



US Army Corps  
of Engineers  
Alaska District

# Public Notice of Application for Permit

Regulatory Division (1145)  
CEPOA-RD  
1600 A Street, Suite 110  
Anchorage, AK 99501-5146

**PUBLIC NOTICE DATE:** November 28, 2011

**EXPIRATION DATE:** December 28, 2011

**REFERENCE NUMBER:** POA-2005-97

**WATERWAY:** Knik Arm

Interested parties are hereby notified that a Department of the Army (DA) permit application has been received for work in waters of the United States as described below and shown on the enclosed project drawings.

Comments on the described work, with the reference number, should reach this office no later than the expiration date of this Public Notice to become part of the record and be considered in the decision. Please contact Mary Lee Plumb-Mentjes at (907) 753-2789, toll-free from within Alaska at (800) 478-2712, by fax at (907) 279-0064, or by e-mail at [Mary.Plumb-Mentjes@usace.army.mil](mailto:Mary.Plumb-Mentjes@usace.army.mil) if further information is desired concerning this notice.

**APPLICANT:** Knik Arm Bridge and Toll Authority (KABATA), Attn. Andrew J. Niemiec, Executive Director, 820 East 15<sup>th</sup> Avenue, Anchorage, Alaska 99501.

**AGENT:** HDR Alaska, Inc., Attn. Paul McLarnon, 2525 C Street, Suite 305, Anchorage, Alaska 99503; tel. 907-644-2063; e-mail: [Paul.McLarnon@hdrinc.com](mailto:Paul.McLarnon@hdrinc.com).

**LOCATION:** The proposed project is located in and adjacent to the upper Knik Arm of Cook Inlet, within Sections 14, 15, 21, 22, 23, 24, T. 14 N., R. 4 W., Section 31, T. 14 N., R. 3 W.; and Sections 6 and 7, T. 13 N., R. 3 W., Seward Meridian; USGS Quad Maps Anchorage B-8 SW and Anchorage A-8 NW. The proposed project would be between the northwestern edge of the Port MacKenzie District, where a new road (Phase 1) is proposed to diverge from the existing Port MacKenzie Road at Milepost (MP) 9.5, Latitude 61.2958° N., Longitude -150.0060° W. It would cross primarily uplands north of Lake Lorraine, heading in a southerly direction to the west bluff of Knik Arm and then end at Latitude 61.2883° N., Longitude -149.9200° W. on the eastern side of the Port MacKenzie District. Approximately 7,200 feet north of Port MacKenzie Dock and 1,700 feet south of Anderson Dock. The bridge roadway embankment on the Mat-Su side starts at Latitude 61.2845° N., Longitude -149.9120° W. The 9,200-foot bridge would span east across Knik Arm to the Anchorage side at Latitude 61.2761° N., Longitude -149.8650° W. and would reach the shoreline approximately 1.5 miles north of Cairn Point at Latitude 61.2682° N., Longitude -149.8625° W. The roadway would follow the Anchorage shoreline and western perimeter of the Joint Base Elmendorf Richardson (JBER) at the bottom of the bluff south to Cairn Point. From the vicinity of Cairn Point, the Anchorage approach would continue south, closely

following the natural shoreline, then climbs in grade along the eastern boundary of the Port of Anchorage. In the vicinity of the Cherry Hill bluff, the roadway would climb slightly on a fill supported by retaining walls at the base of the bluff to provide grade separation for security and operational purposes between the roadway and the edge of the Port of Anchorage property. From this point, the roadway would follow the alignment of Erickson Street via a cut-and-cover tunnel to end on East Loop Road, Latitude 61.2274° N., Longitude -149.8830° W., the terminus of the project where it would connect to the A and C Street Couplet, Anchorage, Alaska.

PURPOSE: The applicant's stated purpose is to further development of transportation systems in the upper Cook Inlet region by providing improved vehicular access and surface transportation connectivity, as well as safety redundancy, between the Matanuska-Susitna region and Municipality of Anchorage with a financially feasible and efficient crossing to meet the needs for:

- Improved regional transportation infrastructure to meet existing and projected population growth and locally adopted economic development, land use, and transportation plans and as directed by the Alaska State Legislature in AS 19.75;
- Regional transportation connectivity for the movement of people and the movement of freight and goods to, from, and between Anchorage, the Mat-Su, and Interior Alaska; and
- Safety and transportation system redundancy for alternative travel routing and access between regional airports, ports, hospitals, and fire, police, and disaster relief services for emergency response and evacuation.

PROPOSED WORK: The total discharge of fill into waters of the U.S., including wetlands, is proposed to be 2,697,349 cubic yards into 78.31 acres. Fill would be discharged into the intertidal wetlands and waters of Knik Arm to provide structural fill for construction of the approach roads and bridge abutments in the Matanuska-Susitna Borough (Mat-Su) and the Municipality of Anchorage (MOA). Structural fill would be discharged into freshwater wetlands on both sides of Knik Arm for construction of the project roadways. In addition, 1.28 acres of wetlands would be impacted by the temporary discharge of fill.

Table 1: Types of Material Being Discharged and Amount of Each Type in Cubic Yards (CY).

	Excavation Volume Total	Fill Volume Total	AC Pavement Volume @ 4" Depth	D1 Gravel and Select Type A <sup>1</sup> Fills @ 42" Depth	Embankment Volume (Select Type A <sup>1</sup> )	Filter Rock Volume	Riprap Rock Volume	Total # of Drilled Shafts
Mat-Su Approach	22,352	12,724	360	3,783	8,581	0	0	0
The Crossing	58,299	2,556,926	7,691	79,975	2,385,422	65,932	264,323	128
Anchorage Approach	22,167	127,699	484	5,077	122,138	0	0	0

Table 2: Surface Area in Acres of Wetlands or Other Waters Filled.

	Permanent Wetlands and Waterbody Impacts (Acres)	Permanent Upland Impacts (Acres)	Temporary Wetland and Waterbody Impacts (Acres)
Mat-Su Approach	2.56	114.19	0.54
The Crossing	73.46	15.14	0.00
Anchorage Approach	2.29	29.58	0.74
<b>Total</b>	<b>78.31</b>	<b>158.91</b>	<b>1.28</b>

All work would be performed in accordance with the enclosed plan (Sheets 1-13), dated November 21, 2011.

ADDITIONAL INFORMATION:

Coast Guard Authorization Required for Bridge and Related Structures

The U.S. Coast Guard regulates bridges under Section 9 of the Rivers and Harbors Act of 1899 and the General Bridge Act of 1946. Thus, the Corps of Engineers will not be reviewing activities usually associated with Section 10 of the Rivers and Harbors Act of 1899, but only those associated with Section 404 of the Clean Water Act, i.e., discharges of fill in waters of the U.S., including wetlands.

Overview of Project

The total length of the Knik Arm Crossing (KAC) project from MP 0.0 of the Point MacKenzie Road in the Mat-Su to the intersection of the A-C and Ingra-Gambell Couplets with Third Avenue in the MOA would be approximately 18.9 miles and just over 19.0 miles, respectively. The KAC would be located approximately 1.5 miles north of Cairn Point and span approximately 2.5 miles of Knik Arm to a point just north of Port MacKenzie. The connection to an existing roadway on the Mat-Su side of Knik Arm is Point MacKenzie Road. The Anchorage side connection is the A-C Couplet/Loop Road (Phase I) and Ingra-Gambell Couplet (Phase 2). The DA permit application with attachments and supporting document can be found at [ftp://ftp.usace.army.mil/pub/poa/KABATA\\_PN\\_References](ftp://ftp.usace.army.mil/pub/poa/KABATA_PN_References).

The Final Environmental Impact Statement (FEIS) and Section 4(f) Evaluation, both dated December 20, 2007, and the Record of Decision (ROD), signed December 15, 2010, by the Federal Highway Administration (FHWA) (all of which can be accessed on KABATA's website, [www.knikarmbridge.com](http://www.knikarmbridge.com)) supported the Northern Access Alternative for the Mat-Su Approach, the Erickson Alternative for the Anchorage Approach and the Southern Alignment with a 8,200-foot long bridge for the KAC. However, additional hydrological analysis conducted since the ROD was signed and consultations with NMFS, resulted in a recommendation of a longer 9,200-foot bridge, which is what is being proposed in the applicant's DA permit application, dated September 30, 2011 and revised November 21, 2011. The ROD committed to the use of drilled shaft foundations in lieu of driven piles and increased bridge span lengths from 250 feet to approximately 275 feet. KABATA also identified a comprehensive construction schedule to minimize impacts to the beluga whales in Knik Arm. A detailed listing of mitigation measures and commitments is contained in the FEIS, the formal Section 7 consultation, the Biological Opinion issued by the National Marine Fisheries Service (NMFS) on November 30, 2010, and the ROD on KABATA's website.

The KAC project would be constructed in two phases to provide needed capacity as traffic volumes grow over time. The proposed DA permit application is for the construction of two-lane roadways in Phase I of the project, as well as the subgrade of the additional two lanes on the Mat-Su bluff (Cross-section C, Sheet 4), the Western and Eastern Road Embankments (Cross-section D, Sheet 6, and the additional two lanes along eastern edge of Knik Arm, (Cross-section H, Sheet 10) including along the eastern margin of the Port of Anchorage (Cross-sections I, J, K, Sheets 10 and 11). Phase I would include a new bridge spanning Knik Arm and the

bridge approaches from the Mat-Su side of Knik Arm (the Mat-Su Approach) and the Anchorage side of Knik Arm (the Anchorage Approach). The Mat-Su and Anchorage Approaches would connect the bridge to existing transportation infrastructure near the existing MP 9.5 of Port MacKenzie Road on the Mat-Su side and the A-C couplet on the Anchorage side. All bridge substructures, including approach fill for a future four-lane roadway, would be constructed in Phase 1, with no additional fill in Knik Arm needed for development of Phase 2. Phase 2 would be initiated when warranted by traffic volumes and would not need any in-water work within Knik Arm. Phase 2 would provide a four-lane roadway from MP 0.0 Point MacKenzie Road to the Ingra-Gambell Couplet at Third Avenue in Anchorage. The bridge deck would be expanded to four lanes with a multi-purpose pathway. In Phase 2 the original (Phase 1) cut-and-cover tunnel would be expanded to the east to accommodate an additional four lanes of traffic, and facilitate a connection with a structure over the Ship Creek rail yard leading to the Ingra-Gambell couplet. Additional access and egress ramps would be provided. The A-C structure's sidewalk would be connected to a multi-use path, which would be constructed on the west side of the roadway, and which would extend northward over the cut-and-cover tunnel.

The permanent roadway embankments would be a rural typical section meaning that surface drainage would sheet flow off the road, over the edge and run down the side slopes through the riprap, and eventually into Knik Arm. Drainage from the bridge would also sheet flow across the road and cascade from the edge of the deck.

