US Army Corps
of Engineers
Alaska District

Public Notice of Application for Permit

FAIRBANKS
Regulatory Division (1145)
CEPOA-RD-NF
2175 University Avenue, Suite 201E
Fairbanks, Alaska 99709-4910

PUBLIC NOTICE DATE: **July 1, 2008**

EXPIRATION DATE: **July 30, 2008**

REFERENCE NUMBER: **POA-2006-1393**

WATERWAY: **Shaw Creek**

Interested parties are hereby notified that a Department of the Army 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 **Sharon Seim** at (907) 474-2166, by fax at (907) 474-2164, or by email at Sharon.G.Seim@usace.army.mil if further information is desired concerning this notice.

APPLICANT: Alaska Department of Transportation and Public Facilities (ADOT&PF), 2301 Peger Road, Fairbanks, Alaska 99709-5316

AGENT: Mr. Bruce Campbell, Environmental Coordinator, ADOT&PF, 2301 Peger Road, Fairbanks, Alaska 99709-5316, (907) 451-2238

LOCATION: The project site is located within Section 35, T. 7 S., R. 8 E., Fairbanks Meridian; USGS Quad Map Big Delta B-5; Latitude 64.2600° N., Longitude -146.1083° W.; Milepost 289 of the Richardson Highway, approximately 22 miles northwest of Delta Junction, Alaska.

PURPOSE: The applicant's stated purpose is to replace the Shaw Creek Bridge and reconstruct approximately 1,800 feet of the highway approaches on the existing alignment.

PROPOSED WORK: The applicant proposes to excavate approximately 9,900 cubic yards of material from, and discharge about 7,900 cy fill into 0.81 acres of waters of the U.S., including wetlands. All work would be performed in accordance with the enclosed plan (sheets 1-11), dated June 25, 2008.

ADDITIONAL INFORMATION: The Shaw Creek Bridge was constructed in 1975. ADOT&PF is proposing to replace the bridge and 1,800 feet of highway approaches in order to accommodate oversized loads and those in excess of standard legal weights. Bridge replacement would result in improved access for large vehicles and the transport of larger loads between Fairbanks, Delta Junction, and Valdez.

The new bridge would be constructed with pre-stressed concrete bulb tee girders and two instream piers that would be situated immediately beside the existing piers. The existing span and abutments would be removed, and a new bridge, 180 feet longer than the current bridge, would be constructed on the existing alignment. Additionally, the banks beneath the bridge would be graded to a 2:1 slope and riprapped, resulting in a larger hydraulic opening beneath the bridge.

In order to accommodate construction, a temporary detour, including bridge approaches and a temporary bridge, would be constructed upstream of the proposed project. These temporary structures would require the discharge of approximately 6,300 cy of fill into 0.56 acres of waters of the U.S., including wetlands. The final project would result in the permanent discharge of an additional 1,600 cy of riprap into 0.25 acres below the ordinary high water of Shaw Creek (see sheet 11).

ALTERNATIVES: Alternatives considered by ADOT&PF included: 1) a two-span replacement bridge on existing alignment with one instream pier, 2) the proposed project (a three-span replacement bridge on existing alignment similar to the current bridge design with two instream piers), and 3) the no-build alternative. Public comments obtained by ADOT&PF expressed concern that the center pier in Alternative 1 would impede navigation during low flows, would add to existing channel siltation concerns, and would delay spring break-up.

Alternatives for the location of temporary fills were also considered. ADOT&PF determined that construction of the temporary detour bridge with approaches would not be practicable south of the existing alignment because of the proximity of the Tanana River and sensitive cultural resource areas. Moving temporary fill farther north than the current proposal would result in additional impacts to private property owners.

MITIGATION: Measures that would be taken to avoid and minimize impacts to waters of the U.S. are outlined on sheets 9 and 10. Additionally, ADOT&PF stated:

- Reconstructed bridge approaches would remain within the existing right-of-way and overlap onto the footprint of the existing highway alignment resulting in no permanent wetland impacts.
- Temporary impacts would be confined to wetlands of lesser value adjacent to or near the highway, resulting in the avoidance of relatively undisturbed wetlands farther from the highway.
- The cross section and profile of the detour roadway would be limited to the minimum footprint that meets design standards for safe travel.
- Wetland areas would be allowed to re-vegetate from seed sources within the wetland soil upon removal of geotextile fabric and temporary fill.

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. There are seven unevaluated properties in the vicinity of the worksite. They have been designated: XBD-0190, XBD-0245, XBD-0130, XBD-0015, XBD-0131, XBD-0071, and XBD-0053. Because the properties have been determined to lie within the project area, a determination of eligibility and, if needed, a determination of effect will be made in consultation with the State Historic Preservation Officer (SHPO). Consultation of the AHRS constitutes the extent of cultural resource investigations by the District Commander at this time, and this application is being coordinated with SHPO. It should be noted, however,

that ADOT&PF coordinated with SHPO during their scoping process. In a letter dated December 26, 2007, SHPO concurred that no historic properties would be affected by the project provided an archaeologist flags sensitive areas before ground disturbing activities. Any additional 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: No threatened or endangered species are known to use the project area. Preliminarily, the described activity will not affect threatened or endangered species, or modify their designated critical habitat, under the Endangered Species Act of 1973 (87 Stat. 844). This application is being coordinated with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (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.

