IS THE 4.1 ACRES OF THE EXISTING ALASKA STATE C-1 FOOTPRINT.
3. THE ONSHORE PORTION OF THE BOAT LAUNCH INCLUDES THE AREA FROM THE TOE OF THE CENTRAL PAD TO THE MEAN HIGH WATER(MHW) ELEVATION. THE FILL VOLUME INCLUDES FROM THE SHOULDER OF THE CENTRAL PAD TO MHW.
4. THREE OF THE SERVICE PIER PILES WILL BE COVERED BY THE CENTRAL PAD AND ARE NOT INCLUDED IN OFFSHORE SECTION 10 QUANTITIES
5. OFFSHORE SECTION 10 QUANTITIES INCLUDE FOOTPRINTS OF STRUCTURES FROM THE MHW ELEVATION EXTENDING SEAWARD, AND VOLUMES OF STRUCTURES BELOW THE MHW ELEVATION.

**POINT THOMSON PROJECT QUANTITIES****AIRSTRIIP & HELIPAD/ACCESS ROAD**

ACCESS ROAD LENGTH \_\_\_\_\_ 0.24 MILES  
 ACCESS ROAD FOOTPRINT \_\_\_\_\_ 1.7 ACRES  
 PAD FOOTPRINT \_\_\_\_\_ 42.3 ACRES  
 ACCESS ROAD FILL QUANTITY \_\_\_\_\_ 12,000 CY  
 PAD FILL QUANTITY \_\_\_\_\_ 414,000 CY

**NAVAID PAD/ACCESS ROAD**

ACCESS ROAD LENGTH \_\_\_\_\_ 0.22 MILES  
 ACCESS ROAD FOOTPRINT \_\_\_\_\_ 1.5 ACRES  
 PAD FOOTPRINT \_\_\_\_\_ 1.6 ACRES  
 ACCESS ROAD FILL QUANTITY \_\_\_\_\_ 9,000 CY  
 PAD FILL QUANTITY \_\_\_\_\_ 15,000 CY

**OFF PAD QUANTITIES**

TIMBER SLEEPERS-NAVAID POWER \_\_\_\_\_ 1,400 SQ FT  
 TIMBER SLEEPERS-NAVAID POWER \_\_\_\_\_ 230 EA  
 NAVAID POWER-CONDUIT \_\_\_\_\_ 4,200 LINEAL FT  
 TIMBER SLEEPERS-WASTEWATER EFFLUENT \_\_\_\_\_ 200 SQ FT  
 ELECTRICAL TRENCHING \_\_\_\_\_ 18,000 SQ FT  
 SERVICE PIER ONSHORE PILES \_\_\_\_\_ 23 SQ FT  
 NAVAID PILES \_\_\_\_\_ 22 SQ FT  
 NAVAID PILES CUTTINGS \_\_\_\_\_ 14 CY  
 ELECTRICAL PILES \_\_\_\_\_ 4 SQ FT  
 ELECTRICAL PILES CUTTINGS \_\_\_\_\_ 2 CY  
 GATHERING PIPELINE PILES \_\_\_\_\_ 1,200 SQ FT  
 EXPORT PIPELINE PILES \_\_\_\_\_ 4,600 SQ FT  
 GATHERING PIPELINE PILE CUTTINGS \_\_\_\_\_ 500 CY  
 EXPORT PIPELINE PILE CUTTINGS \_\_\_\_\_ 3,000 CY  
 CULTVERT SCOUR PROTECTION FOOTPRINT \_\_\_\_\_ 3,730 SQ FT  
 WATER INTAKE CONCRETE PIPE SUPPORT FOOTPRINT \_\_\_\_\_ 44 SQ FT  
 WILDLIFE CORRIDOR FILL VOLUME (SE) \_\_\_\_\_ 460 CY  
 WILDLIFE CORRIDOR FILL FOOTPRINT (SE) \_\_\_\_\_ .19 ACRES  
 WILDLIFE CORRIDOR FILL VOLUME (NE) \_\_\_\_\_ 20 CY  
 WILDLIFE CORRIDOR FILL FOOTPRINT (NE) \_\_\_\_\_ .06 ACRES

**OFFSHORE SECTION 10 QUANTITIES5**

SERVICE PIER PILING(6)4 \_\_\_\_\_ 30 SQ FT  
 MOORING DOLPHINS \_\_\_\_\_ 40 SQ FT  
 TEMPORARY RAMP SUPPORT \_\_\_\_\_ 20 SQ FT  
 OFFSHORE BOAT LAUNCH RAMP FILL QUANTITY \_\_\_\_\_ 80 CY  
 OFFSHORE BOAT LAUNCH RAMP FOOTPRINT \_\_\_\_\_ 6,950 SQ FT  
 WILDLIFE CORRIDOR FILL VOLUME (SE) \_\_\_\_\_ 1,540 CY  
 WILDLIFE CORRIDOR FILL FOOTPRINT (SE) \_\_\_\_\_ .31 ACRES  
 WILDLIFE CORRIDOR FILL VOLUME (NE) \_\_\_\_\_ 40 CY  
 WILDLIFE CORRIDOR FILL FOOTPRINT (NE) \_\_\_\_\_ .04 ACRES

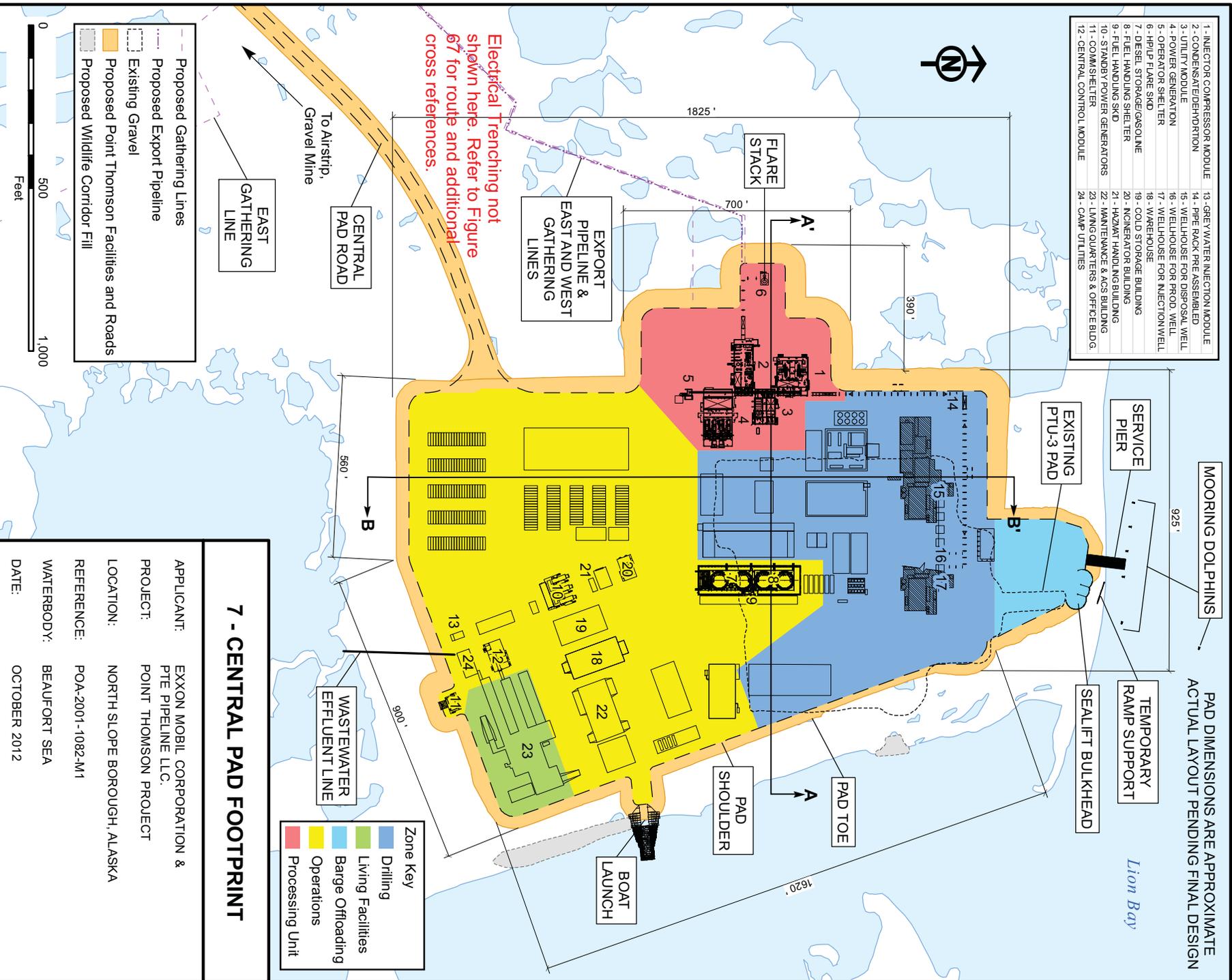
**GRAVEL MINE/ACCESS ROADS**

ACCESS ROAD LENGTH \_\_\_\_\_ 0.14 MILES  
 ACCESS ROAD FOOTPRINT \_\_\_\_\_ 1.2 ACRES  
 ACCESS ROAD VOLUME \_\_\_\_\_ 8,600 CU YDS  
 MINE FOOTPRINT \_\_\_\_\_ 48.9 ACRES  
 GRAVEL STOCKPILE ACCESS ROAD LENGTH \_\_\_\_\_ 5.2 ACRES  
 STOCKPILE ACCESS ROAD LENGTH \_\_\_\_\_ 200 FT  
 STOCKPILE ACCESS ROAD FOOTPRINT \_\_\_\_\_ 0.65 ACRES  
 STOCKPILE ACCESS ROAD VOLUME \_\_\_\_\_ 1,700 CY  
 GRAVEL STOCKPILE QUANTITY \_\_\_\_\_ 135,000 CY  
 ORGANIC STORAGE QUANTITY \_\_\_\_\_ 81,000 CY  
 INORGANIC STORAGE QUANTITY \_\_\_\_\_ 721,000 CY  
 GRAVEL DEMAND \_\_\_\_\_ 2,296,000 CY

**6 - PROJECT QUANTITIES**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

- 1- INJECTOR COMPRESSOR MODULE
- 2- CONDENSATE/DEHYDRON
- 3- UTILITY MODULE
- 4- POWER GENERATION
- 5- OPERATOR SHELTER
- 6- HP/LP FLARE SKID
- 7- DIESEL STORAGE/GASOLINE
- 8- FUEL HANDLING SKID
- 9- FUEL HANDLING SKID
- 10- STANDBY POWER GENERATORS
- 11- COMM/SHELTER
- 12- CENTRAL CONTROL MODULE
- 13- GREY WATER INJECTION MODULE
- 14- PIPE RACK PRE ASSEMBLED
- 15- WELLHOUSE FOR DISPOSAL WELL
- 16- WELLHOUSE FOR PROD. WELL
- 17- WELLHOUSE FOR INJECTIONWELL
- 18- WARE HOUSE
- 19- COLD STORAGE BUILDING
- 20- GENERATOR BUILDING
- 21- HAZMAT HANDLING BUILDING
- 22- MAINTENANCE & ACS BUILDING
- 23- LIVING QUARTERS & OFFICE BLDG.
- 24- CAMP UTILITIES



Electrical Trenching not shown here. Refer to Figure 67 for route and additional cross references.

- - - Proposed Gathering Lines
- - - Proposed Export Pipeline
- - - Existing Gravel
- ▭ Proposed Point Thomson Facilities and Roads
- ▭ Proposed Wildlife Corridor Fill



PAD DIMENSIONS ARE APPROXIMATE  
ACTUAL LAYOUT PENDING FINAL DESIGN

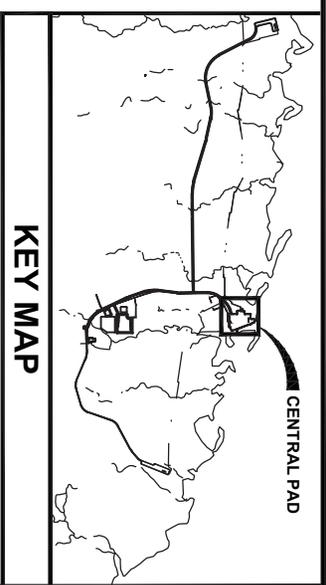
*Lion Bay*

- Zone Key**
- Drilling
  - Living Facilities
  - Barge Offloading
  - Operations
  - Processing Unit

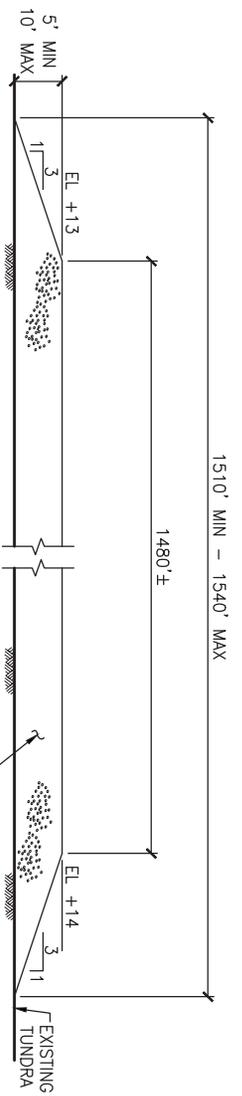
## 7 - CENTRAL PAD FOOTPRINT

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

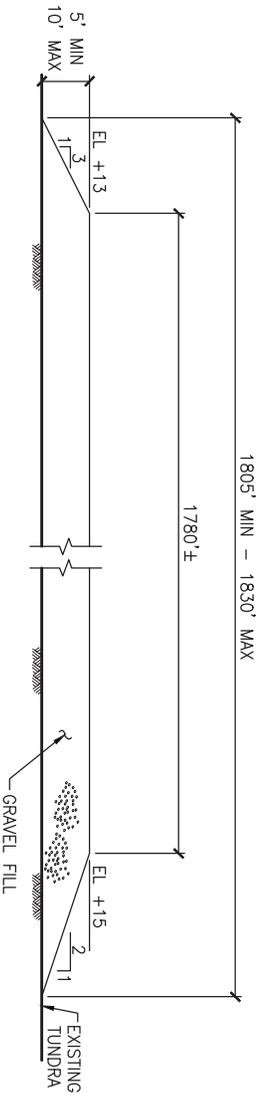
POA-2001-1082-M1 10/19/2012



**KEY MAP**



**SECTION A-A**  
NOT TO SCALE

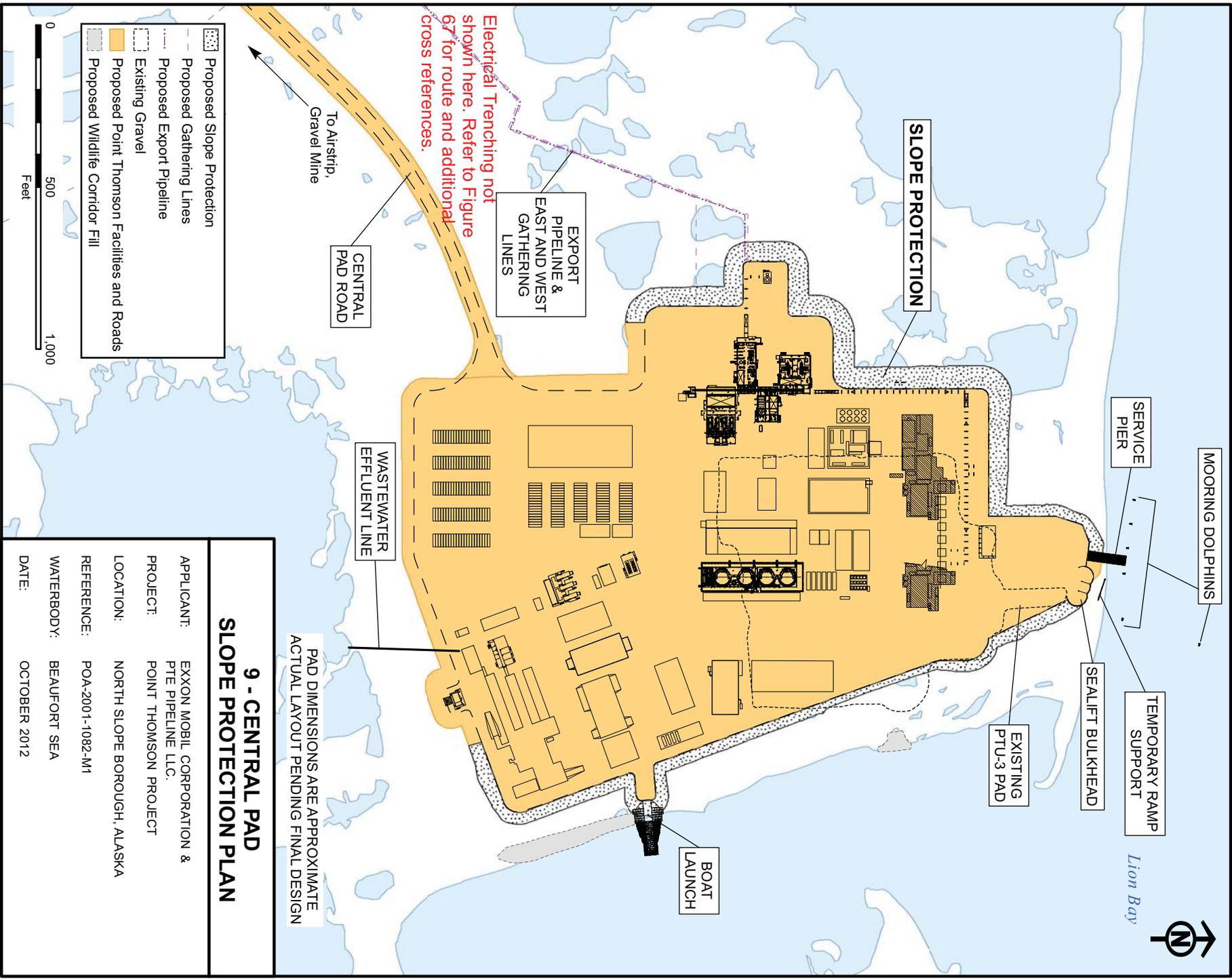


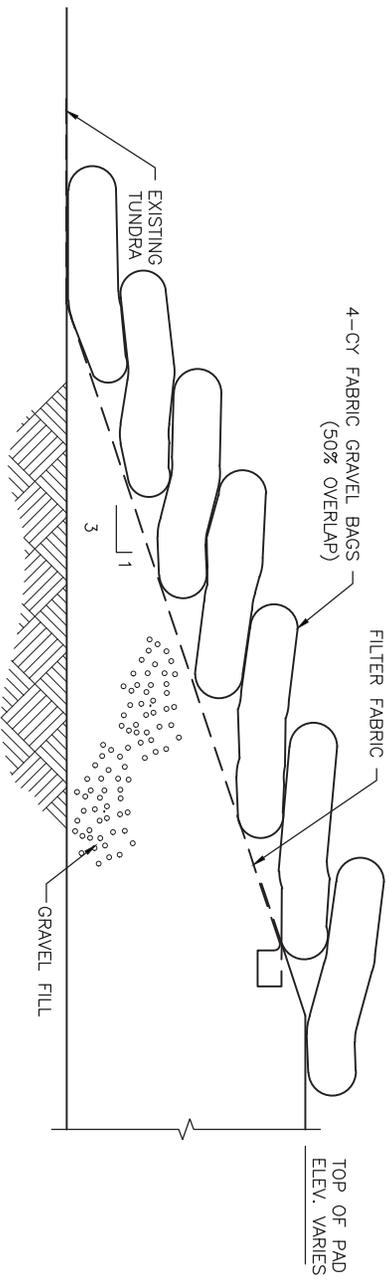
**SECTION B-B**  
NOT TO SCALE

**8 - CENTRAL PAD SECTIONS**

|            |   |
|------------|---|
| APPLICANT: | EXXON MOBIL CORPORATION & PTE PIPELINE LLC. |
| PROJECT:   | POINT THOMSON PROJECT                       |
| LOCATION:  | NORTH SLOPE BOROUGH, ALASKA                 |
| REFERENCE: | POA-2001-1082-M1                            |
| WATERBODY: | BEAUFORT SEA                                |
| DATE:      | OCTOBER 2012                                |

SEE FIGURE 10 FOR SLOPE PROTECTION DETAILS  
SEE FIGURE 7 FOR CENTRAL PAD PLAN





**GRAVEL BAG ARMOR SECTION**

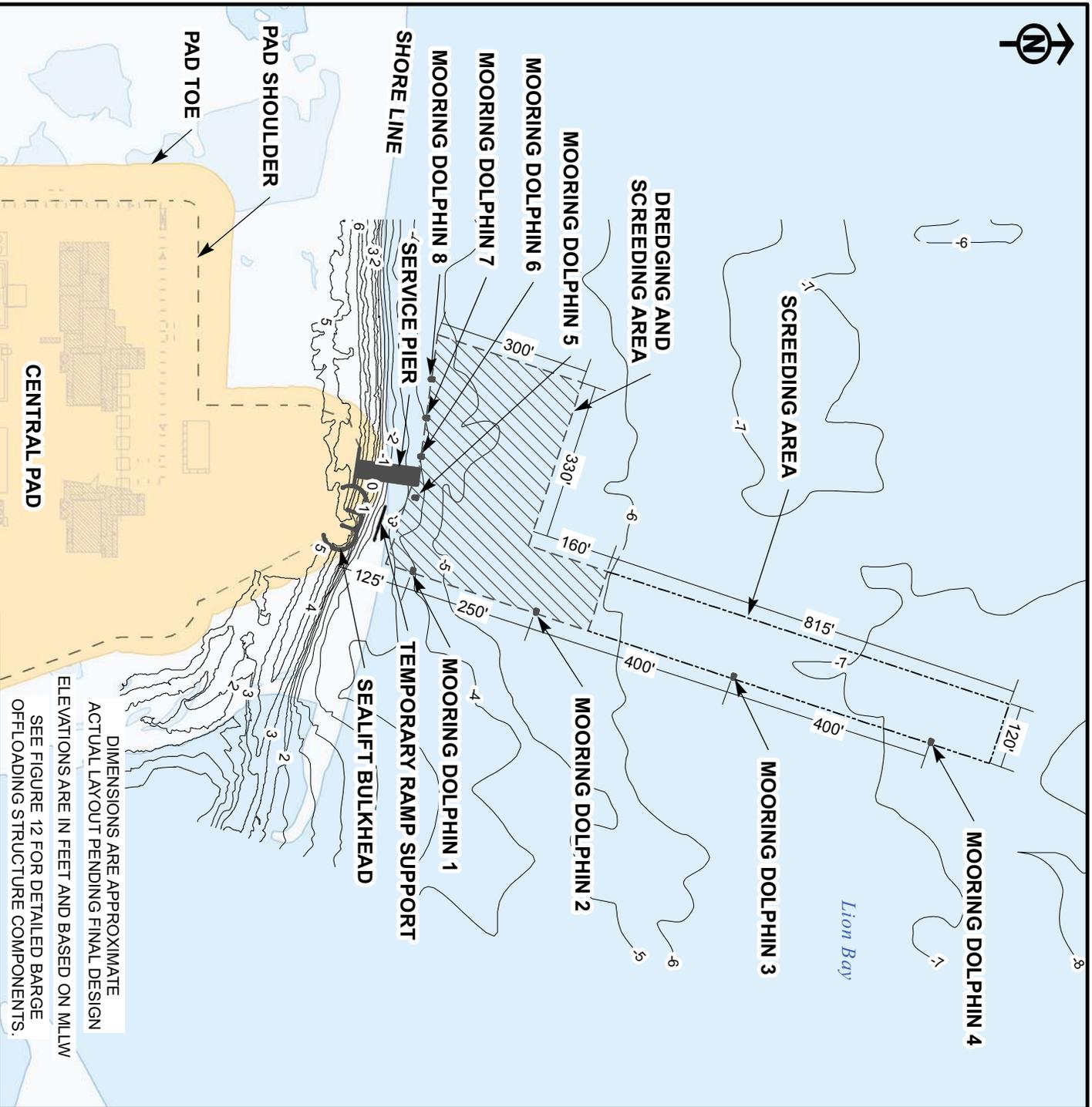
NOT TO SCALE

**10 - TYPICAL PAD SLOPE PROTECTION SECTION**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

SEE FIGURE 9 FOR CENTRAL PAD SLOPE PROTECTION PLAN

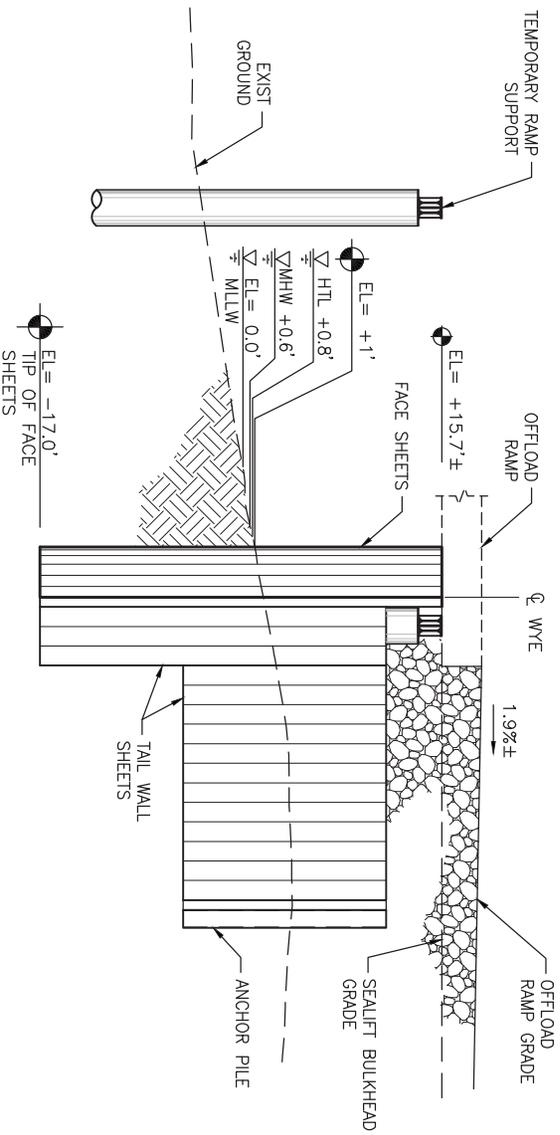
POA-2001-1082-M1 10/19/2012



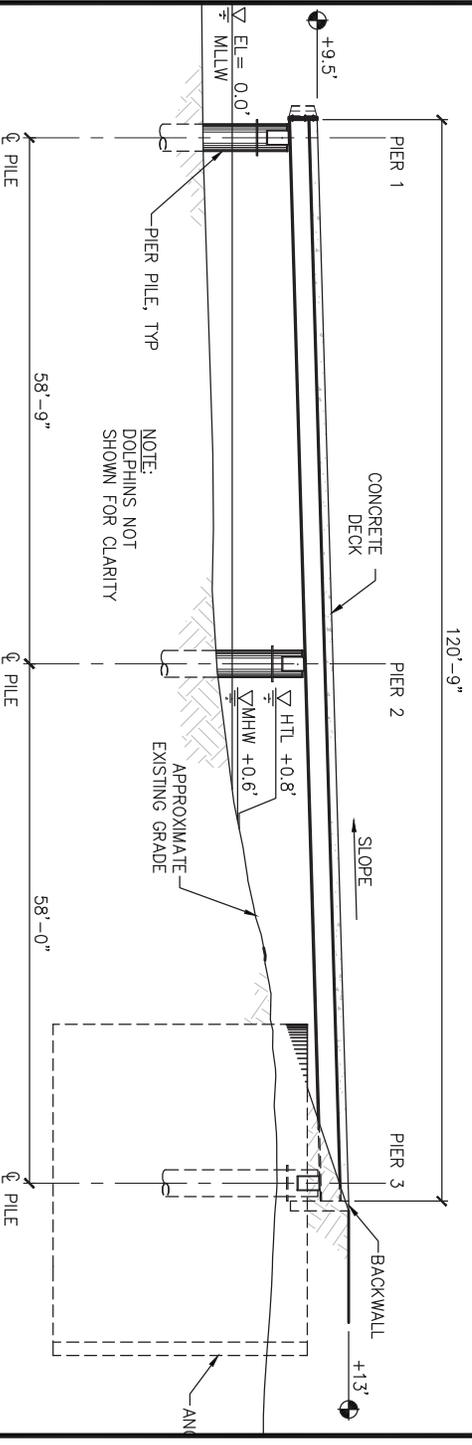
DIMENSIONS ARE APPROXIMATE  
 ACTUAL LAYOUT PENDING FINAL DESIGN  
 ELEVATIONS ARE IN FEET AND BASED ON MLLW  
 SEE FIGURE 12 FOR DETAILED BARGE  
 OFFLOADING STRUCTURE COMPONENTS.

**11 - BARGE OFFLOADING  
 STRUCTURES PLAN**

APPLICANT: EXXON MOBIL CORPORATION &  
 PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012



**SEALIFT BULKHEAD SECTION**  
NOT TO SCALE



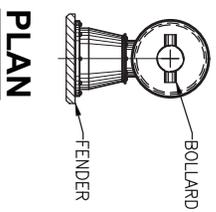
**SERVICE PIER SECTION**  
NOT TO SCALE

**12 - BARGE OFFLOADING  
STRUCTURES SECTIONS**

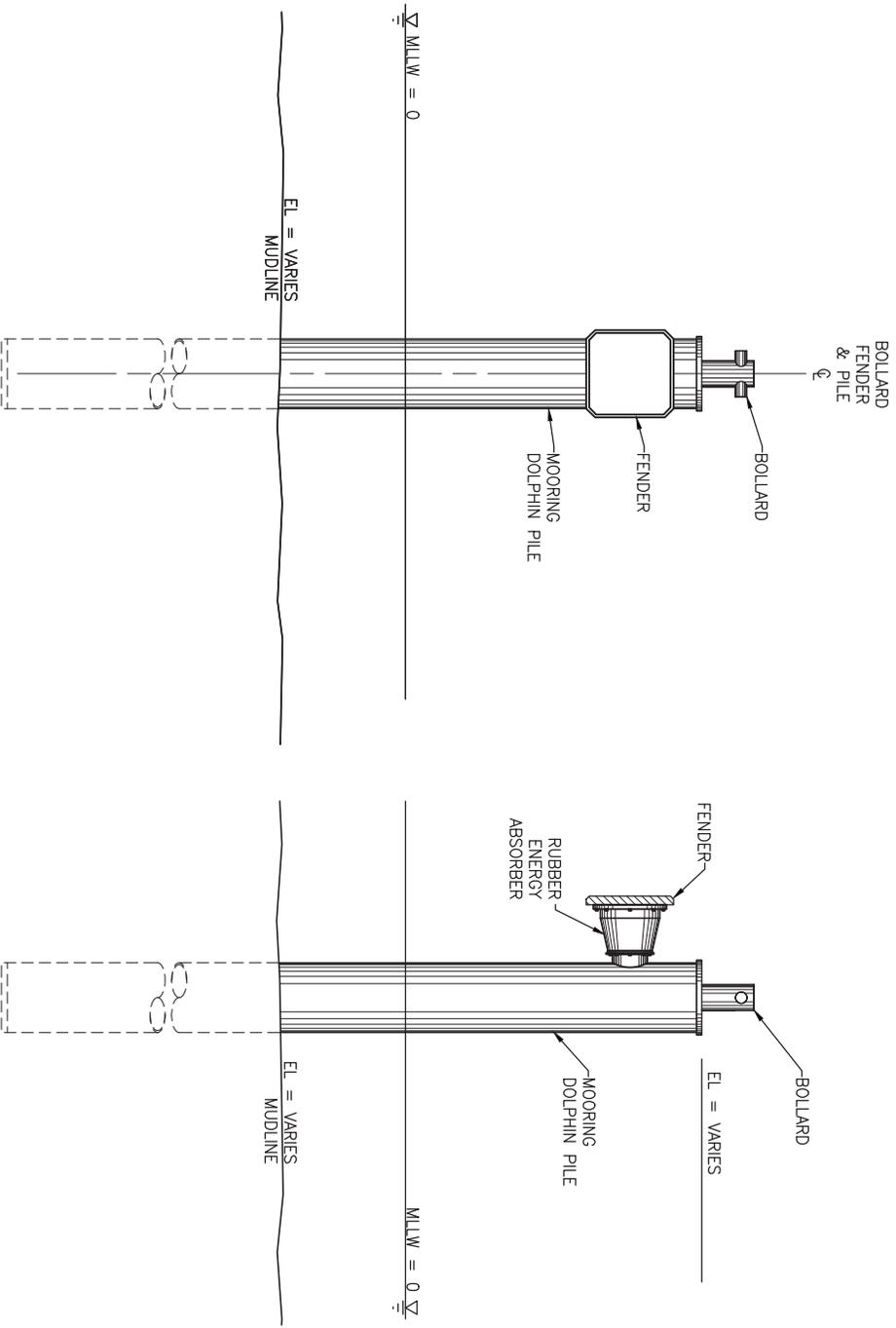
APPLICANT: EXXON MOBIL CORPORATION &  
 PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

SEE FIGURE 11 FOR BARGE OFFLOADING STRUCTURE PLAN

POA-2001-1082-M1 10/19/2012



**PLAN**



**MOORING DOLPHIN  
FRONT ELEVATION**

NOT TO SCALE

**MOORING DOLPHIN  
SIDE ELEVATION**

NOT TO SCALE

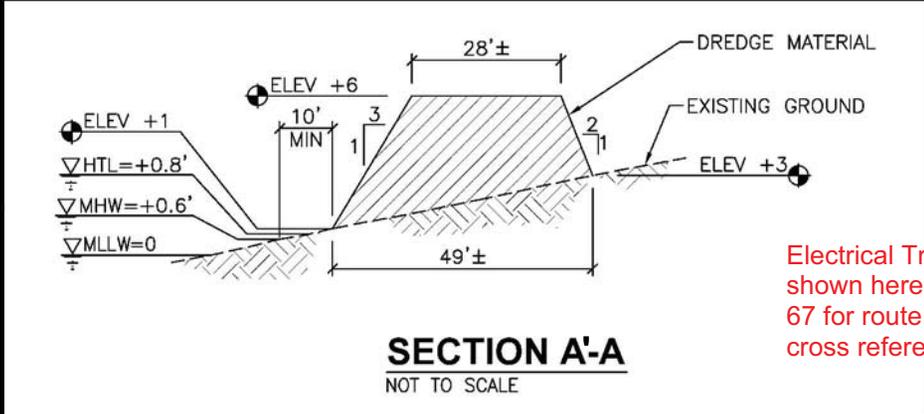
**13 - BREASTING/MOORING DOLPHIN  
PLAN & ELEVATION**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

SEE FIGURE 11 FOR MOORING DOLPHIN LOCATION

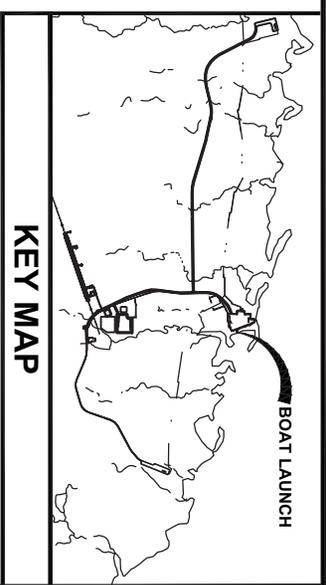


- Proposed Onshore Dredge Material Placement
- Proposed Central Pad

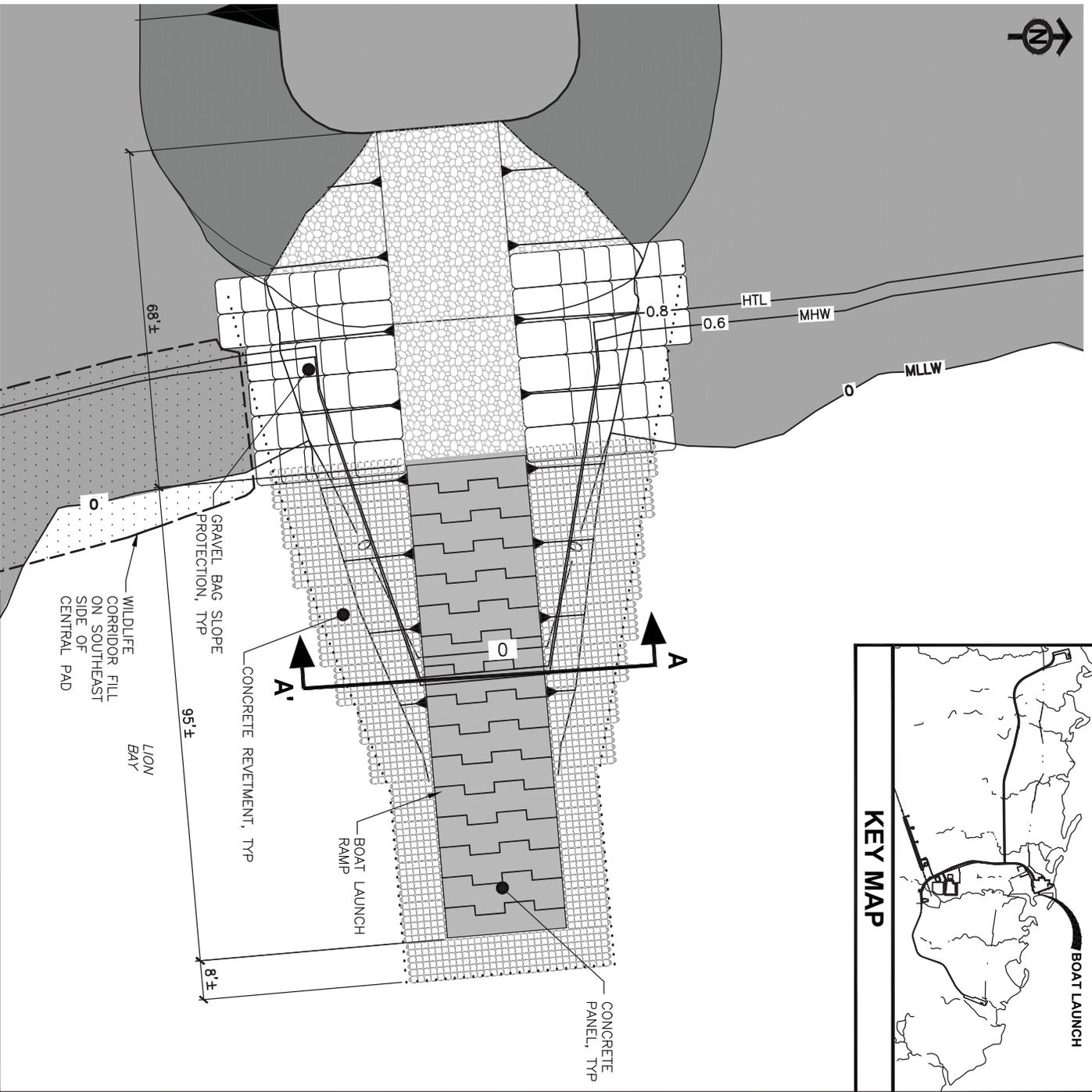


Electrical Trenching not shown here. Refer to Figure 67 for route and additional cross references.