#### New Approach Alignment on Mat-Su Side of Proposed Bridge

The Mat-Su Approach would consist of a paved two-lane roadway with a 24-foot driving surface and 10-foot shoulders. The side slopes would have a grade of 2:1 and be constructed as shown in typical Cross-section A (Sheet 3 of 13). It would begin at MP 9.5 of the Point MacKenzie Road where an intersection would be constructed at the entrance to the Port MacKenzie District and would allow for controlled and secure access into the Port MacKenzie District. From this new intersection at the northwestern end of the Port MacKenzie District, a new 3.5-mile long alignment would be constructed north of Lake Lorraine and continuing east toward the Knik Arm bluff. The new road would end on the eastern side of the Port MacKenzie District in an area approximately 7,200 feet north of the Port MacKenzie Dock and 1,700 feet south of the Anderson Dock. Before reaching the shoreline, a toll facility and multi-use facility for road maintenance equipment would be constructed near an intersection that would control access to and from Port MacKenzie and Anderson Dock. An undercrossing consisting of a large culvert would be constructed near Lake Lorraine to allow access for the existing power line easement and trail. For security reasons, the new alignment might be physically isolated from Port MacKenzie operations by approximately 37,300 linear feet of security fencing with wildlife gates or ramps. A 44-acre construction staging area would be located in non-wetland habitat on the east side of the Port MacKenzie District between the Grain Access Road and the top of the bluff overlooking Knik Arm. Additional construction staging areas would be on top of the western and eastern permanent roadway embankments, once they are constructed. Up to 2.56 acres of wetlands would be filled by the Mat-Su Approach.

#### Mat-Su Side Permanent Roadway Embankment

The 1,800-foot long western permanent roadway embankment would begin approximately one-third of the way down from the top of the bluff on the Mat-Su side of Knik Arm. It would terminate at approximately minus 8 Mean Lower Low Water (MLLW) contour in Knik Arm where it would meet the western bridge abutment. The permanent roadway embankment would be constructed of clean fill composed of gravel, filter rock and rock armor for protection against wave action and ice and be wide enough to accommodate expansion.

### Bridge Crossing

A 9,200-foot long bridge would join the western and eastern permanent roadway embankments. The bridge would be supported by 32 piers spaced approximately 275 feet apart. To meet the U.S. Coast Guard navigational requirements, the bridge would have a navigational clearance height of 79 feet above MLLW and 50 feet above MHHW for vessel passage near mid-channel. U.S. Coast Guard required lighting and navigational aids would be provided. The bridge would initially have a minimum of one lane in each direction with shoulders, but would have capacity to be expanded to four lanes. The bridge foundation would have permanent piers, each consisting of four 8- to 10-foot diameter drilled shafts. The drilled shafts would be connected to the pier cap and columns through use of a concrete footing. The 10-foot drilled shafts would consist of steel casing, with an average length of approximately 165 feet. Each drilled shaft would be filled with rebar and concrete. The 9,200-foot bridge would be constructed using standard marine vessel-supported construction methods below the minus 10-foot MLLW contour. Above the minus 10-foot MLLW contour a temporary trestle construction method would be utilized by the contractor.

### Anchorage-Side Permanent Roadway Embankment

Beginning at the eastern abutment of the bridge at approximately minus 3 feet MLLW, a 8,900-foot long permanent roadway embankment of similar materials and design as the western embankment would be constructed on the east side of Knik Arm. The embankment would curve to the south following the eastern shoreline of the Knik Arm and western perimeter of the Joint Base Elmendorf Richardson (JBER) at the bottom of the bluff to end at the northern end of the extended Port of Anchorage, approximately 1,000 feet south of Cairn Point. The eastern permanent roadway embankment would be similar in cross-section to the permanent roadway embankment on the Mat-Su side, but the Anchorage roadway embankment would be located in a shallower section of Knik Arm. Staging of the operations on the Anchorage side would likely be either from the north end of the Port of Anchorage, on the former defense fuels property below Government Hill, or on the roadway subgrade. In addition to stockpiling of equipment and materials, this would likely be the main office site. The two-lane roadway would extend 0.65-mile along the Port of Anchorage, approximately 15 feet from the toe of the bluff. Along the existing Elmendorf Landfill in the vicinity of the Cherry Hill bluff, the roadway would climb slightly on an area of new fill supported by a retaining wall for approximately 0.9-mile between JBER and the Port of Anchorage at the base of the bluff. The retaining walls would provide grade separation for security and operational purposes between the roadway and the edge of the Port property. The retaining wall would be positioned to accommodate construction of the bridge access road to the east, allowing for the initial two-lane roadway and room to expand in the future to four lanes with a pathway. Because the roadway would run close to sensitive areas, it would be isolated from military and Port of Anchorage operations by security fencing. A 0.65-mile roadway would be built east of the security wall to climb the bluff toward Government Hill. This two-lane roadway would be wide enough to allow expansion to four lanes and a pathway. A partial interchange would be provided to allow access to the KAC facility from the northern end of the Port of Anchorage and to allow military access to the Port of Anchorage and the KAC facility.

A two-lane road would traverse Government Hill within an approximately 800-foot long cut-and-cover tunnel approximately 30 feet below Erickson Street. The cut-and-cover tunnel would be a minimum of two lanes wide. On the south side of the tunnel East Loop Road would be modified to allow the roadway to join into the A-C Couplet. The roadway would include construction of an intersection to allow northern access to the Port of Anchorage. The design provides for a sidewalk along the west side of the roadway from the top of the cut-and-cover tunnel south to the existing A-C Couplet.

### Construction Methods

These are described in detail in Attachment B of the DA permit application at [ftp://ftp.usace.army.mil/pub/poa/KABATA\\_PN\\_References](ftp://ftp.usace.army.mil/pub/poa/KABATA_PN_References). The 2011 Design Study Report provides an overview of the design standards and engineering consideration for the KAC Phase 1 Project; this study is included at [ftp://ftp.usace.army.mil/pub/poa/KABATA\\_PN\\_References](ftp://ftp.usace.army.mil/pub/poa/KABATA_PN_References).

### Construction of Permanent Roadway Embankments

These would be constructed as the first component of the KAC. They would be constructed simultaneously from the eastern and western sides of Knik Arm and would be anticipated to be completed to the top of the subgrade in the initial construction season. The width of the permanent roadway embankments would range between 300 and 500 feet at the seabed. The maximum height to the fill, at the end of the approaches near both bridge abutments, would be approximately 70 feet above the channel bottom (about 30 feet above high tide line). To reduce the risk of directly covering fish from March through August and to minimize the amount of fill lost to tidal erosion in the intertidal zone (between minus 6 and plus 34 feet), initial fill for intertidal roadway and bridge approach construction activities would be placed when the construction area is above water line and in a dry condition. Any in-water filling in subtidal areas during the months of April through August would be accomplished during the three hours on either side of low tide. To the extent practicable, filling in the subtidal areas would be accomplished from September through March, when juvenile and adult salmon would be less likely to be present. Upon completion of each permanent roadway embankment, the associated bridge abutment would be built.

### Construction of Bridge

Two different methods would be used. Below the minus 10-foot MLLW contour, i.e., approximately 8,300 feet of bridge length in the middle of Knik Arm, floating marine vessels/barges can efficiently operate to support bridge construction. Below minus 10 feet MLLW temporary impacts would be associated with the temporary piles driven for barge moorage, construction docks, and the drilled shaft templates. Above minus 10-foot MLLW contour, a temporary trestle-supported construction method would be used. It would be approximately 30 feet in width supported by a combination of steel beams and driven pipe piles, would be built on each side of Knik Arm to allow simultaneous construction on each end of the bridge. The trestles would remain in place until completion of the bridge and would consist of a center spine paralleling the alignment of the bridge. Template platforms would be constructed along the spine of the trestle, adjacent to each bridge pier to provide a work surface for installation of permanent casings and piles. Piles (232) for the temporary trestle must be installed and removed between April 1 and July 31 because of higher concentrations of beluga whales within Knik Arm during the rest of the year. The trestle would remain in place so that shaft installation work could proceed through at least November of each season, and potentially through the entire winter depending on the weather conditions. Small diameter driven piles and large diameter drilled shafts could be installed from a temporary work trestle.

Temporary construction docks would be constructed at the ends of the western and eastern permanent roadway embankment fills to support movement of materials and workers. A total of sixty-six temporary piles, measuring 24 inches in diameter, would be needed for these three temporary construction docks, which would be installed (pile-driven) between April and July and removed at the end of the project. In addition, twenty-four 24-inch diameter temporary piles would be needed for mooring all marine vessels.

At the peak of bridge construction, approximately 52 marine vessels would be needed: 14 powered vessels, 36 non-powered barges, and two Flexifloat platforms. The largest vessels that would be used during construction would be the support

barges, which would measure approximately 400 feet by 100 feet. The majority of the vessels would be smaller, measuring approximately 120 feet by 30 feet. At any given time approximately eight barges would be in use and the remaining vessels would be smaller, support vessels. A minimum of 4,000 feet, or approximately 40 percent of the bridge length would remain unobstructed (free of moored and anchorage barges and vessels) within Knik Arm at any time during construction to ensure unrestricted passage for belugas. This distance might not always be linearly continuous because of the need for staging of vessels for substructure and superstructure construction.

#### Additional Construction Information

The Port of Anchorage and Port MacKenzie would be the primary sites for off-loading materials needed for the KAC project. Three main types of compactable gravel would be needed for the KAC project: graded pit-run gravel for subgrade fill for all permanent roadways, roadway embankments, and bridge approaches above +20 feet elevation MLLW; coarse-grained pit-run material with less than 15 percent fines used for bridge approach fills constructed below +20 feet MLLW elevation, selected non-frost susceptible fill with less than 6 percent fines and a more controlled gradation for fill above the subgrade. In addition, large angular shot-rock riprap would be needed to protect the permanent roadway embankment sides from erosion and ice gouging along Knik Arm. The cores of the two bridge approaches would need coarser material or shot-rock fill if higher than expected tidal currents are encountered during actual placement. Materials would be transported to the KAC project by truck, train, barge, or combination of these modes. All gravels from the Mat-Su side would come either from within the right-of-way corridor or by truck from the commercial sites near Wasilla. On the Anchorage side, gravel would most likely be transported by a combination of truck and train to the Port of Anchorage where stockpiles would be transferred to truck for final placement. In addition, some production aggregates (base course, pavement, and possibly concrete) would likely be transported by truck from the commercial plants located in the Anchorage Bowl area. Riprap would likely come to one of the ports by barge, side-dump trucks or train, and put in place either by large off-road trucks or side-dumps. Materials for construction of the permanent roadway embankment on the Mat-Su side might travel by barge to Port MacKenzie. Additional information about materials is available in Attachment B of the DA permit application at [ftp://ftp.usace.army.mil/pub/poa/KABATA\\_PN\\_References](ftp://ftp.usace.army.mil/pub/poa/KABATA_PN_References).

It is possible that one or more of the following would be needed: material crushing operations, a concrete plant, and portable pavement plant. These would require dedicated space for stockpiling of various graded materials that would be larger than five acres. More likely, however, is that much of the processed aggregate products would come from already established commercial vendors.

#### Anticipated Schedule

The applicant anticipates issuing a Request for Proposals in spring 2012 and award in fall 2012. They hope to complete permitting in summer 2012 and begin construction in 2013. Winter construction activities are weather- and ice-dependent, so the schedule presumes little or no construction activity between November and March. They anticipate beginning operation of the KAC in 2018.