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). Preliminarily, the described activity will not affect EFH in the project area. 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

SARAH PALIN, GOVERNOR

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

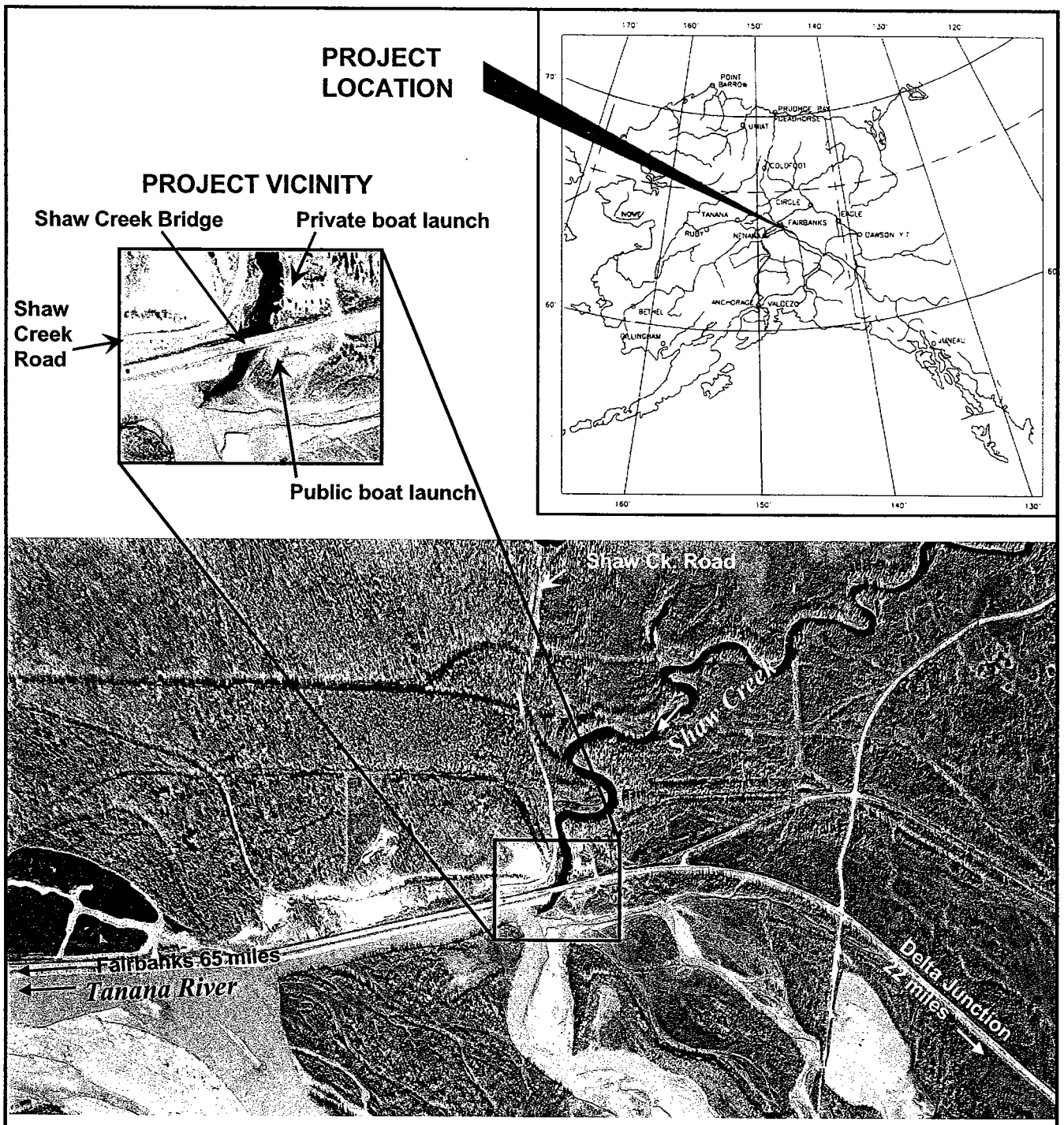
NOTICE OF APPLICATION
FOR
STATE WATER QUALITY CERTIFICATION

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-2006-1393, Shaw Creek,** 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.



LOCATION AND VICINITY MAPS

T7S, R8E; Section 35; Big Delta (B-5)
Fairbanks Meridian
Latitude 64°15'36"N, Longitude -146°06'30"W (NAD83)