| <b>14 - DREDGE MATERIAL ONSHORE PLACEMENT</b> |   |
|---|---|
| APPLICANT:                                    | EXXON MOBIL CORPORATION & PTE PIPELINE LLC. |
| PROJECT:                                      | POINT THOMSON PROJECT                       |
| LOCATION:                                     | NORTH SLOPE BOROUGH, ALASKA                 |
| REFERENCE:                                    | POA-2001-1082-M1                            |
| WATERBODY:                                    | BEAUFORT SEA                                |
| DATE:   | OCTOBER 2012                                |



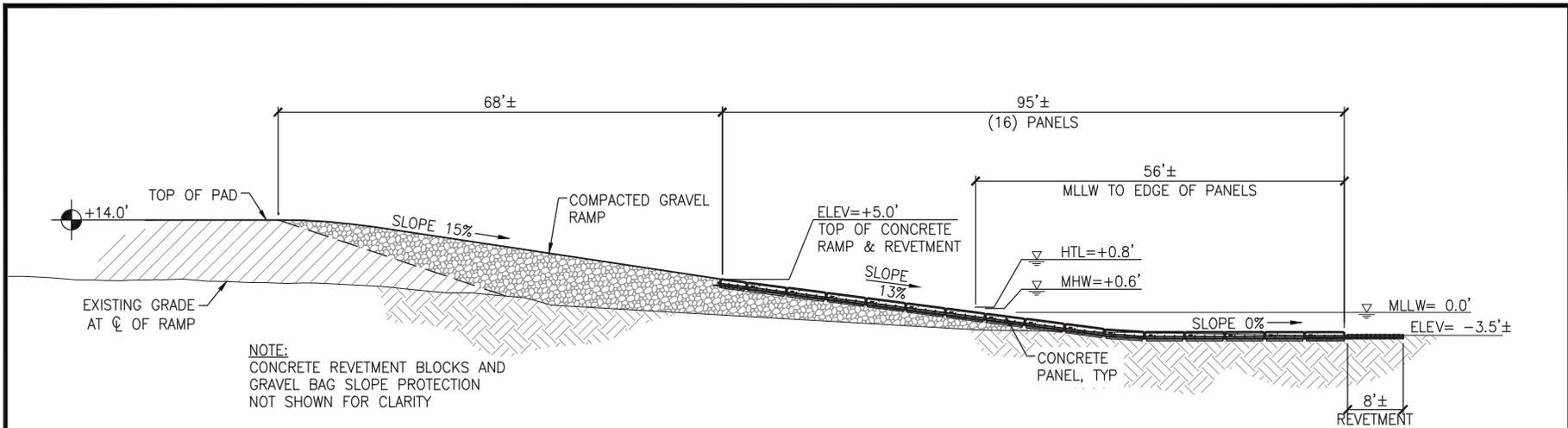
**KEY MAP**



**15 - BOAT LAUNCH PLAN**

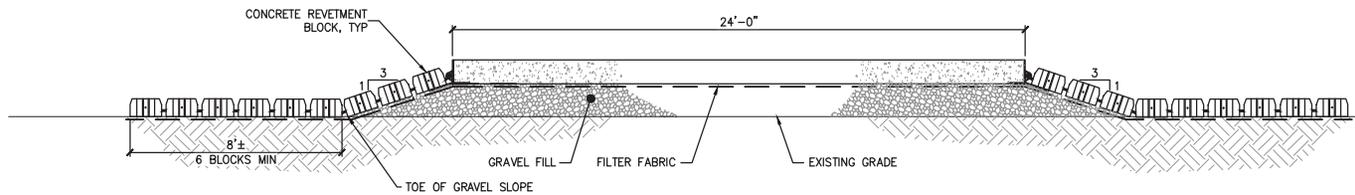
**APPLICANT:** EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
**PROJECT:** POINT THOMSON PROJECT  
**LOCATION:** NORTH SLOPE BOROUGH, ALASKA  
**REFERENCE:** POA-2001-1082-M1  
**WATERBODY:** BEAUFORT SEA  
**DATE:** OCTOBER 2012

POA-2001-1082-M1 10/19/2012



**RAMP ELEVATION**

NOT TO SCALE



**SECTION A'-A**

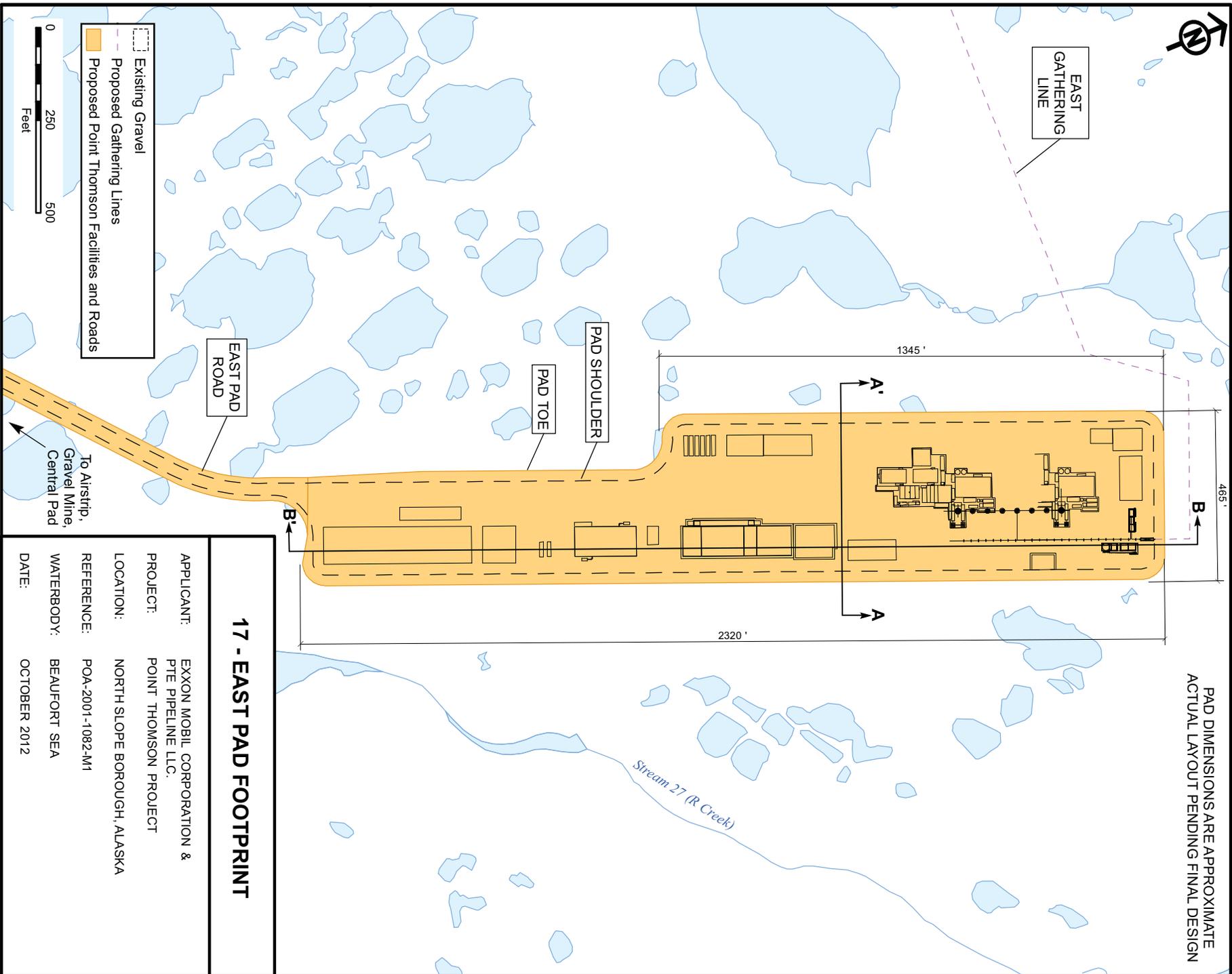
NOT TO SCALE

| <b>16 - BOAT LAUNCH SECTIONS</b> |   |
|----------------------------------|---|
| APPLICANT:                       | EXXON MOBIL CORPORATION & PTE PIPELINE LLC. |
| PROJECT:                         | POINT THOMSON PROJECT                       |
| LOCATION:                        | NORTH SLOPE BOROUGH, ALASKA                 |
| REFERENCE:                       | POA-2001-1082-M1                            |
| WATERBODY:                       | BEAUFORT SEA                                |
| DATE:                            | OCTOBER 2012                                |

SEE FIGURE 15 FOR BOAT LAUNCH PLAN



EAST GATHERING LINE



Existing Gravel

Proposed Gathering Lines

Proposed Point Thomson Facilities and Roads



PAD DIMENSIONS ARE APPROXIMATE  
ACTUAL LAYOUT PENDING FINAL DESIGN

### 17 - EAST PAD FOOTPRINT

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.

PROJECT: POINT THOMSON PROJECT

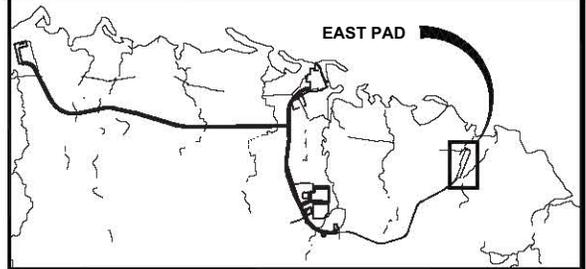
LOCATION: NORTH SLOPE BOROUGH, ALASKA

REFERENCE: POA-2001-1082-M1

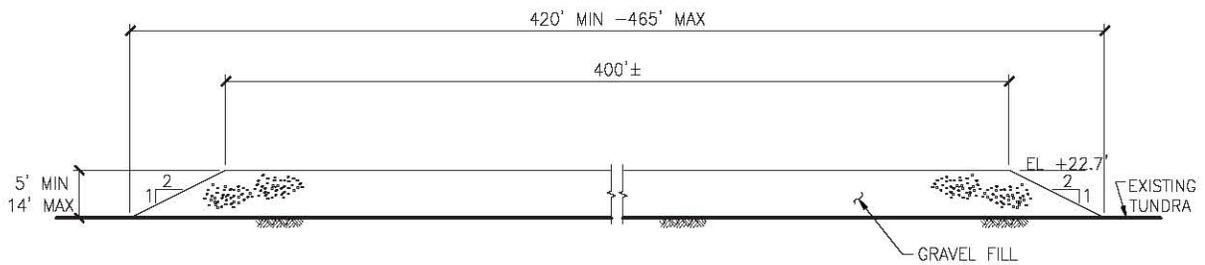
WATERBODY: BEAUFORT SEA

DATE: OCTOBER 2012

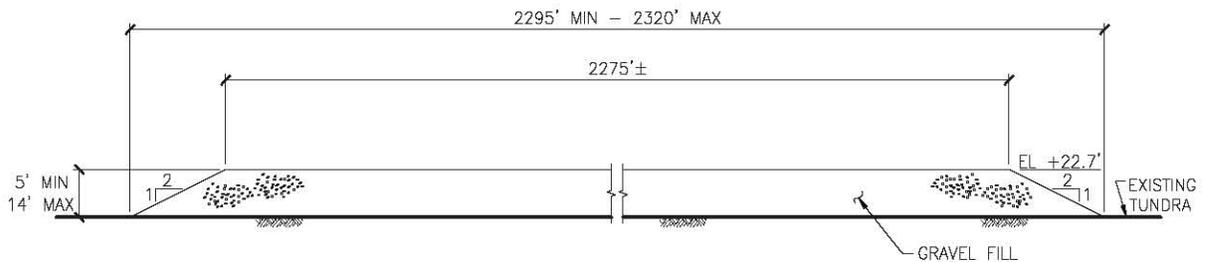
POA-2001-1082-M1 10/19/2012



**KEY MAP**



**SECTION A'-A**  
NOT TO SCALE

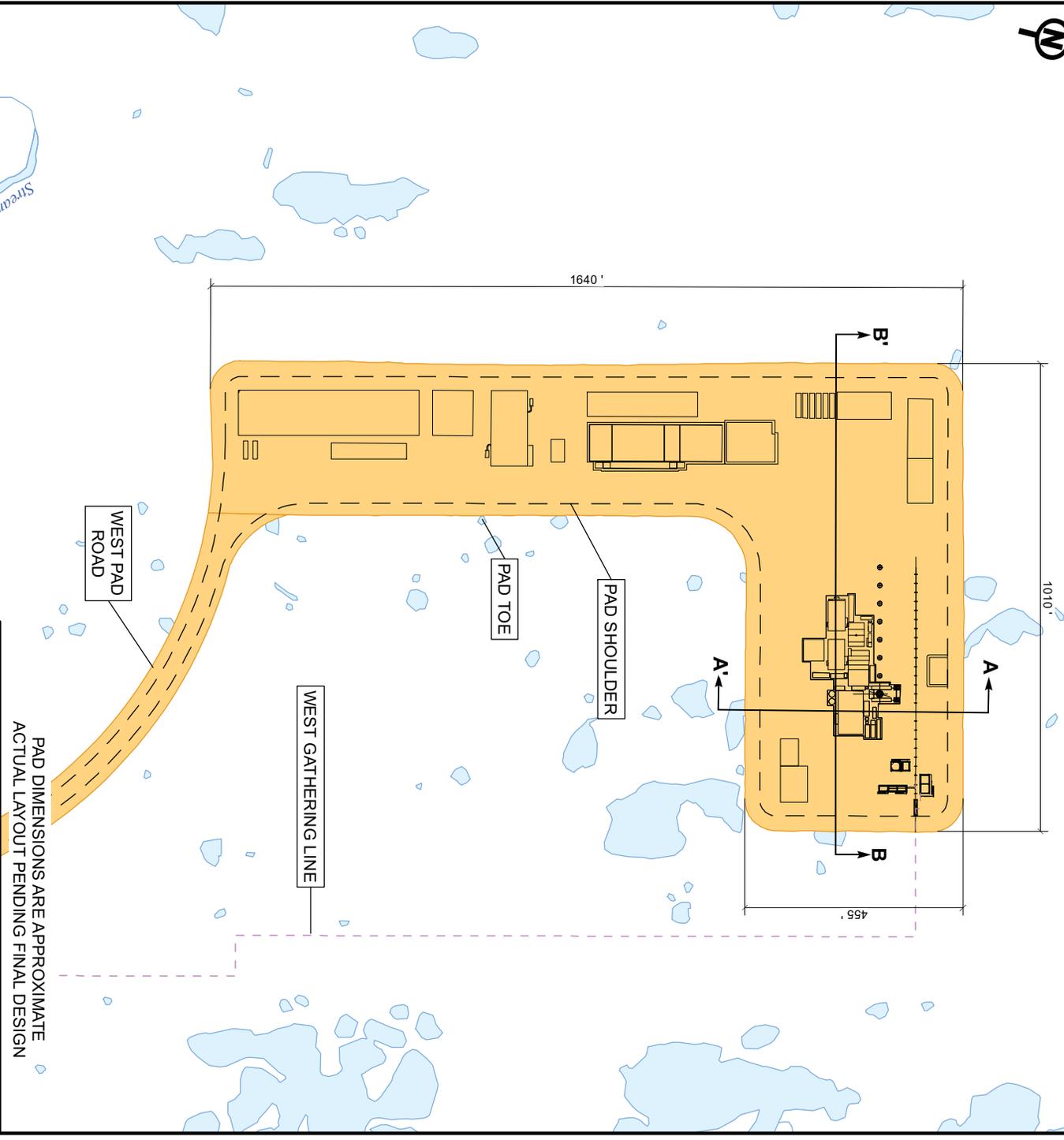


**SECTION B'-B**  
NOT TO SCALE

**18 - EAST PAD SECTIONS**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

SEE FIGURE 17 FOR EAST PAD PLAN

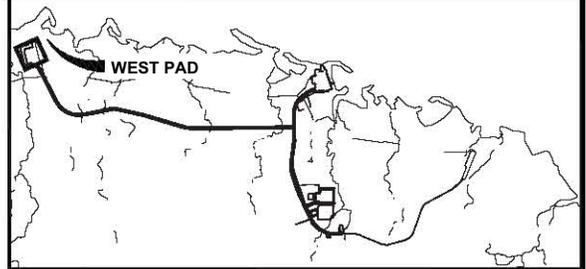


PAD DIMENSIONS ARE APPROXIMATE  
ACTUAL LAYOUT PENDING FINAL DESIGN

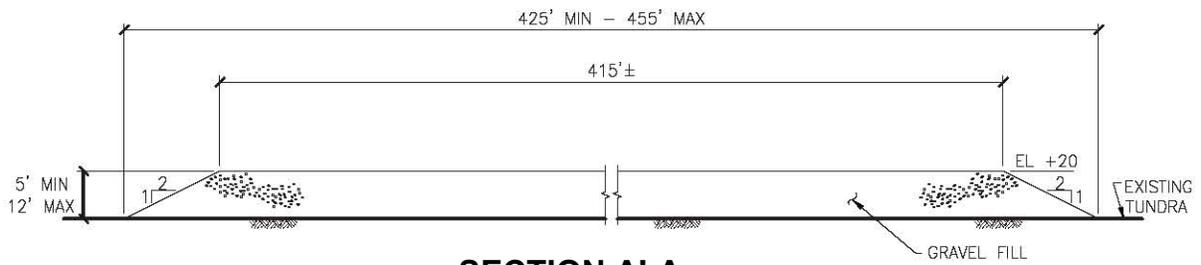
### 19 - WEST PAD FOOTPRINT

|            |   |
|------------|---|
| APPLICANT: | EXXON MOBIL CORPORATION & PTE PIPELINE LLC. |
| PROJECT:   | POINT THOMSON PROJECT                       |
| LOCATION:  | NORTH SLOPE BOROUGH, ALASKA                 |
| REFERENCE: | POA-2001-1082-M1                            |
| WATERBODY: | BEAUFORT SEA                                |
| DATE:      | OCTOBER 2012                                |

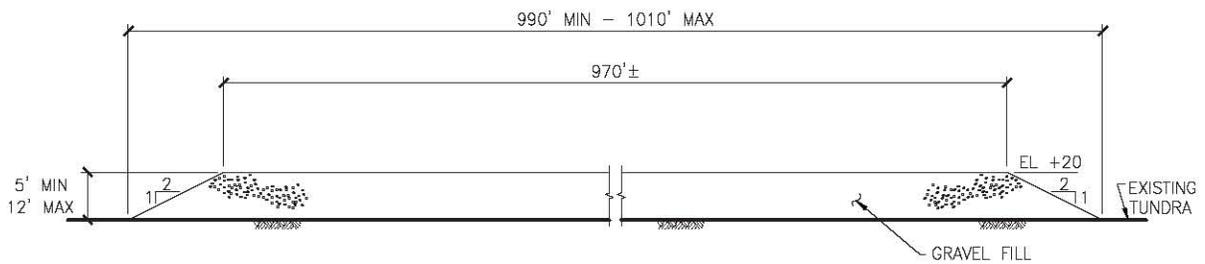
POA-2001-1082-M1 10/19/2012



**KEY MAP**



**SECTION A'-A**  
NOT TO SCALE

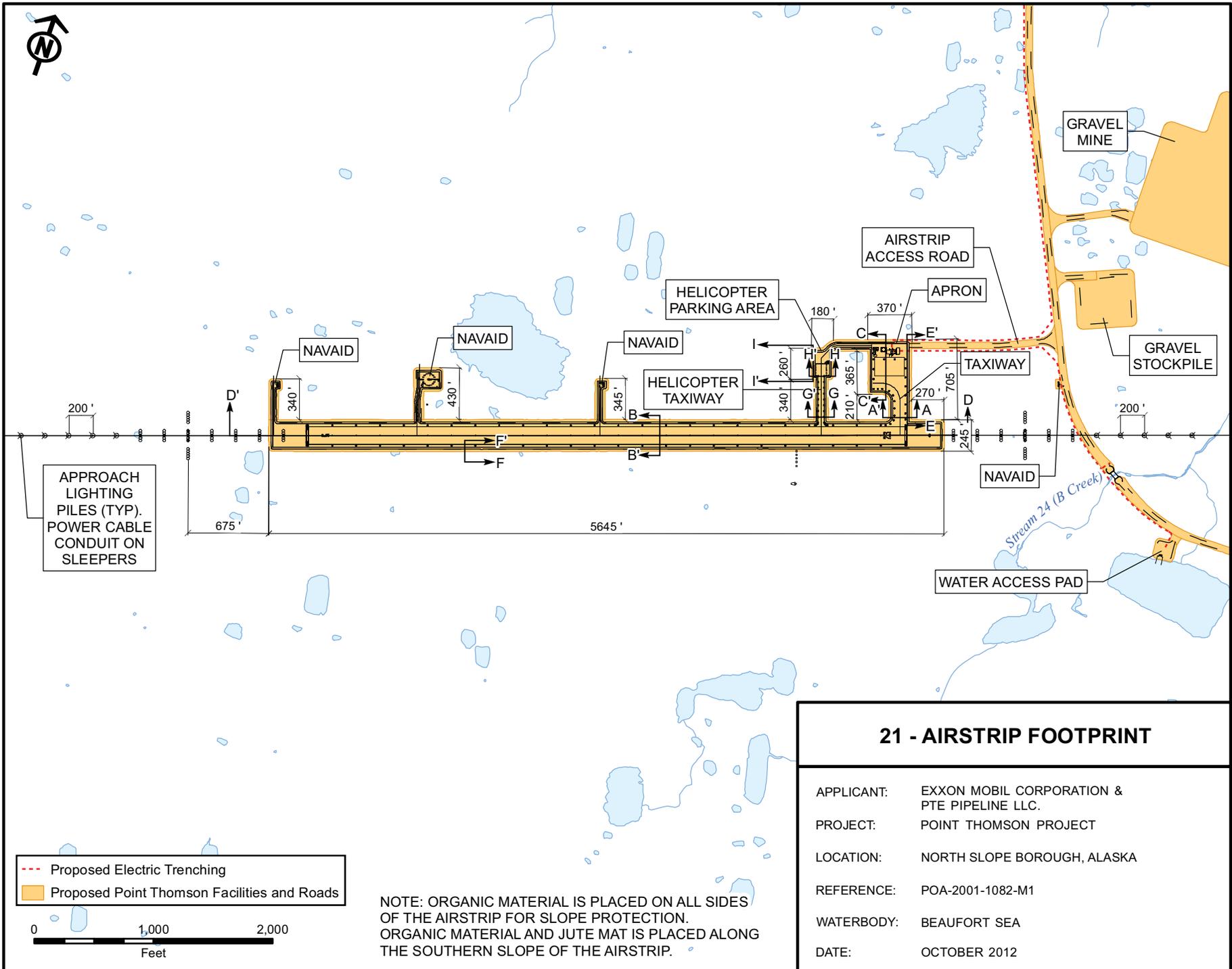


**SECTION B'-B**  
NOT TO SCALE

**20 - WEST PAD SECTIONS**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

SEE FIGURE 19 FOR WEST PAD PLAN



APPROACH LIGHTING PILES (TYP). POWER CABLE CONDUIT ON SLEEPERS

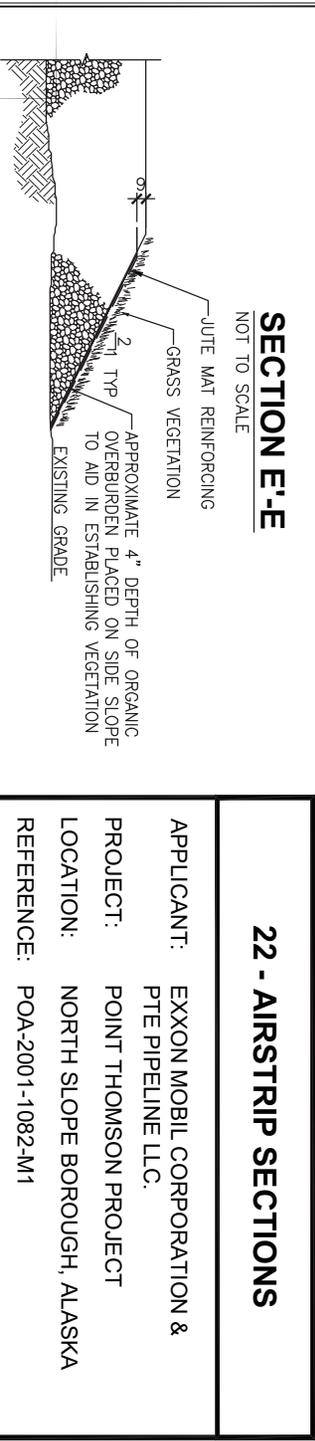
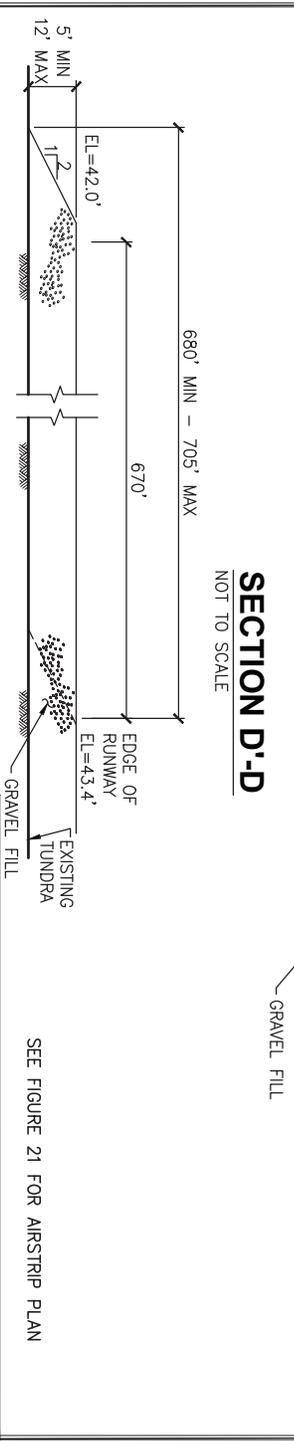
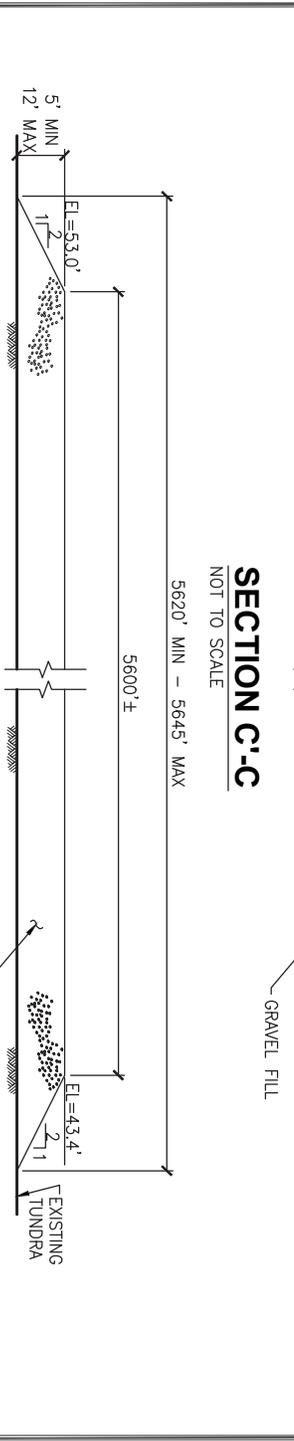
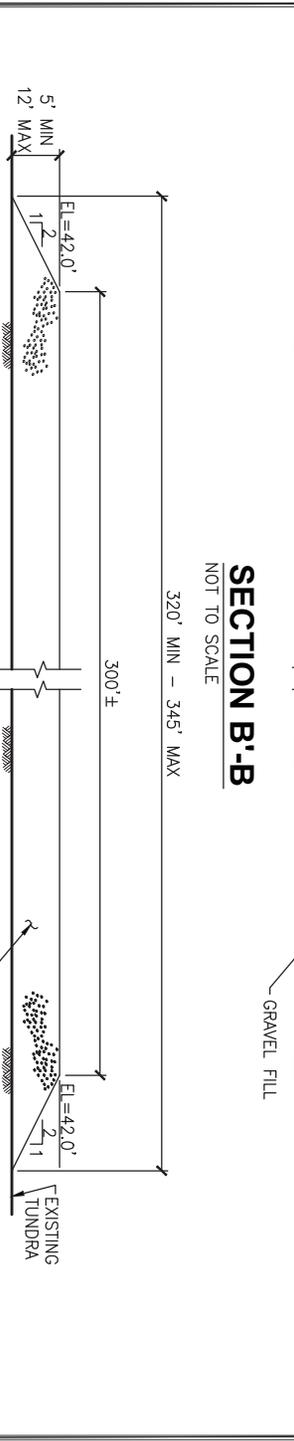
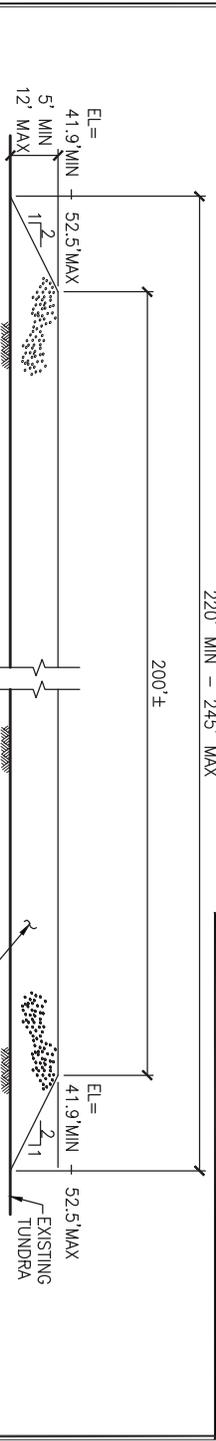
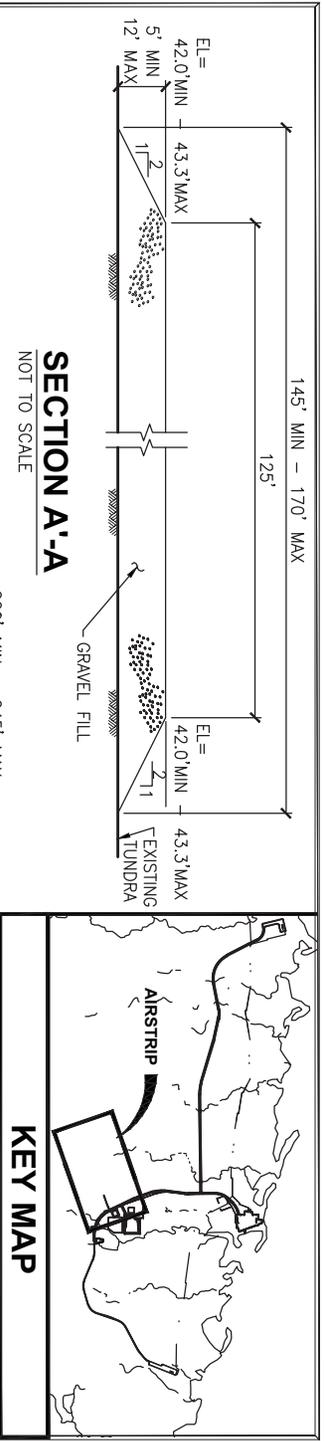
--- Proposed Electric Trenching  
 Proposed Point Thomson Facilities and Roads

0 1,000 2,000  
 Feet

NOTE: ORGANIC MATERIAL IS PLACED ON ALL SIDES OF THE AIRSTRIP FOR SLOPE PROTECTION. ORGANIC MATERIAL AND JUTE MAT IS PLACED ALONG THE SOUTHERN SLOPE OF THE AIRSTRIP.