#### Additional Information

No defined stream channels or anadromous fish drainages would be crossed. No longitudinal encroachments or any significant flood plain encroachments would occur within the Mat-Su or Anchorage portions of the study area. Floodplain encroachment would occur as a result of the selected alternative within the Knik Arm portion of the KAC project. Several utilities would be crossed and/or affected by the KAC project. A joint utility/pathway easement would be provided along the outside edge of the new right-of-way. Several utility companies have expressed interest in ensuring that the structure would be able to carry their conduits.

APPLICANT PROPOSED MITIGATION: The applicant proposes the following mitigation measures to avoid, minimize, and compensate for impacts to waters of the United States from activities involving discharges of dredged or fill material.

Avoidance and Minimization: Attachment D and Attachment G of the applicant's application provide the mitigation statements and a map set marked with the different avoidance and minimization measures. These attachments are available at [ftp://ftp.usace.army.mil/pub/poa/KABATA\\_PN\\_References](ftp://ftp.usace.army.mil/pub/poa/KABATA_PN_References). These include connection to existing roadways to avoid disturbances to undisturbed habitats, maximizing construction on non-wetlands, avoiding bisecting a wetland by routing the alignment along the edge of a wetland, avoiding areas of open water, placing staging areas in upland areas, drilling shafts for piers instead driving piles to minimize impacts to beluga whales, extending the bridge length to 9,200 feet to minimize fill in Knik Arm, having the bridge cross perpendicular to the tidal currents of Knik Arm, having the bridge cross at the narrowest location feasible considering Cairn Point Trench, air space restrictions, and port operations; avoiding impacts to beluga concentration areas to the north at the mouth of Sixmile Creek, properly sizing and designing culverts to maintain natural flow patterns of all bluff drainage features, reducing side slopes from the industry standard of 4:1 to 2:1 to reduce impacts to Knik Arm, directing roadside runoff through vegetated swales before reaching Knik Arm, locating the alignment directly adjacent to bluff to minimize impacts to Knik Arm, maximizing use of existing fill material at the Port of Anchorage, limiting most wetland impacts on Anchorage side to predominantly disturbed wetland areas, and minimizing impacts to 4(f) properties.

Compensatory Mitigation: For unavoidable impacts in Knik Arm and on the Anchorage side KABATA proposes to pay a fee in lieu of compensatory mitigation. They have completed a preliminary calculation of debits using the Anchorage Debit Credit Methodology (2011) and determined total debits to be 58.44 debits, of which 0.11 would be REV 1, 53.98 debits would be REV 2, and 4.39 debits would be REV 3. The Anchorage Debit Credit Methodology is available for review at [ftp://ftp.usace.army.mil/pub/poa/KABATA\\_PN\\_References](ftp://ftp.usace.army.mil/pub/poa/KABATA_PN_References). For impacts to wetlands on the Mat-Su side KABATA has evaluated the unavoidable wetland losses using the Su-Knik Rapid Assessment available at [ftp://ftp.usace.army.mil/pub/poa/KABATA\\_PN\\_References](ftp://ftp.usace.army.mil/pub/poa/KABATA_PN_References), assessing the overall functional capacity of each wetland on a scale from 0 to 1. The calculation of credits needed was determined by multiplying the acreage of permanently impacted wetland by the overall functional assessment score. KABATA proposes to purchase 4.82 credits from a mitigation bank in the Mat-Su Borough.

WATER QUALITY CERTIFICATION: A permit for the described work will not be issued until a certification or waiver of certification, as required under Section 401 of the Clean Water Act (Public Law 95-217), has been received from the Alaska Department of Environmental Conservation.

CULTURAL RESOURCES: The latest published version of the Alaska Heritage Resources Survey (AHRs) has been consulted for the presence or absence of historic properties, including those listed in or eligible for inclusion in the National Register of Historic Places.

Because historic properties have been determined to be within the project area, a determination of effect will be made in consultation with the State Historic Preservation Officer (SHPO). These are described in the KAC FEIS. On May 1, 2008, the FHWA informed the Corps that pursuant to 36 CFR 800.4(d)(1), implementing regulations of Section 106 of the National Historic Preservation Act, the FHWA finds that historic properties would be adversely affected by the proposed project. A Programmatic Agreement (PA) was signed between SHPO, the Advisory Council on Historic Preservation (ACHP), Elmendorf Air Force Base and FHWA on

December 29, 2008. A Memorandum of Understanding was signed by FHWA and SHPO on July 28, 2009; other signatories include the Municipality of Anchorage, Matanuska-Susitna Borough, Knik Tribal Council, and the Native Village of Eklutna. The FHWA ROD, describes the proposed mitigative measures.

Consultation of the AHRS constitutes the extent of cultural resource investigations by the District Commander at this time. As provided for under the PA, ACHP and SHPO were notified on November 15, 2011, of the Corps' intentions to comply with the terms of the PA, as it applies to the issuance of the Section 404 Permit, in fulfillment of the Corps' Section 106 responsibilities. Any comments SHPO may have concerning presently unknown archeological or historic data that may be lost or destroyed by work under the requested permit will be considered in our final assessment of the described work.

ENDANGERED SPECIES: The project area is within the known or historic range of the Cook Inlet Beluga Whale, Delphinapterus leucas. This application is being coordinated with the U.S. Fish and Wildlife Service and the NMFS. Any comments they may have concerning endangered or threatened wildlife or plants or their critical habitat will be considered in our final assessment of the described work. Preliminarily, we have determined the described activity may adversely affect the threatened or endangered Cook Inlet Beluga Whale, Delphinapterus leucas.

We have also preliminarily determined the activity may adversely affect the species' designated critical habitat, under the Endangered Species Act of 1973 (87 Stat. 844).

The actions described in this notice are consistent with, and do not result in changes to those previously considered in the NMFS' Biological Opinion of the KAC Project. In that opinion, NMFS determined this work would not jeopardize the continued existence of any threatened or endangered species, nor destroy or adversely modify designated critical habitat for which NMFS bears responsibility. As this action has previously undergone and completed consultation, we have requested NMFS to affirm the applicability of the KAC Project opinion to the authorization of this work by the DA, and that no additional action is necessary to comply with Section 7 of the Endangered Species Act.

ESSENTIAL FISH HABITAT: The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, requires all Federal agencies to consult with the NMFS on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH).

The project area is within the known range of the Pink salmon, Oncorhynchus gorbuscha; Chum salmon, O. keta; Sockeye salmon, O. nerka; Chinook salmon, O. tshawytscha; and Coho salmon, O. kisutch.

Preliminarily, we have determined the described activity may adversely affect EFH in the project area for the above-listed species. This Public Notice initiates EFH consultation with the NMFS. Any comments or recommendations they may have concerning EFH will be considered in our final assessment of the described work.

TRIBAL CONSULTATION: The Alaska District fully supports tribal self-governance and government-to-government relations between Federally recognized Tribes and the Federal government. Tribes with protected rights or resources that could be significantly affected by a proposed Federal action (e.g., a permit decision) have the right to consult with the Alaska District on a government-to-government basis. Views of each Tribe regarding protected rights and resources will be accorded due consideration in this process. This Public Notice serves as notification to the Tribes within the area potentially affected by the proposed work and invites their

participation in the Federal decision-making process regarding the protected Tribal right or resource. Consultation may be initiated by the affected Tribe upon written request to the District Commander during the public comment period.

PUBLIC HEARING: Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, reasons for holding a public hearing.

EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity and its intended use on the public interest. Evaluation of the probable impacts, which the proposed activity may have on the public interest, requires a careful weighing of all the factors that become relevant in each particular case. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. The outcome of the general balancing process would determine whether to authorize a proposal, and if so, the conditions under which it will be allowed to occur. The decision should reflect the national concern for both protection and utilization of important resources. All factors, which may be relevant to the proposal, must be considered including the cumulative effects thereof. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving 404 discharges, a permit will be denied if the discharge that would be authorized by such permit would not comply with the Environmental Protection Agency's 404(b)(1) guidelines. Subject to the preceding sentence and any other applicable guidelines or criteria (see Sections 320.2 and 320.3), a permit will be granted unless the District Commander determines that it would be contrary to the public interest.

The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

AUTHORITY: This permit will be issued or denied under the following authority:  
(X) Discharge dredged or fill material into waters of the United States - Section 404 Clean Water Act (33 U.S.C. 1344). Therefore, our public interest review will consider the guidelines set forth under Section 404(b) of the Clean Water Act (40 CFR 230).

Project drawings and a Notice of Application for State Water Quality Certification are enclosed with this Public Notice.

District Commander  
U.S. Army, Corps of Engineers

Enclosures

# STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION  
DIVISION OF WATER  
401 Certification Program  
Non-Point Source Water Pollution Control Program

DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
WQM/401 CERTIFICATION  
555 CORDOVA STREET  
ANCHORAGE, ALASKA 99501-2617  
PHONE: (907) 269-7564/FAX: (907) 334-2415

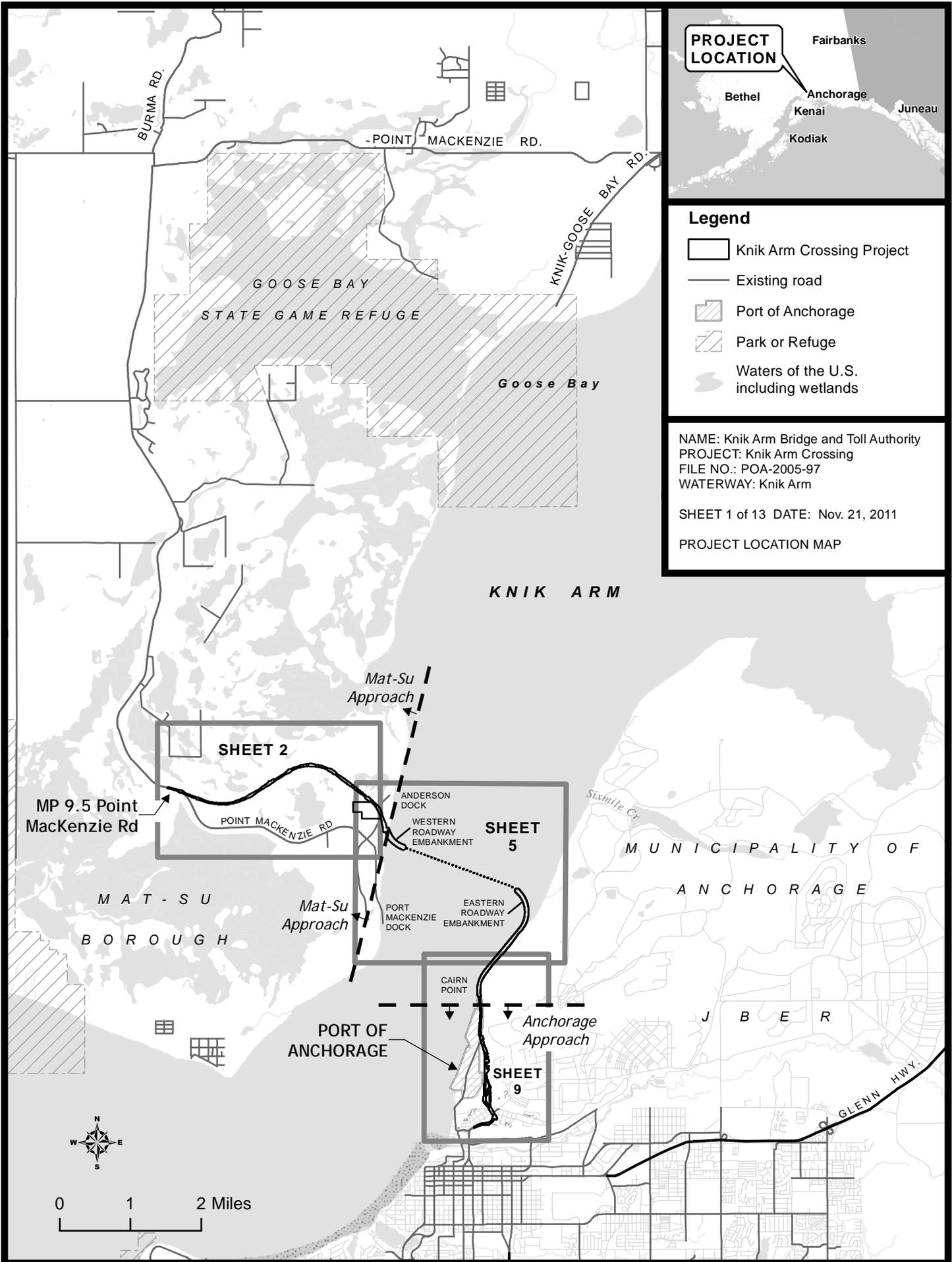
NOTICE OF APPLICATION  
FOR  
STATE WATER QUALITY CERTIFICATION