1 inch ~ 0.25 miles ↑ N

0.25 miles

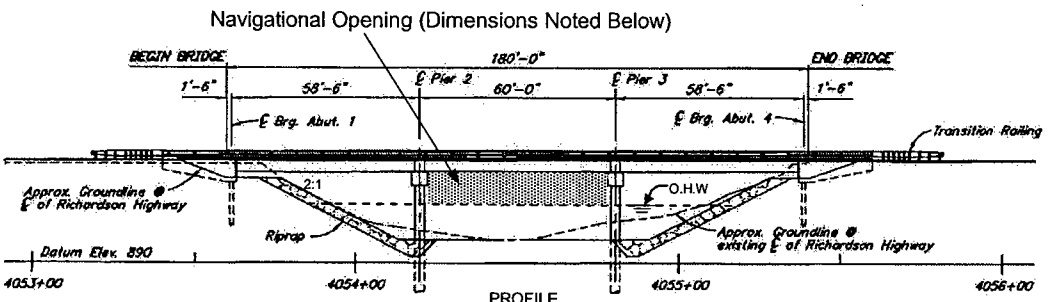
Richardson Highway Milepost 289

STATE OF ALASKA
Department of Transportation and Public Facilities

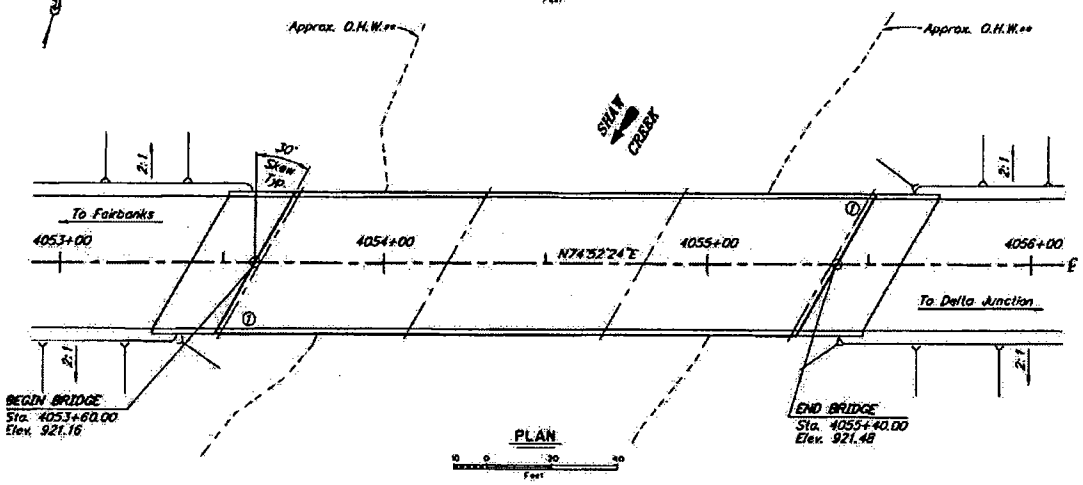
Richardson Highway Shaw Ck. Bridge Replacement
62077
Shaw Creek, Mile 0.02

ADOT&PF
POA-2006-1393, Shaw Creek
Plans prepared: June 25, 2008, by S. Seim

Project Location & Vicinity
Variable



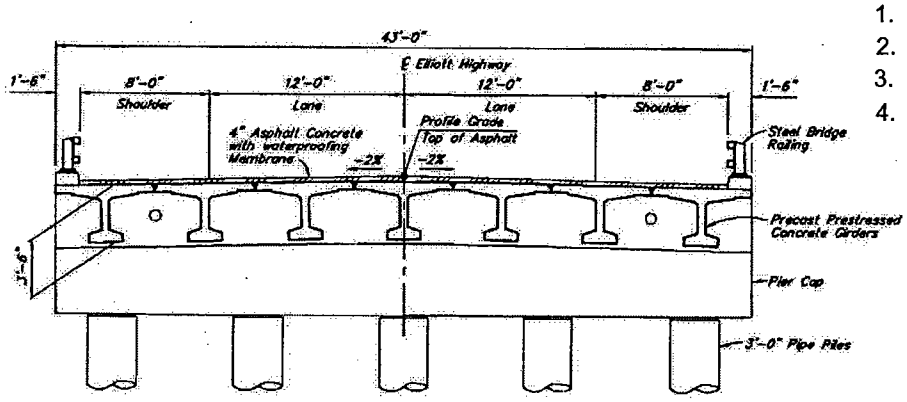
PROFILE



PLAN

ELEVATIONS

1. New Low Cord Elevation ~ 916.9'
2. 100 Year Flood Elev. ~ 910'
3. Ordinary High Water ~ 908.5'
4. Bottom of Waterway ~ 896.9'



TYPICAL SECTION

NAVIGATIONAL OPENING

Horizontal Clearance *(OHW to Pier 2)* =56'-0"

Vertical Clearance *(OHW to Low Member)* = 8'-5"

Water Depth *(Channel Bottom to OHW)* = 11'-7"