### 21 - AIRSTRIP FOOTPRINT

|            |   |
|------------|---|
| APPLICANT: | EXXON MOBIL CORPORATION & PTE PIPELINE LLC. |
| PROJECT:   | POINT THOMSON PROJECT                       |
| LOCATION:  | NORTH SLOPE BOROUGH, ALASKA                 |
| REFERENCE: | POA-2001-1082-M1                            |
| WATERBODY: | BEAUFORT SEA                                |
| DATE:      | OCTOBER 2012                                |

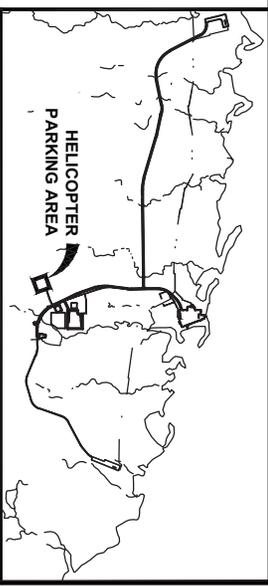


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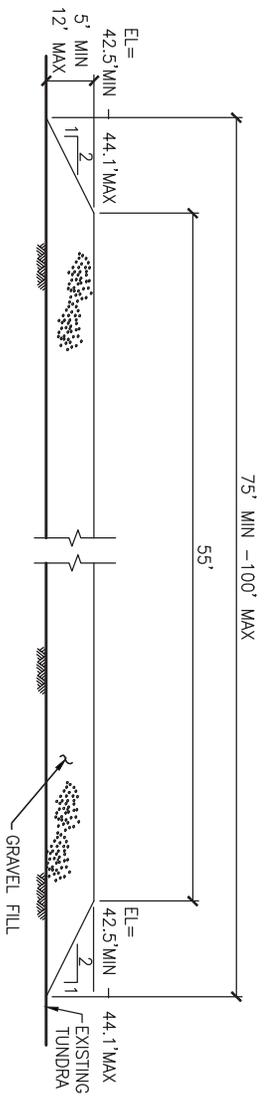
**22 - AIRSTRIP SECTIONS**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

POA-2001-1082-M1 10/19/2012

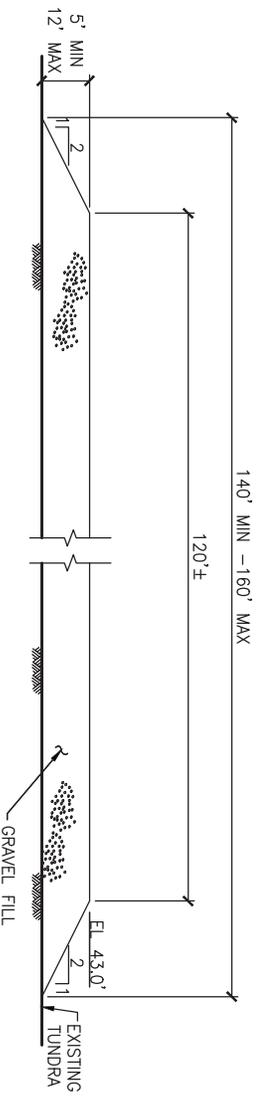


**KEY MAP**



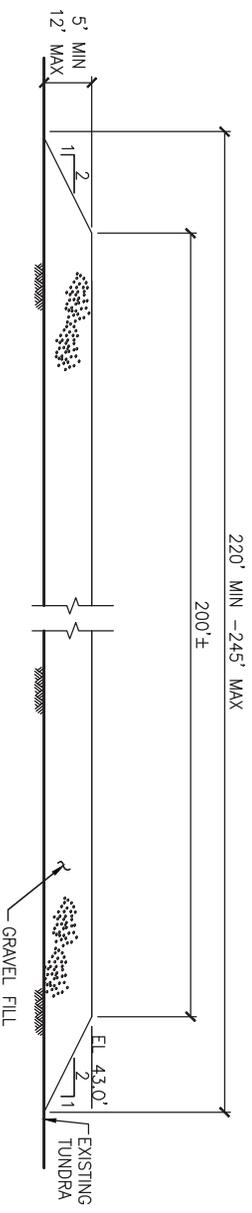
**SECTION G'-G**

NOT TO SCALE



**SECTION H'-H**

NOT TO SCALE



**SECTION I'-I**

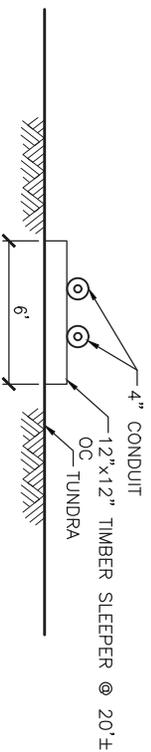
NOT TO SCALE

**23 - AIRSTRIP AUXILIARY FEATURE SECTIONS**

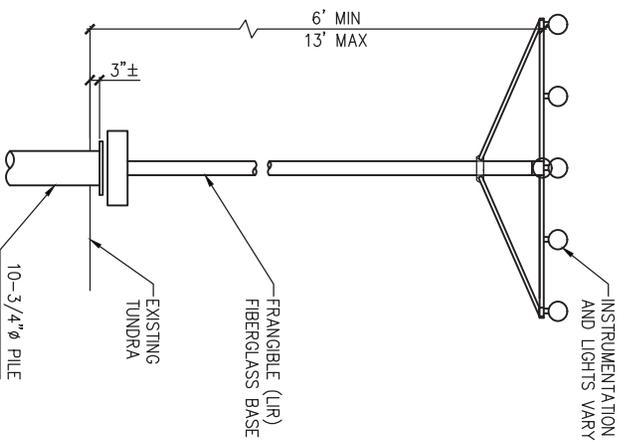
APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
PROJECT: POINT THOMSON PROJECT  
LOCATION: NORTH SLOPE BOROUGH, ALASKA  
REFERENCE: POA-2001-1082-M1  
WATERBODY: BEAUFORT SEA  
DATE: OCTOBER 2012

SEE FIGURE 21 FOR AIRSTRIP PLAN

POA-2001-1082-M1 10/19/2012



**NAVAID POWER DISTRIBUTION  
CONDUIT ON SLEEPER SECTION**  
NOT TO SCALE

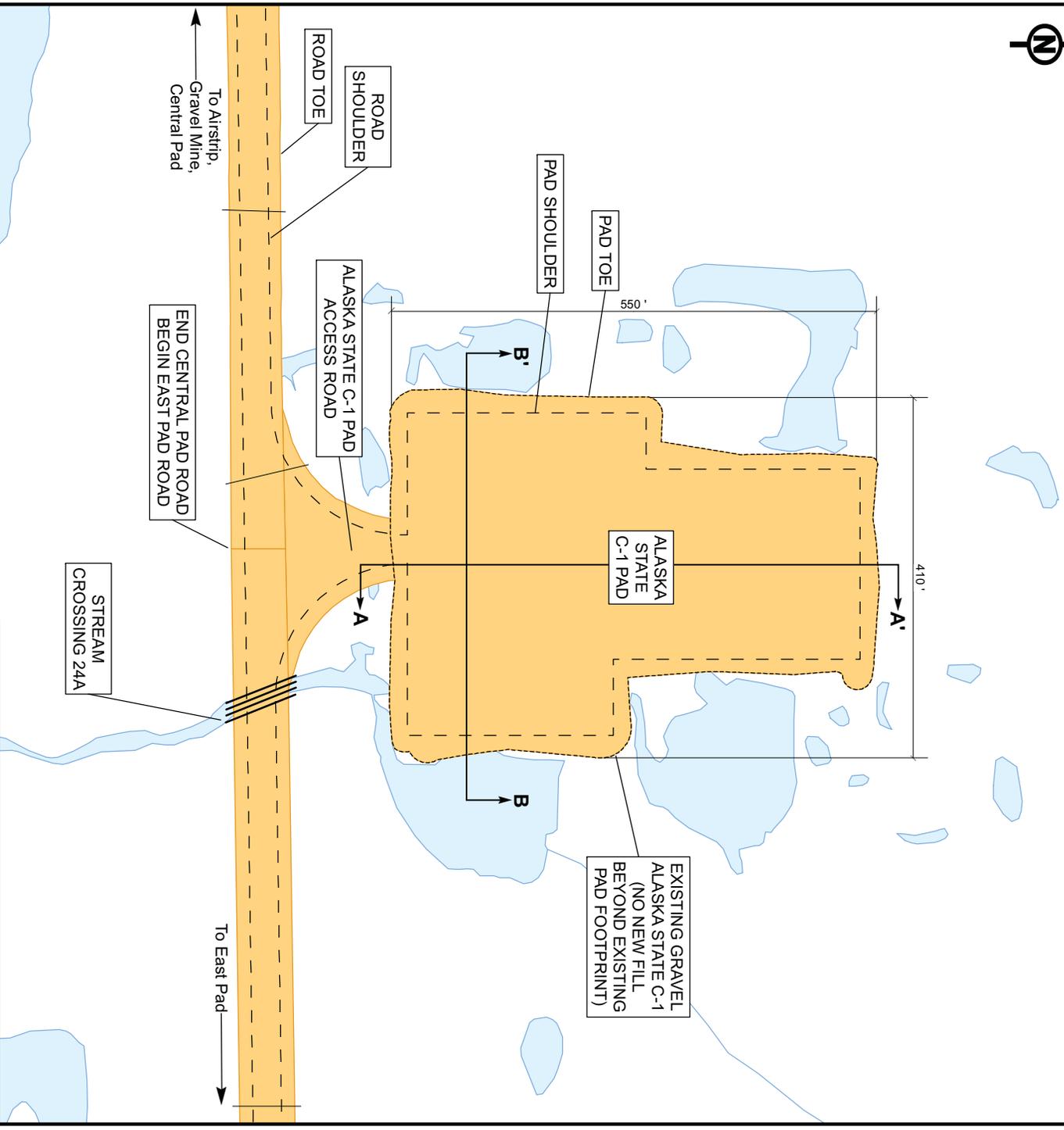


**TYPICAL NAVAID APPROACH LIGHT ON PILE**  
**20 TOTAL**  
NOT TO SCALE

**24 - AIRSTRIP LIGHTING SYSTEM  
SECTIONS**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
PROJECT: POINT THOMSON PROJECT  
LOCATION: NORTH SLOPE BOROUGH, ALASKA  
REFERENCE: POA-2001-1082-M1  
WATERBODY: BEAUFORT SEA  
DATE: OCTOBER 2012

SEE FIGURE 21 FOR NAVAID POWER AND APPROACH LIGHT PLAN



PAD DIMENSIONS ARE APPROXIMATE  
ACTUAL LAYOUT PENDING FINAL DESIGN

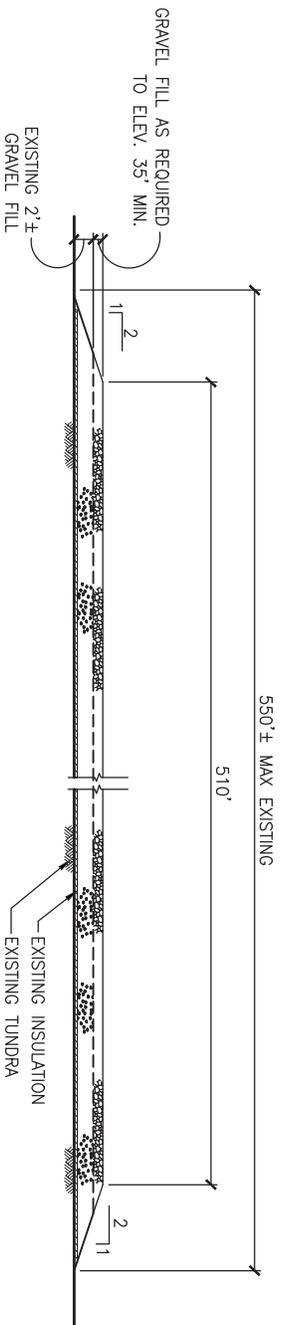
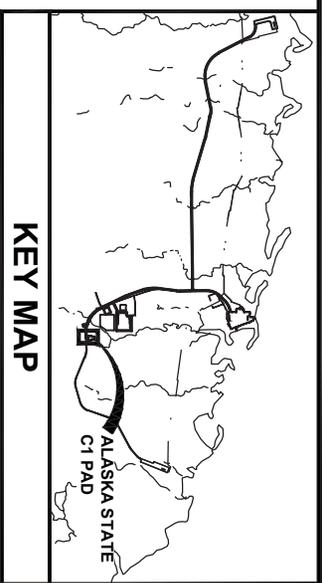
- Stream Crossing Culvert
- Cross Drainage Culvert
- Existing Gravel
- Proposed Point Thomson Facilities and Roads



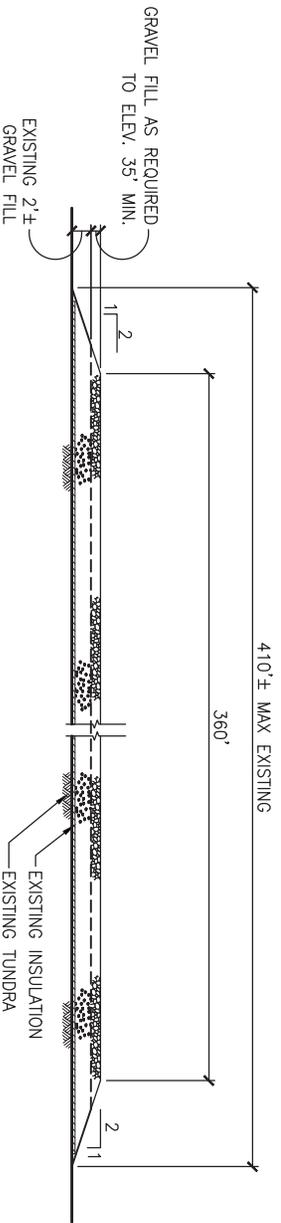
### 25 - ALASKA STATE C-1 PAD FOOTPRINT

APPLICANT: EXXON MOBIL CORPORATION &  
PTE PIPELINE LLC.  
PROJECT: POINT THOMSON PROJECT  
LOCATION: NORTH SLOPE BOROUGH, ALASKA  
REFERENCE: POA-2001-1082-M1  
WATERBODY: BEAUFORT SEA  
DATE: OCTOBER 2012

POA-2001-1082-M1 10/19/2012



**SECTION A-A**  
NOT TO SCALE



**SECTION B-B**  
NOT TO SCALE

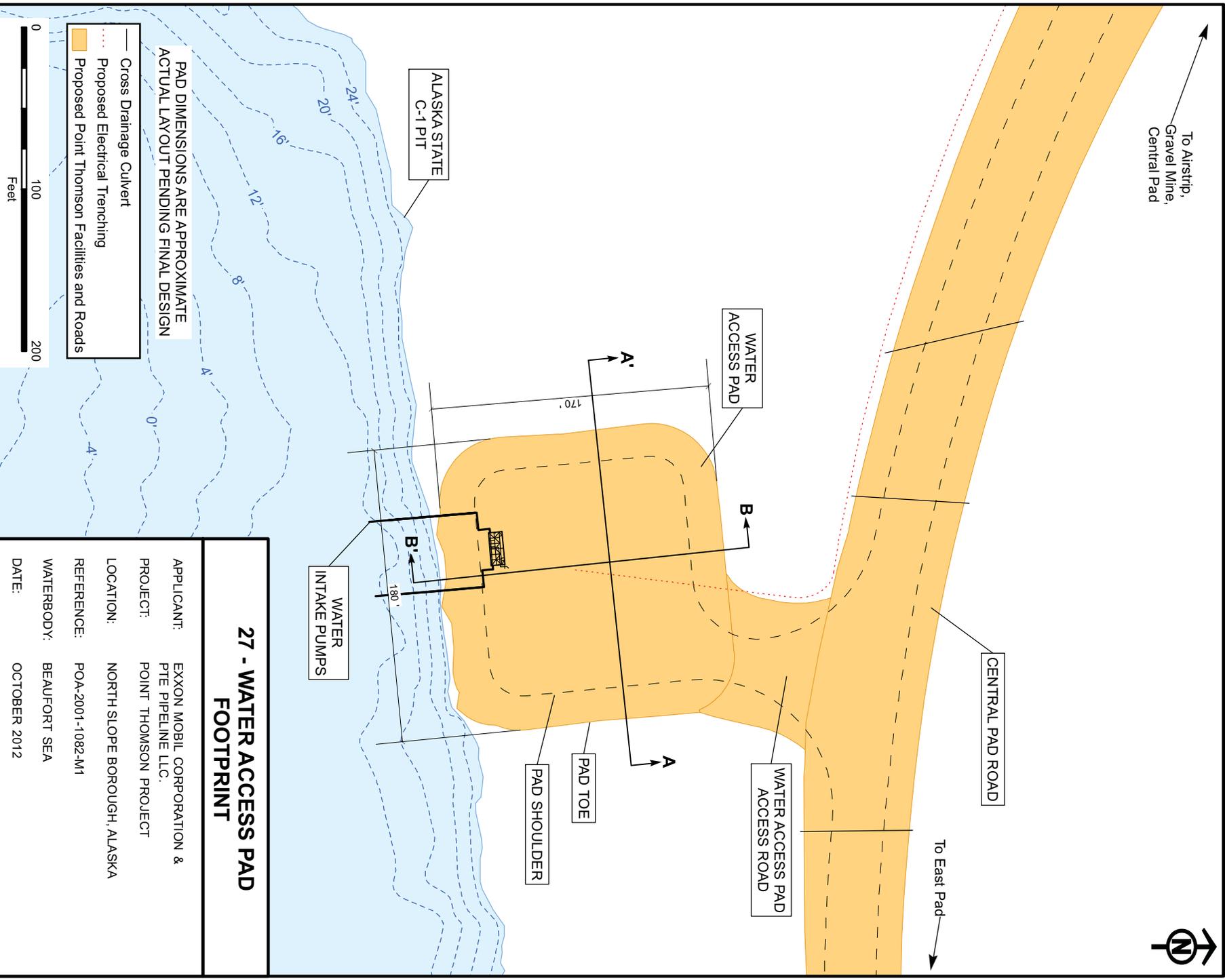
**26 - ALASKA STATE C-1 PAD SECTIONS**

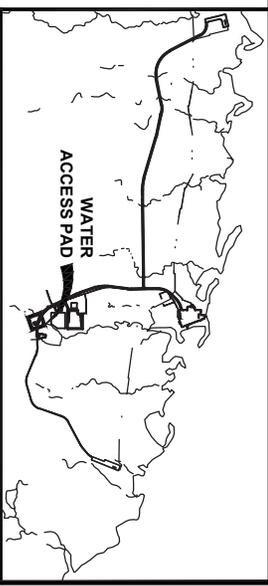
APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

SEE FIGURE 25 FOR ALASKA STATE C-1 PAD PLAN

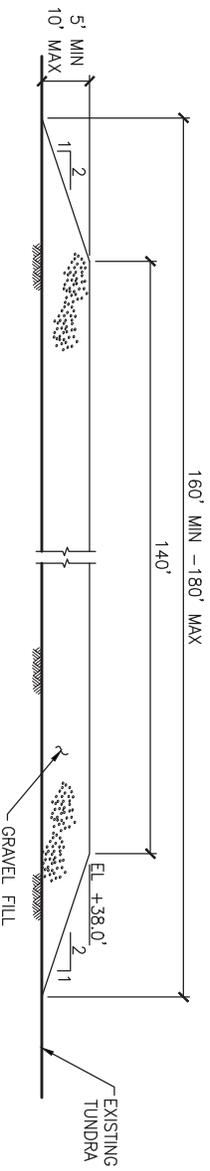
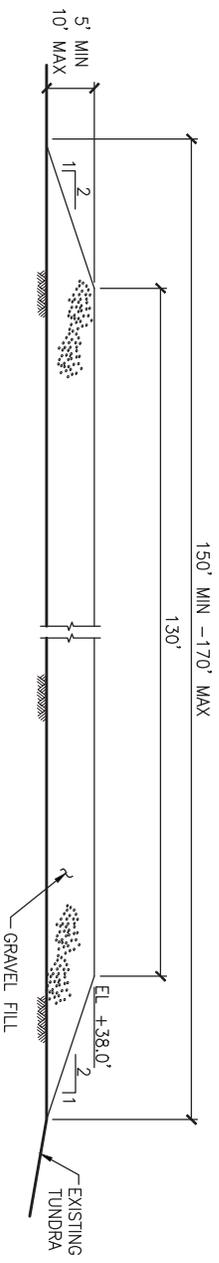
POA-2001-1082-M1 10/19/2012

To Airstrip,  
Gravel Mine,  
Central Pad





**KEY MAP**



**28 - WATER ACCESS PAD SECTIONS**

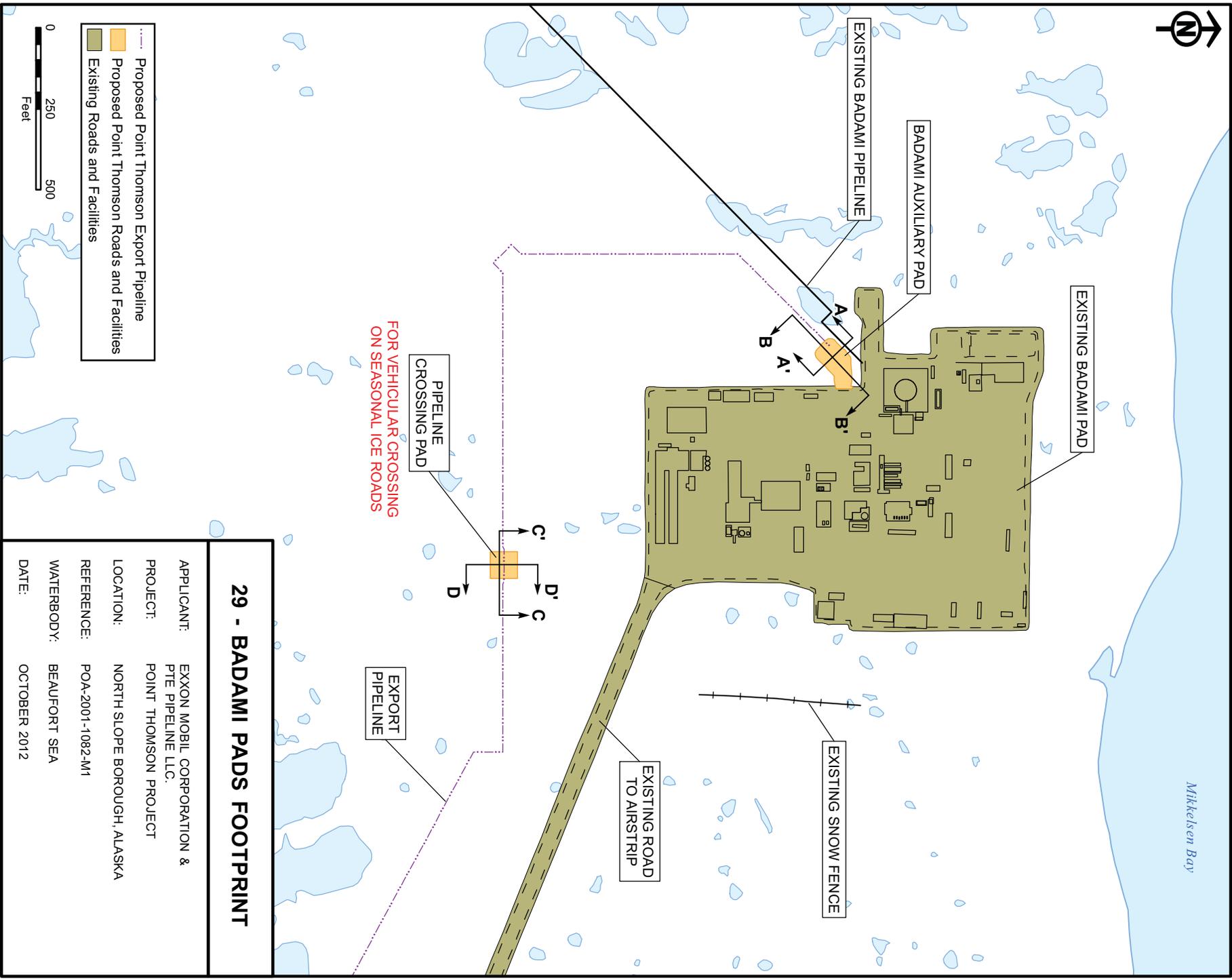
APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

SEE FIGURE 27 FOR WATER ACCESS PAD PLAN

POA-2001-1082-M1 10/19/2012



Mikkelsen Bay



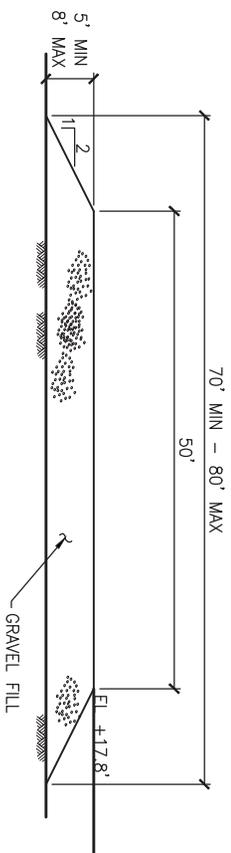
- Proposed Point Thomson Export Pipeline
- Proposed Point Thomson Roads and Facilities
- Existing Roads and Facilities



### 29 - BADAMI PADS FOOTPRINT

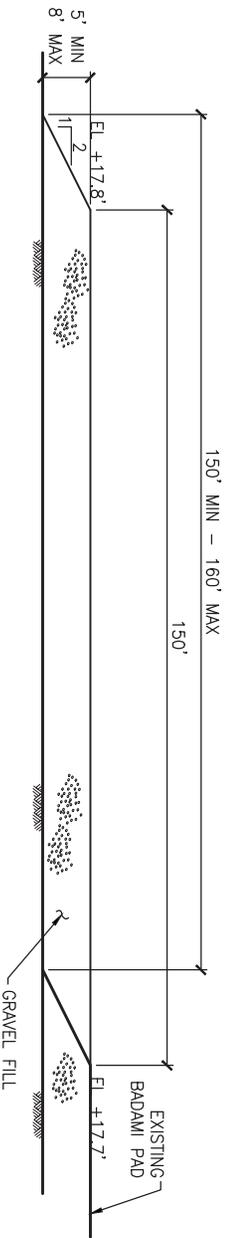
APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
PROJECT: POINT THOMSON PROJECT  
LOCATION: NORTH SLOPE BOROUGH, ALASKA  
REFERENCE: POA-2001-1082-M1  
WATERBODY: BEAUFORT SEA  
DATE: OCTOBER 2012

POA-2001-1082-M1 10/19/2012



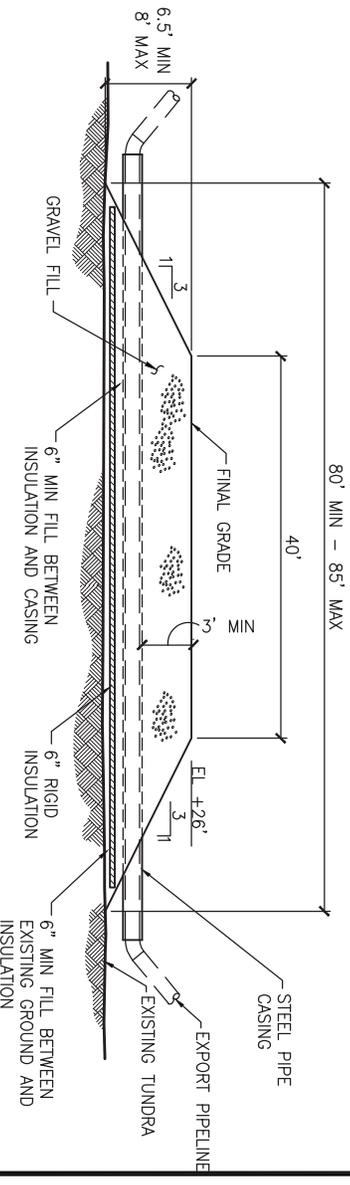
**SECTION A-A**

NOT TO SCALE



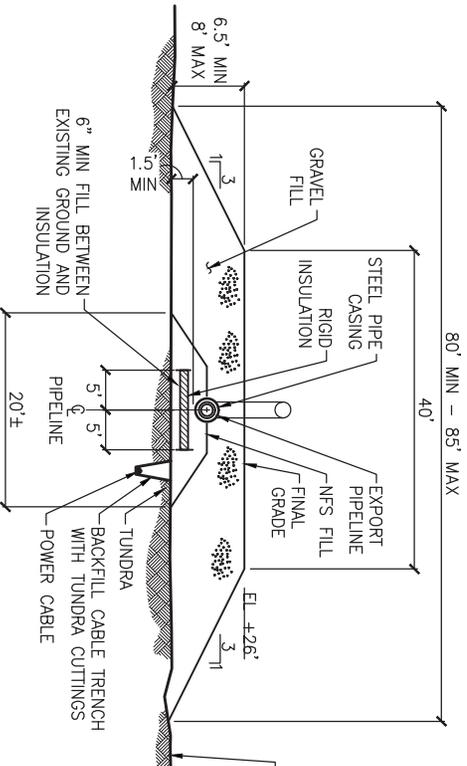
**SECTION B-B**

NOT TO SCALE



**SECTION C-C**

NOT TO SCALE



**SECTION D-D**

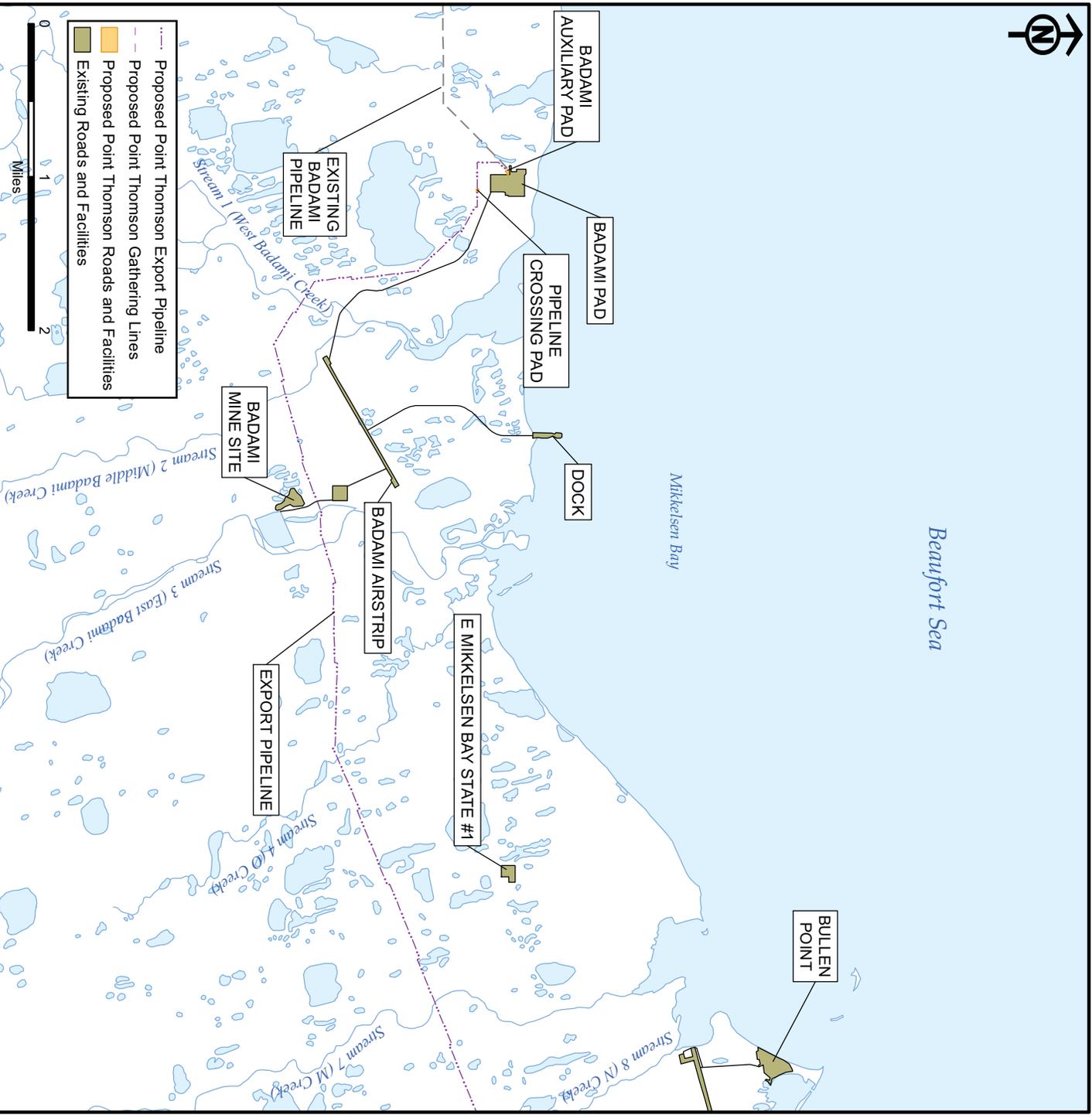
NOT TO SCALE

**30 - BADAMI PADS SECTIONS**

SEE FIGURE 29 FOR BADAMI PADS PLAN

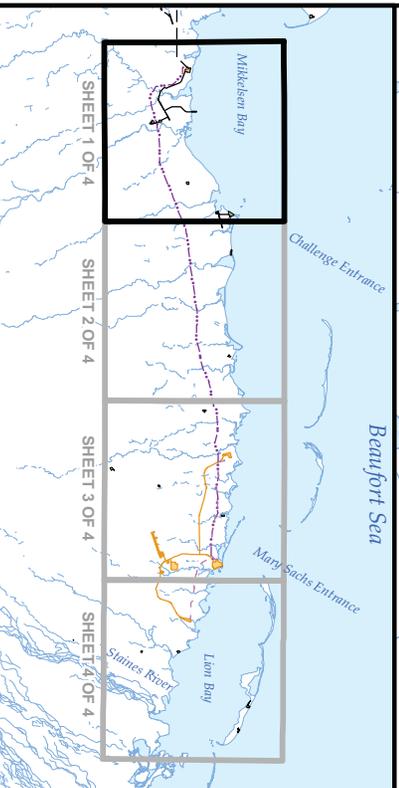
APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

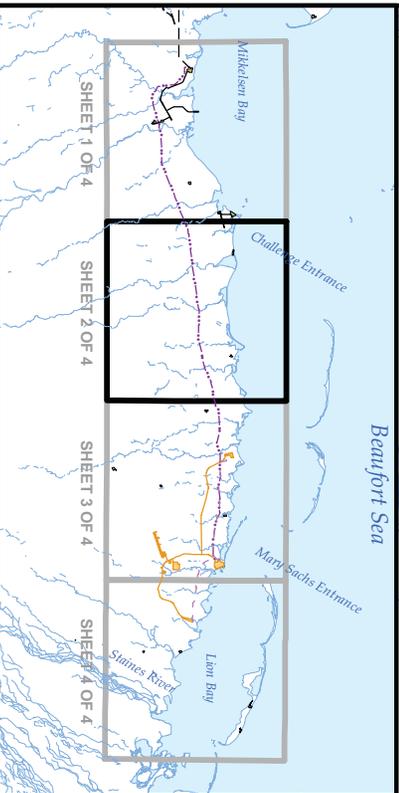
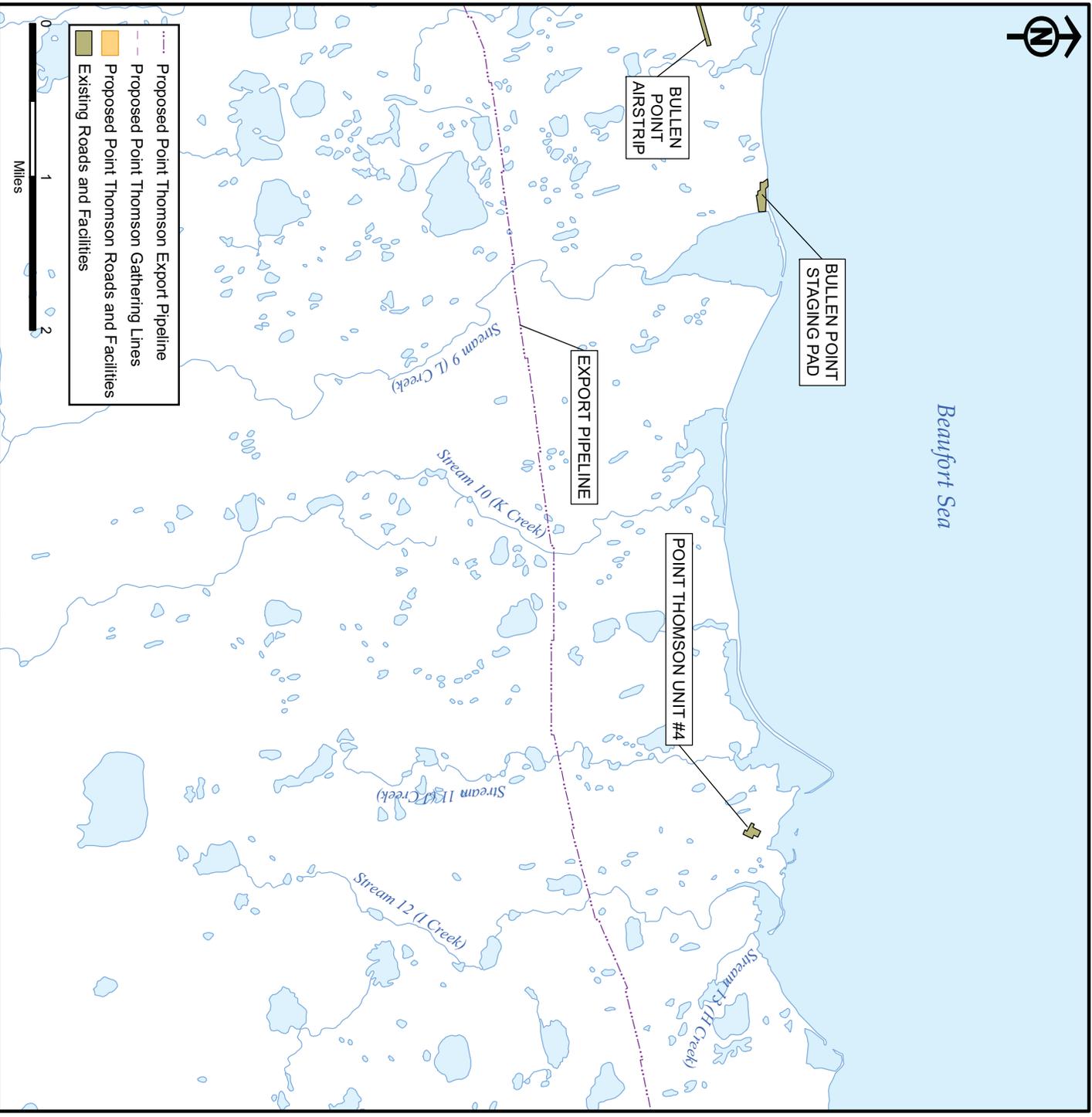
POA-2001-1082-M1 10/19/2012



### 31 - PIPELINE OVERVIEW SHEET 1 OF 4

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
PROJECT: POINT THOMSON PROJECT  
LOCATION: NORTH SLOPE BOROUGH, ALASKA  
REFERENCE: POA-2001-1082-M1  
WATERBODY: BEAUFORT SEA  
DATE: OCTOBER 2012





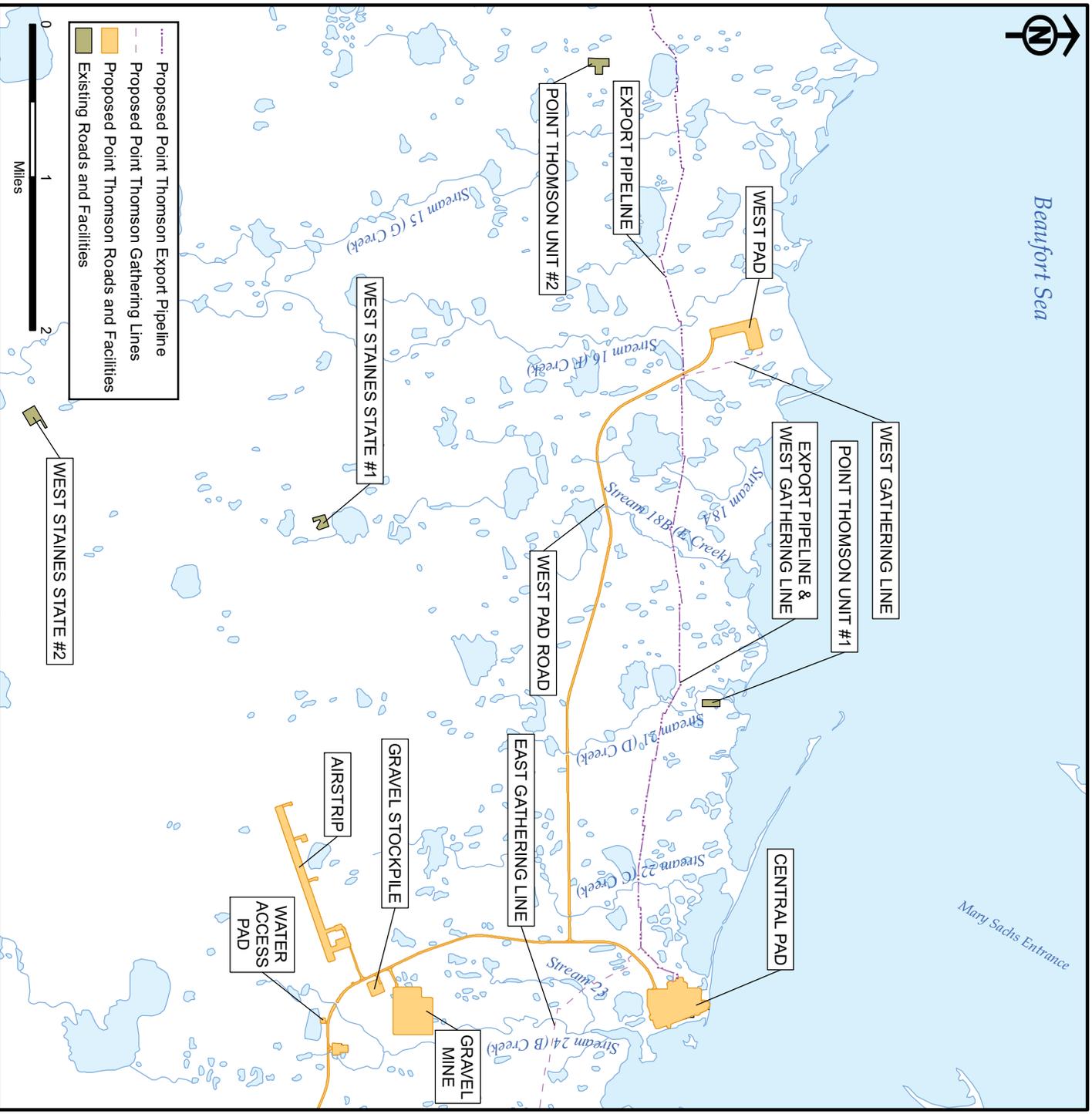
**32 - PIPELINE OVERVIEW  
SHEET 2 OF 4**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012