Any applicant for a federal license or permit to conduct an activity that might result in a discharge into navigable waters, in accordance with Section 401 of the Clean Water Act of 1977 (PL95-217), also must apply for and obtain certification from the Alaska Department of Environmental Conservation that the discharge will comply with the Clean Water Act, the Alaska Water Quality Standards, and other applicable State laws. By agreement between the U.S. Army Corps of Engineers and the Department of Environmental Conservation, application for a Department of the Army permit to discharge dredged or fill material into navigable waters under Section 404 of the Clean Water Act also may serve as application for State Water Quality Certification.

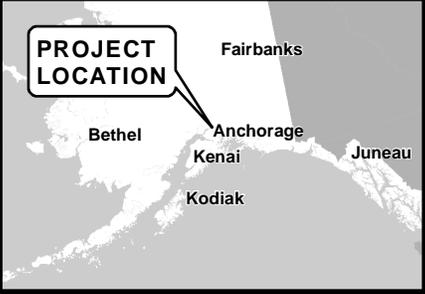
Notice is hereby given that the application for a Department of the Army Permit described in the Corps of Engineers' Public Notice No. POA-2005-97, Knik Arm, serves as application for State Water Quality Certification from the Department of Environmental Conservation.

After reviewing the application, the Department may certify there is reasonable assurance the activity, and any discharge that might result, will comply with the Clean Water Act, the Alaska Water Quality Standards, and other applicable State laws. The Department also may deny or waive certification.

Any person desiring to comment on the project, with respect to Water Quality Certification, may submit written comments to the address above by the expiration date of the Corps of Engineer's Public Notice.



**PROJECT LOCATION**



**Legend**

- Knik Arm Crossing Project
- Existing road
- Port of Anchorage
- Park or Refuge
- Waters of the U.S. including wetlands

NAME: Knik Arm Bridge and Toll Authority  
 PROJECT: Knik Arm Crossing  
 FILE NO.: POA-2005-97  
 WATERWAY: Knik Arm

SHEET 1 of 13 DATE: Nov. 21, 2011

PROJECT LOCATION MAP

**KNIK ARM**

**SHEET 2**

**SHEET 5**

**SHEET 9**

MUNICIPALITY OF ANCHORAGE

MAT-SU BOROUGH

J B E R

PORT OF ANCHORAGE

GLENN HWY.



0 1 2 Miles

Mat-Su Approach

Mat-Su Approach

Anchorage Approach

MP 9.5 Point MacKenzie Rd

POINT MACKENZIE RD

POINT MACKENZIE RD.

KNIK-GOOSE BAY RD.

GOOSE BAY STATE GAME REFUGE

Goose Bay

Anderson Dock

WESTERN ROADWAY EMBANKMENT

PORT MACKENZIE DOCK

EASTERN ROADWAY EMBANKMENT

CAIRN POINT

Sixmile Cr

Note: Temporary disturbance limited to 20 feet from the toe of slope in wetlands along roadway fills for the Mat-Su Approach and Anchorage Approach. There will be no discharge of fill in these areas. There are no temporary disturbance areas along the roadway embankments in the waters of Knik Arm.

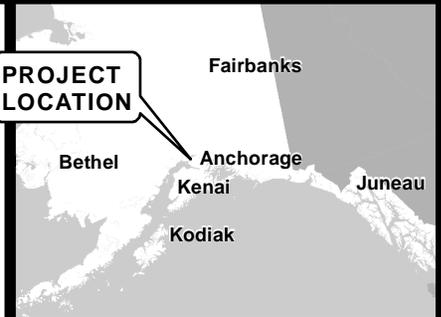
NAME: Knik Arm Bridge and Toll Authority  
 PROJECT: Knik Arm Crossing  
 FILE NO.: POA-2005-97  
 LOCATION: S14, 15, 16, 21, 22, 23, 24, T14N, R4W, Seward Meridian.

WATERWAY: Knik Arm

SHEET 2 of 13 DATE: Nov. 21, 2011

WETLAND IMPACTS MAP  
 MAT-SU APPROACH

**PROJECT LOCATION**



SHEET 3:  
TYPICAL  
SECTION A

SHEET 3:  
SECTION B

ANDERSON DOCK

SHEET 4:  
TYPICAL  
SECTION C

Lake Lorraine

PORT MACKENZIE ROAD

CONSTRUCTION STAGING AREA

GRAIN TERMINAL RD

LU YOUNG LANE

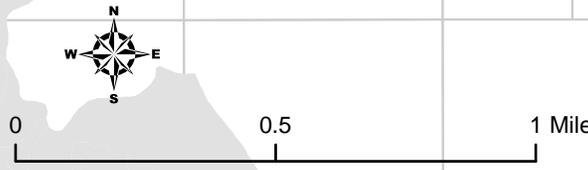
DON YOUNG ROAD

WESTERN ROADWAY EMBANKMENT

0 ft MLLW

**Legend**

- Cut/fill area
- Permanent fill in wetland or water body
- Waters of the U.S. including wetlands
- Bathymetric contour
- Existing road
- Parcel boundary
- Cross section location and direction



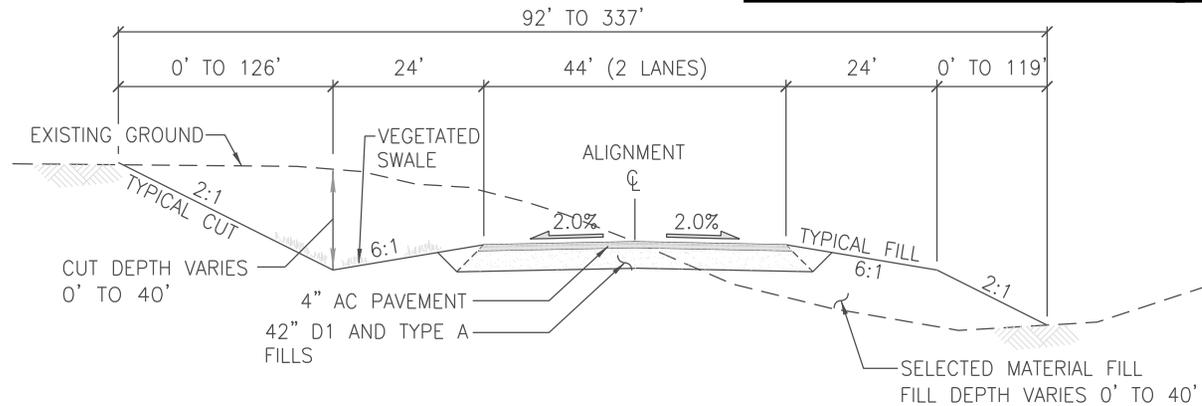
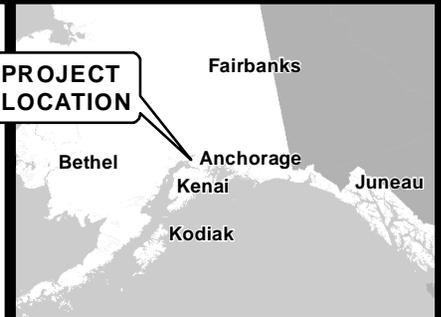
NAME: Knik Arm Bridge and Toll Authority  
 PROJECT: Knik Arm Crossing  
 FILE NO.: POA-2005-97  
 WATERWAY: Knk Arm

SHEET 3 of 13 DATE: Nov. 21, 2011

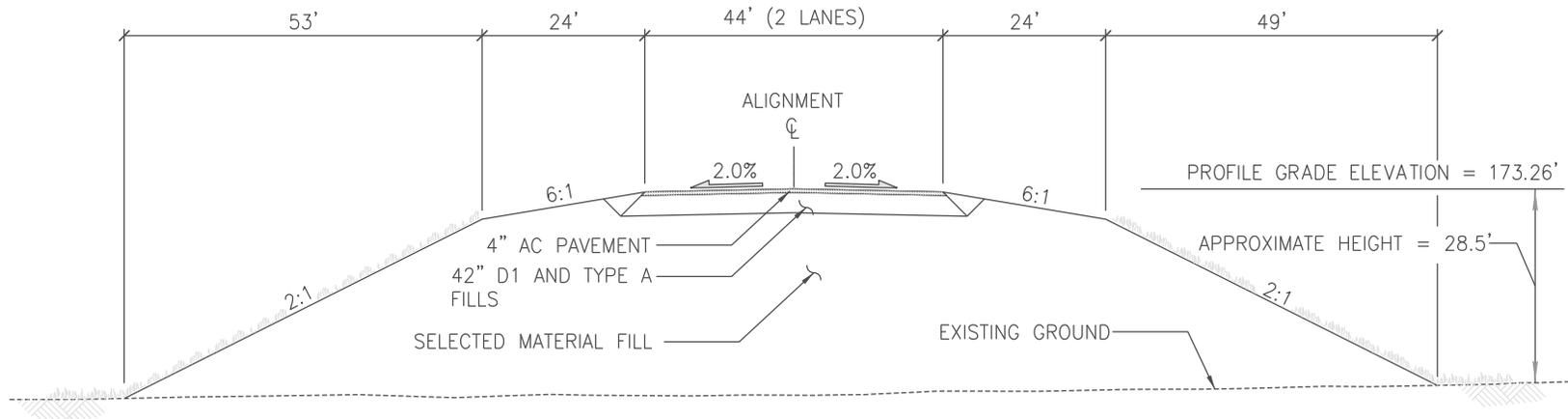
A: MAT-SU APPROACH ROADWAY  
 TYPICAL SECTION