PRELIMINARY
PROFILE, PLAN, AND CROSS SECTION

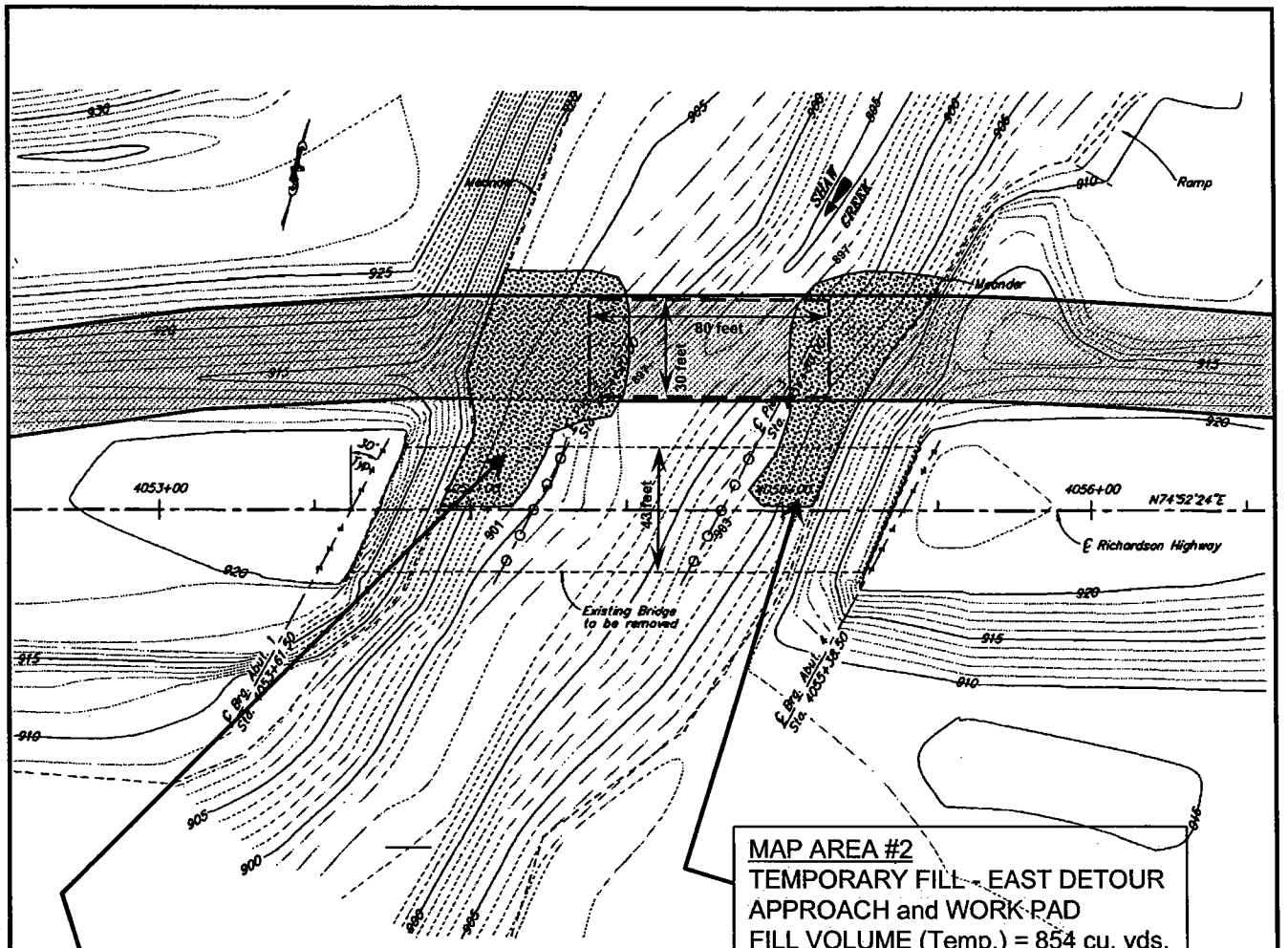
T7S, R8E; Section 35; Big Delta (B-5)
Fairbanks Meridian
Latitude 64°15'36"N N, Longitude -146°06'30"W (NAD83)
Richardson Highway Milepost 289

STATE OF ALASKA
Department of Transportation and Public Facilities

Richardson Highway, Shaw Creek Bridge
62077
Shaw Creek, Mile 0.02

ADOT&PF
POA-2006-1393, Shaw Creek
Plans prepared: June 25, 2008, by S. Seim

Project Profile, Plan, and Section
Variable



MAP AREA #1
TEMPORARY FILL - WEST DETOUR APPROACH and WORK PAD
FILL VOLUME (Temp.) = 1200 cu. yds.
FILL AREA (Temp.) = 0.07 acres

MAP AREA #2
TEMPORARY FILL - EAST DETOUR APPROACH and WORK PAD
FILL VOLUME (Temp.) = 854 cu. yds.
FILL AREA (Temp.) = 0.06 acres

SITE PLAN

10 0 20
Feet

ABBREVIATIONS

℄	= Centerline	e.f.	= each face
ℙ	= Plate	f.f.	= far face
&	= and	Hwy.	= Highway
@	= at	max.	= maximum
ø	= diameter	min.	= minimum
Approx.	= approximate	M.H.H.W	= Mean Higher High Water
Abut.	= Abutment	MMC	= Microsilica Modified Concrete
bot.	= bottom	n.a.	= not applicable
Br.	= Bridge	n.c.	= not calculated
btwn.	= between	n.f.	= near face
Brg.	= Bearings	No.	= Number
C.I.P.	= Cast-in-Place	o.c.	= on center
Clr.	= Clear, Clearance	spc.	= space, spaces
col.	= column	Sta.	= Station
CSL	= Crosshole Sonic Logging	Symm.	= Symmetric
dia.	= diameter	Typ.	= Typical
D.H.W.	= Design High Water		
Dwg.	= Drawing		
Elev.	= elevation		

N

1 inch ~ 65 feet

Estimated Temporary Detour Approach Fill and New Bridge Work Pad Fill

Estimated Detour Alignment

Estimated Detour Bridge

T7S, R8E; Section 35; Big Delta (B-5)
Fairbanks Meridian
Latitude 64°15'36"N N, Longitude -146°06'30"W (NAD83)
Richardson Highway Milepost 289