Beaufort Sea

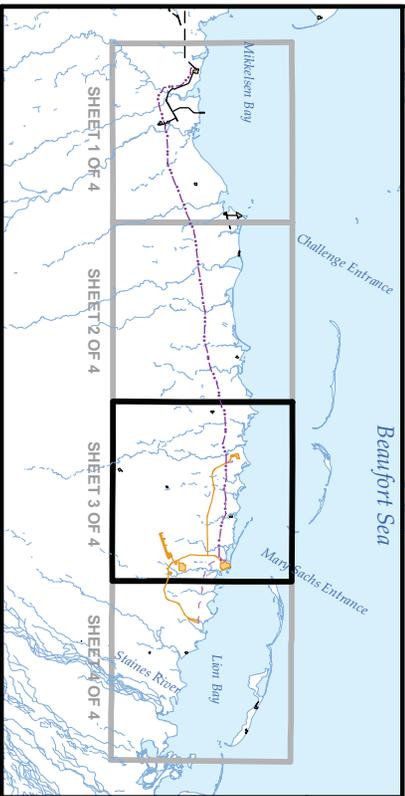
Mary Sachs Entrance



- Proposed Point Thomson Export Pipeline
- Proposed Point Thomson Gathering Lines
- Proposed Point Thomson Roads and Facilities
- Existing Roads and Facilities



WEST STAINES STATE #2



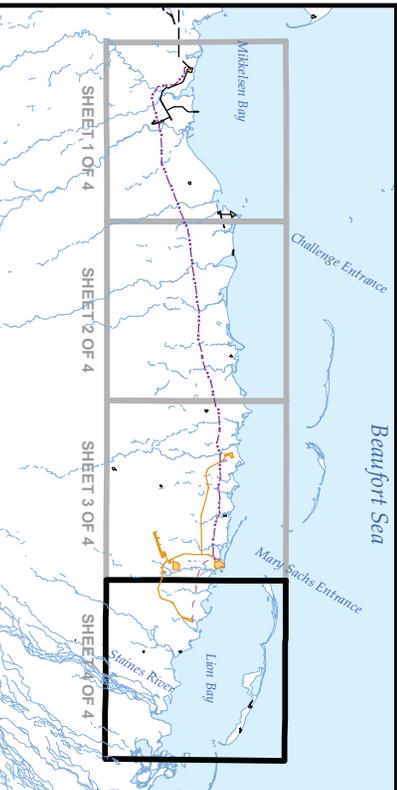
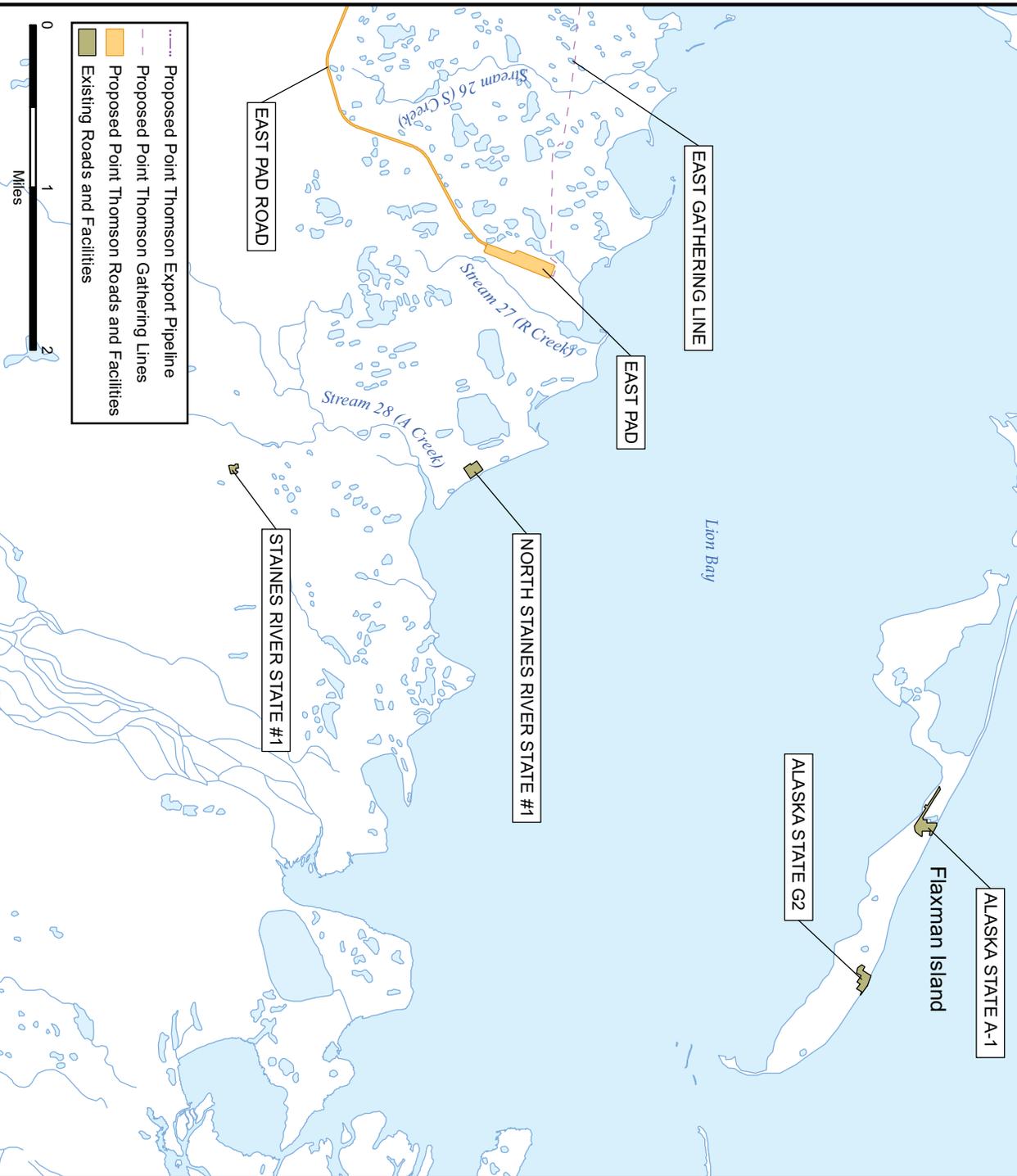
### 33 - PIPELINE OVERVIEW SHEET 3 OF 4

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012



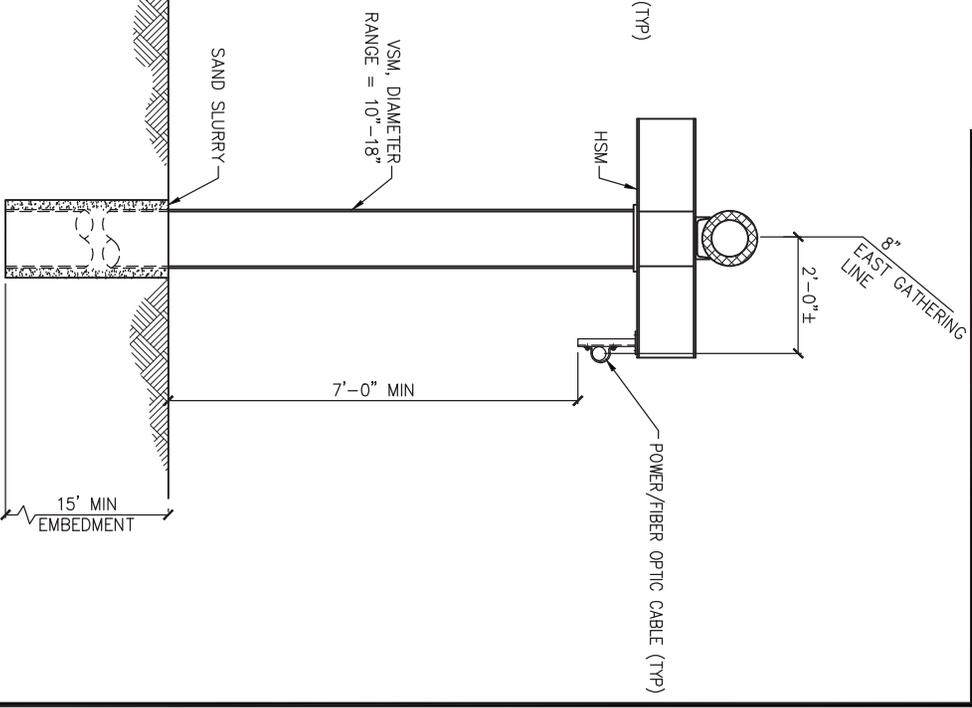
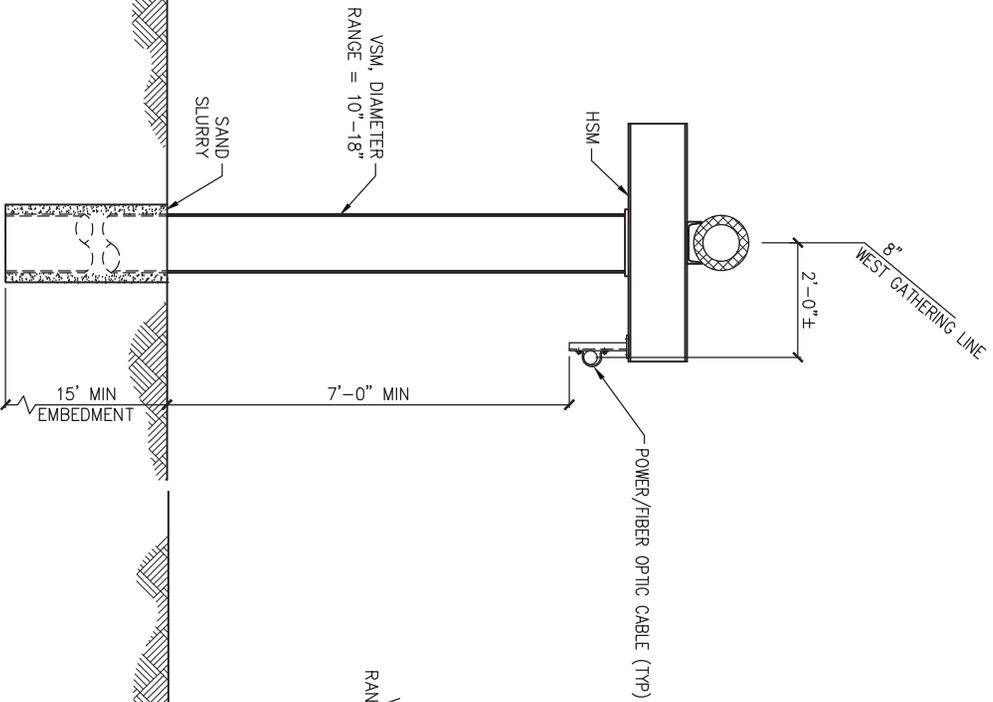
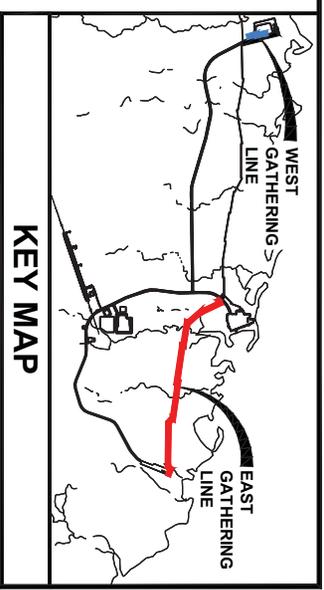
Mary Sachs Island

Beaufort Sea



**34 - PIPELINE OVERVIEW  
SHEET 4 OF 4**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012



### WEST GATHERING LINE

NOT TO SCALE

### EAST GATHERING LINE

NOT TO SCALE

## 35 - PIPELINE SECTIONS GATHERING LINES

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.

PROJECT: POINT THOMSON PROJECT

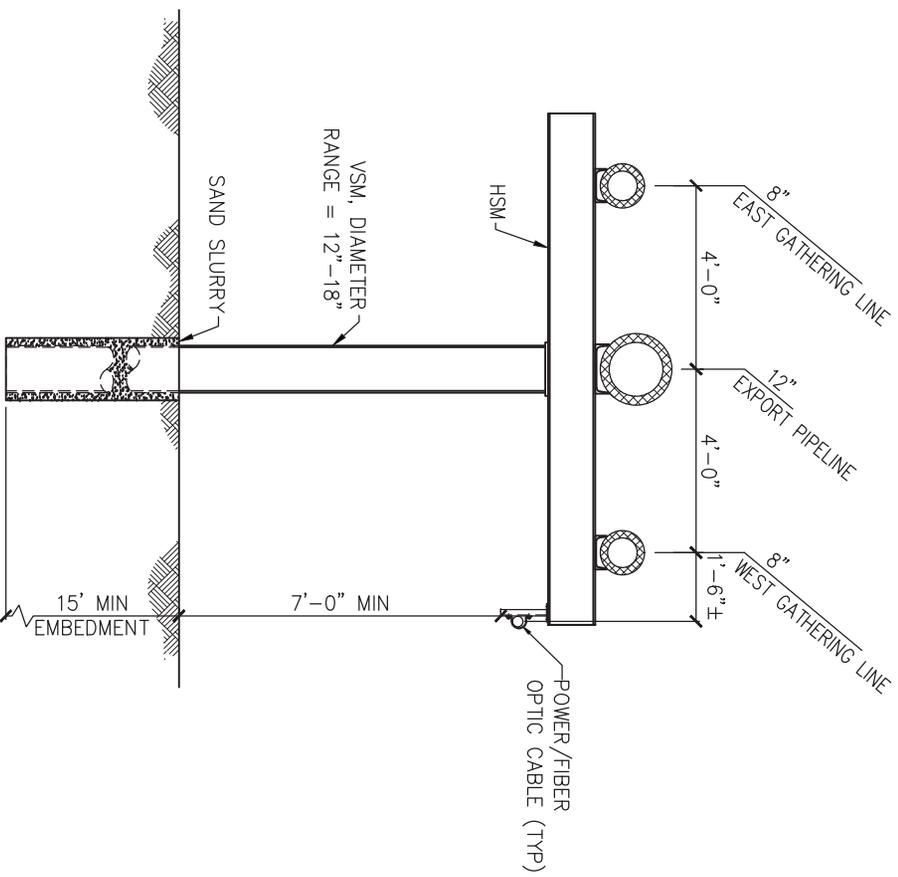
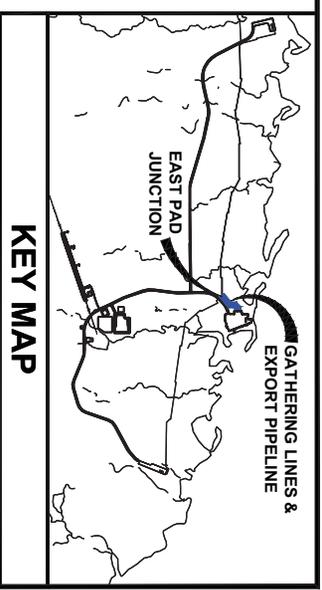
LOCATION: NORTH SLOPE BOROUGH, ALASKA

REFERENCE: POA-2001-1082-M1

WATERBODY: BEAUFORT SEA

DATE: OCTOBER 2012

POA-2001-1082-M1 10/19/2012



**GATHERING LINES & EXPORT PIPELINE - CENTRAL  
PAD TO EAST PAD JUNCTION ON SINGLE VSM**

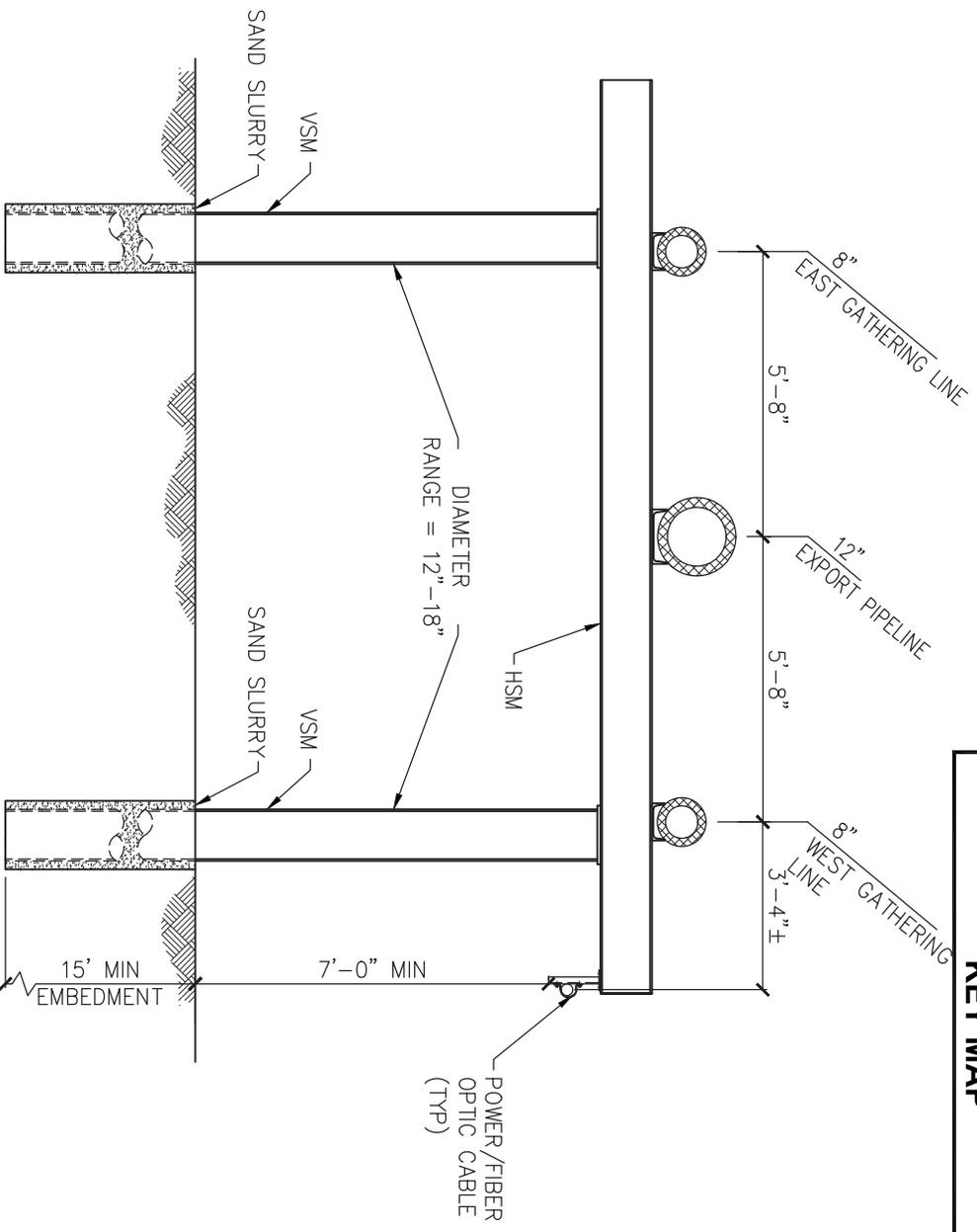
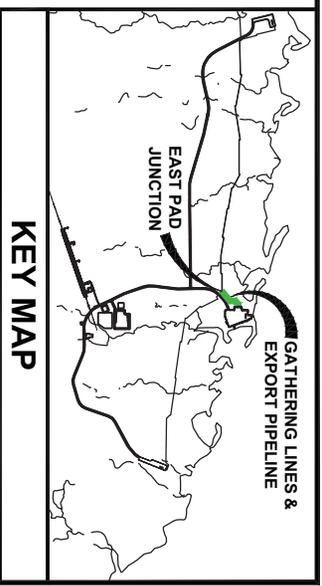
NOT TO SCALE

NOTE:  
TYPICAL CONFIGURATION IS SINGLE VSM, DUAL VSM  
TYPICALLY TAKE PLACE AT PIPELINE EXPANSION LOOPS  
AND WHERE ANCHORED FOR STRUCTURAL INTEGRITY.

**36 - PIPELINE SECTIONS GATHERING LINES &  
EXPORT PIPELINE (SINGLE VSM)**

APPLICANT: EXXON MOBIL CORPORATION &  
PTE PIPELINE LLC.  
PROJECT: POINT THOMSON PROJECT  
LOCATION: NORTH SLOPE BOROUGH, ALASKA  
REFERENCE: POA-2001-1082-M1  
WATERBODY: BEAUFORT SEA  
DATE: OCTOBER 2012

POA-2001-1082-M1 10/19/2012

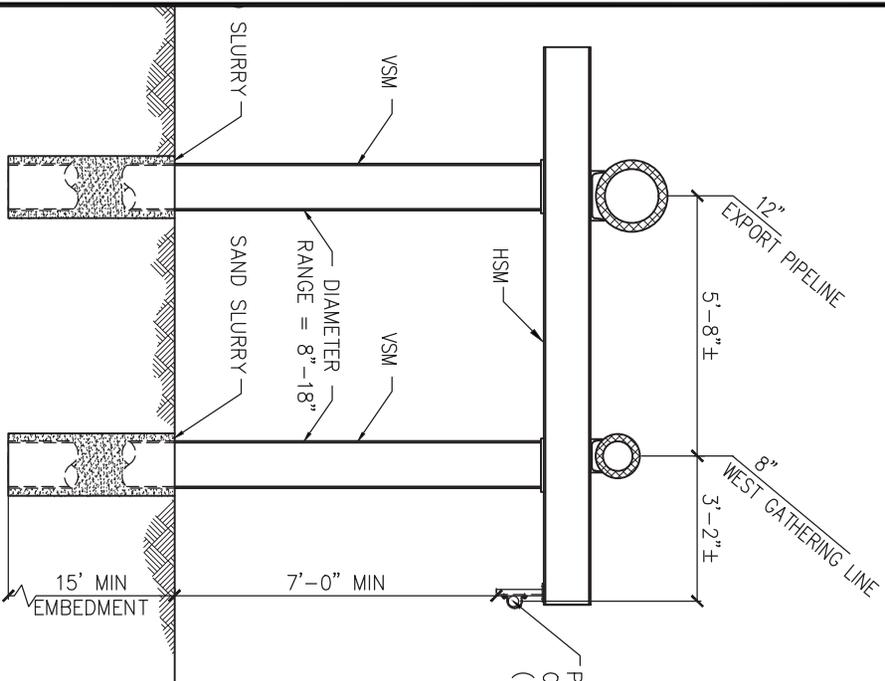
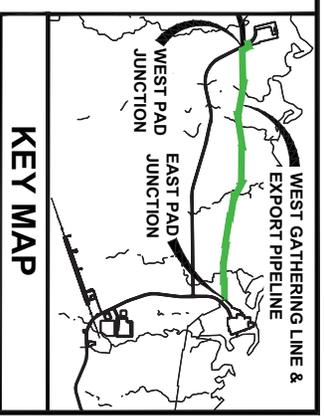


NOTE:  
TYPICAL CONFIGURATION IS SINGLE VSM, DUAL VSM  
TYPICALLY TAKE PLACE AT PIPELINE EXPANSION LOOPS  
AND WHERE ANCHORED FOR STRUCTURAL INTEGRITY.

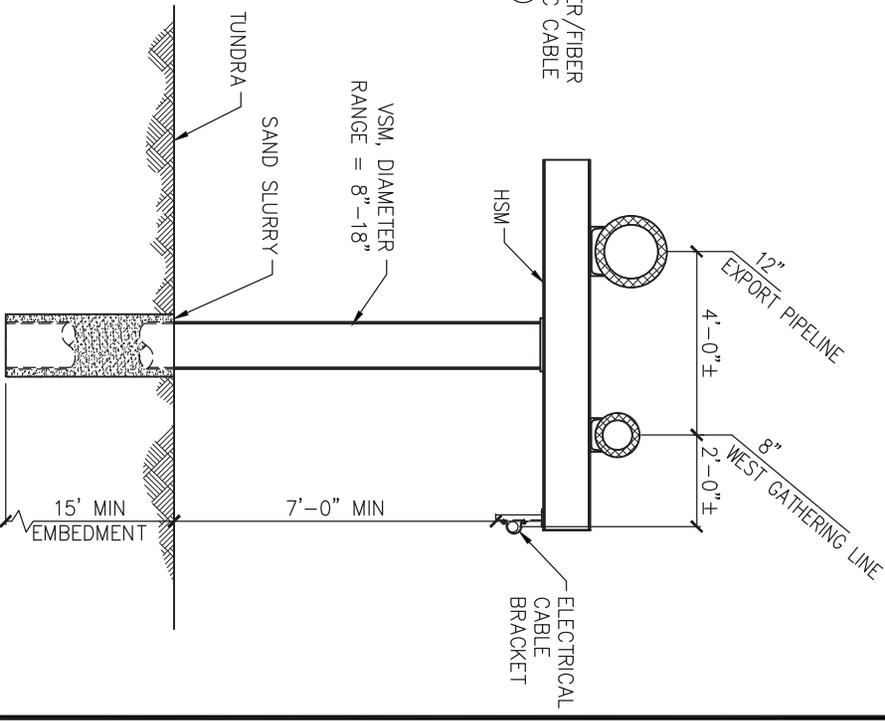
**37 - PIPELINE SECTIONS GATHERING LINES & EXPORT PIPELINE (DUAL VSM)**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
PROJECT: POINT THOMSON PROJECT  
LOCATION: NORTH SLOPE BOROUGH, ALASKA  
REFERENCE: POA-2001-1082-M1  
WATERBODY: BEAUFORT SEA  
DATE: OCTOBER 2012

POA-2001-1082-M1 10/19/2012



**WEST GATHERING LINE AND EXPORT PIPELINE - EAST PAD JUNCTION TO WEST PAD JUNCTION ON DUAL VSM**  
NOT TO SCALE

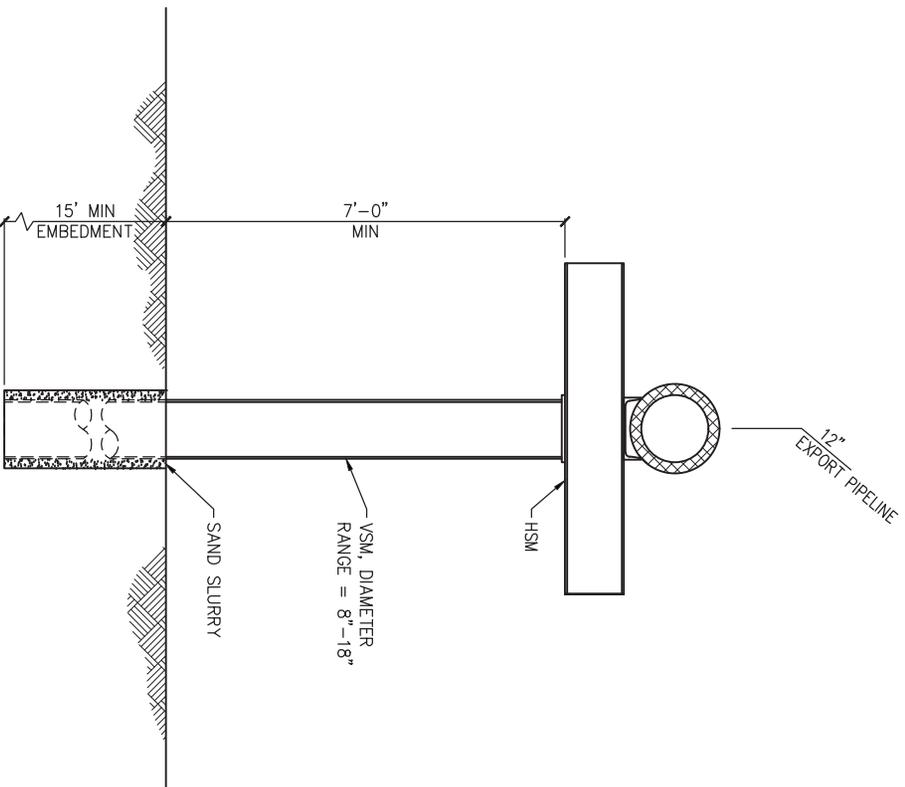
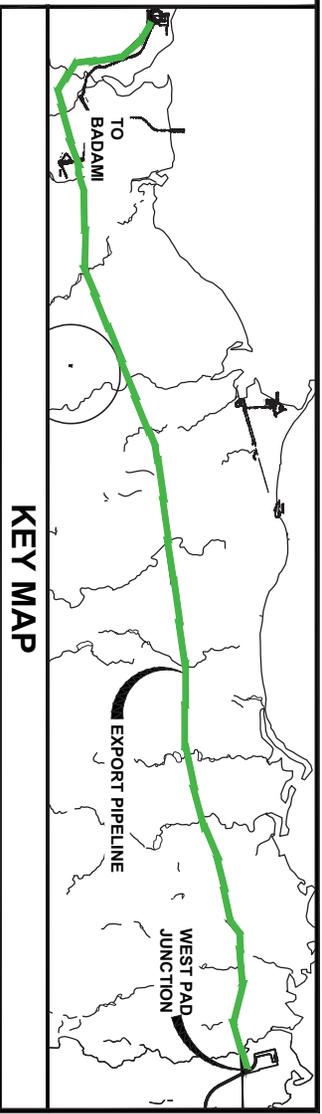


**WEST GATHERING LINE AND EXPORT PIPELINE - EAST PAD JUNCTION TO WEST PAD JUNCTION ON SINGLE VSM**  
NOT TO SCALE

NOTE:  
TYPICAL CONFIGURATION IS SINGLE VSM, DUAL VSM  
TYPICALLY TAKE PLACE AT PIPELINE EXPANSION LOOPS  
AND WHERE ANCHORED FOR STRUCTURAL INTEGRITY.

**38 - PIPELINE SECTIONS WEST GATHERING LINE AND EXPORT PIPELINE**

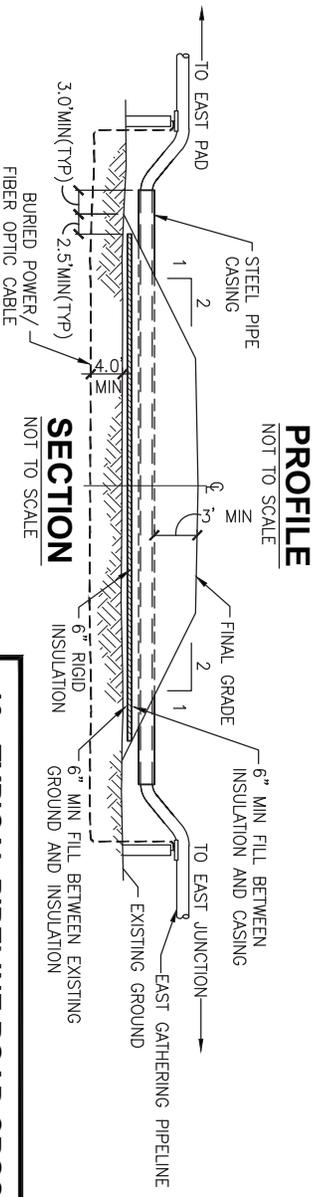
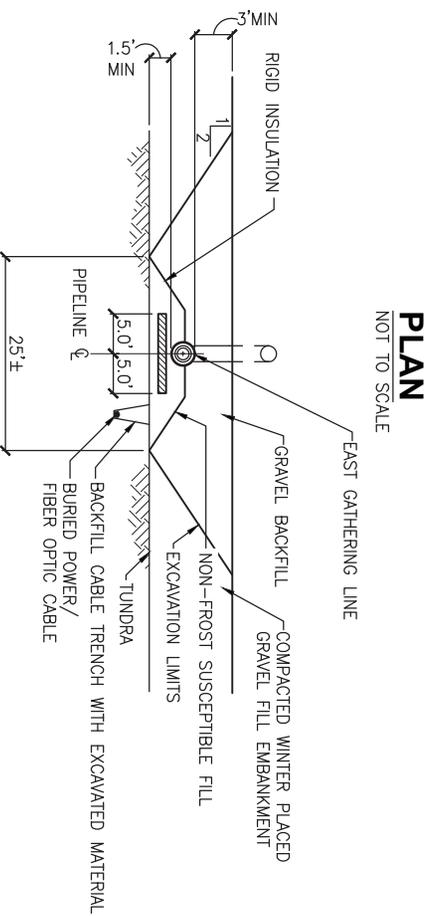
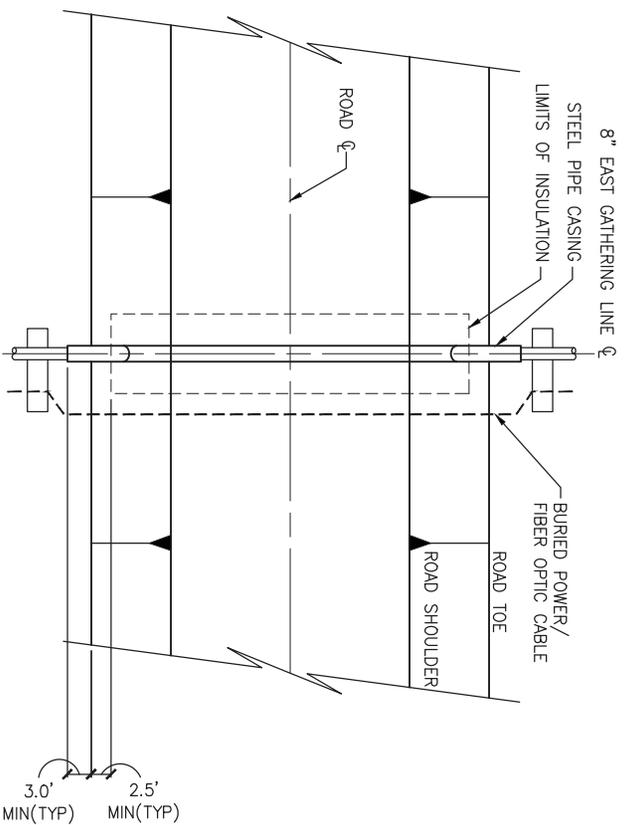
APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
PROJECT: POINT THOMSON PROJECT  
LOCATION: NORTH SLOPE BOROUGH, ALASKA  
REFERENCE: POA-2001-1082-M1  
WATERBODY: BEAUFORT SEA  
DATE: OCTOBER 2012



**EXPORT PIPELINE -  
WEST PAD JUNCTION TO BADAMI**  
NOT TO SCALE

**39 - PIPELINE SECTIONS  
EXPORT PIPELINE**

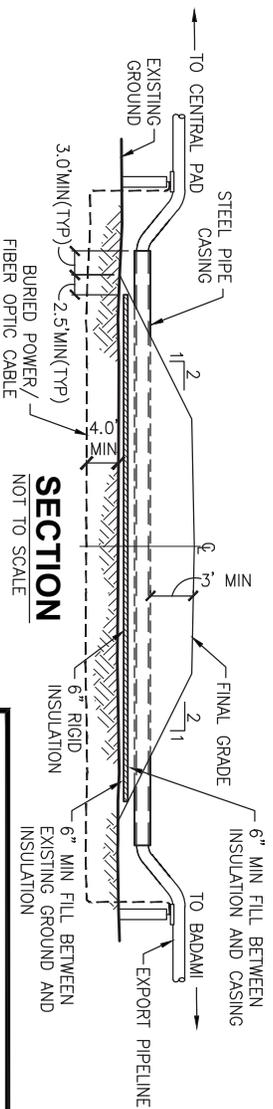
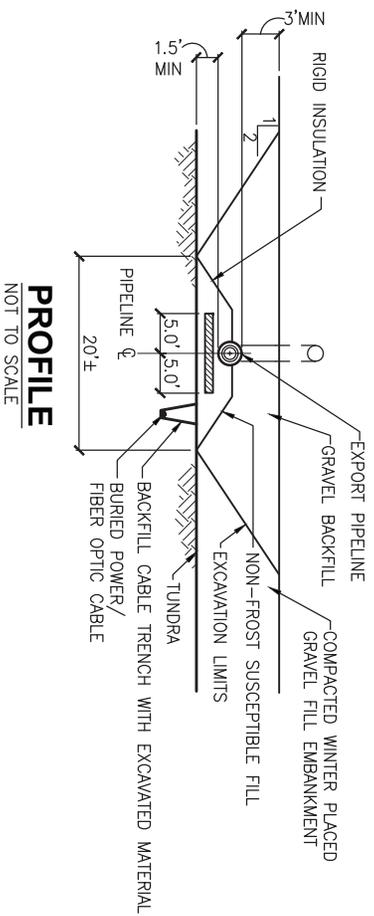
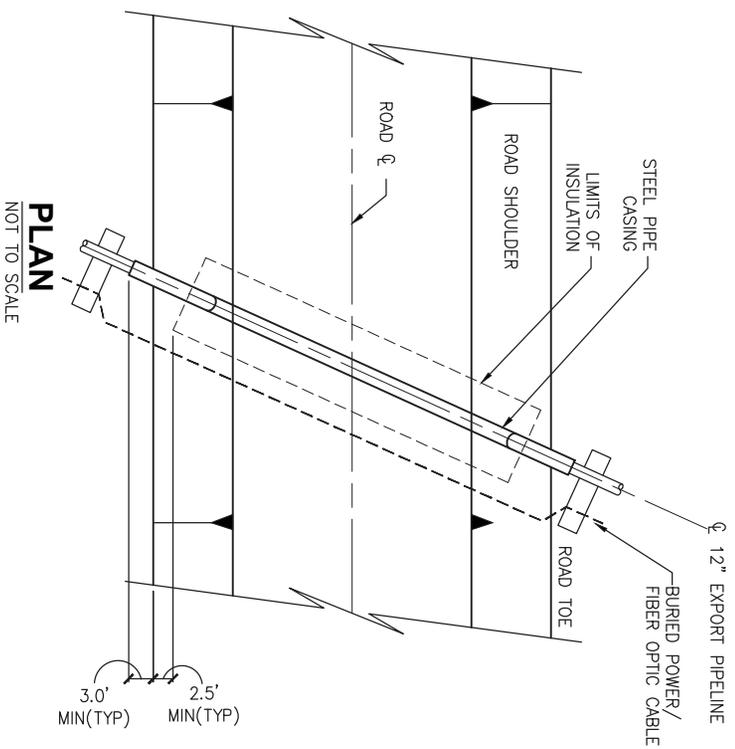
APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012