B: MAT-SU APPROACH ROADWAY  
 SECTION @ STATION 744+00

**PROJECT  
 LOCATION**



**A: MAT-SU APPROACH ROADWAY  
 TYPICAL SECTION**



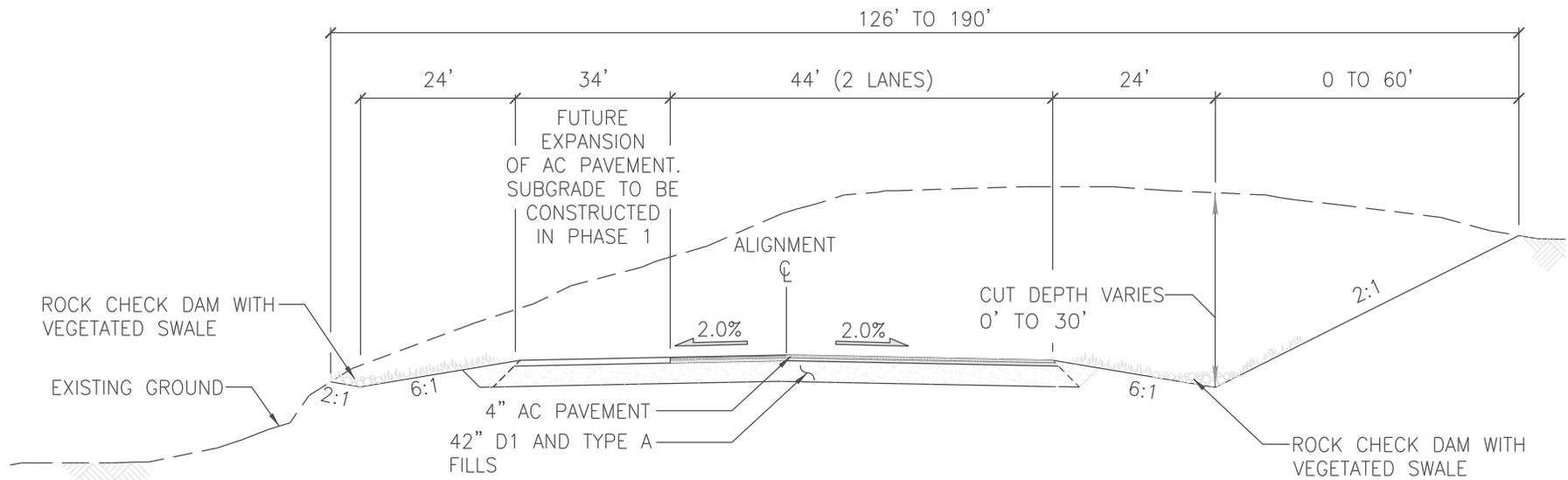
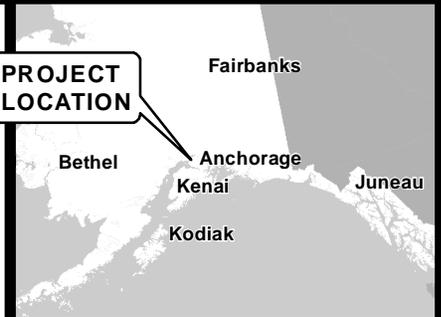
**B: MAT-SU APPROACH ROADWAY SECTION @ STATION 744+00**

NAME: Knik Arm Bridge and Toll Authority  
PROJECT: Knik Arm Crossing  
FILE NO.: POA-2005-97  
WATERWAY: Knik Arm

SHEET 4 of 13 DATE: Nov. 21, 2011

C: MAT-SU APPROACH TRANSITION TO  
WESTERN ROADWAY EMBANKMENT  
TYPICAL SECTION

**PROJECT  
LOCATION**



## **C: MAT-SU APPROACH TRANSITION TO WESTERN ROADWAY EMBANKMENT TYPICAL SECTION**

\*NO DIRECT IMPACT TO WATERS OF THE U.S.

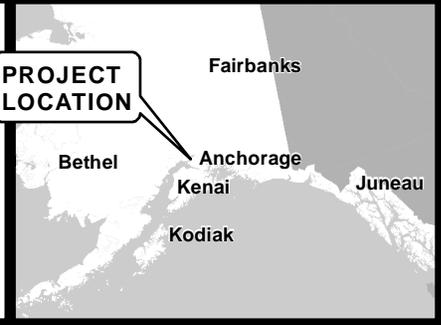
NAME: Knik Arm Bridge and Toll Authority  
 PROJECT: Knik Arm Crossing  
 FILE NO.: POA-2005-97  
 LOCATION: S19, 29, 30, 31, 32, T14N, R3W, Seward Meridian; S14, 23, 24, T14N, R4W, Seward Meridian.

WATERWAY: Knik Arm

SHEET 5 of 13 DATE: Nov. 21, 2011

WETLAND IMPACTS MAP: ROADWAY EMBANKMENTS AND BRIDGE CROSSING

**PROJECT LOCATION**

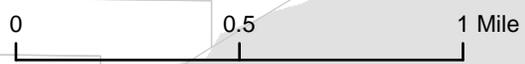
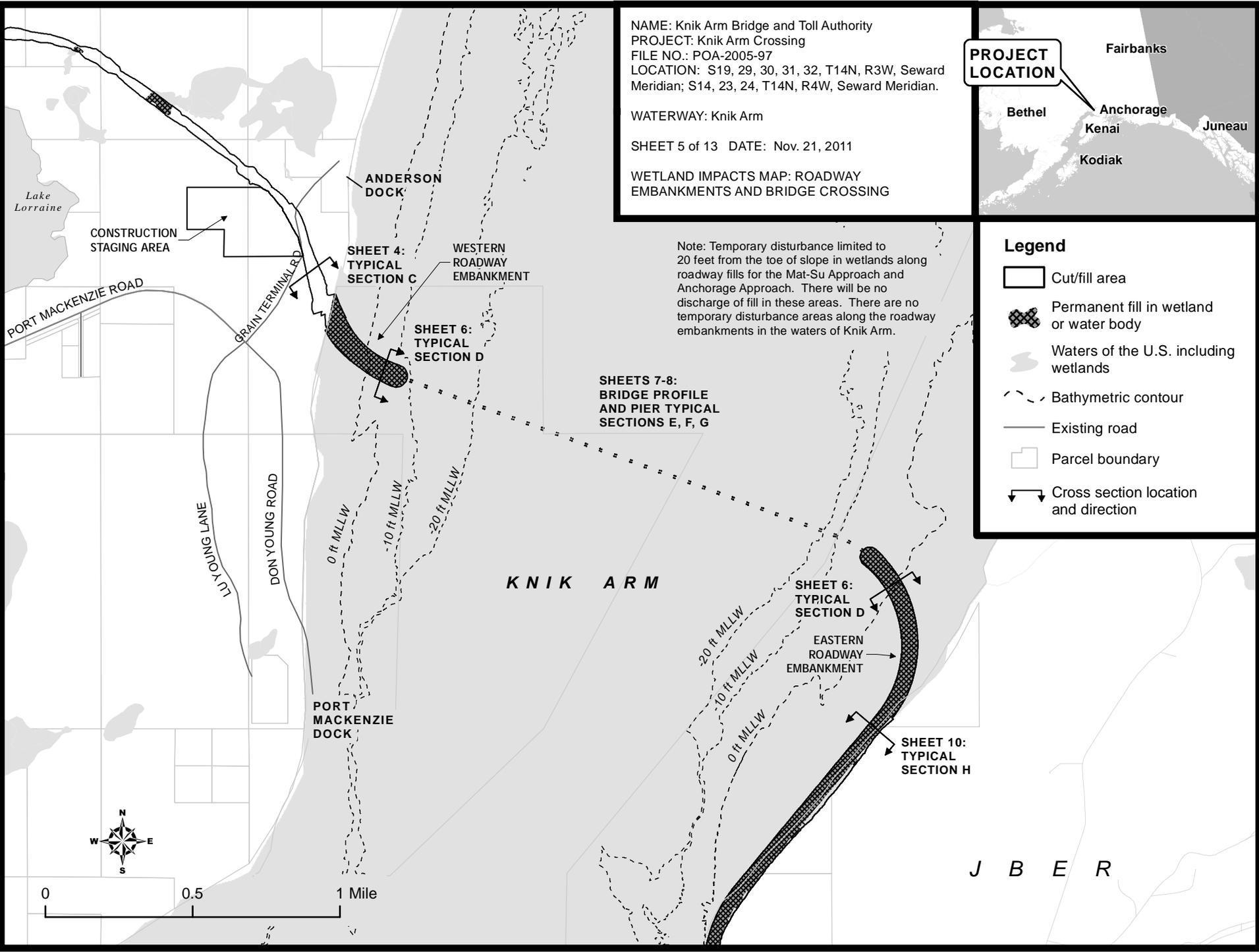


**Legend**

- Cut/fill area
- Permanent fill in wetland or water body
- Waters of the U.S. including wetlands
- Bathymetric contour
- Existing road
- Parcel boundary
- Cross section location and direction

Note: Temporary disturbance limited to 20 feet from the toe of slope in wetlands along roadway fills for the Mat-Su Approach and Anchorage Approach. There will be no discharge of fill in these areas. There are no temporary disturbance areas along the roadway embankments in the waters of Knik Arm.