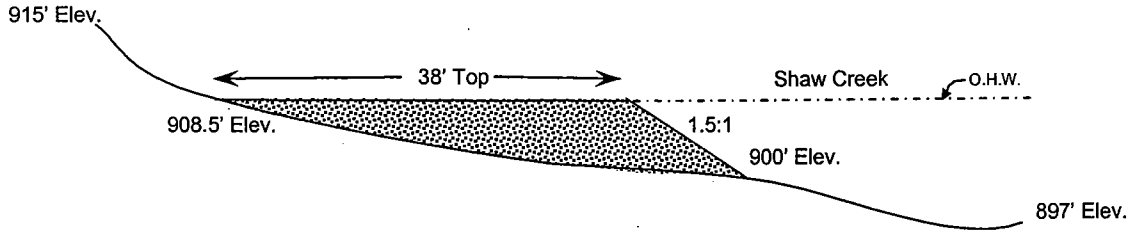
ESTIMATED DETOUR PLAN

STATE OF ALASKA
Department of Transportation and Public Facilities

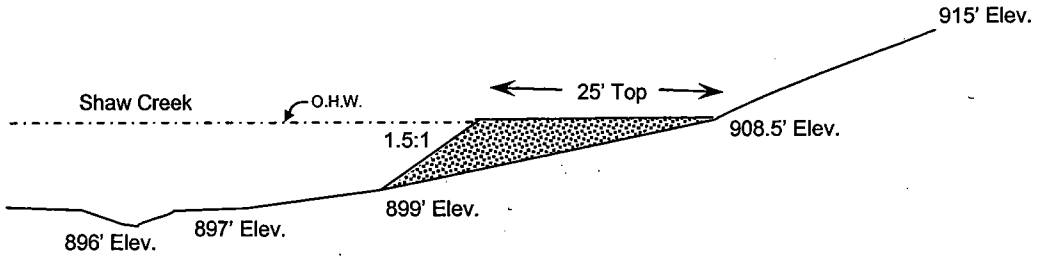
Richardson Highway, Shaw Creek Bridge
62077
Shaw Creek, Mile 0.02

ADOT&PF
POA-2006-1393, Shaw Creek
Plans prepared: June 25, 2008, by S. Seim

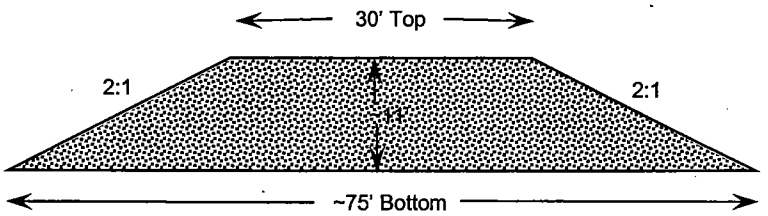
Detour Plan
1" ≈ 60 feet



Construction Work Pad
West Bank Section @ Detour Bridge Centerline



Construction Work Pad
East Bank Section @ Detour Bridge Centerline



Temporary Detour Road
Typical Cross Section

ELEVATIONS at Estimated Detour Bridge Centerline

1. Water Depth (Channel Bottom to OHW) = 12.5'
2. 100 Year Flood Elev. ~ 910.0'
3. Ordinary High Water Elev. ~ 908.5'
4. Bottom of Waterway Elev. ~ 896.0'

Scale:

10 feet horizontal & vertical
1" = ~ 20 feet

ESTIMATED TEMPORARY FILL CROSS SECTIONS

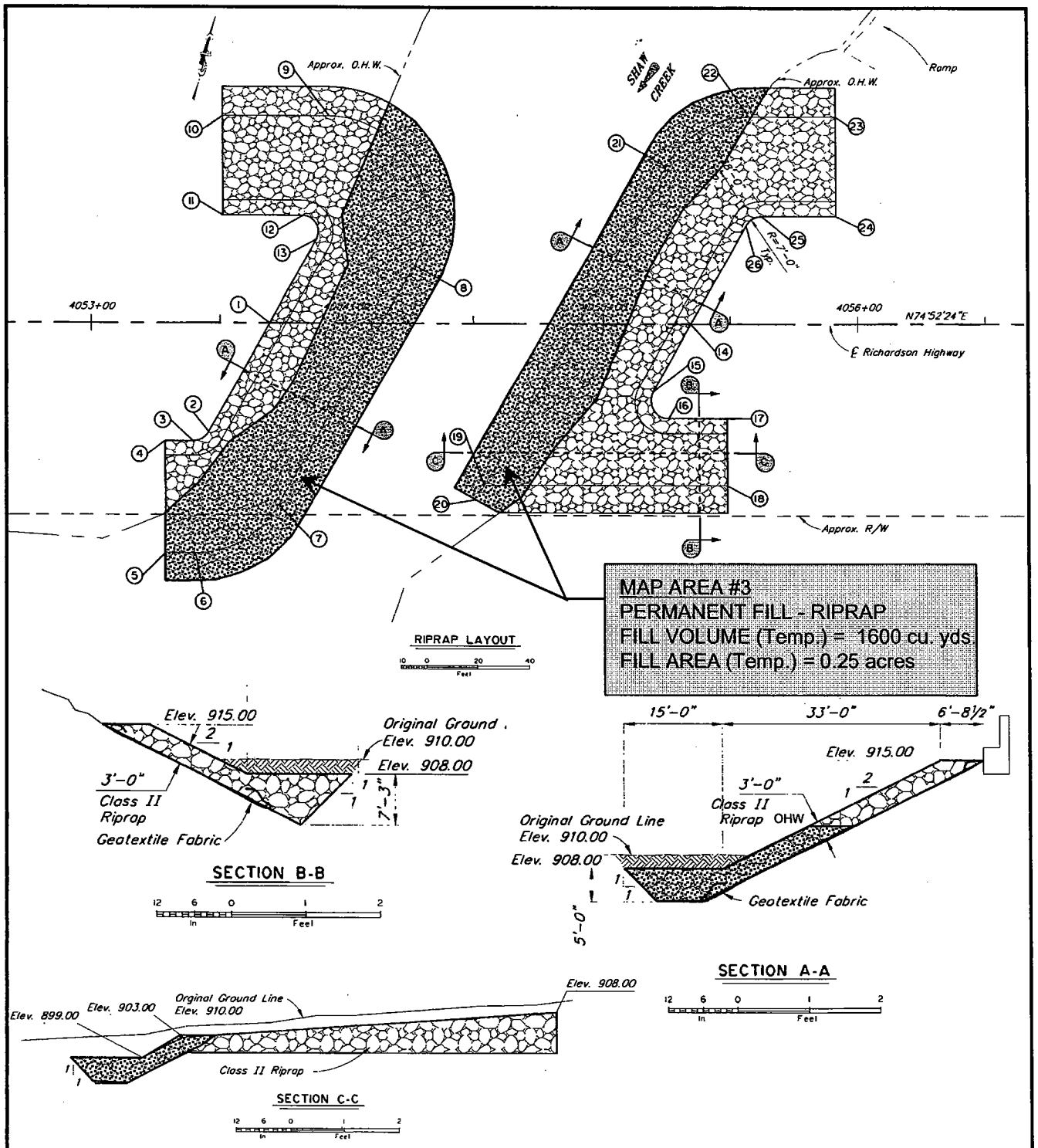
T7S, R8E; Section 35; Big Delta (B-5)
Fairbanks Meridian
Latitude 64°15'36"N N, Longitude -146°06'30"W (NAD83)
Richardson Highway Milepost 289