**40 - TYPICAL PIPELINE ROAD CROSSING  
CENTRAL PAD ACCESS ROAD**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

SEE FIGURE 33 FOR PIPELINE ROAD CROSSING AT CENTRAL PAD ACCESS ROAD

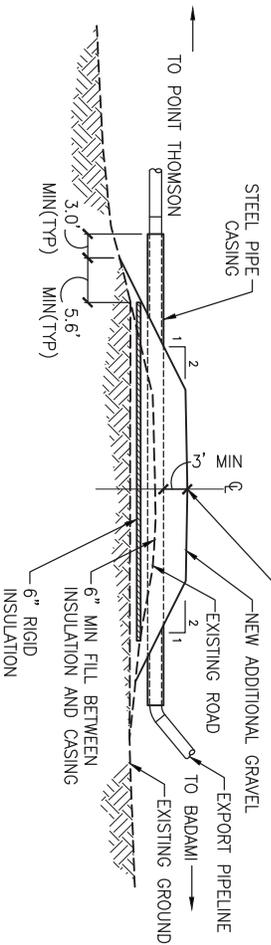
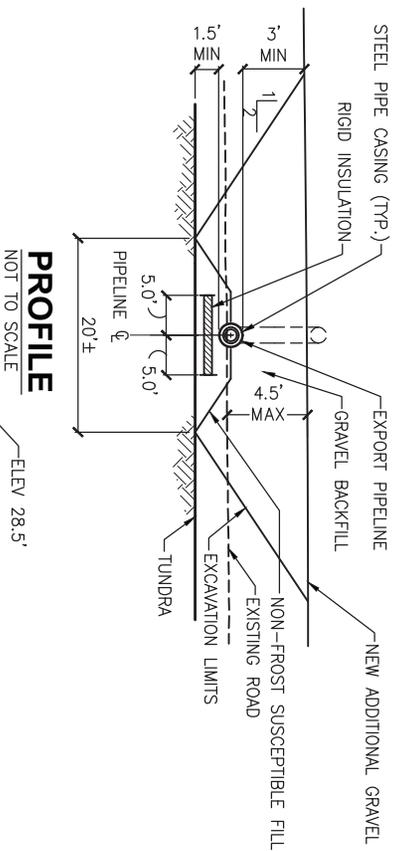
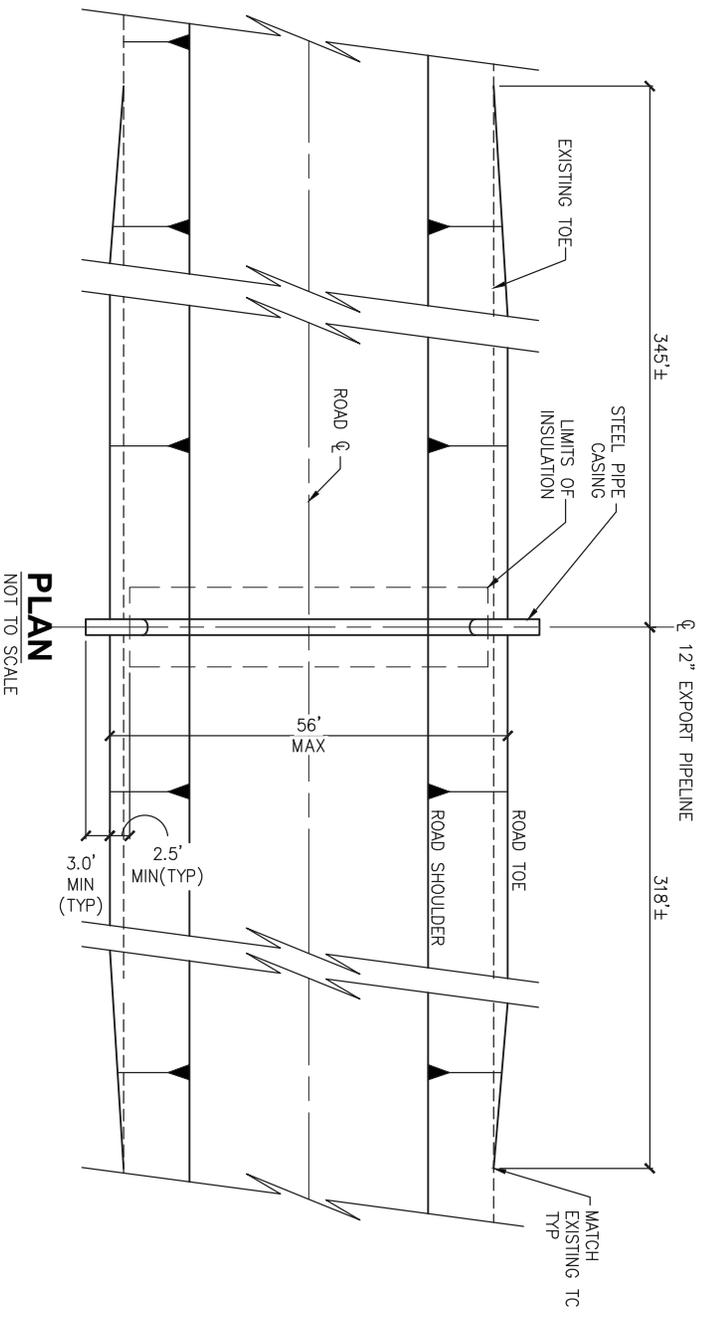


**41 - TYPICAL PIPELINE ROAD CROSSING  
WEST PAD ACCESS ROAD**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

SEE FIGURE 33 FOR PIPELINE ROAD CROSSING AT WEST PAD ACCESS ROAD

POA-2001-1082-M1 10/19/2012

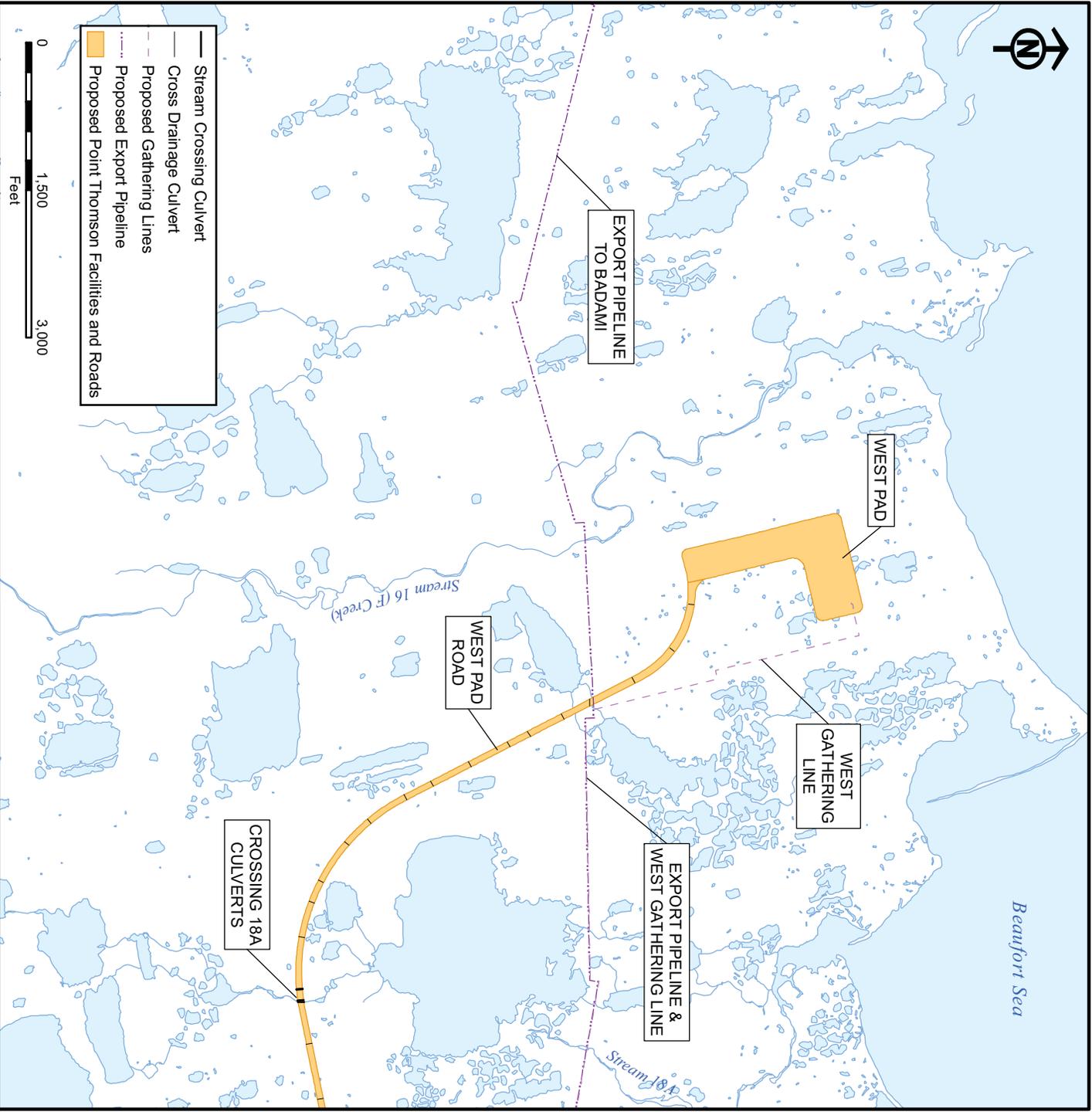


**SECTION**  
NOT TO SCALE

**42 - TYPICAL PIPELINE ROAD CROSSING  
BADAMI MINE SITE ACCESS ROAD**

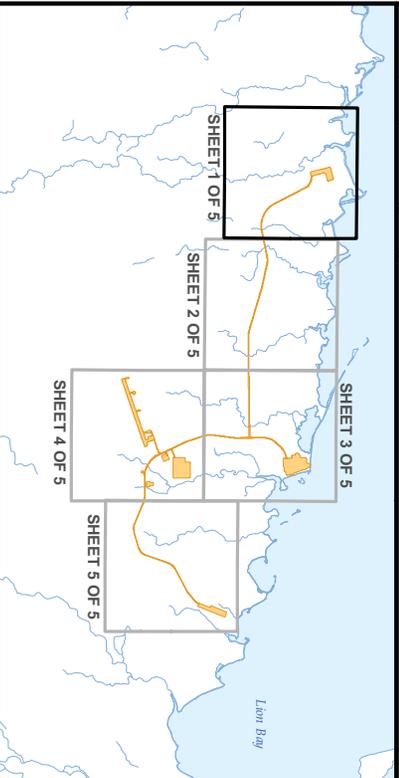
|            |   |
|------------|---|
| APPLICANT: | EXXON MOBIL CORPORATION & PTE PIPELINE LLC. |
| PROJECT:   | POINT THOMSON PROJECT                       |
| LOCATION:  | NORTH SLOPE BOROUGH, ALASKA                 |
| REFERENCE: | POA-2001-1082-M1                            |
| WATERBODY: | BEAUFORT SEA                                |
| DATE:      | OCTOBER 2012                                |

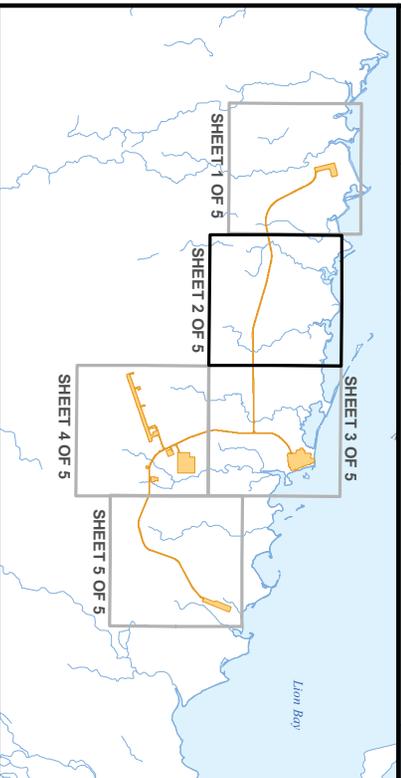
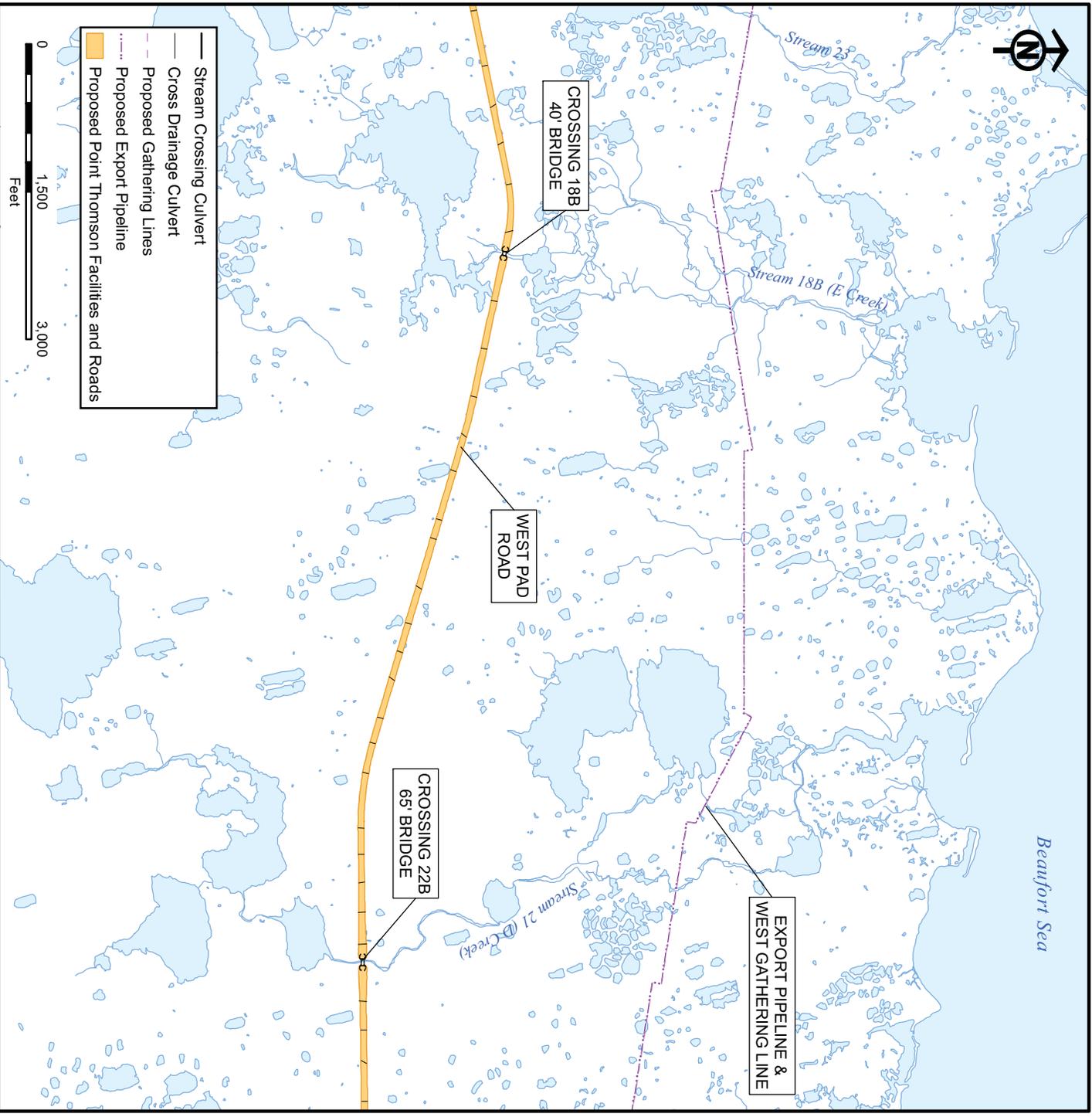
SEE FIGURE 31 FOR PIPELINE ROAD CROSSING AT BADAMI



**43 - GRAVEL ROAD AND DRAINAGE STRUCTURES SHEET 1 OF 5**

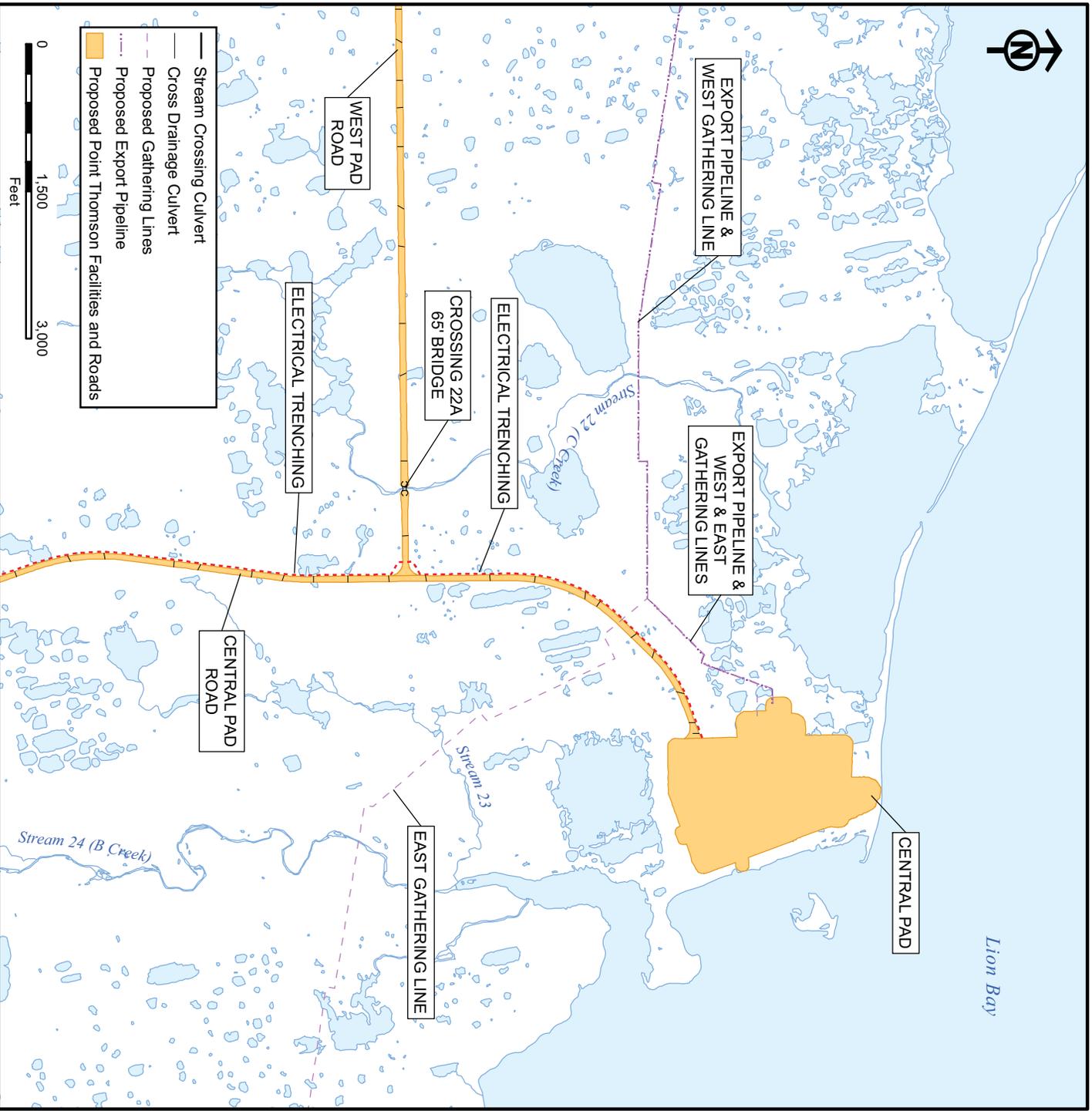
APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012



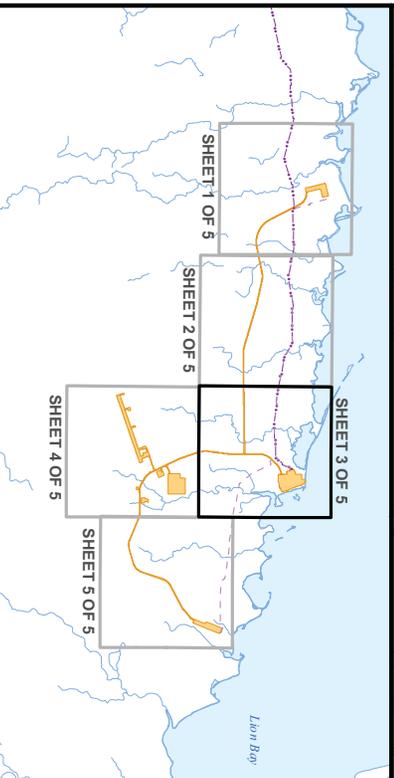


### 44 - GRAVEL ROAD AND DRAINAGE STRUCTURES SHEET 2 OF 5

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
PROJECT: POINT THOMSON PROJECT  
LOCATION: NORTH SLOPE BOROUGH, ALASKA  
REFERENCE: POA-2001-1082-M1  
WATERBODY: BEAUFORT SEA  
DATE: OCTOBER 2012

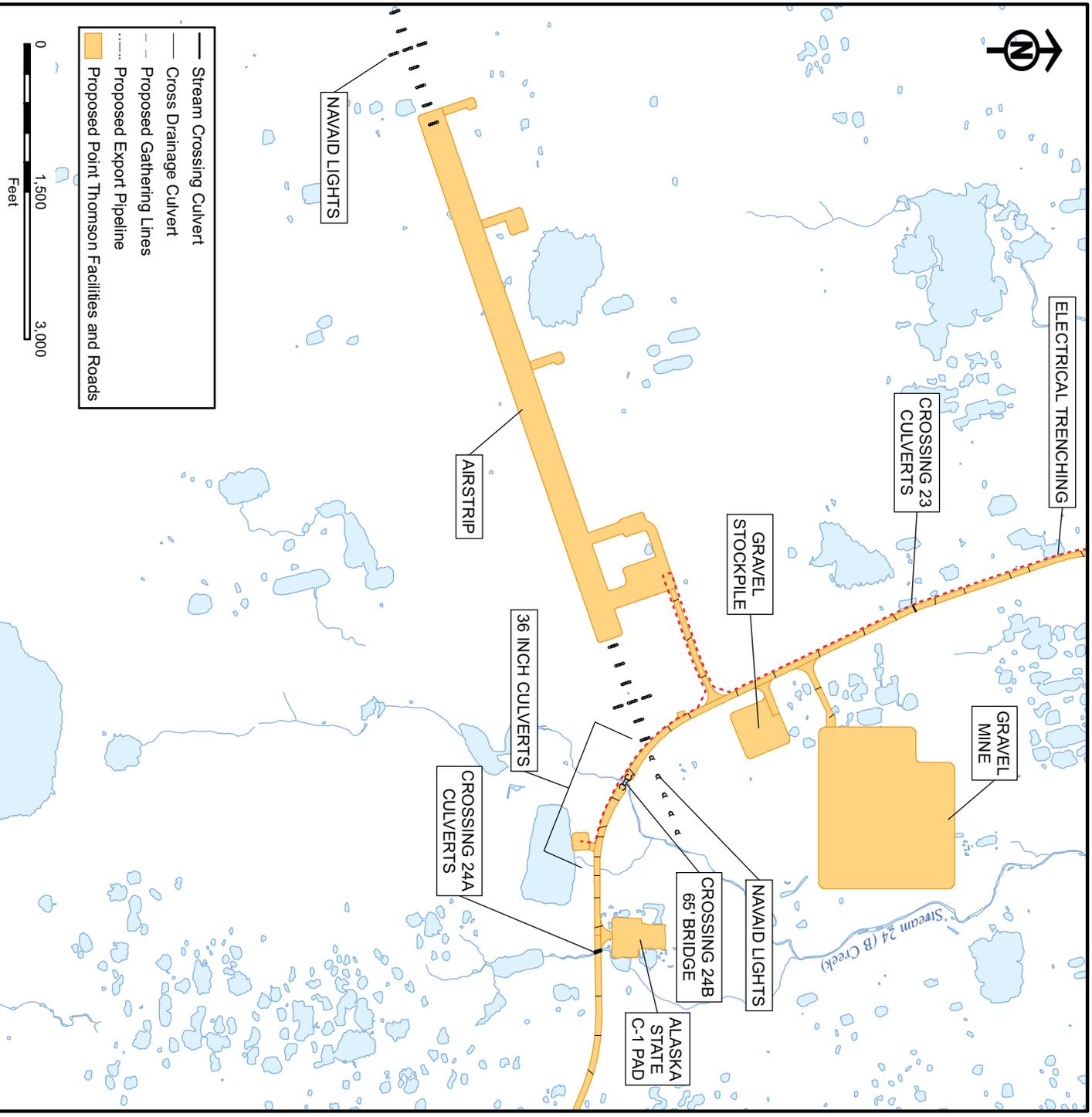


- Stream Crossing Culvert
- Cross Drainage Culvert
- - - Proposed Gathering Lines
- - - Proposed Export Pipeline
- Proposed Point Thomson Facilities and Roads



**45 - GRAVEL ROAD AND DRAINAGE STRUCTURES SHEET 3 OF 5**

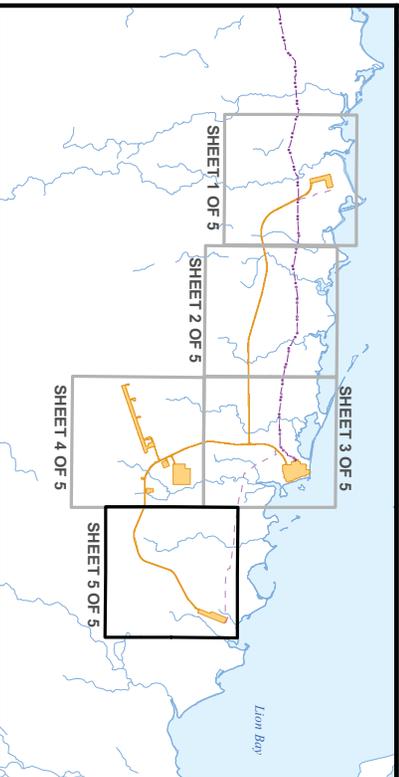
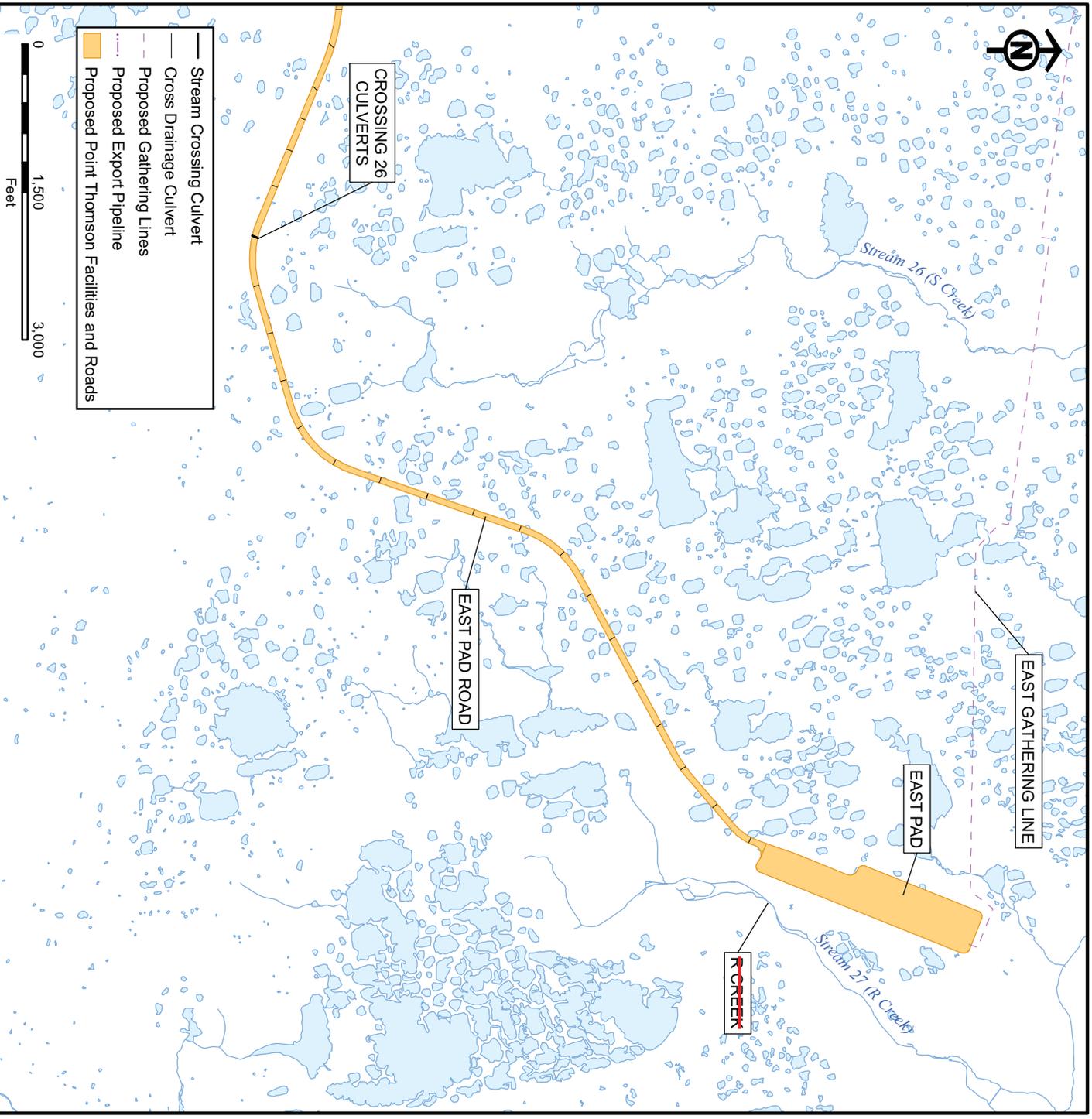
APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012



**46 - GRAVEL ROAD AND DRAINAGE STRUCTURES SHEET 4 OF 5**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

POA-2001-1082-M1 10/19/2012

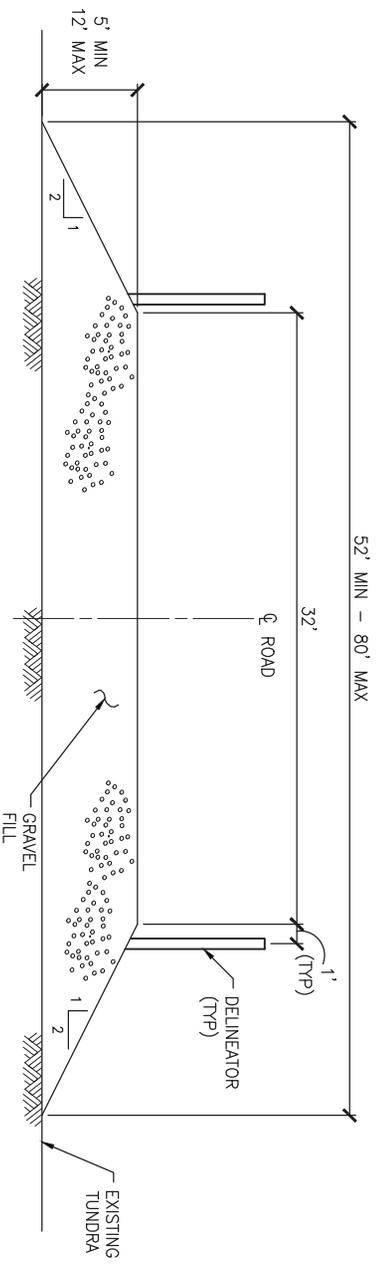


**47 - GRAVEL ROAD AND DRAINAGE STRUCTURES SHEET 5 OF 5**

**APPLICANT:** EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
**PROJECT:** POINT THOMSON PROJECT  
**LOCATION:** NORTH SLOPE BOROUGH, ALASKA  
**REFERENCE:** POA-2001-1082-M1  
**WATERBODY:** BEAUFORT SEA  
**DATE:** OCTOBER 2012

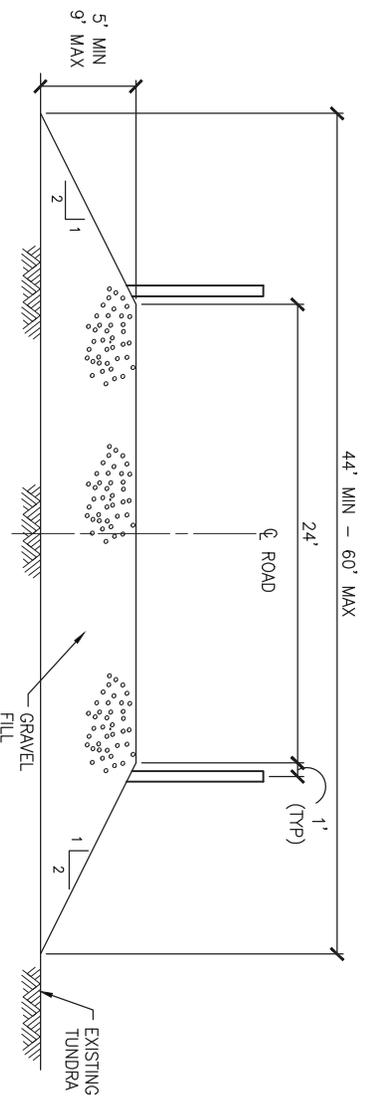
FIGURE 48 - GRAVEL ROAD AND DRAINAGE STRUCTURES  
(SHEET 6 OF 6) - REMOVED

(THE NEW GRAVEL LAYOUT NO LONGER REQUIRES 6 MAP  
SHEETS TO COVER THESE FEATURES)



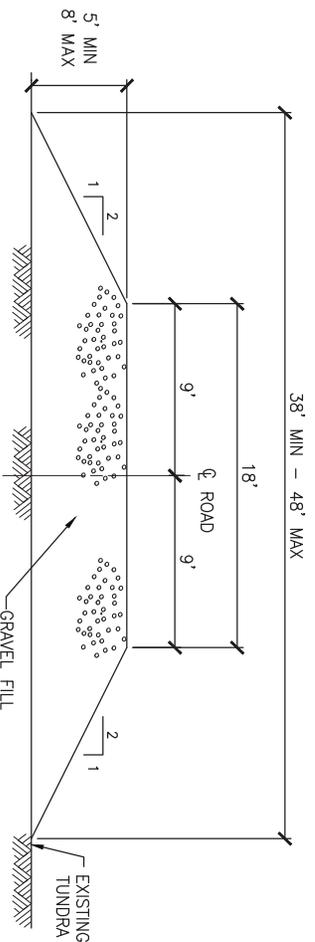
### PRIMARY ACCESS ROAD TYPICAL SECTION

NOT TO SCALE (TYPICAL DRILL PADS, C1 PAD, GRAVEL STOCKPILE ACCESS, BADAMI, AND AIRSTRIP ACCESS)



### SECONDARY ACCESS / MAINTENANCE ROAD TYPICAL SECTION

NOT TO SCALE (TYPICAL WATER ACCESS)