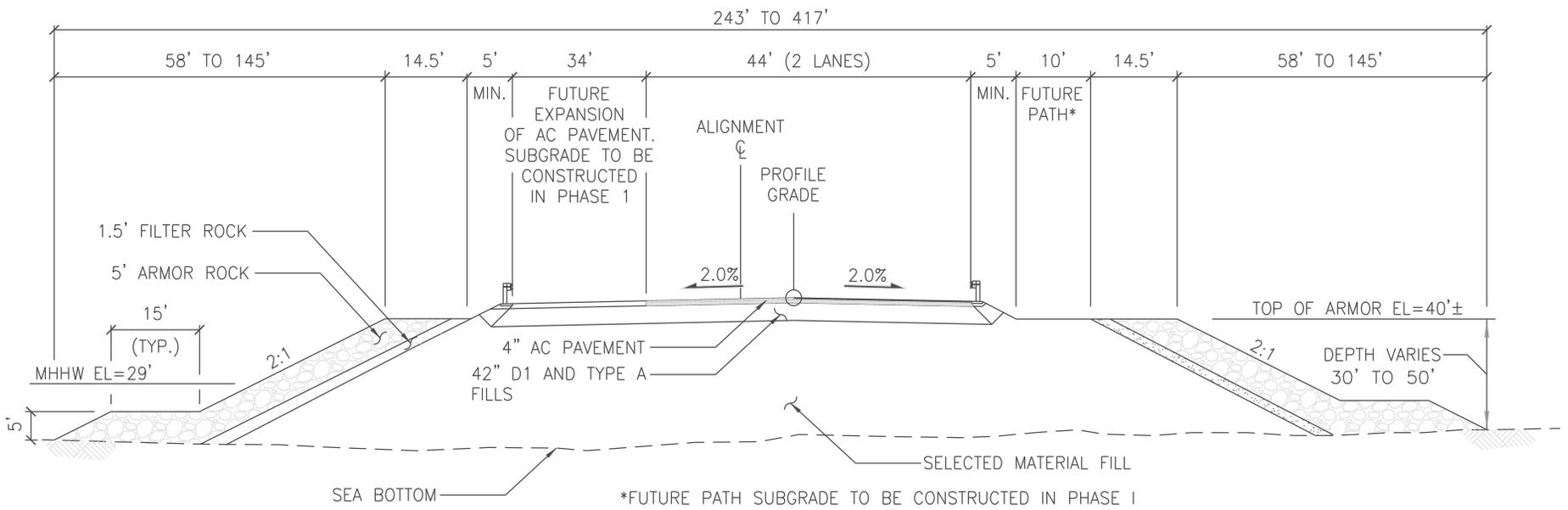
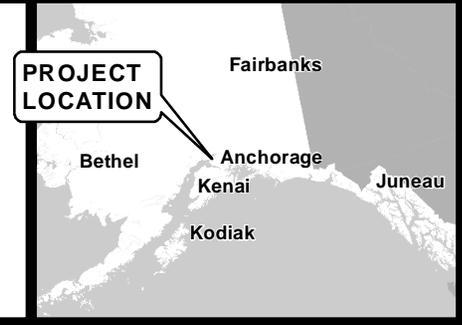
SHEETS 7-8:  
 BRIDGE PROFILE  
 AND PIER TYPICAL  
 SECTIONS E, F, G



J B E R

NAME: Knik Arm Bridge and Toll Authority  
 PROJECT: Knik Arm Crossing  
 FILE NO.: POA-2005-97  
 WATERWAY: Knik Arm

SHEET 6 of 13 DATE: Nov. 21, 2011  
 D: WESTERN AND EASTERN ROADWAY  
 EMBANKMENT TYPICAL SECTION



**D: WESTERN AND EASTERN ROADWAY EMBANKMENT  
 TYPICAL SECTION**

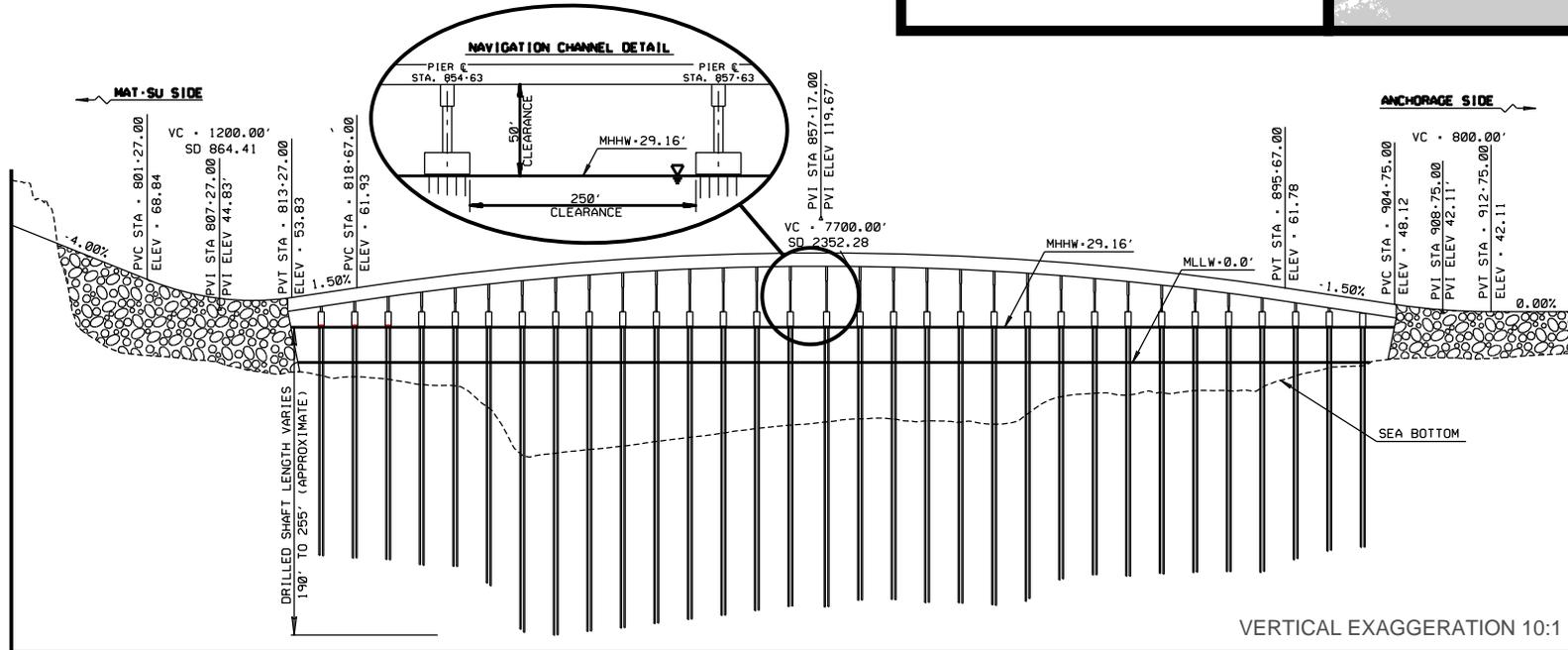
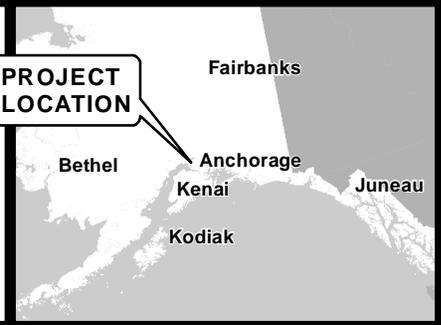
NAME: Knik Arm Bridge and Toll Authority  
 PROJECT: Knik Arm Crossing  
 FILE NO.: POA-2005-97  
 WATERWAY: Knik Arm

SHEET 7 of 13 DATE: Nov. 21 2011

E: BRIDGE PROFILE

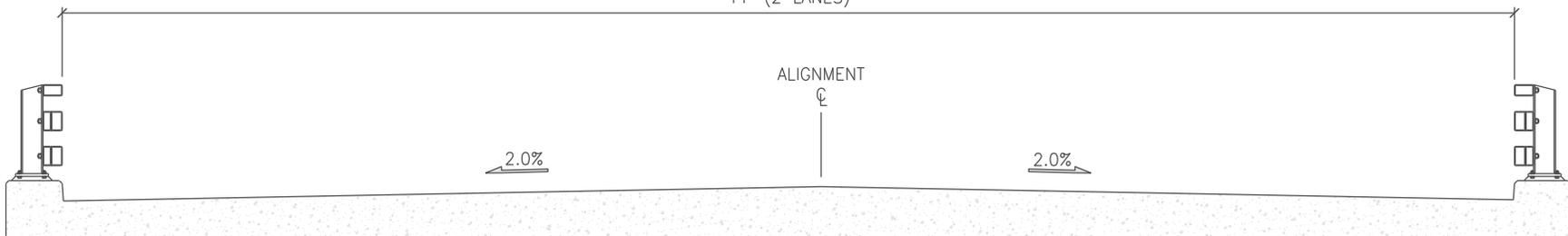
F: BRIDGE DECK TYPICAL SECTION

**PROJECT LOCATION**



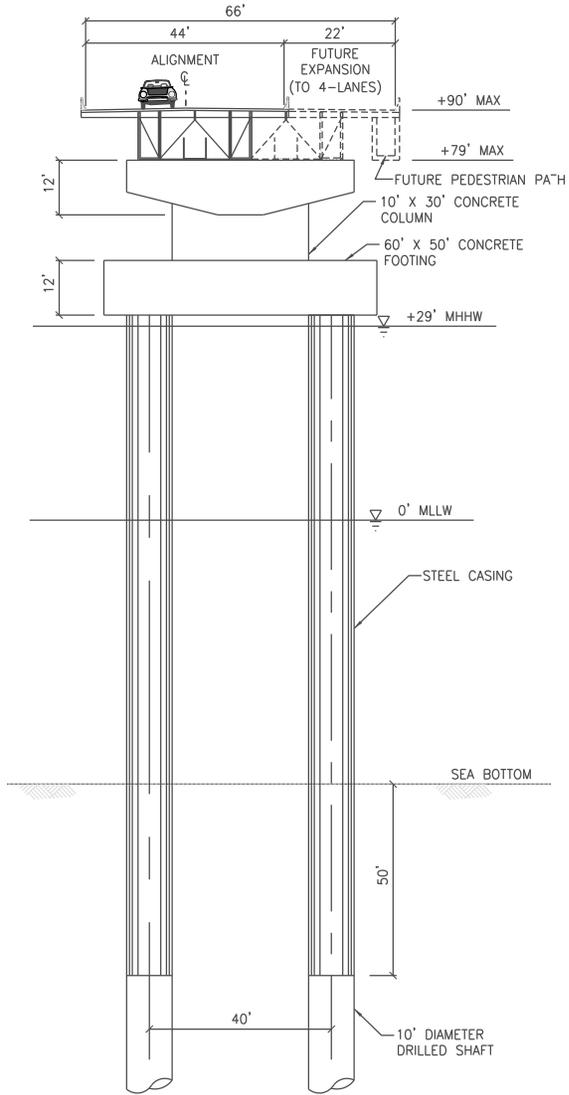
**E: BRIDGE PROFILE**

44' (2 LANES)



**F: BRIDGE DECK TYPICAL SECTION**

# G: PIER TYPICAL SECTIONS



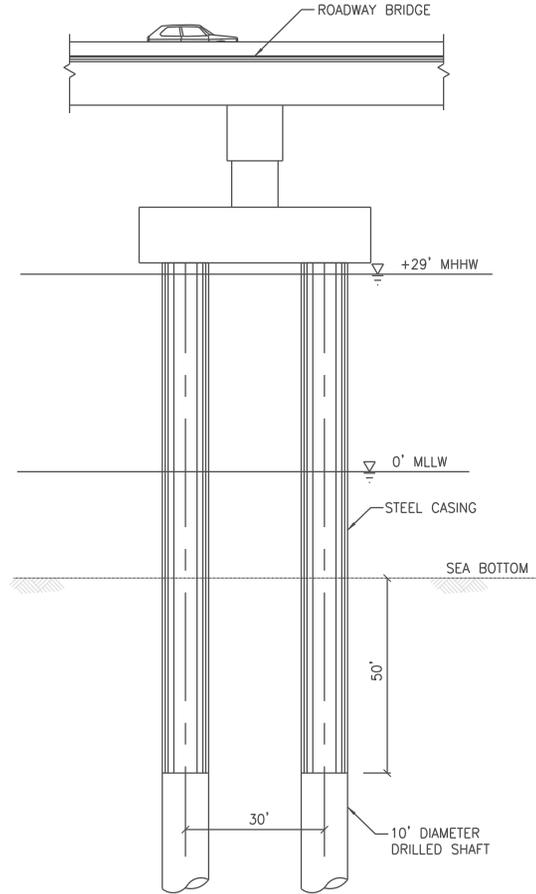
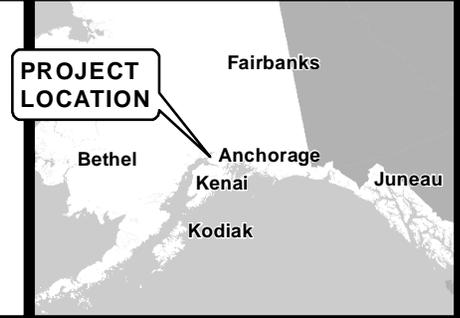
TYPICAL PIER, BRIDGE CROSS-SECTION