STATE OF ALASKA
Department of Transportation and Public Facilities

Richardson Highway, Shaw Creek Bridge
62077
Shaw Creek, Mile 0.02

ADOT&PF
POA-2006-1393, Shaw Creek
Plans prepared: June 25, 2008, by S. Seim

Temporary Fill Sections
NTS



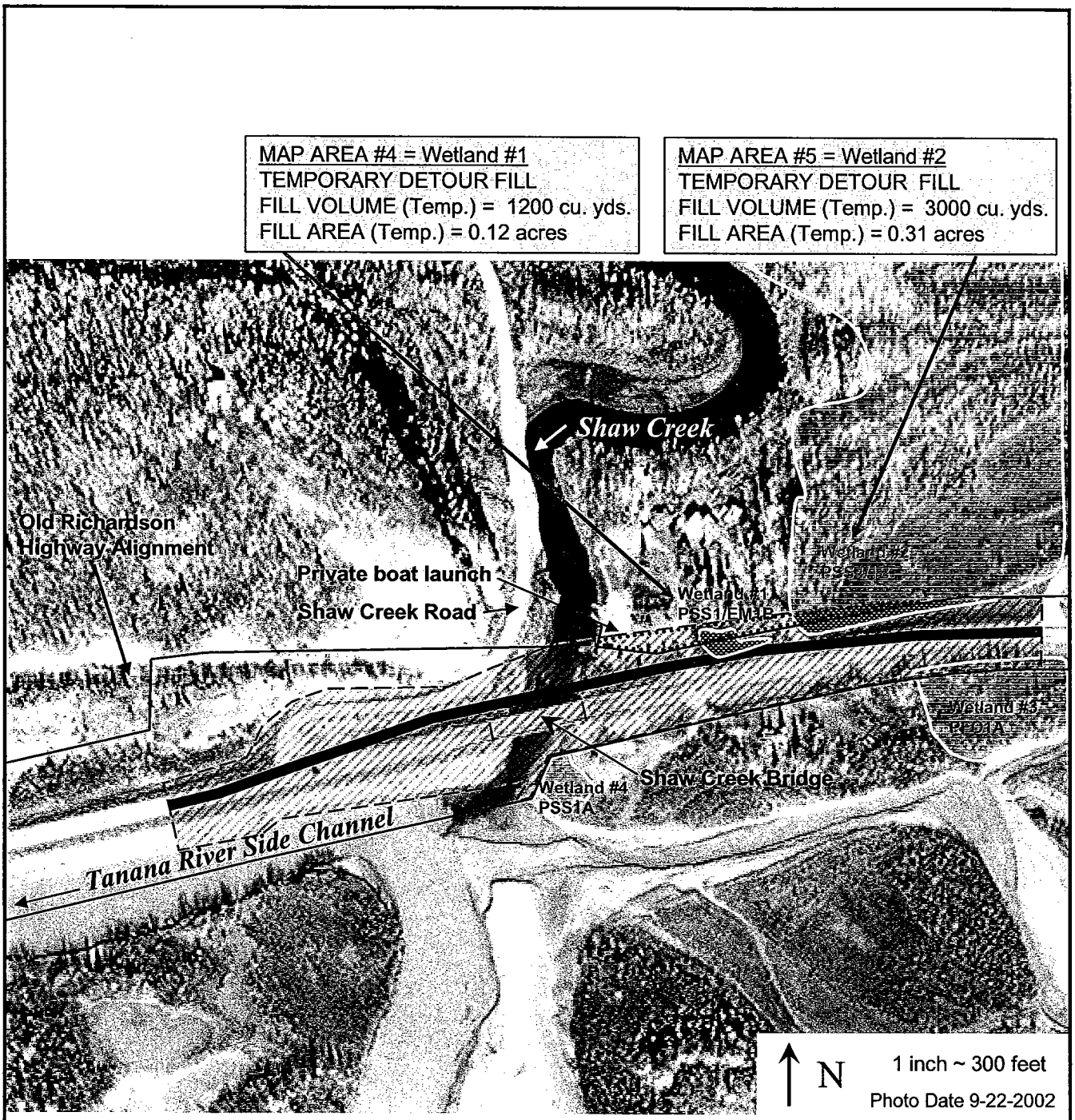
PRELIMINARY
RIPRAP PLAN

T7S, R8E; Section 35; Big Delta (B-5)
Fairbanks Meridian
Latitude 64°15'36"N N, Longitude -146°06'30"W (NAD83)
Richardson Highway Milepost 289