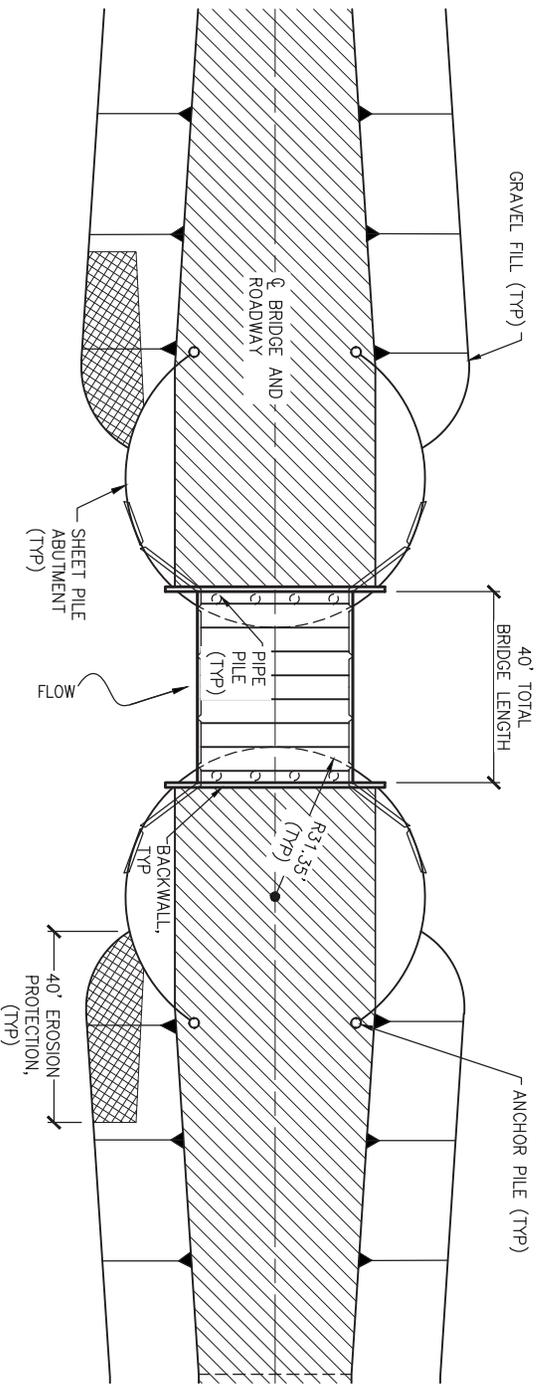


### NAVAID ACCESS ROAD TYPICAL SECTION

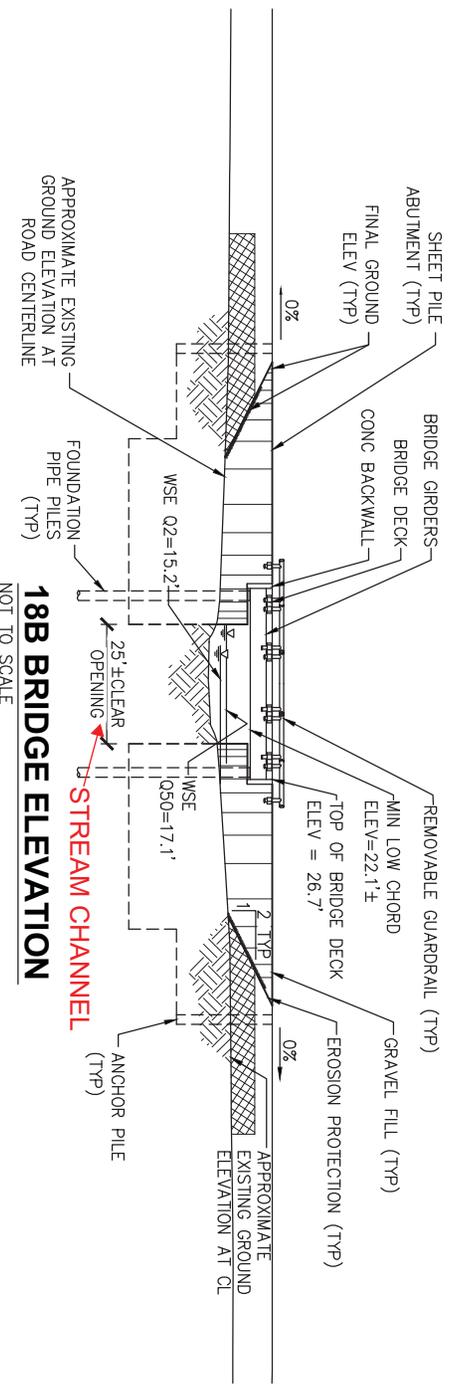
NOT TO SCALE

## 49 - TYPICAL ACCESS ROAD SECTIONS

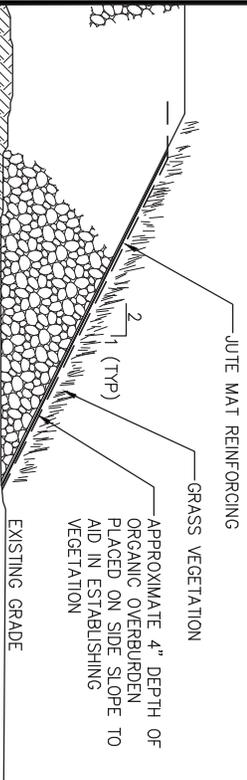
APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012



**BRIDGE PLAN**  
NOT TO SCALE



**188 BRIDGE ELEVATION**  
NOT TO SCALE



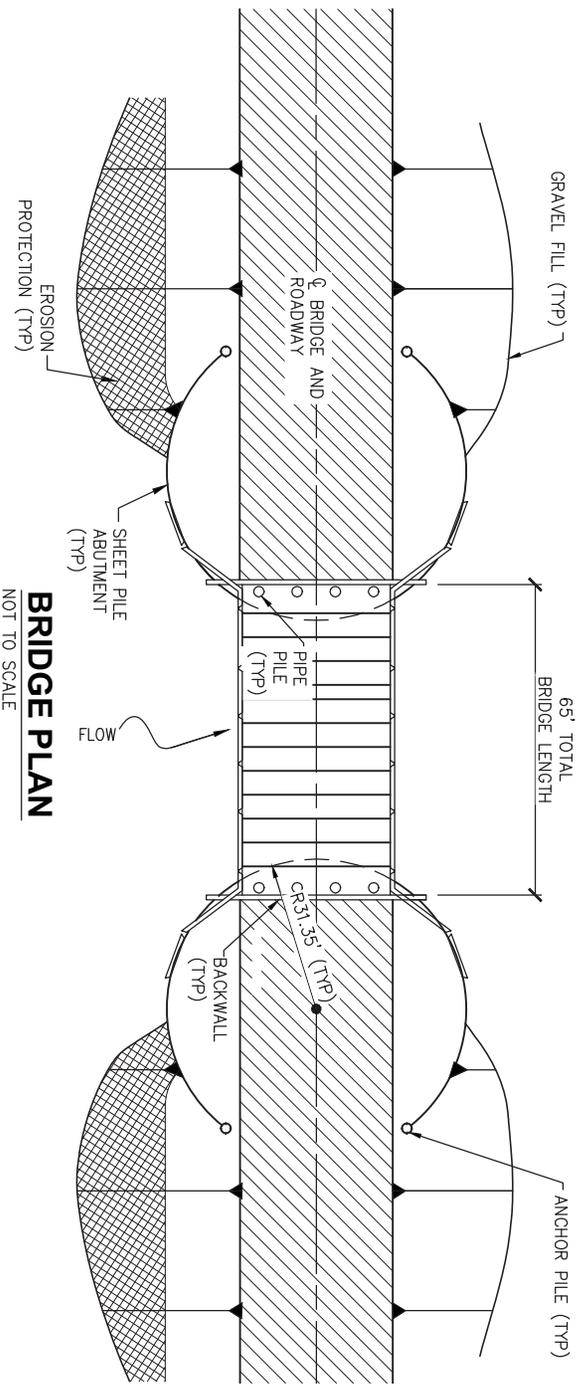
**TYPICAL EROSION PROTECTION SECTION**  
NOT TO SCALE

SEE FIGURE 44 FOR STREAM CROSSING 188 LOCATION

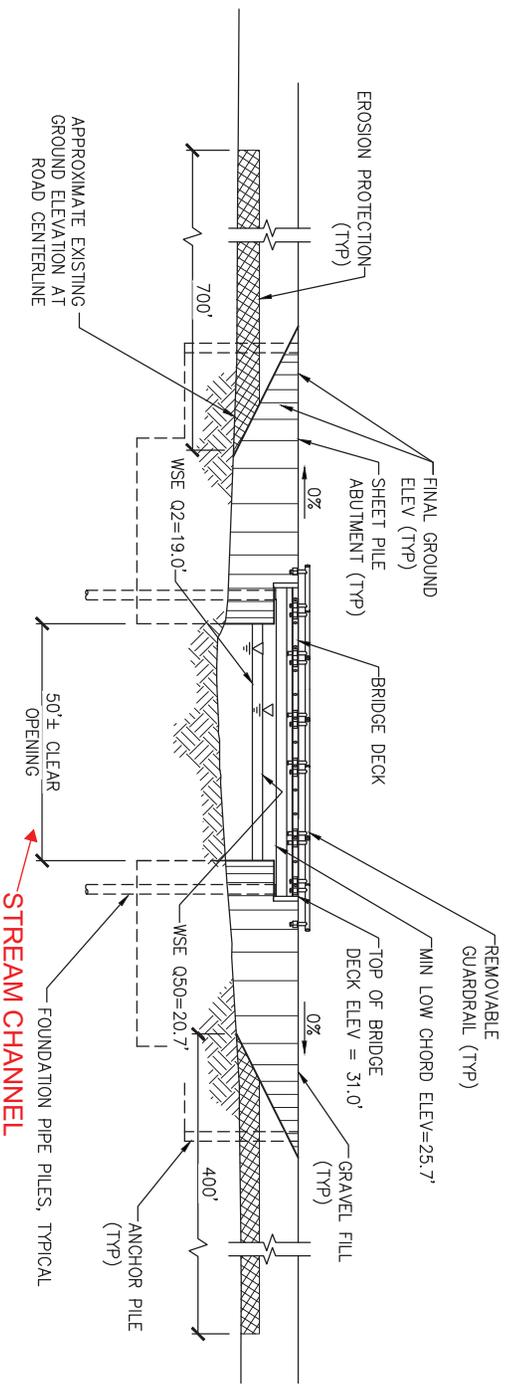
**50 - STREAM 188 BRIDGE  
PLAN AND ELEVATION**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
PROJECT: POINT THOMSON PROJECT  
LOCATION: NORTH SLOPE BOROUGH, ALASKA  
REFERENCE: POA-2001-1082-M1  
WATERBODY: BEAUFORT SEA  
DATE: OCTOBER 2012

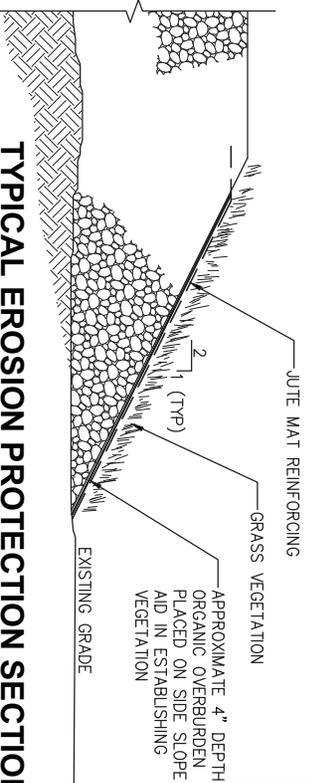
POA-2001-1082-M1 10/19/2012



**BRIDGE PLAN**  
NOT TO SCALE



**BRIDGE ELEVATION**  
NOT TO SCALE



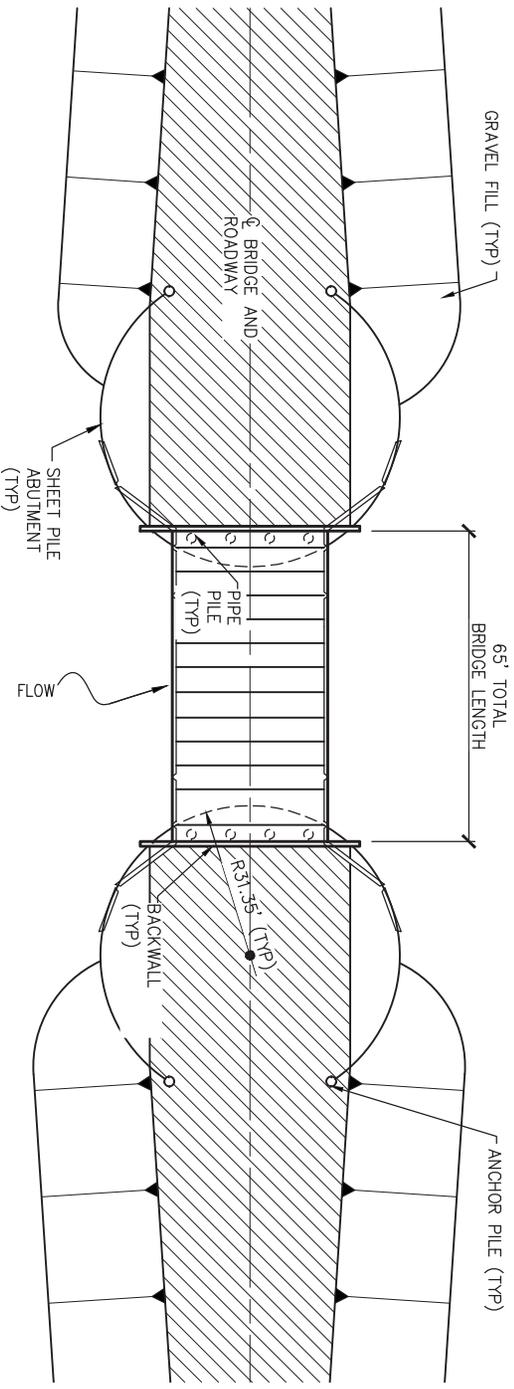
**TYPICAL EROSION PROTECTION SECTION**  
NOT TO SCALE

SEE FIGURE 44 FOR STREAM CROSSING 22B LOCATION

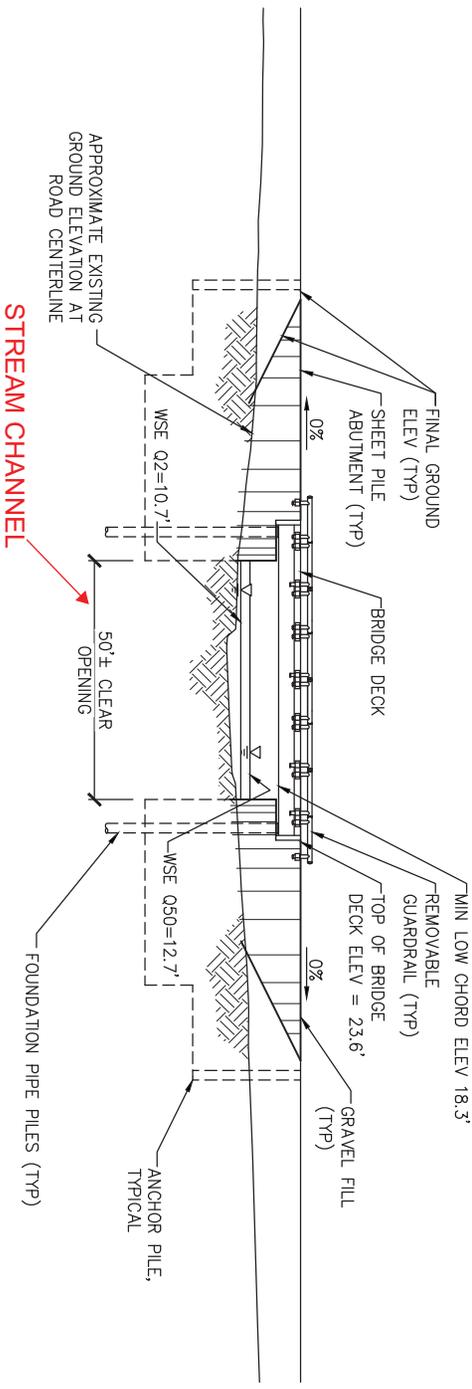
**51 - STREAM 22B BRIDGE  
PLAN AND ELEVATION**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

POA-2001-1082-M1 10/19/2012



**BRIDGE PLAN**  
NOT TO SCALE

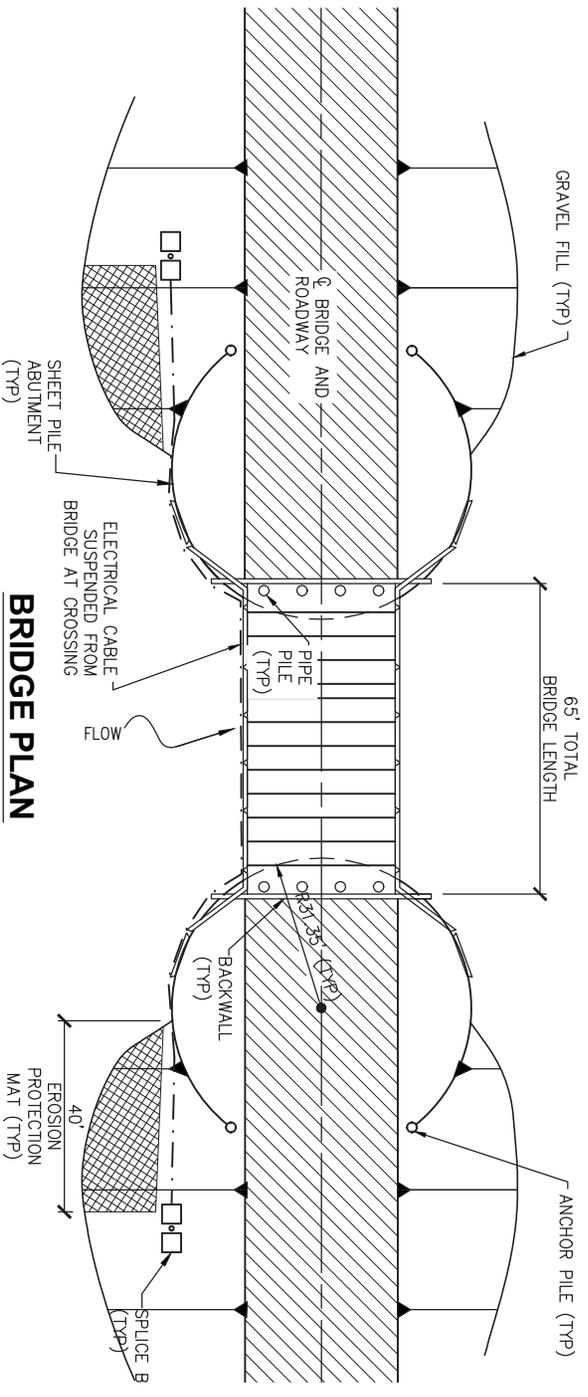


**52 - STREAM 22A BRIDGE  
PLAN AND ELEVATION**

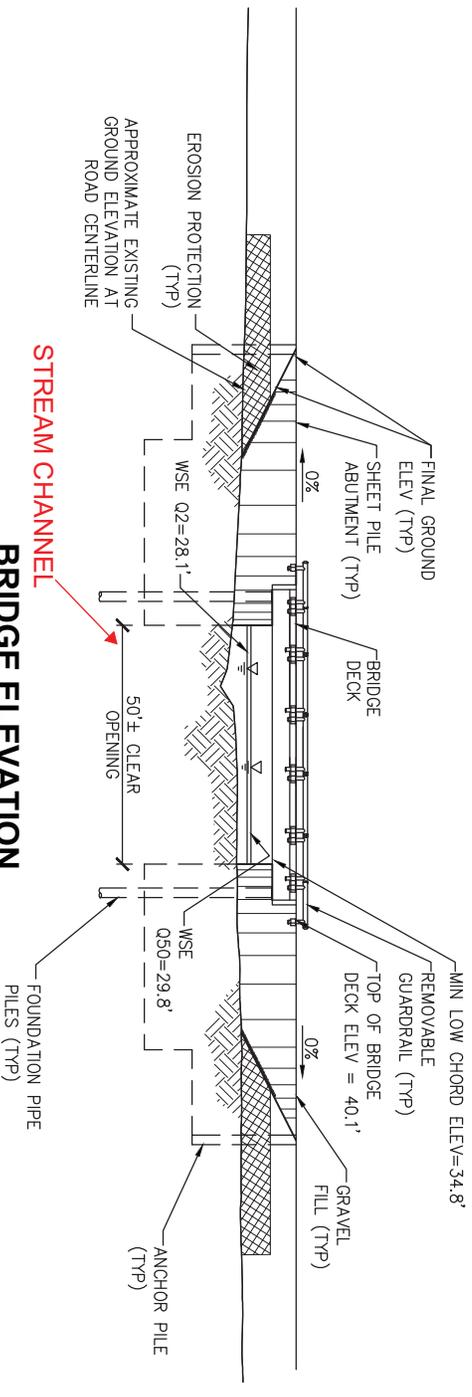
APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

SEE FIGURE 45 FOR STREAM CROSSING 22A LOCATION

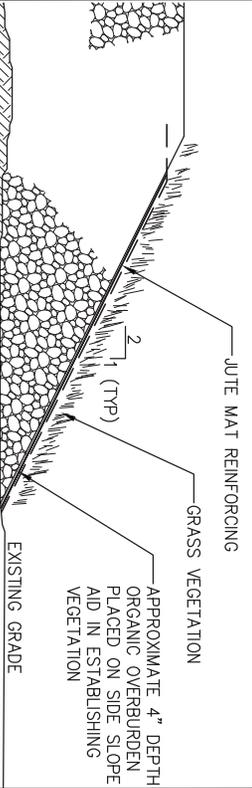
POA-2001-1082-M1 10/19/2012



**BRIDGE PLAN**  
NOT TO SCALE



**BRIDGE ELEVATION**  
NOT TO SCALE



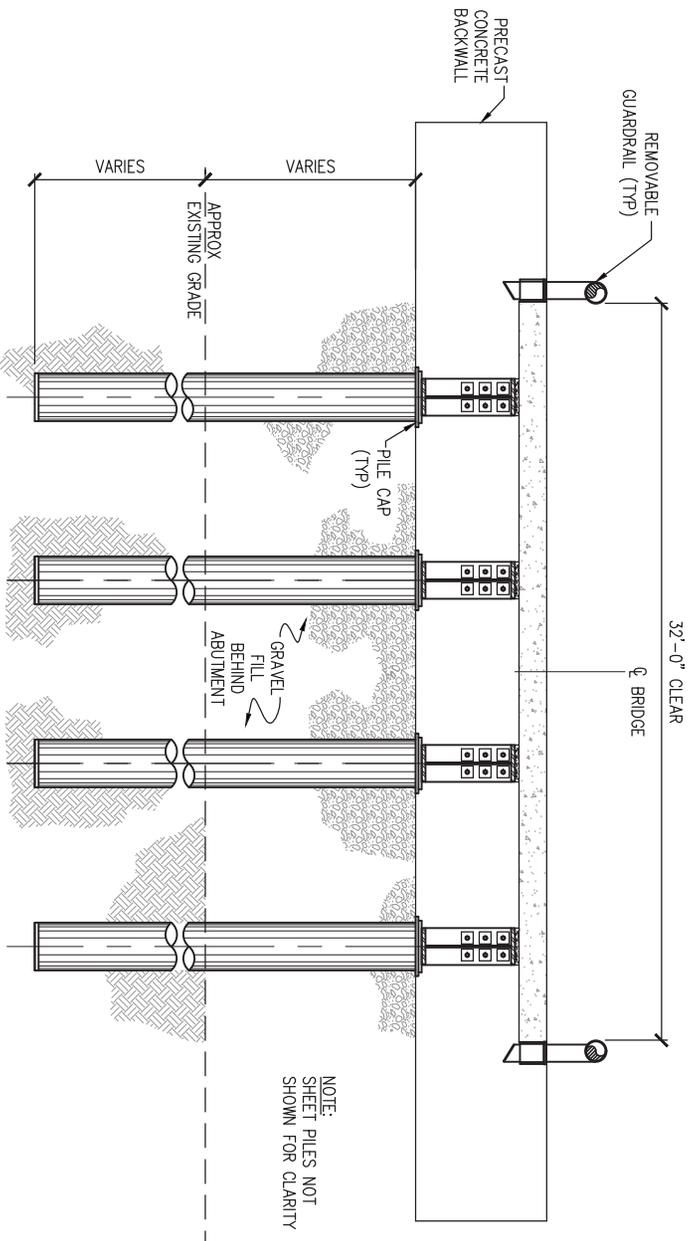
**TYPICAL EROSION PROTECTION SECTION**  
NOT TO SCALE

SEE FIGURE 46 FOR STREAM CROSSING 24B LOCATION

**53 - STREAM 24B BRIDGE  
PLAN AND ELEVATION**

**APPLICANT:** EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
**PROJECT:** POINT THOMSON PROJECT  
**LOCATION:** NORTH SLOPE BOROUGH, ALASKA  
**REFERENCE:** POA-2001-1082-M1  
**WATERBODY:** BEAUFORT SEA  
**DATE:** OCTOBER 2012

POA-2001-1082-M1 10/19/2012

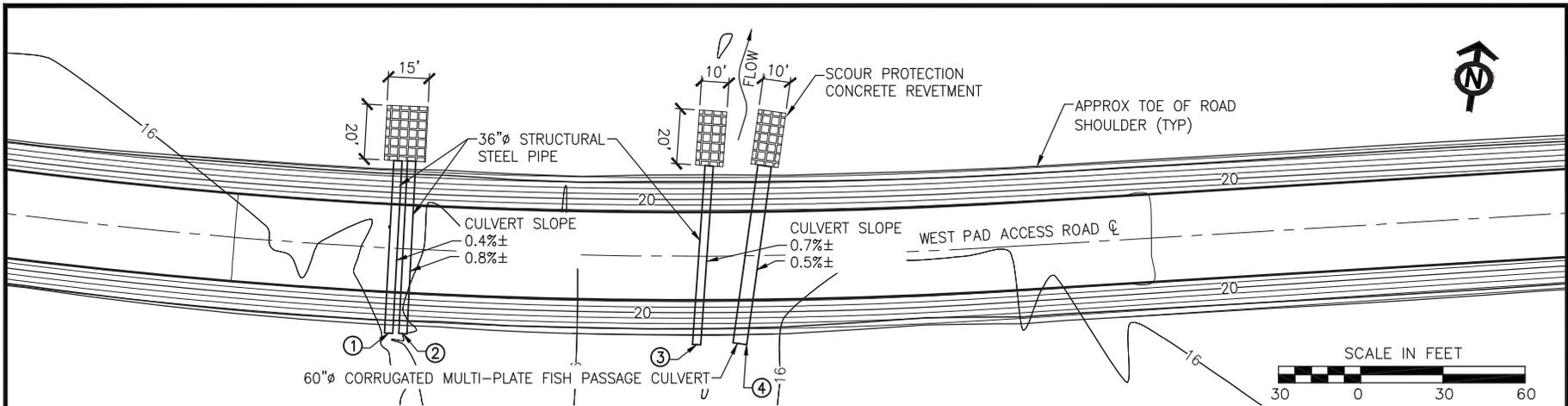


**TYPICAL SECTION AT ABUTMENT**  
 NOT TO SCALE

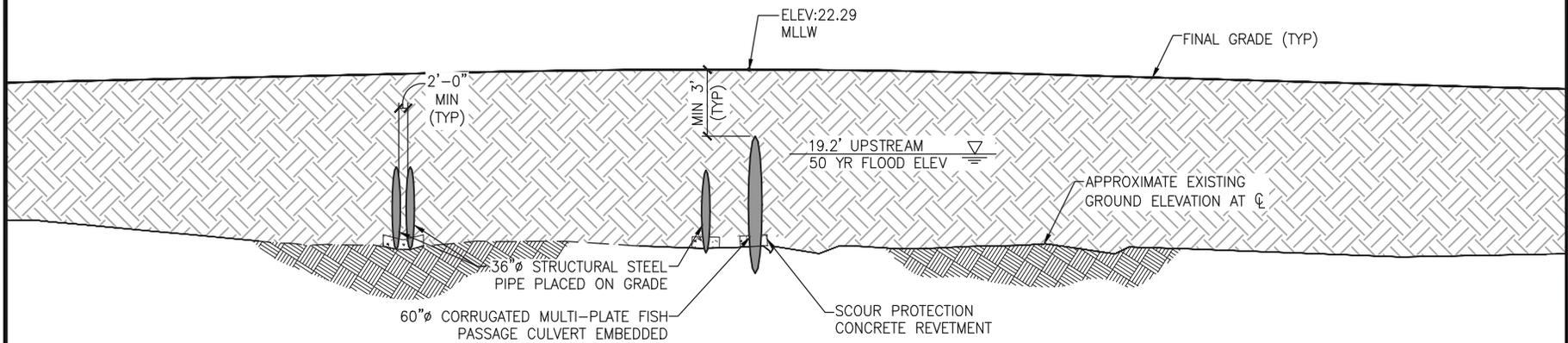
**54 - TYPICAL BRIDGE PIER  
 ELEVATION**

APPLICANT: EXXON MOBIL CORPORATION &  
 PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

POA-2001-1082-M1 10/19/2012

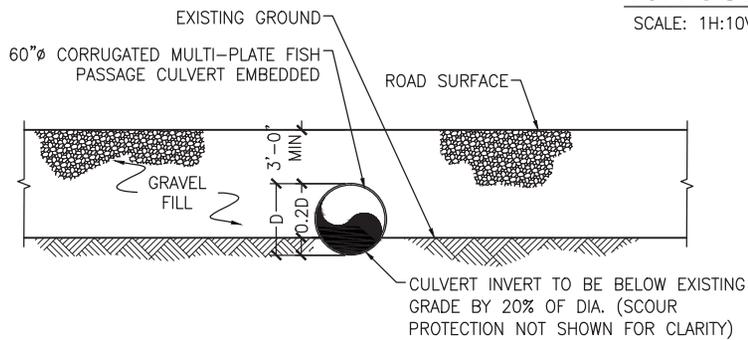


**18A CULVERT CROSSING PLAN**



**18A CULVERT CROSSING PROFILE**

SCALE: 1H:10V



**EMBEDDED MULTI-PLATE CULVERT DETAIL**

NOT TO SCALE

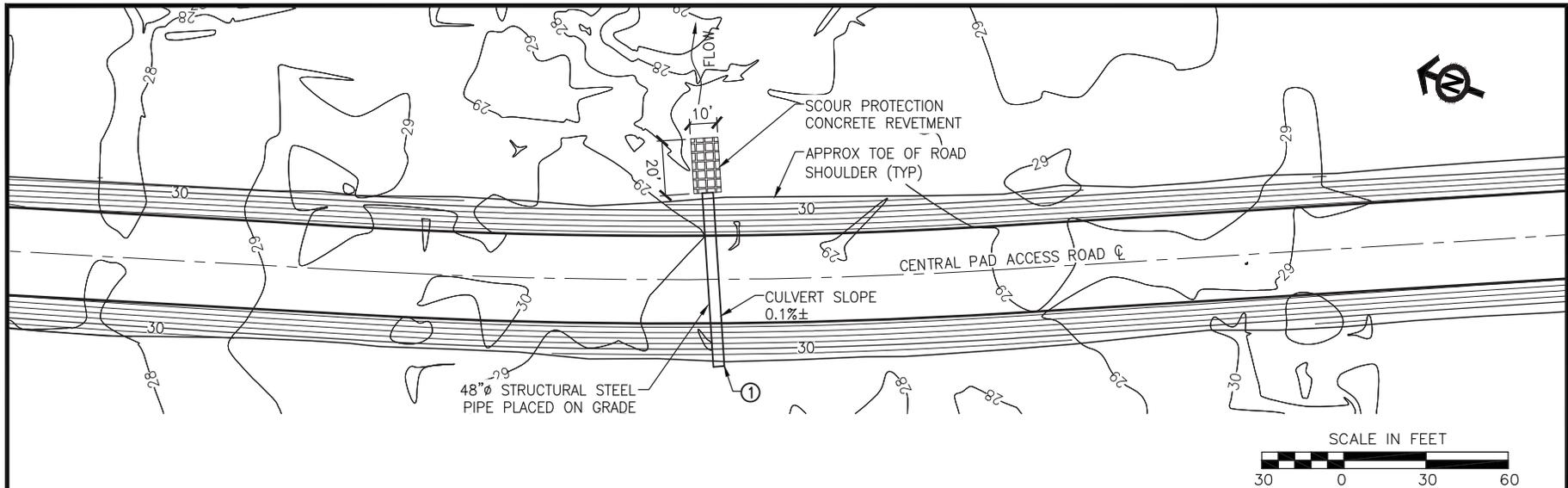
| PIPE | DIAMETER (IN) | LENGTH (FT) |
|------|---------------|-------------|
| 1    | 36            | 66          |
| 2    | 36            | 66          |
| 3    | 36            | 66          |
| 4    | 60            | 66          |

SCOUR PROTECTION FOOTPRINT = 990 S.F.

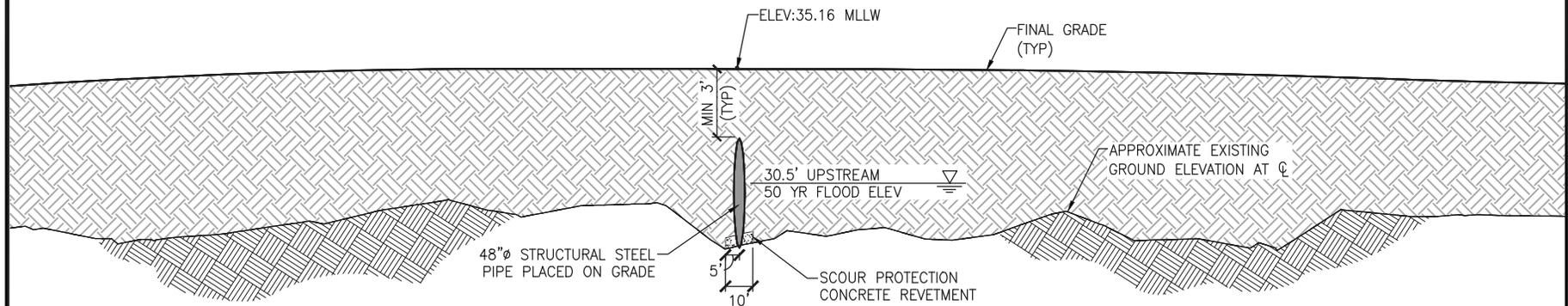
SEE FIGURE 43 FOR STREAM CROSSING 18A LOCATION

**55 - STREAM 18A CULVERT  
PLAN & PROFILE**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012



**23 CULVERT CROSSING PLAN**



**23 CULVERT CROSSING PROFILE**

SCALE: 1H:10V

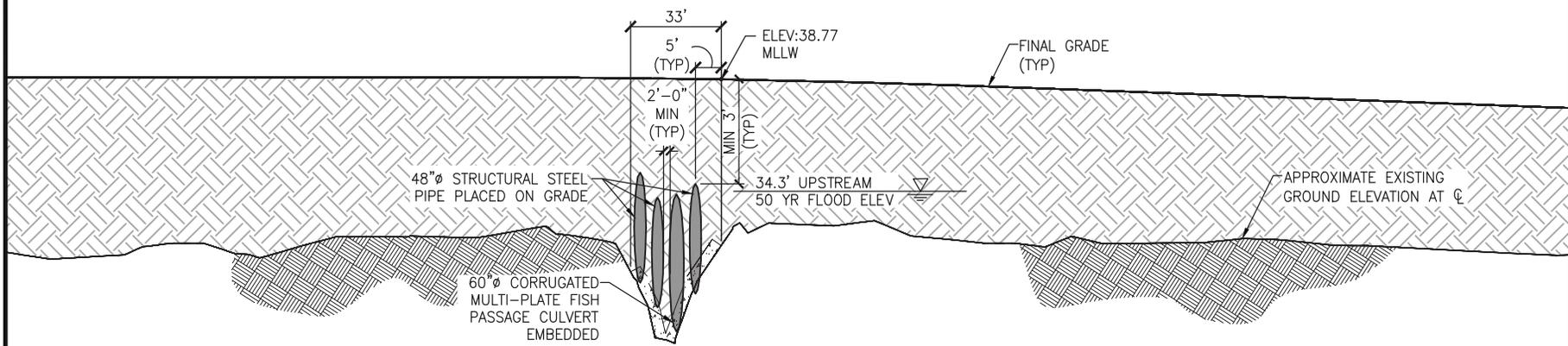
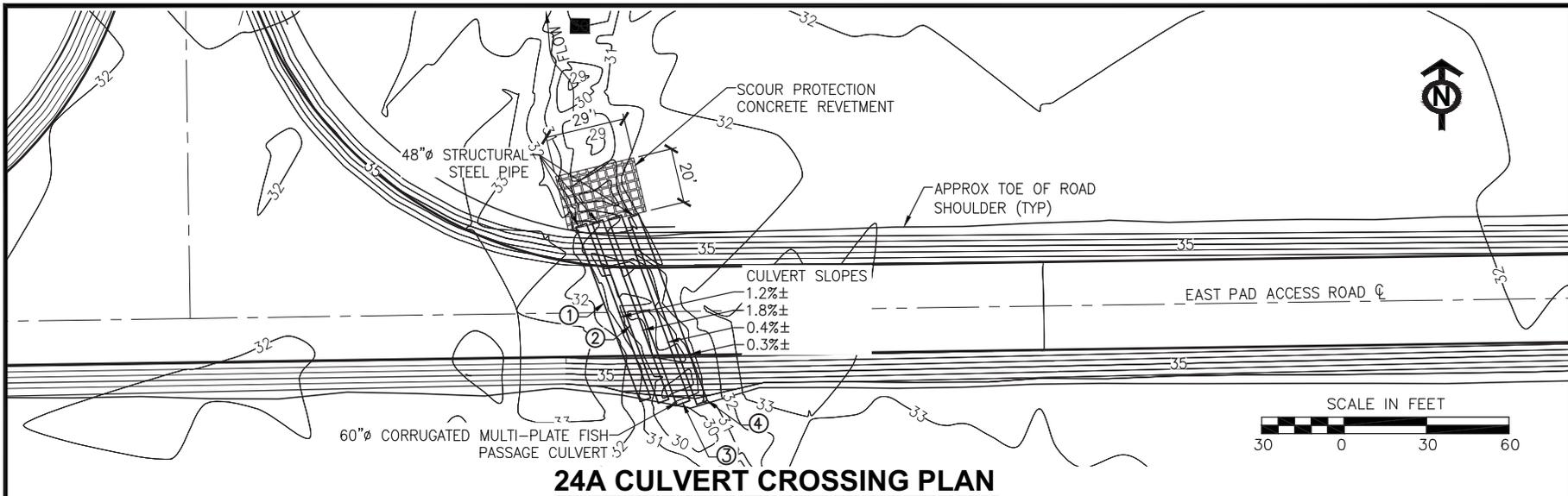
| PIPE | DIAMETER (IN) | LENGTH (FT) |
|------|---------------|-------------|
| 1    | 48            | 65          |

SCOUR PROTECTION FOOTPRINT = 330 S.F.

**56 - STREAM 23 CULVERT PLAN & PROFILE**

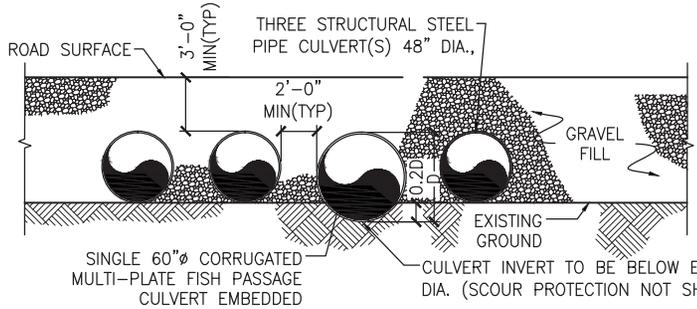
APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

SEE FIGURE 46 FOR STREAM CROSSING 23 LOCATION



**24A CULVERT CROSSING PROFILE**

SCALE: 1H:10V



NOT TO SCALE

| PIPE | DIAMETER (IN) | LENGTH (FT) |
|------|---------------|-------------|
| 1    | 48            | 73          |
| 2    | 48            | 73          |
| 3    | 60            | 73          |
| 4    | 48            | 73          |

SCOUR PROTECTION FOOTPRINT = 640 S.F.