NAME: Knik Arm Bridge and Toll Authority  
 PROJECT: Knik Arm Crossing  
 FILE NO.: POA-2005-97  
 WATERWAY: Knik Arm

SHEET 8 of 13 DATE: Nov. 21, 2011

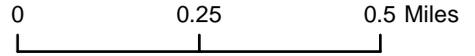
G: TYPICAL PIER, BRIDGE  
 CROSS-SECTION

G: TYPICAL PIER ELEVATION PARALLEL  
 TO BRIDGE



TYPICAL PIER, ELEVATION PARALLEL TO BRIDGE

Note: Temporary disturbance limited to 20 feet from the toe of slope in wetlands along roadway fills for the Mat-Su Approach and Anchorage Approach. There will be no discharge of fill in these areas. There are no temporary disturbance areas along the roadway embankments in the waters of Knik Arm.



**J B E R**

**KNIK ARM**

**CAIRN POINT**

**SHEET 10:  
TYPICAL  
SECTION I**

**SHEET 11:  
TYPICAL  
SECTION J**

**CHERRY HILL**

**PORT OF  
ANCHORAGE**

**SHEET 11:  
TYPICAL  
SECTION K**

**SHEET 12:  
TYPICAL  
SECTION L**

**SHEET 12:  
TYPICAL  
SECTION M**

**SHEET 13:  
TYPICAL  
SECTION N**

**SHEET 13:  
TYPICAL  
SECTION O**

**Legend**

- Cut/fill area
- Port of Anchorage
- Fill in wetland or water body
- Waters of the U.S. including wetlands
- Existing road
- Parcel boundary
- Cross section location and direction

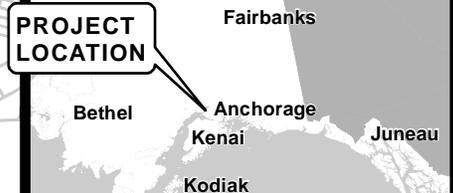
NAME: Knik Arm Bridge and Toll Authority  
 PROJECT: Knik Arm Crossing  
 FILE NO.: POA-2005-97  
 LOCATION: S6, 7, 29, 30, 31, 32, T14N, R3W, Seward Meridian.

WATERWAY: Knik Arm

SHEET 9 of 13 DATE: Nov. 21, 2011

WETLAND IMPACTS MAP

**PROJECT  
LOCATION**



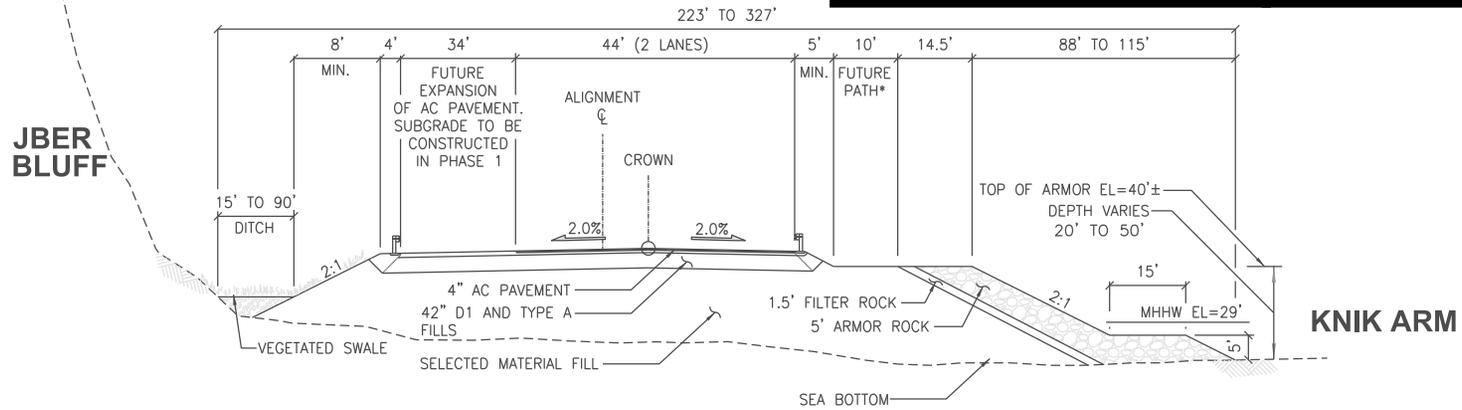
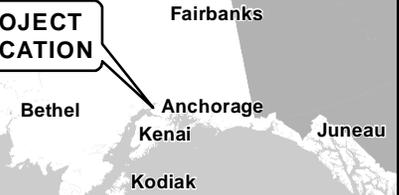
NAME: Knik Arm Bridge and Toll Authority  
 PROJECT: Knik Arm Crossing  
 FILE NO.: POA-2005-97  
 WATERWAY: Knik Arm

SHEET 10 of 13 DATE: Nov. 21, 2011

H: EASTERN ROADWAY EMBANKMENT  
 ALONG SHORELINE TYPICAL SECTION

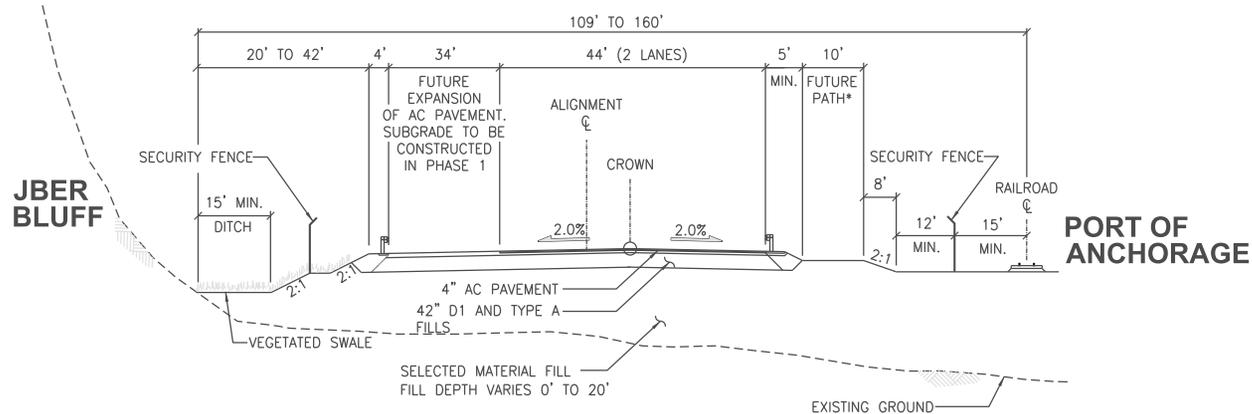
I: ANCHORAGE APPROACH ALONG TOE  
 OF LANDFILL AT PORT OF ANCHORAGE  
 TYPICAL SECTION

**PROJECT  
 LOCATION**



\*FUTURE PATH SUBGRADE TO BE CONSTRUCTED IN PHASE I

**H: EASTERN ROADWAY EMBANKMENT ALONG SHORELINE**  
 TYPICAL SECTION-SEE SHEET 5



\*FUTURE PATH SUBGRADE TO BE CONSTRUCTED IN PHASE I

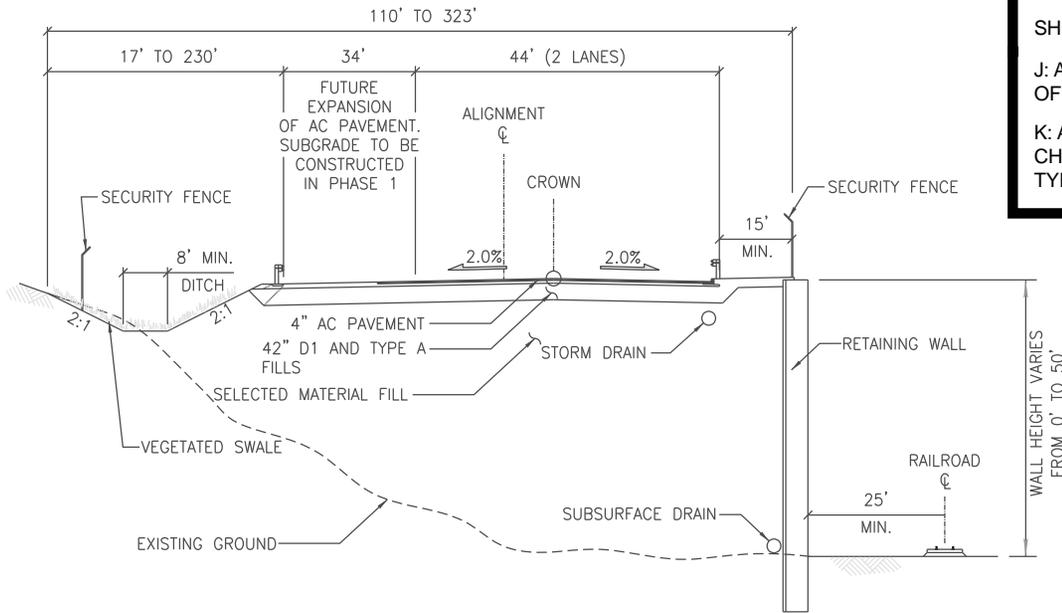
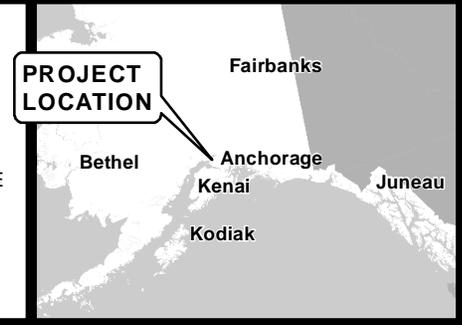
**I: ANCH. APPROACH ALONG TOE OF LANDFILL AT PORT OF ANCHORAGE**  
 TYPICAL SECTION-SEE SHEET 9

NAME: Knik Arm Bridge and Toll Authority  
 PROJECT: Knik Arm Crossing  
 FILE NO.: POA-2005-97  
 WATERWAY: Knik Arm