STATE OF ALASKA
Department of Transportation and Public Facilities

Richardson Highway, Shaw Creek Bridge
62077
Shaw Creek, Mile 0.02

ADOT&PF
POA-2006-1393, Shaw Creek
Plans prepared: June 25, 2008, by S. Seim



T7S, R8E; Section 35; Big Delta (B-5)
Fairbanks Meridian
Latitude 64°15'36"N N, Longitude -146°06'30"W (NAD83)
Richardson Highway Milepost 289

Wetlands

Estimated Wetland Impacts

Estimated Project Work Limits

Estimated Detour Route

Right-of-way Boundary (approximate)

Proposed Temporary Easement

ESTIMATED WETLAND IMAPACTS

STATE OF ALASKA
Department of Transportation and Public Facilities

Richardson Highway, Shaw Creek Bridge
62077
Shaw Creek, Mile 0.02

ADOT&PF
POA-2006-1393, Shaw Creek
Plans prepared: June 25, 2008, by S. Seim

Wetland Impacts
1" ≈ 300 feet

APPENDIX A

U.S Army Corps of Engineers Section 404 Permit Application
Detailed Project Summary
For
Richardson Highway Shaw Creek Bridge
Project # 62077

The Alaska Department of Transportation and Public Facilities (DOT&PF), is proposing a state-funded project to replace the Shaw Creek Bridge on the existing alignment.

Project Location
The Shaw Creek Bridge is located at milepost 289 of the Richardson Highway, within Section 35, Township 7 South, Range 8 East, Fairbanks Meridian, (latitude 64°15'36"N and longitude -146°06'30"W, NAD 83) USGS Big Delta B-5. Figure 1 shows the project location and vicinity. Figure 5 shows the boundaries of the project work area.

Project Purpose and Need
The purpose of the project is to construct a bridge that would accommodate loads that are oversized or in excess of standard legal weights. Replacing the existing Shaw Creek Bridge would allow industry to transport larger loads, thereby improving access for large type vehicles on the Richardson Highway between Fairbanks, Delta Junction, and Valdez.

Project Description
The existing Shaw Creek Bridge is a three span prestressed concrete bulb tee girder bridge with asphalt decking constructed in 1975. The bridge is 166 feet long and the deck is 43 feet wide with approximately 6.5 feet of clearance between the low member the ordinary high water mark. The proposed new bridge would be a 3-span structure constructed on the existing centerline and to the existing width to accommodate two 12-foot lanes with 8-foot shoulders and steel railing (3 feet of width). See typical section Figure 2. Like the existing bridge, the new bridge would also be constructed with prestressed concrete bulb tee girders and two in-stream piers immediate beside the existing piers. It would be lengthened to 180-feet and the deck raised approximately 1-2 feet to accommodate the deep girders that allow for oversized loads. The banks beneath the bridge would be graded to a 2:1 slope and riprapped (Figure 2). This would result in a greater hydraulic opening beneath the bridge. The Richardson Highway approaching the new bridge would be reconstructed on existing alignment for approximately 1800 feet. Material sites, disposal sites, staging areas, and/or bridge demolition methods would be determined by the contractor. Any necessary permitting for these areas would be the responsibility of the contractor.

<u>Permanent Fill</u>
The approaches would remain above the ordinary high water (OHW) mark of the Shaw Creek. The new slopes around the bridge abutments would be armored with class II riprap keyed in at the toe. Proposed riprap would result in 1600 cubic yards (approx. 200'L x 36'W x 3.75'D plus 180'L x 24'W x 3.75'D) of permanent fill below OHW. The new bridge is proposed to have two piers within the active channel as shown on Figure 2. The talweg of the channel would be located between the piers. The sizing of the piles and pier caps will be determined during the detailed design phase. The pier caps would likely be supported with a total of 10-3' diameter pipe piles driven up to 80-100 feet into the stream bed with the upper 20-30 feet filled with concrete.

Temporary Fill and Structures

In order to maintain traffic during construction, an on-site detour with a temporary bridge is anticipated to be constructed on the upstream side of the existing bridge predominately within the existing right-of-way (ROW). The nature, location, and dimensions of the temporary bridge and approaches are uncertain and would be determined by the contractor. An estimated temporary detour plan is shown on Figure 3, 4, & 6. It is estimated that the temporary detour embankment fill in the northeast quadrant of the bridge would result in 4200 cubic yards of wetland fill [Wetland #1, 90L x 60'W x 6'D; Wetland #2, 0.5(450'L x 60'W) x 6'D]. It is estimated that the temporary detour approach/work pad fills would result in 2054 cubic yards of fill in Shaw Creek [east bank = 256.25' avg. cross sectional area x 90' avg. width; west bank = 381.25 avg. cross sectional area x 85' avg. width]. A potential temporary detour bridge could be 30' wide, with pier piles every 25 feet. Temporary structures could be supported by as many as 10 to 48 driven "H" piles depending on total temporary bridge length and the contractor's proposed plan. Temporary structures over Shaw Creek would be required to have a minimum vertical clearance equal to that of the existing bridge (6.5 feet as measured between the low member and the OHW) and a minimum 20 feet of horizontal clearance for a navigational opening.