**57 - STREAM 24A CULVERT PLAN & PROFILE**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.

PROJECT: POINT THOMSON PROJECT

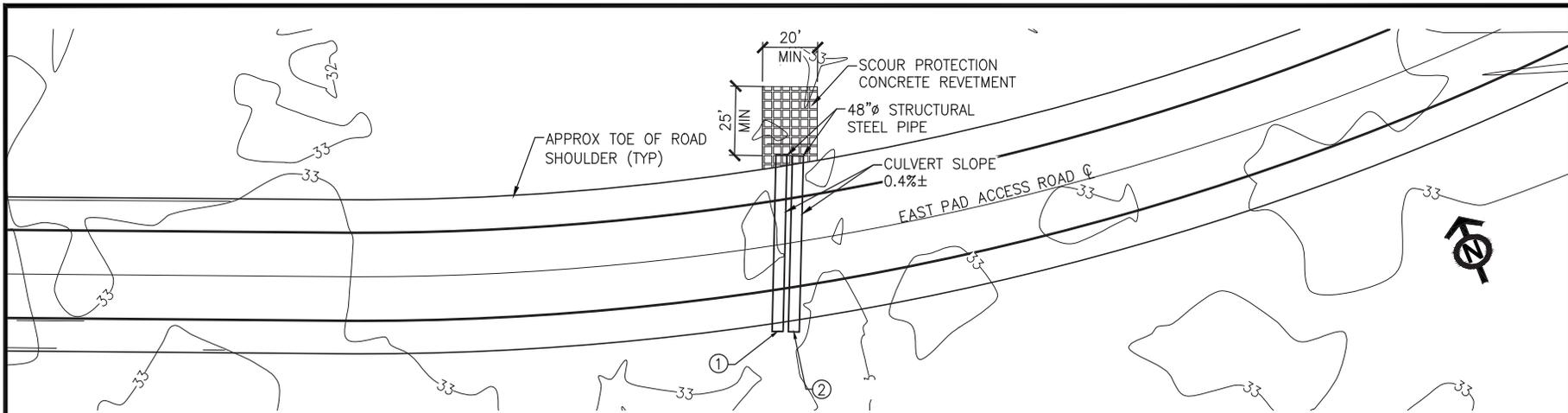
LOCATION: NORTH SLOPE BOROUGH, ALASKA

REFERENCE: POA-2001-1082-M1

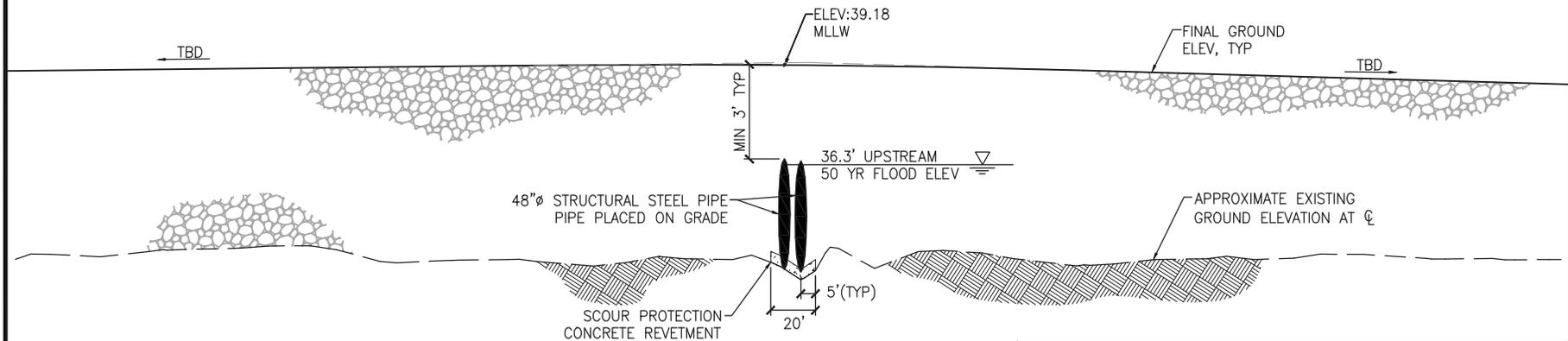
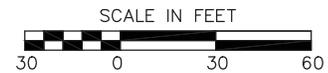
WATERBODY: BEAUFORT SEA

DATE: OCTOBER 2012

SEE FIGURE 46 FOR STREAM CROSSING 24A LOCATION



**26 CULVERT CROSSING PLAN**



**26 CULVERT CROSSING PROFILE**

SCALE: 1H:10V

| PIPE | DIAMETER (IN) | LENGTH (FT) |
|------|---------------|-------------|
| 1    | 48            | 64          |
| 2    | 48            | 64          |

SCOUR PROTECTION FOOTPRINT = 630 S.F.

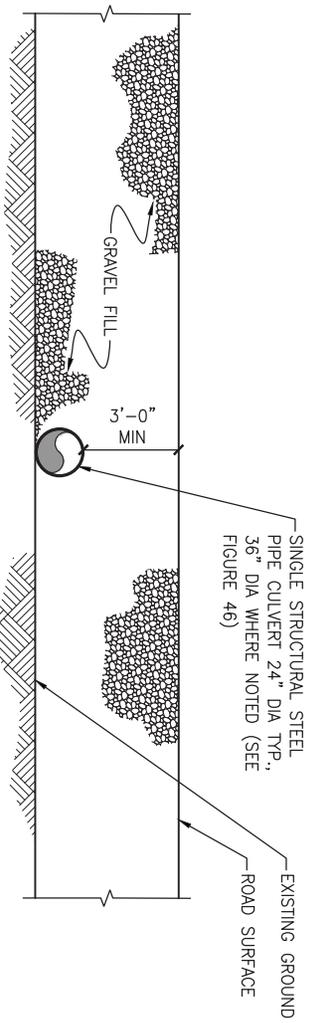
SEE FIGURE 47 FOR STREAM CROSSING 26 LOCATION

**58 - STREAM 26 CULVERT PLAN & PROFILE**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

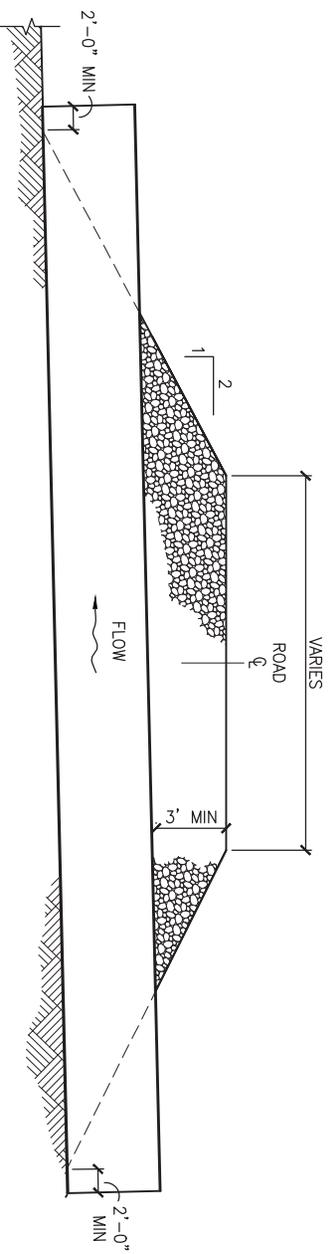
FIGURE 59 - STREAM 27 CULVERT PLAN & PROFILE - REMOVED

(THE NEW GRAVEL LAYOUT FOR EAST PAD ROAD NO LONGER  
INTERSECTS STREAM 27)



### CROSS DRAINAGE CULVERT ELEVATION

NOT TO SCALE



### CROSS DRAINAGE CULVERT SECTION

NOT TO SCALE

- NOTES:
- 1) PLACE FILL AND CULVERT AS PART OF THE ROAD CONSTRUCTION
  - 2) CULVERT LENGTHS RANGE FROM 60' MIN. TO 95' MAX.

### 60 - TYPICAL CROSS DRAINAGE CULVERT SECTIONS

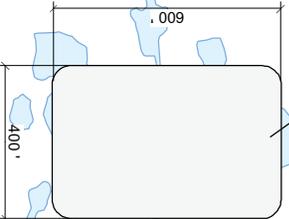
**APPLICANT:** EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
**PROJECT:** POINT THOMSON PROJECT  
**LOCATION:** NORTH SLOPE BOROUGH, ALASKA  
**REFERENCE:** POA-2001-1082-M1  
**WATERBODY:** BEAUFORT SEA  
**DATE:** OCTOBER 2012

SEE FIGURES 43-47 FOR CROSS DRAINAGE CULVERT LOCATIONS

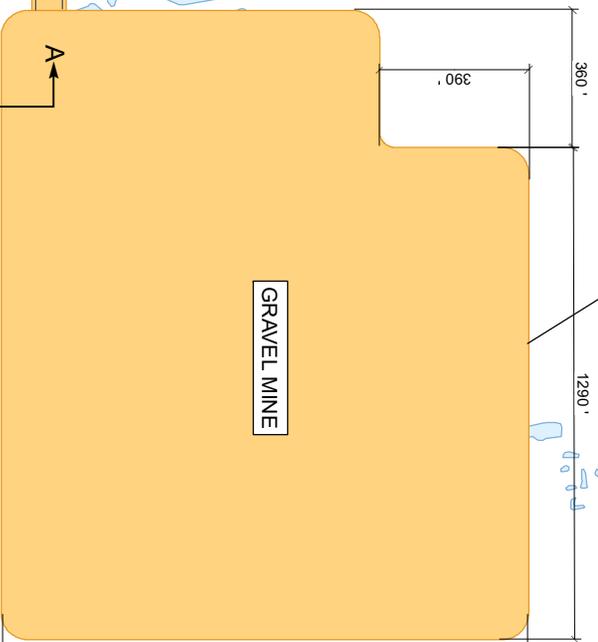
POA-2001-1082-M1 10/19/2012



TEMPORARY ORGANIC OVERBURDEN STORAGE ON SEASONAL ICE PAD



PROPOSED EXCAVATION LIMITS



GRAVEL MINE

32' WIDE GRAVEL ACCESS ROAD TO GRAVEL STOCKPILE

CENTRAL PAD ROAD

Electrical Trenching not shown here. Refer to Figure 67 for route and additional cross references.

GRAVEL STOCKPILE

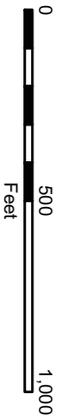


TEMPORARY INORGANIC OVERBURDEN STORAGE ON SEASONAL ICE PAD

AIRSTRIP ACCESS ROAD

PAD DIMENSIONS ARE APPROXIMATE  
ACTUAL LAYOUT PENDING FINAL DESIGN

- Proposed Electrical Trenching
- Proposed Point Thomson Facilities and Roads
- Proposed Point Thomson Temporary Ice Pads



### 61 - GRAVEL MINE FOOTPRINT

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

ALASKA STATE C-1

Stream 24 (B Creek)



FIGURE 63 - GRAVEL MINE YEAR 1 PLAN

(TO BE SUBMITTED WITH THE REVISED MINING AND  
REHABILITATION PLAN)

FIGURE 64 - GRAVEL MINE YEAR 1 ELEVATIONS

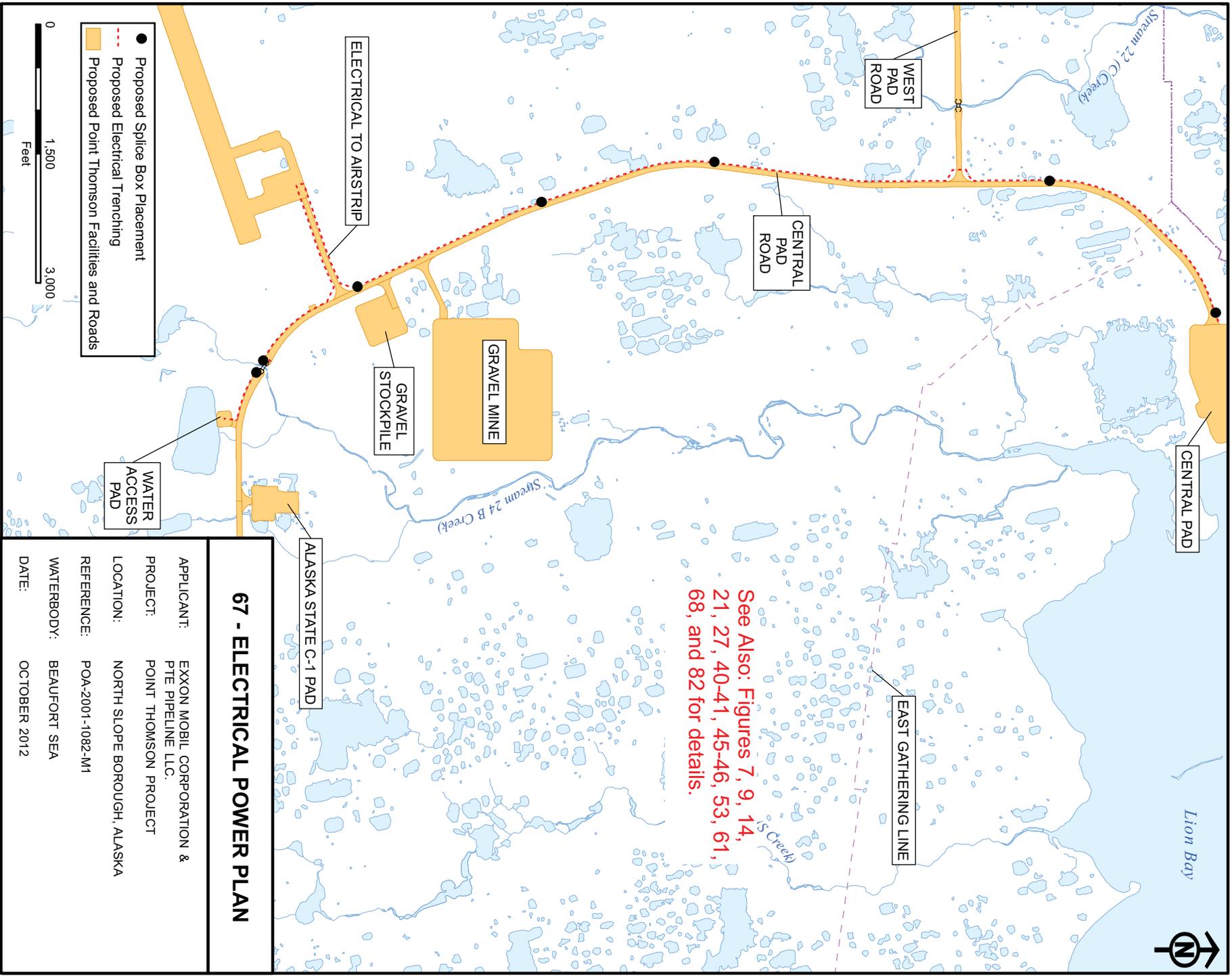
(TO BE SUBMITTED WITH THE REVISED MINING AND  
REHABILITATION PLAN)

FIGURE 65 - GRAVEL MINE YEAR 2 PLAN

(TO BE SUBMITTED WITH THE REVISED MINING AND  
REHABILITATION PLAN)

FIGURE 66 - GRAVEL MINE YEAR 2 ELEVATIONS

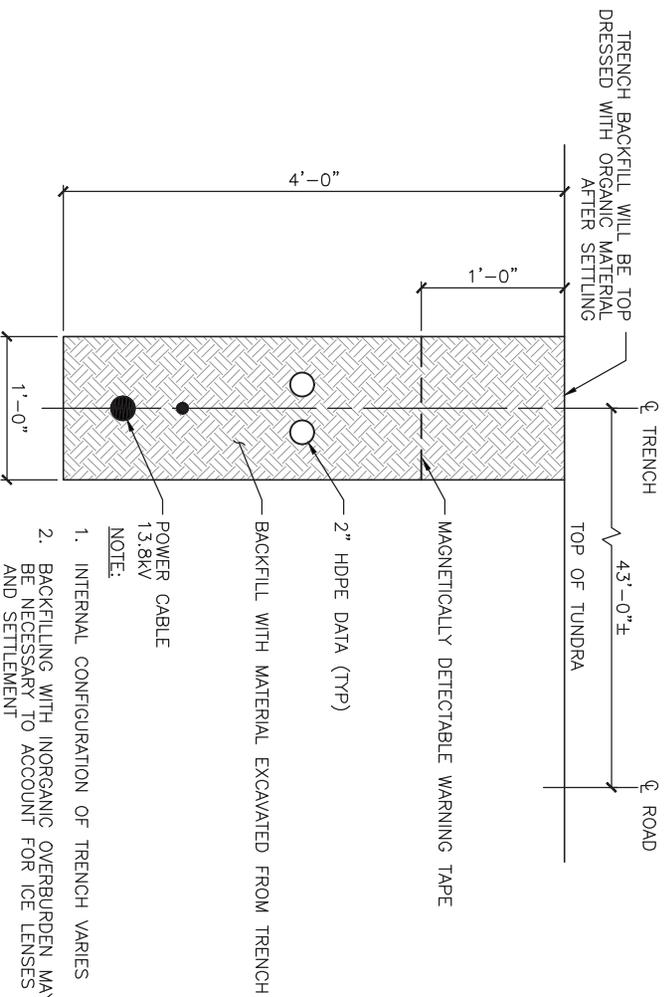
(TO BE SUBMITTED WITH THE REVISED MINING AND  
REHABILITATION PLAN)



See Also: Figures 7, 9, 14,  
21, 27, 40-41, 45-46, 53, 61,  
68, and 82 for details.

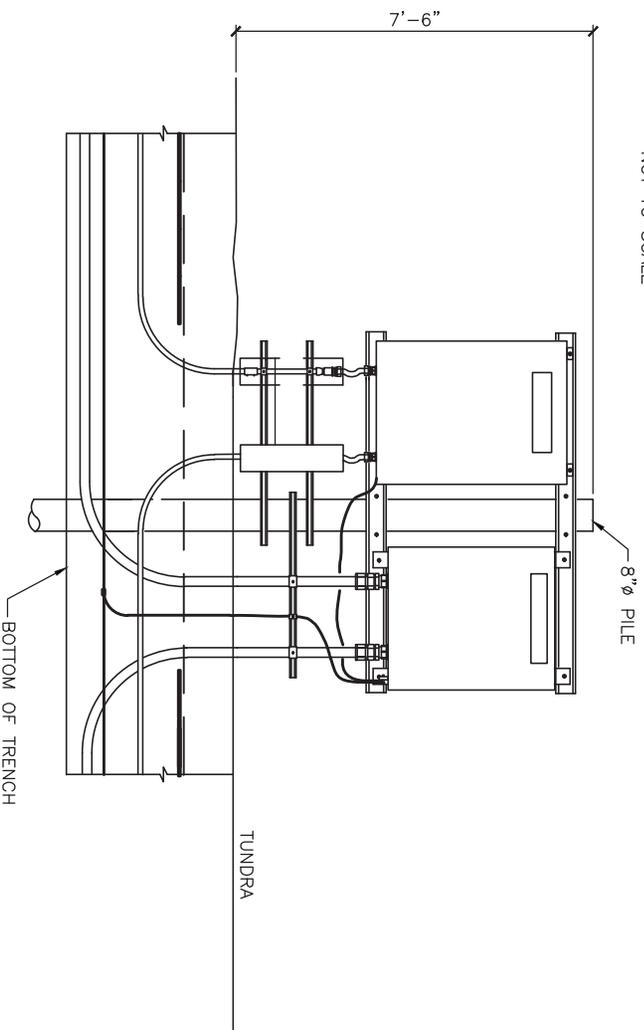
### 67 - ELECTRICAL POWER PLAN

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012



### TYPICAL TRENCH SECTION

NOT TO SCALE



### TYPICAL SPLICE BOX SECTION

NOT TO SCALE

## 68 - TYPICAL ELECTRICAL POWER SECTIONS

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.

PROJECT: POINT THOMSON PROJECT

LOCATION: NORTH SLOPE BOROUGH, ALASKA

REFERENCE: POA-2001-1082-M1

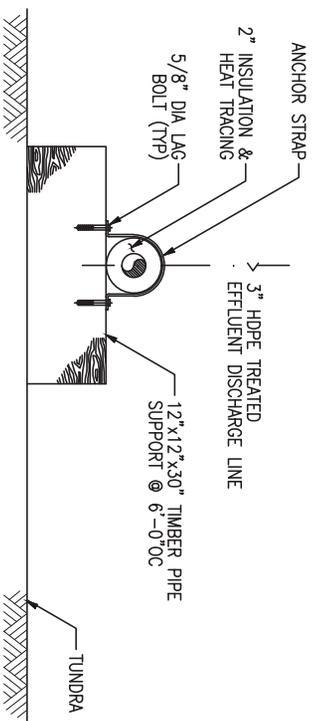
WATERBODY: BEAUFORT SEA

DATE: OCTOBER 2012

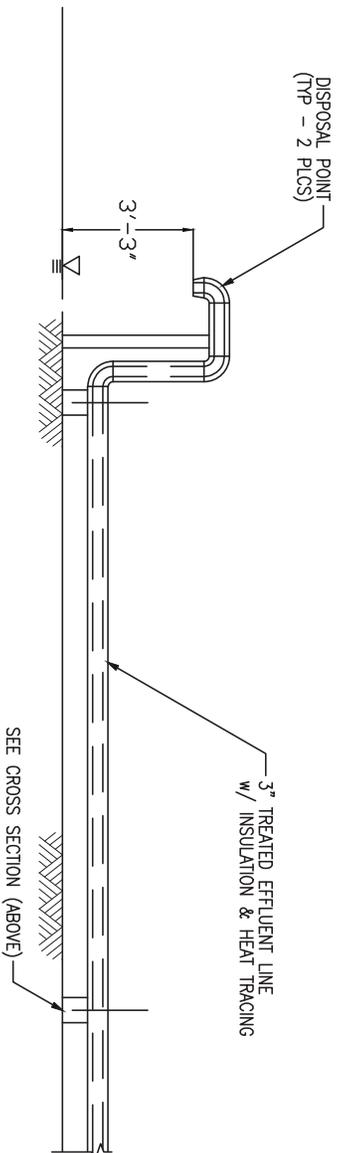
SEE FIGURE 67 FOR ELECTRICAL TRENCHING PLAN

POA-2001-1082-M1 10/19/2012

FIGURE 69 - COMPARISON OF FUEL USE FOR  
IN-FIELD ICE ROADS VS. GRAVEL ROADS  
OMITTED BY CORPS OF ENGINEERS



### CROSS SECTION OF WASTEWATER EFFLUENT LINE



### LONGITUDINAL SECTION OF WASTEWATER EFFLUENT LINE

NOTE:

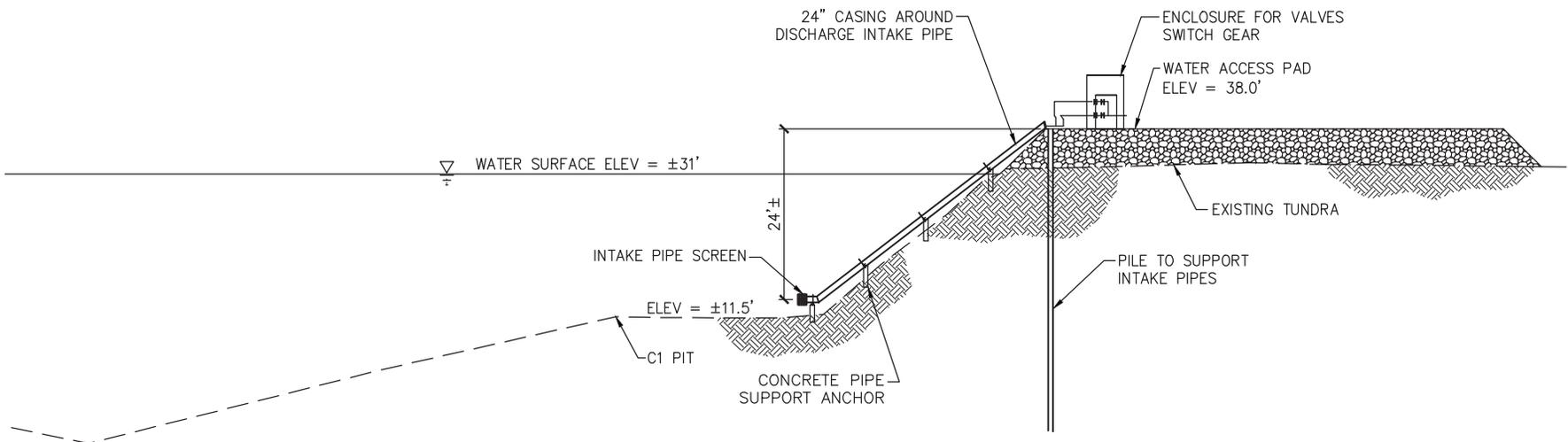
THE SECTIONS PRESENTED HERE ARE CONCEPTUAL IN DESIGN THE TECHNICAL DETAILS OF THE WASTEWATER EFFLUENT LINE ARE UNDER DEVELOPMENT.

### 70 - WASTEWATER EFFLUENT SECTIONS

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

SEE FIGURE 7 FOR WASTEWATER EFFLUENT LINE LOCATION

POA-2001-1082-M1 10/19/2012



### 71 - WATER ACCESS PAD INTAKE SECTION

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.

PROJECT: POINT THOMSON PROJECT

LOCATION: NORTH SLOPE BOROUGH, ALASKA

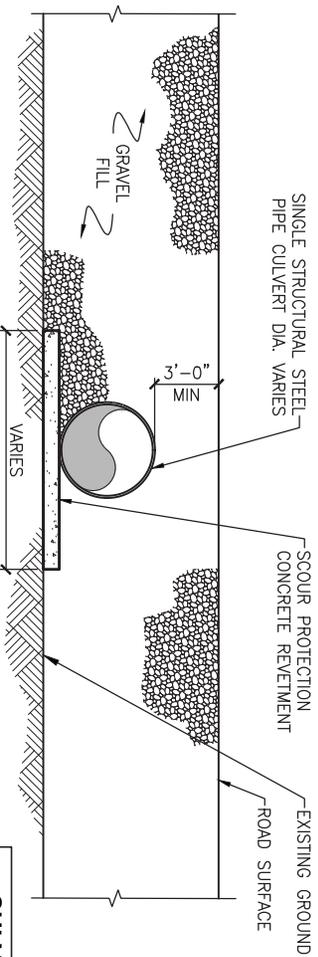
REFERENCE: POA-2001-1082-M1

WATERBODY: BEAUFORT SEA

DATE: OCTOBER 2012

SEE FIGURE 27 FOR WATER ACCESS PAD PLAN

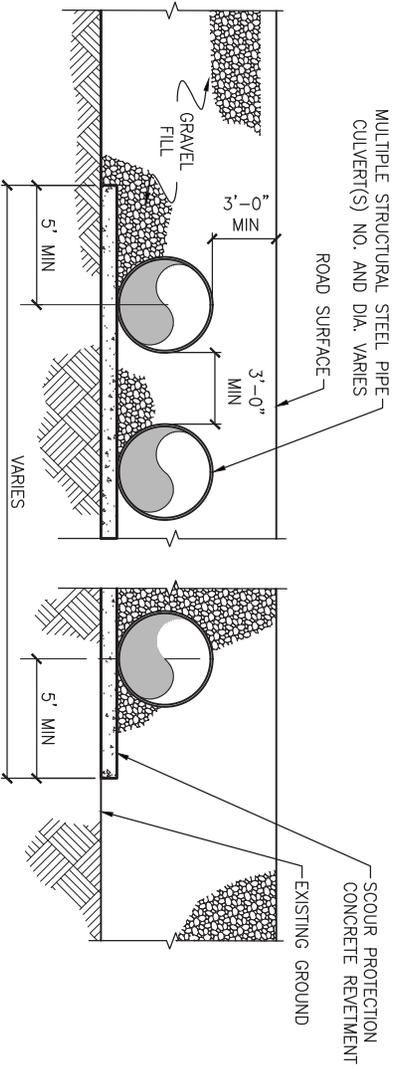
POA-2001-1082-M1 10/19/2012



### TYPICAL SINGLE CULVERT ELEVATION

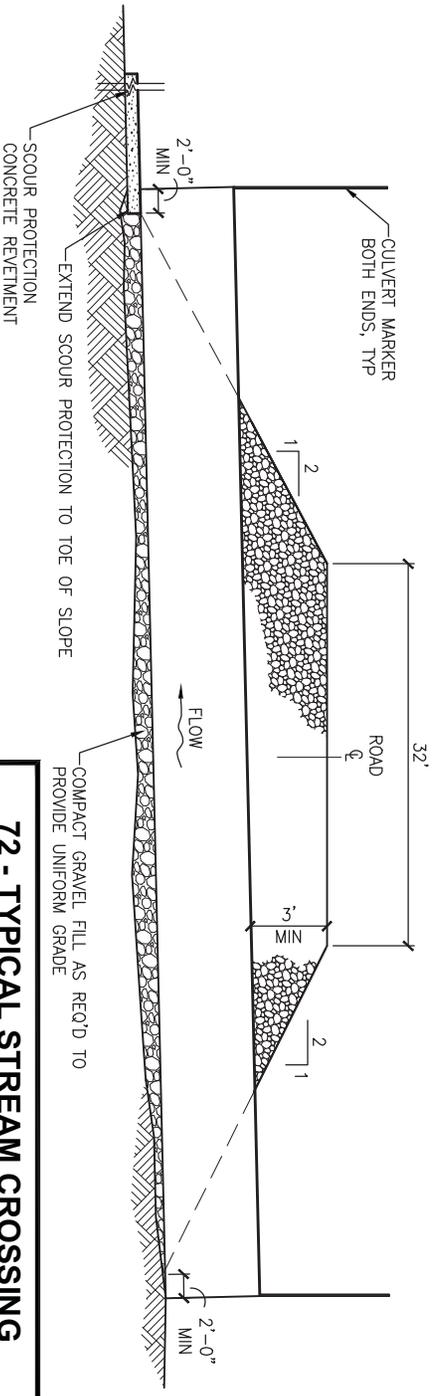
NOT TO SCALE

| CULVERT TABLE   |                    |                   |  |
|-----------------|--------------------|-------------------|--|
| STREAM CROSSING | NUMBER OF CULVERTS | DIAMETER (INCHES) |  |
| 23              | 1                  | 48                |  |
| 26              | 2                  | 48                |  |



### TYPICAL MULTIPLE CULVERTS ELEVATION

NOT TO SCALE



### TYPICAL SINGLE/MULTIPLE CULVERT SECTION

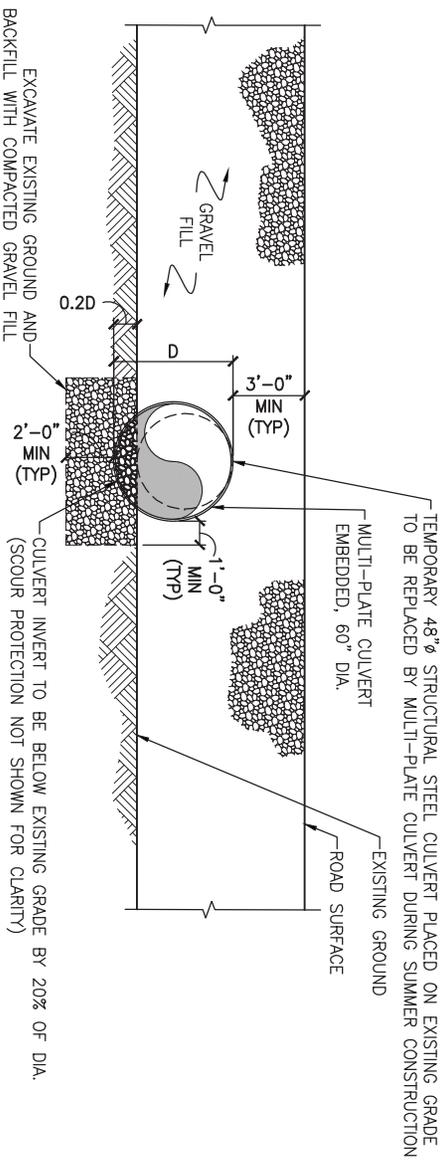
NOT TO SCALE

### 72 - TYPICAL STREAM CROSSING CULVERT SECTION

- NOTES:
1. CULVERT PLACEMENT TO MATCH THALWEG
  2. SCOUR PROTECTION WILL MATCH EXISTING CHANNEL ELEVATION
  3. STREAM CROSSING CULVERT GRADIENTS RANGE 0.1%-1.8%

PURPOSE:  
PLACE FILL AND CULVERT AS PART OF THE ROAD CONSTRUCTION

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

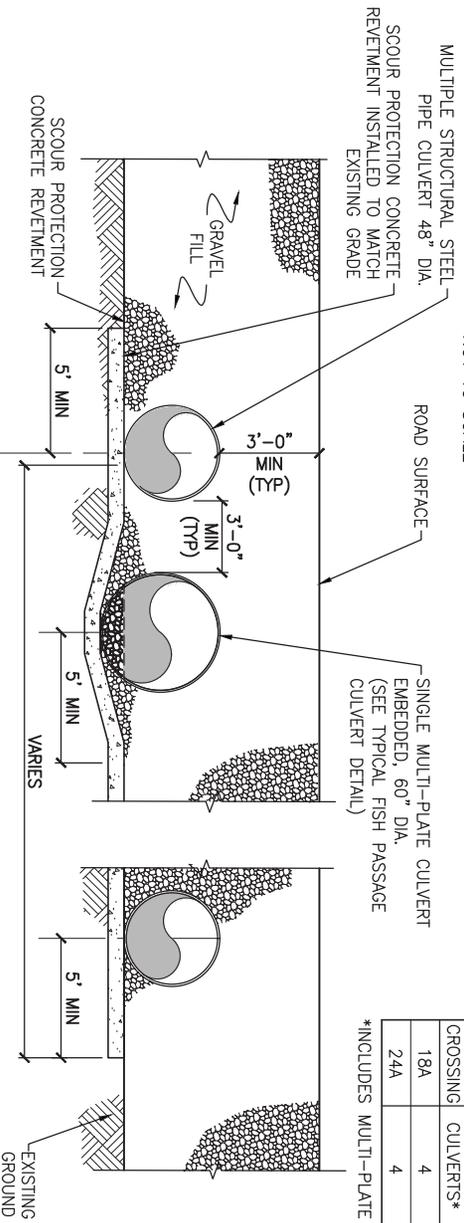


**TYPICAL EMBEDDED CULVERT DETAIL**

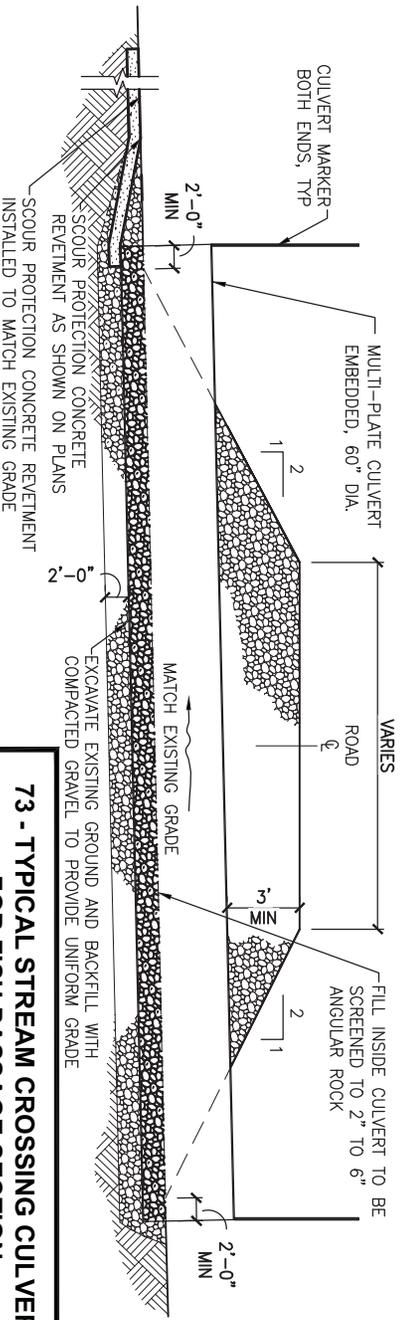
NOT TO SCALE

| CULVERT TABLE   |                     |
|-----------------|---------------------|
| STREAM CROSSING | NUMBER OF CULVERTS* |
| 18A             | 4                   |
| 24A             | 4                   |