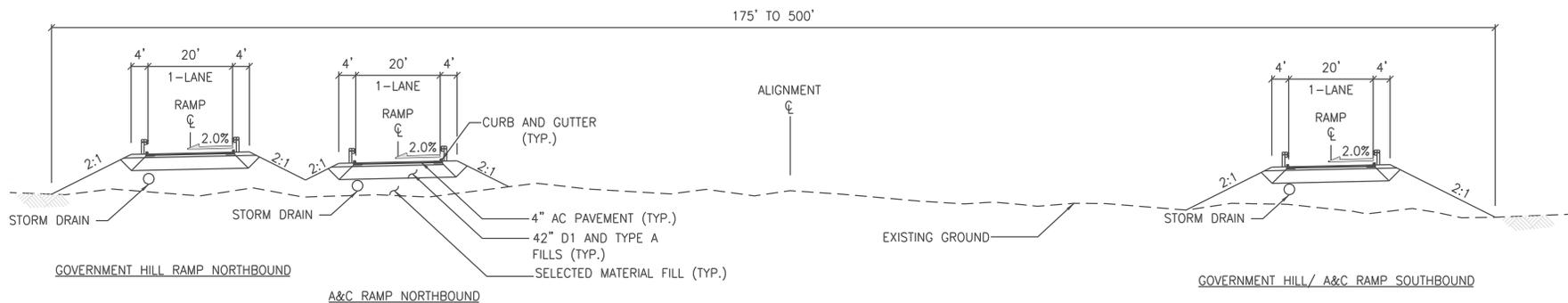
SHEET 11 of 13 DATA: Nov. 21, 2011

J: ANCHORAGE APPROACH ALONG TOE OF CHERRY HILL TYPICAL SECTION

K: ANCHORAGE APPROACH ALONG CHERRY HILL DRAINAGE DITCH TYPICAL SECTION



**J: ANCHORAGE APPROACH ALONG TOE OF CHERRY HILL TYPICAL SECTION**



**K: ANCHORAGE APPROACH ALONG CHERRY HILL DRAINAGE DITCH TYPICAL SECTION**

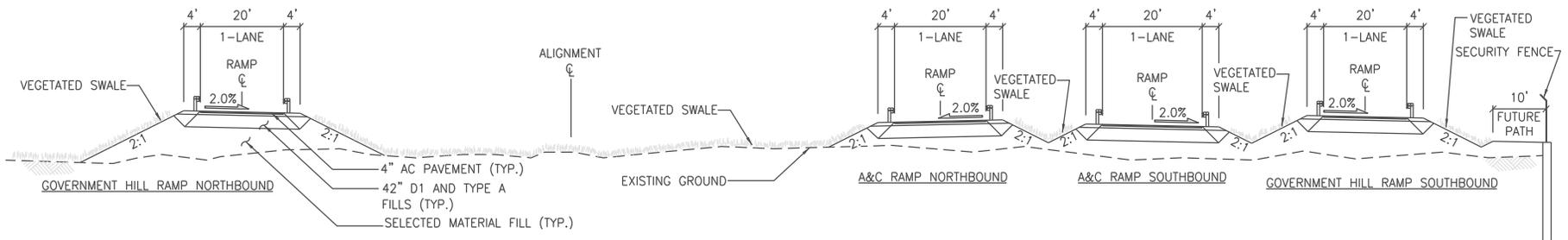
NAME: Knik Arm Bridge and Toll Authority  
 PROJECT: Knik Arm Crossing  
 FILE NO.: POA-2005-97  
 WATERWAY: Knik Arm

SHEET 12 of 13 DATE: Nov. 21, 2011

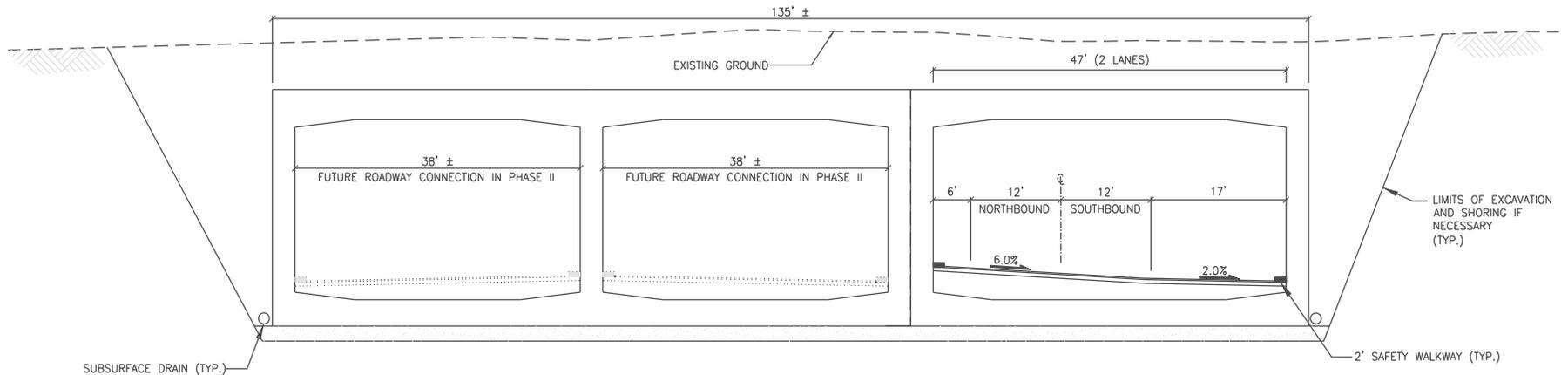
L: ANCHORAGE APPROACH NORTH OF ERICKSON TUNNEL  
 TYPICAL SECTION

M: ANCHORAGE APPROACH A/C  
 CONNECTION TUNNEL TYPICAL SECTION

**PROJECT LOCATION**



**L: ANCHORAGE APPROACH NORTH OF ERICKSON TUNNEL  
 TYPICAL SECTION**



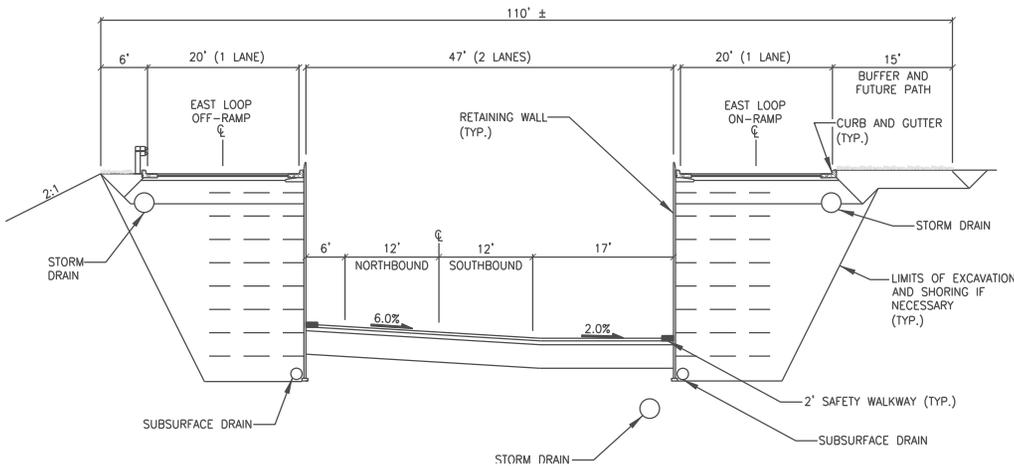
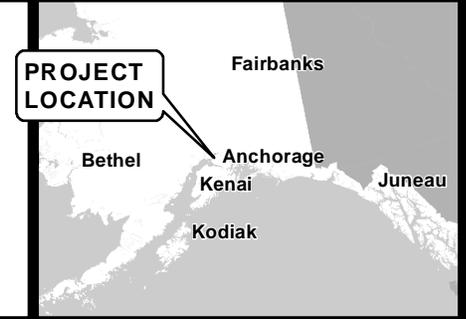
**M: ANCHORAGE APPROACH A/C CONNECTION TUNNEL  
 TYPICAL SECTION**

NAME: Knik Arm Bridge and Toll Authority  
 PROJECT: Knik Arm Crossing  
 FILE NO.: POA-2005-97  
 WATERWAY: Knik Arm

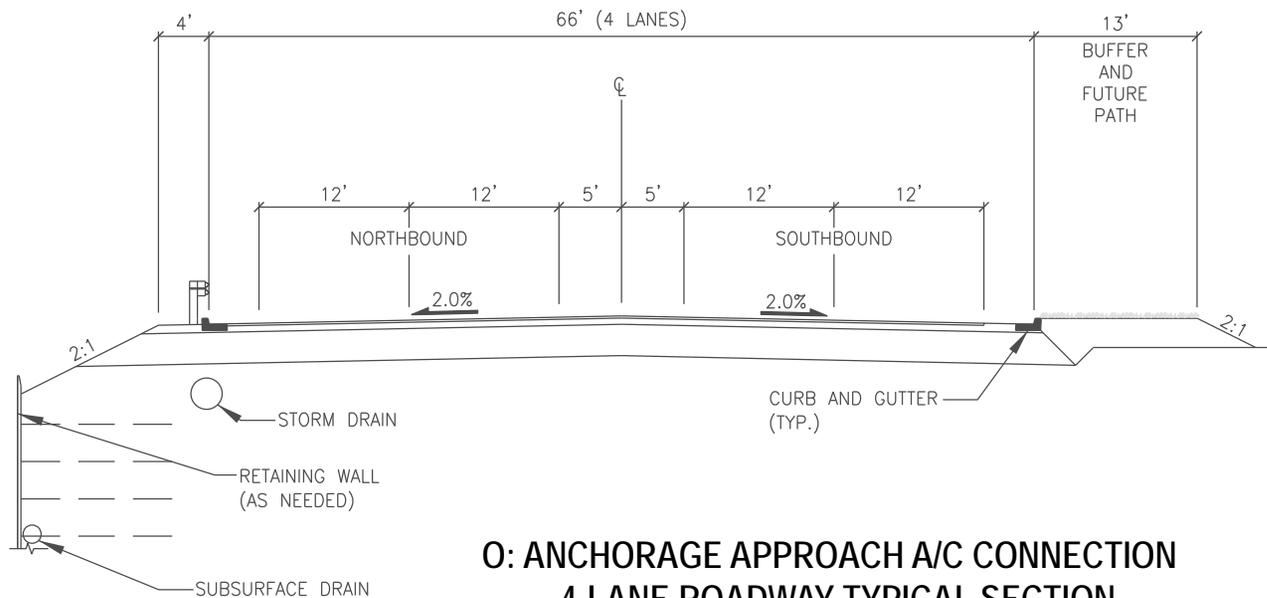
SHEET 13 OF 13 DATE: Nov. 21, 2011

N: ANCHORAGE APPROACH A/C  
 CONNECTION FROM DEPRESSED HWY  
 TYPICAL SECTION

O: ANCHORAGE APPROACH A/C  
 CONNECTION 4-LANE ROADWAY  
 TYPICAL SECTION



**N: ANCHORAGE APPROACH A/C CONNECTION FROM  
 DEPRESSED HIGHWAY TYPICAL SECTION**



**O: ANCHORAGE APPROACH A/C CONNECTION  
 4-LANE ROADWAY TYPICAL SECTION**