\*INCLUDES MULTI-PLATE CULVERT



**TYPICAL FISH PASSAGE CULVERT BATTERY ELEVATION**

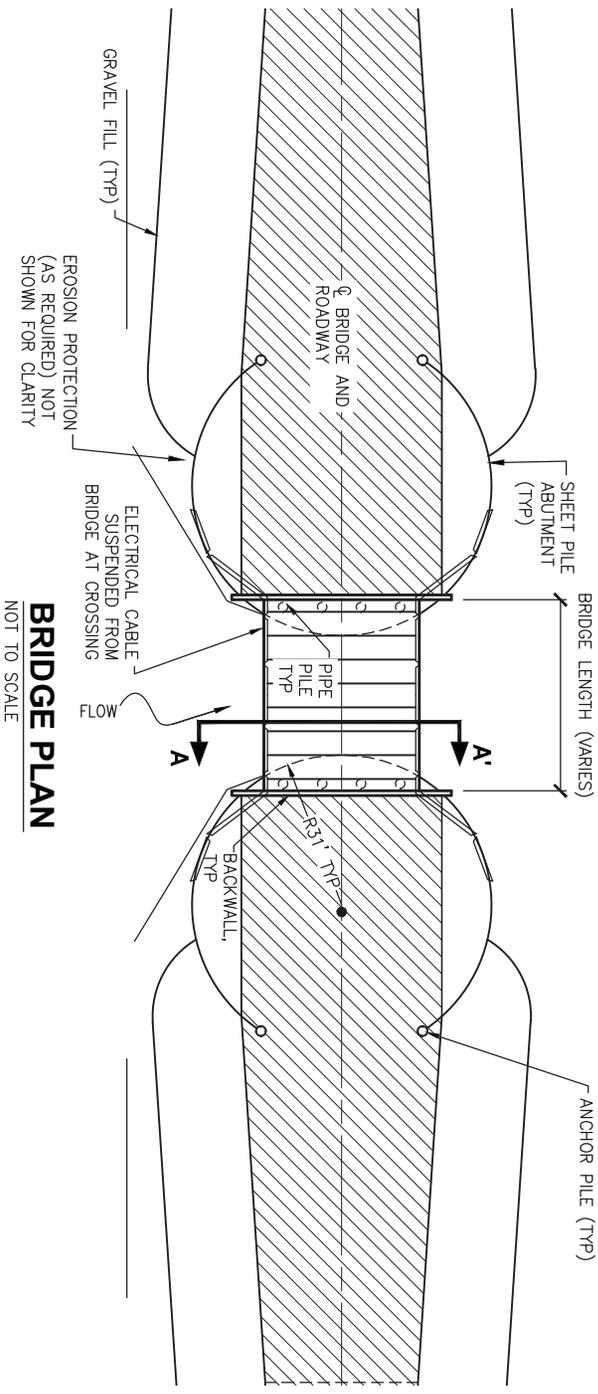


**TYPICAL EMBEDDED CULVERT SECTION**

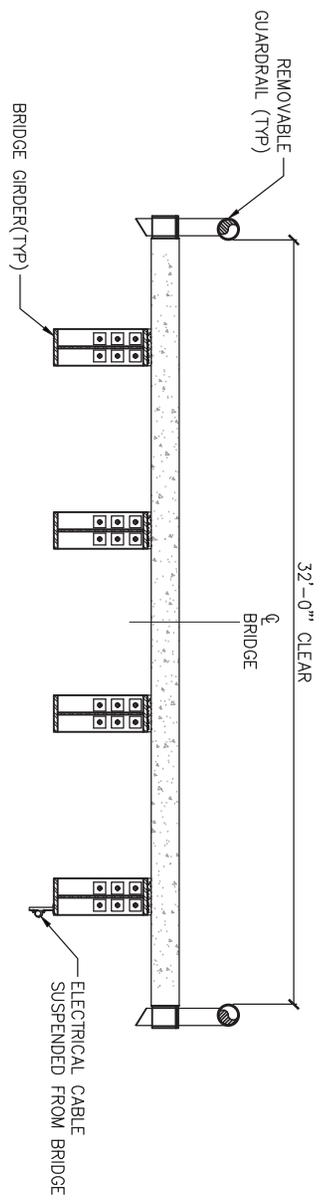
NOT TO SCALE

**73 - TYPICAL STREAM CROSSING CULVERT FOR FISH PASSAGE SECTION**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012  
 PURPOSE: PLACE FILL AND CULVERT AS PART OF THE ROAD CONSTRUCTION



**BRIDGE PLAN**  
NOT TO SCALE



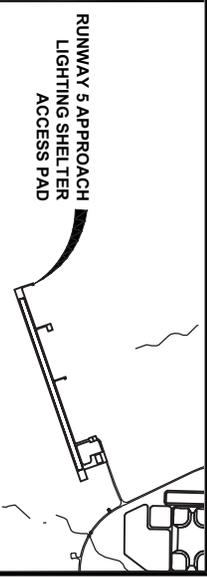
**SECTION A-A**  
NOT TO SCALE

NOTE:  
SHEET PILES NOT SHOWN  
FOR CLARITY

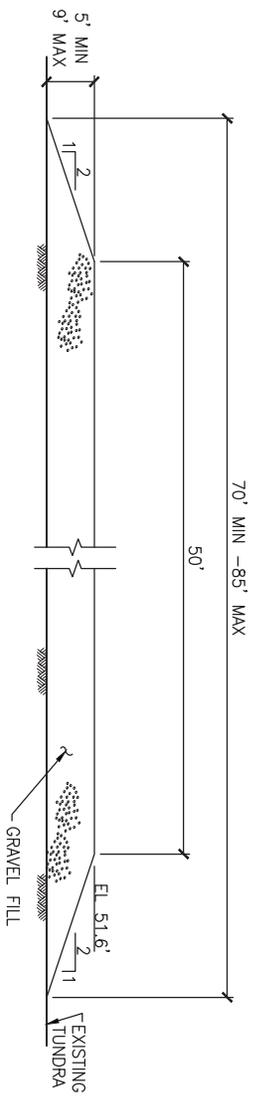
**74 - POWERLINE BRIDGE CROSSING**  
**SECTION**

|            |   |
|------------|---|
| APPLICANT: | EXXON MOBIL CORPORATION & PTE PIPELINE LLC. |
| PROJECT:   | POINT THOMSON PROJECT                       |
| LOCATION:  | NORTH SLOPE BOROUGH, ALASKA                 |
| REFERENCE: | POA-2001-1082-M1                            |
| WATERBODY: | BEAUFORT SEA                                |
| DATE:      | OCTOBER 2012                                |

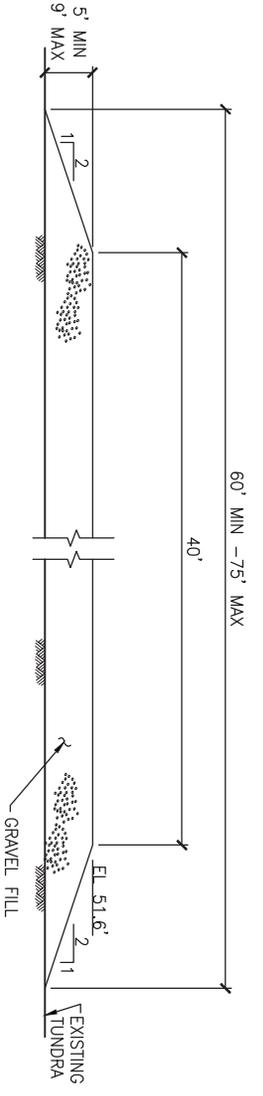
POA-2001-1082-M1 10/19/2012



**KEY MAP**



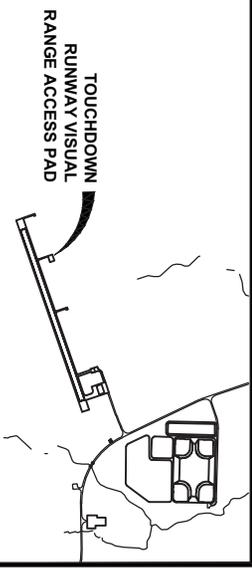
**RUNWAY 5 APPROACH LIGHTING SHELTER  
ACCESS PAD LONGITUDINAL SECTION**  
NOT TO SCALE



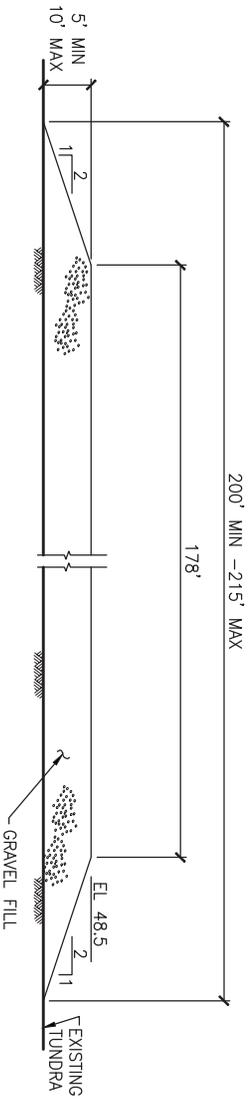
**RUNWAY 5 APPROACH LIGHTING SHELTER  
ACCESS PAD TRANSVERSE SECTION**  
NOT TO SCALE

**75 - NAVAID PAD SECTION  
(SHEET 1 OF 4)**

APPLICANT: EXXON MOBIL CORPORATION &  
PTE PIPELINE LLC.  
PROJECT: POINT THOMSON PROJECT  
LOCATION: NORTH SLOPE BOROUGH, ALASKA  
REFERENCE: POA-2001-1082-M1  
WATERBODY: BEAUFORT SEA  
DATE: OCTOBER 2012

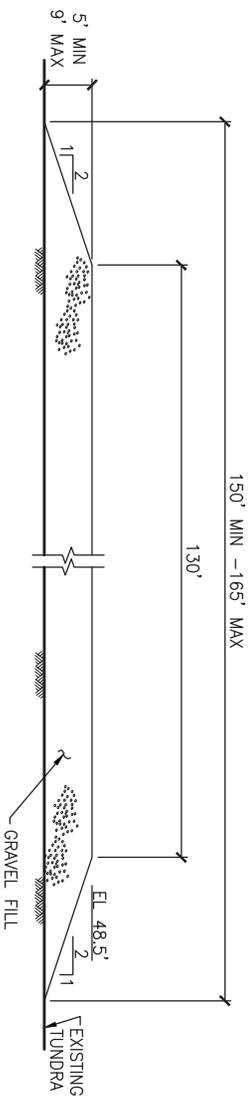


**KEY MAP**



**TOUCHDOWN RUNWAY VISUAL RANGE ACCESS PAD LONGITUDINAL SECTION**

NOT TO SCALE



**TOUCHDOWN RUNWAY VISUAL RANGE ACCESS PAD TRANSVERSE SECTION**

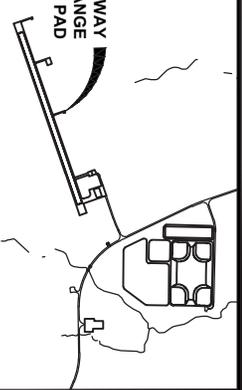
NOT TO SCALE

**76 - NAVAID PAD SECTION  
(SHEET 2 OF 4)**

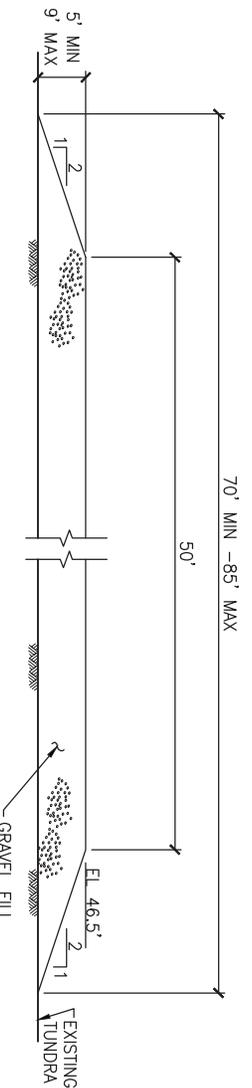
APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

POA-2001-1082-M1 10/19/2012

MIDFIELD RUNWAY  
VISUAL RANGE  
ACCESS PAD

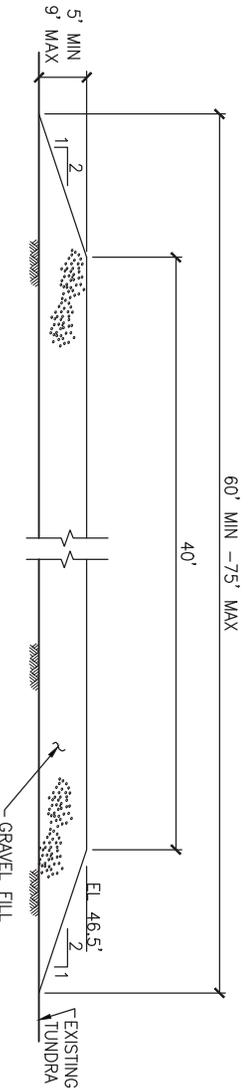


**KEY MAP**



**MIDFIELD RUNWAY VISUAL RANGE ACCESS PAD LONGITUDINAL SECTION**

NOT TO SCALE

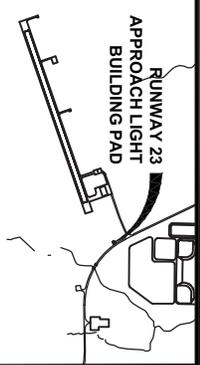


**MIDFIELD RUNWAY VISUAL RANGE ACCESS PAD TRANSVERSE SECTION**

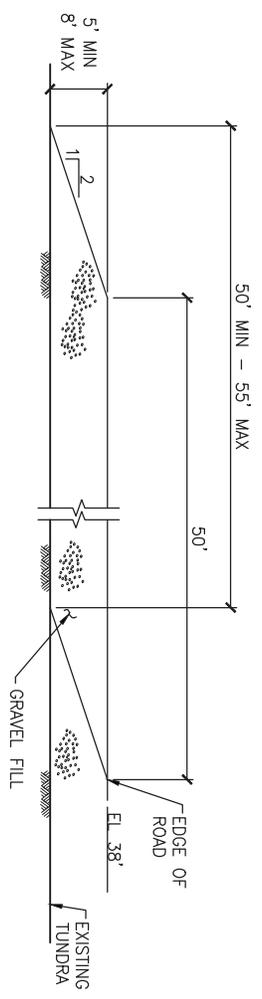
NOT TO SCALE

**77 - NAVAID PAD SECTION  
(SHEET 3 OF 4)**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

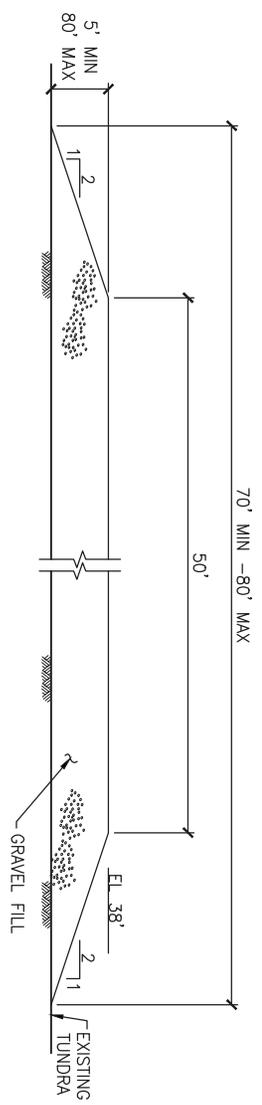


## KEY MAP



### **RUNWAY 23 APPROACH LIGHT BUILDING PAD LONGITUDINAL SECTION**

NOT TO SCALE

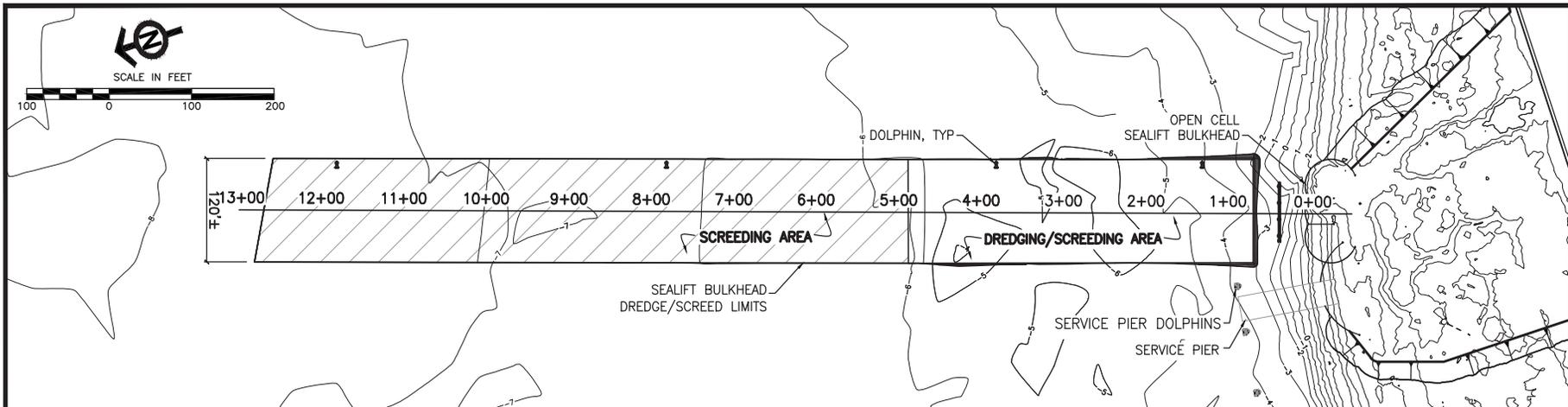


### **RUNWAY 23 APPROACH LIGHT BUILDING PAD TRANSVERSE SECTION**

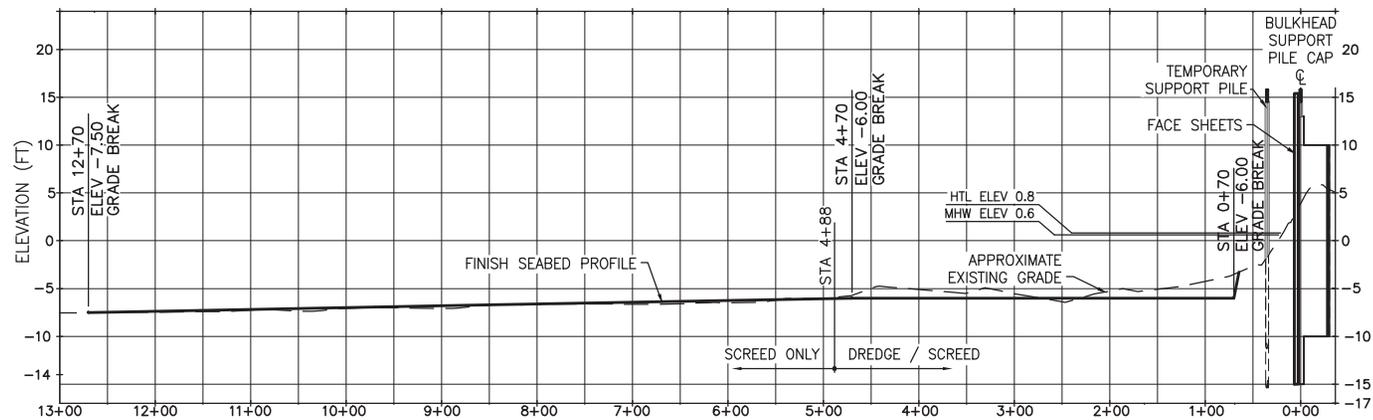
NOT TO SCALE

## 78 - NAVAID PAD SECTION (SHEET 4 OF 4)

|            |   |
|------------|---|
| APPLICANT: | EXXON MOBIL CORPORATION & PTE PIPELINE LLC. |
| PROJECT:   | POINT THOMSON PROJECT                       |
| LOCATION:  | NORTH SLOPE BOROUGH, ALASKA                 |
| REFERENCE: | POA-2001-1082-M1                            |
| WATERBODY: | BEAUFORT SEA                                |
| DATE:      | OCTOBER 2012                                |



**DREDGING AND SCREEDING AREA PLAN**



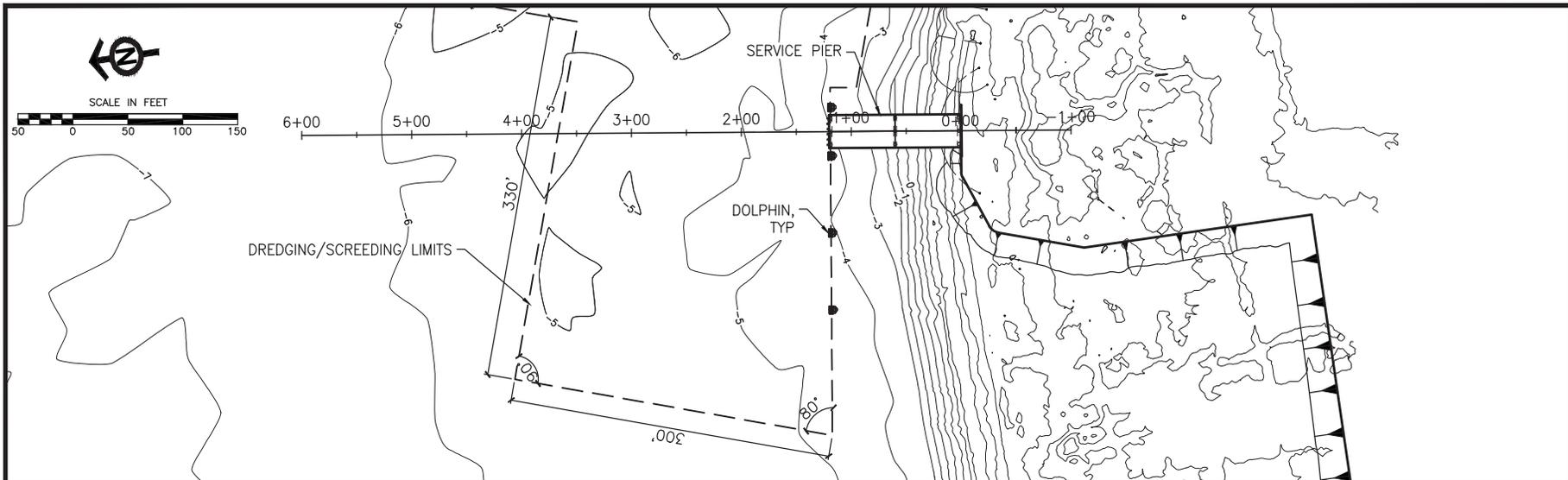
**DREDGING AND SCREEDING AREA PROFILE**

1H:10V

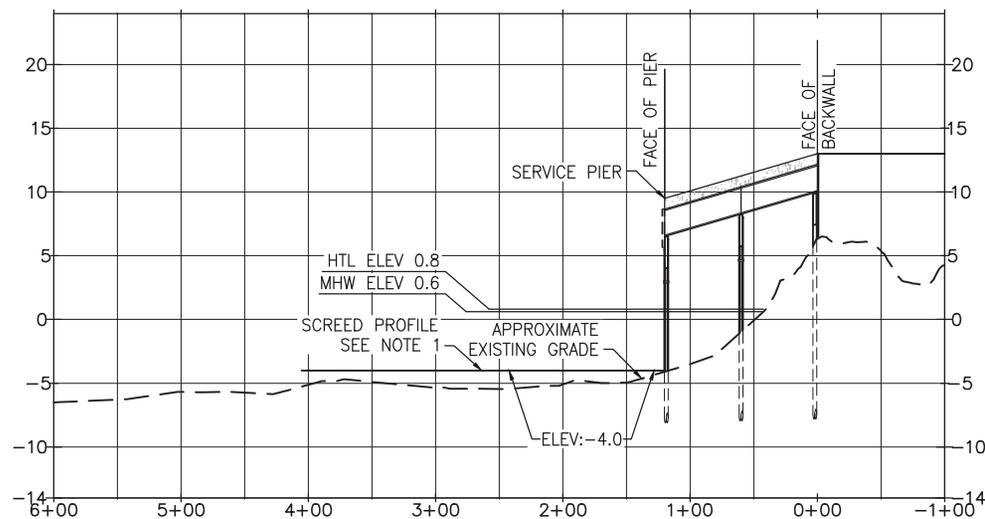
**NOTE:**  
 PROFILE TO BE COMPLETED WINTER 2015 PRIOR TO SEALIFT MODULE OFFLOAD. RECONFIRM ADEQUATE GRADE IMMEDIATELY PRIOR TO SEALIFT BARGE ARRIVAL.

**79 - SEALIFT BULKHEAD DREDGING AND SCREEDING DETAILS**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012



### DREDGING AND SCREEDING AREA LIMITS



**NOTE:**

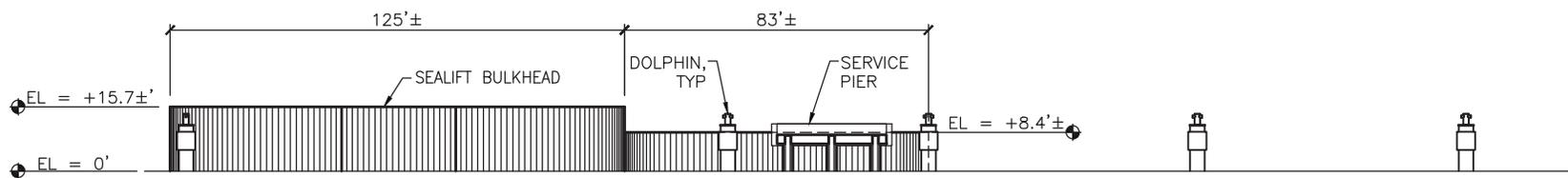
1. SCREED LEVEL AND TO A MAXIMUM ELEVATION OF -4.0' MLLW WITHIN THE LIMITS OF PROJECT SCREEDING.
2. SHEET PILES NOT SHOWN FOR CLARITY.

### DREDGING AND SCREEDING AREA PROFILE AT PIER CENTERLINE

1H:10V

### 80 - SERVICE PIER DREDGING AND SCREEDING DETAILS

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012



NOTE:  
 TEMPORARY RAMP SUPPORT  
 NOT SHOWN FOR CLARITY

VERTICAL DATUM=MLLW  
 MHW=0.6'

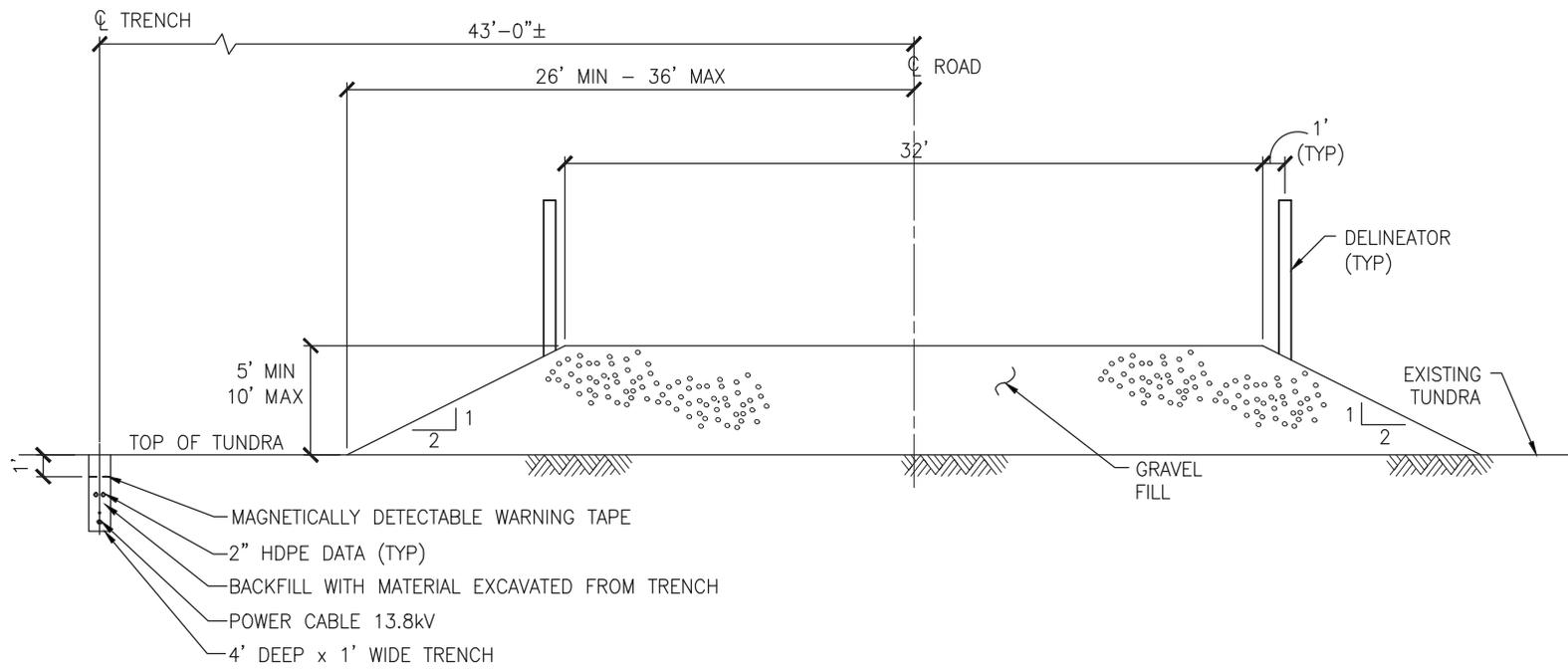
**SEALIFT BULKHEAD/SERVICE PIER ELEVATION**

NOT TO SCALE

**81 - SEALIFT BULKHEAD AND SERVICE PIER ELEVATION**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012

SEE FIGURES 11 AND 12 FOR SEALIFT BULKHEAD AND SERVICE PIER PLAN AND PROFILE



**NOTE:**

1. INTERNAL CONFIGURATION OF TRENCH VARIES
2. BACKFILLING WITH INORGANIC OVERBURDEN MAY BE NECESSARY TO ACCOUNT FOR ICE LENSES AND SETTLEMENT

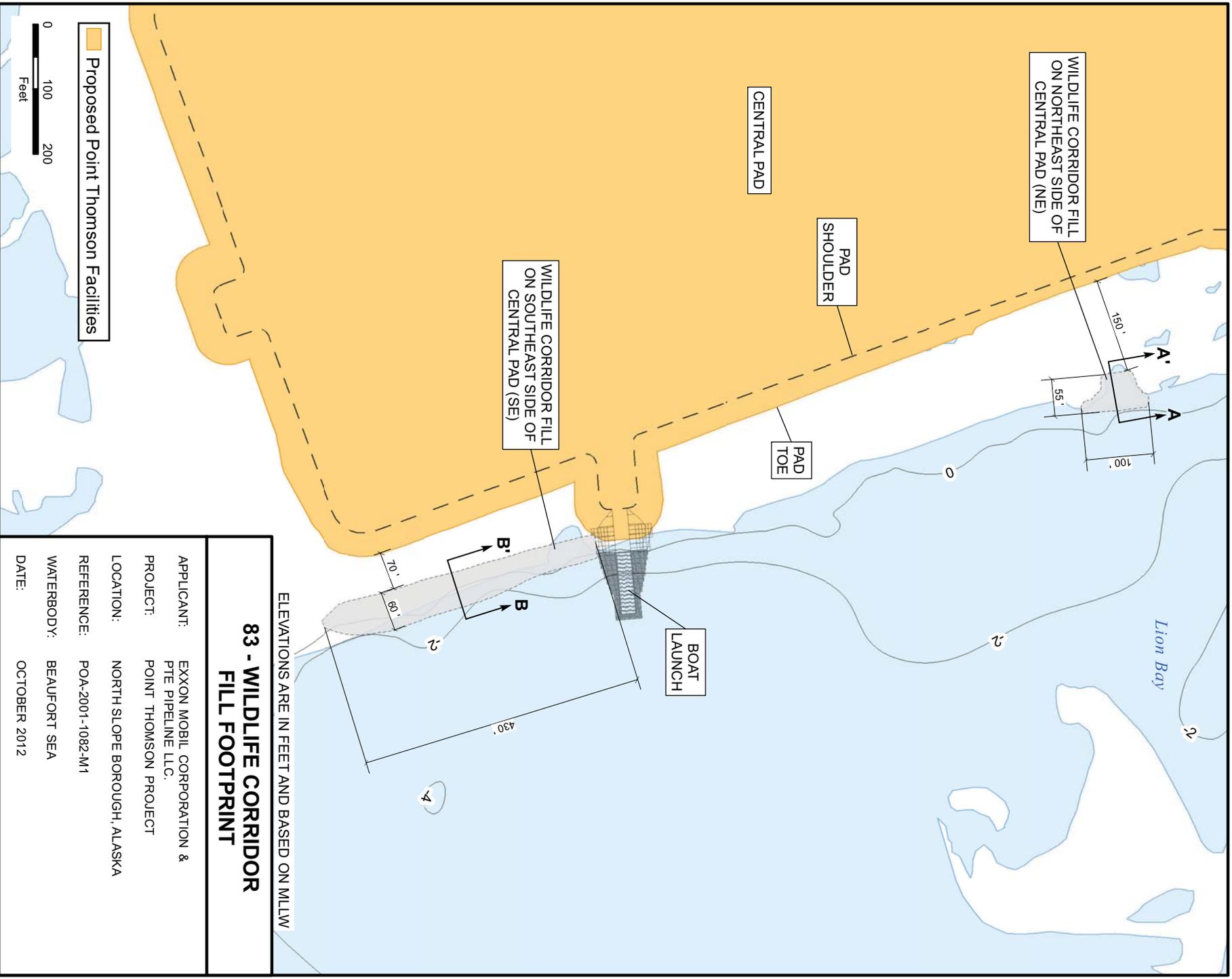
**CENTRAL PAD ROAD AND ELECTRICAL TRENCHING TYPICAL SECTION**

NOT TO SCALE

**82 - TYPICAL ELECTRICAL TRENCHING AND ROAD SECTION**

|            |   |
|------------|---|
| APPLICANT: | EXXON MOBIL CORPORATION & PTE PIPELINE LLC. |
| PROJECT:   | POINT THOMSON PROJECT                       |
| LOCATION:  | NORTH SLOPE BOROUGH, ALASKA                 |
| REFERENCE: | POA-2001-1082-M1                            |
| WATERBODY: | BEAUFORT SEA                                |
| DATE:      | OCTOBER 2012                                |

SEE FIGURE 67 FOR ELECTRICAL TRENCHING PLAN



Proposed Point Thomson Facilities

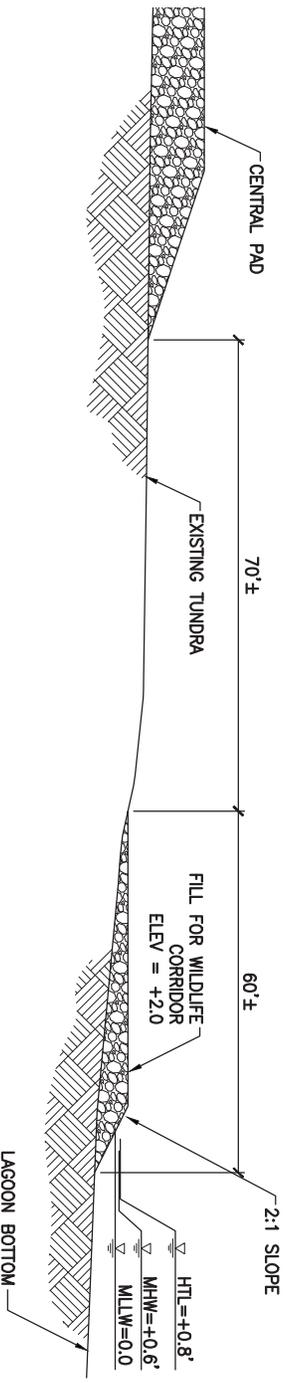
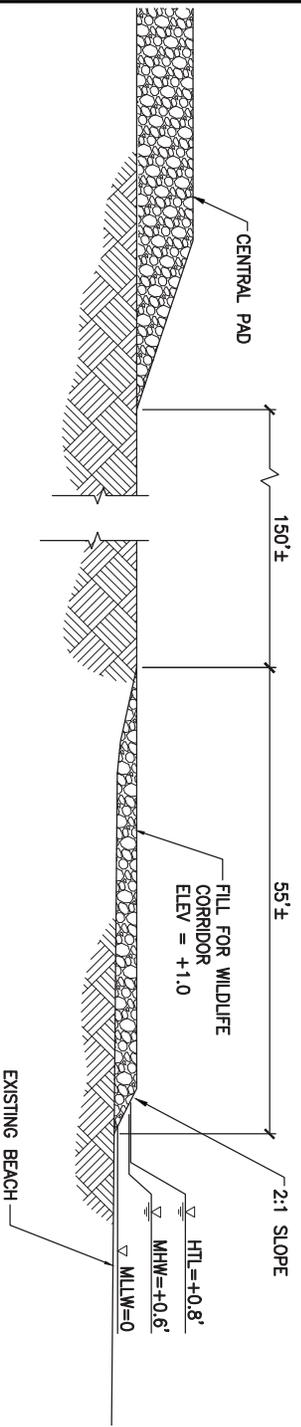
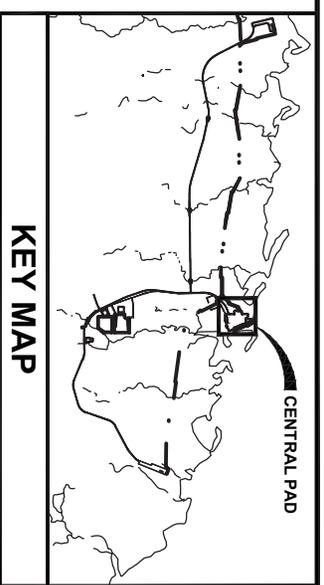


ELEVATIONS ARE IN FEET AND BASED ON MLLW

**83 - WILDLIFE CORRIDOR  
FILL FOOTPRINT**

|            |   |
|------------|---|
| APPLICANT: | EXXON MOBIL CORPORATION & PTE PIPELINE LLC. |
| PROJECT:   | POINT THOMSON PROJECT                       |
| LOCATION:  | NORTH SLOPE BOROUGH, ALASKA                 |
| REFERENCE: | POA-2001-1082-M1                            |
| WATERBODY: | BEAUFORT SEA                                |
| DATE:      | OCTOBER 2012                                |

POA-2001-1082-M1 10/19/2012



**84 - WILDLIFE CORRIDOR  
FILL SECTIONS**

APPLICANT: EXXON MOBIL CORPORATION & PTE PIPELINE LLC.  
 PROJECT: POINT THOMSON PROJECT  
 LOCATION: NORTH SLOPE BOROUGH, ALASKA  
 REFERENCE: POA-2001-1082-M1  
 WATERBODY: BEAUFORT SEA  
 DATE: OCTOBER 2012