Bridge and Hydraulics Summary

Existing Bridge		
Bridge Owner	**Alaska Department of Transportation & PF**	
Type of Existing Bridge	**166' long, 43' wide, 3-span prestressed concrete girder**	
Mile Point (~ mile 0.02)	**100' upstream of confluence with the Tanana River**	
Clearance Datum	**Ordinary High Water (OHW)**	
OHW Elevation	**908.5 feet**	**276.9 meters**
Streambed Elevation (thalweg)	**896.9 feet**	**273.4 meters**
Water Depth btw. OHW & thalweg	**11 feet**	**3.4 meters**
Water Width @ OHW	**116 feet**	**35.4 meters**
Navigational Clearance @ OHW	**6.5 feet**	**2.0 meters**
Removal Extent	**Complete removal – span & abutments**	
Proposed Bridge		
Bridge Type	**180' long, 43' wide, 3-span prestressed concrete girder**	
Horizontal Navigational Clearance (Navigational Span @ OHW)	**56 feet**	**17.1 meters**
Vertical Navigational Clearance (Navigational Span @ OHW)	**8.4 feet**	**2.6 meters**
Temporary Structures		
Bridge Type	**To be determined by contractor**	
Minimum Horizontal Clearance (Navigational Span @ OHW)	**20 feet**	**6.1 meters**
Minimum Vertical Clearance (Navigational Span @ OHW)	**6.5 feet**	**2.0 meters**

Schedule & Construction Sequence

The project is scheduled to begin construction during either the fall 2008 or spring of 2009 and is estimated to be completed in the fall of 2009. A schedule which incorporates resource-related timing restrictions would be developed by the contractor.

Environmental Effects
This project was evaluated for environmental effects in accordance with State of Alaska Environmental Review Procedures. Environmental issues have been document in a State Project Environmental Checklist.

Waters of U.S. and Wetland Impacts
Wetlands in the project areas were delineated in accordance with Part IV, Section D, Subsection 2 (Steps 1-17), of the 1987 *Corps of Engineers Wetlands Delineation Manual* and the 2006 *Interim Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Alaska Region.*

. Our preliminary review finds all wetlands to be impacted by the project to be jurisdiction under Section 404 based on their status as wetlands adjacent to traditional navigable waters.

This table summarizes the impacts associated with the proposed activities.

Activity	Water /Wetland (type*)	Corps Juris-diction	Impacted Area (sq. ft.)	Impacted Acres (acres)	Fill Volume (cu.yds.)	Excavation Volume (cu. yds.)
Permanent						
Abutment Riprap	Shaw Ck.	J	11520	0.25	1600	3600
Total Permanent			11520	0.25	1600	3600
Temporary						
Temp Approach Fill	Shaw Ck.	J	5663	0.13	2054	2054
Temp Detour Fill	Wetland*	J	18900	0.43	4200	4200
Total Temporary			24563	0.56	6254	6254

*** All wetland to be impacted is shrub wetland in the NE quadrant of the bridge**

Floodplain Impacts
The project would not result in an increase in flood height. The new bridge would be 14 feet longer than the existing bridge and the bridge opening would be larger resulting in a greater capacity to pass floodwaters.

Avoidance and Minimization
To minimize impacts to Waters of the U.S. including wetlands, DOT&PF proposes the following measures.

1. Material excavated from the project area would be disposed of in uplands or in an area permitted for fill.

2. DOT&PF would coordinate the timing of any in-stream activity with the Alaska Department of Natural Resources, Office of Habitat Management and Protection to avoid or minimized in-stream work during sensitive fisheries periods.

3. Permanent riprap fill below the OHW would be minimized to that needed to provide a stable slope around the abutments.

4. Permanent bridge piers would be skewed to the direction of river flow.

5. Temporary bridges, platforms, pilings, and approach fills would be removed from the stream when construction is complete.

6. Temporary approach fill in wetlands would be placed on geotextile fabric and the fill and fabric removed when construction in temporary fill areas is complete.

7. Equipment refueling and storage areas would be located at least 100 feet from the active stream channel.

8. Hazardous material use and storage shall be in accordance with all State and Federal regulations.

9. Appropriate erosion control measures would be implemented on and at the perimeters of disturbed soil surfaces to minimize the transport of sediment to waters.

APPENIDIX B
TABLE OF
WETLAND AND WATER IMPACTS
(Referenced to Figures 3 to 5)
for
Richardson Highway Shaw Creek Bridge
Project #62077

FIGURES 3-5 MAP AREA #		IMPACT AREA (ACRES)				FILL QUANTITY (C.Y.)				EXCAVATION QUANTITY (C.Y.)
		WETLANDS		WATERS		WETLANDS		WATERS		
		TEMPORARY	PERMANENT	TEMPORARY	PERMANENT	TEMPORARY	PERMANENT	TEMPORARY	PERMANENT	
Temp. Detour Approaches and Work Pads (Figure 3)										
1	West Detour Approach & Work Pad			0.07				1,200		1,200
2	East Detour Approach & Work Pad			0.06				854		854
	Subtotal			**0.13**				**2,054**		**2,054**
Permanent Riprap (Figure 4)										
3	Bridge abutment riprap				0.25				1600	3,600
	Subtotal				**0.25**				**1600**	**3,600**
Temp. Detour Embankment Fill (Figure 5)										
4	Wetland #1 fill	0.12				1,200				1,200
5	Wetland #2 fill	0.31				3,000				3,000
	Subtotal (South)	**0.43**				**4,200**				**4,200**
TOTALS		**0.43**	**0**	**0.13**	**0.25**	**4,200**	**0**	**2,054**	**1,600**	**9,854**
		0.43 (AC.)		**0.38** IMPACTS (AC.)		**4200** (C.Y.)		**3654** (C.Y.)		**9,854** EXCAVATION QUANTITY (C.Y.)
		0.81 TOTAL IMPACT AREA (ACRES)				**7,854** TOTAL FILL QUANTITY (C.Y.)				
		0.56 TOTAL TEMPORARY IMPACT AREA (AC.				**6,254** TOTAL TEMPORARY FILL (C.Y.)				
		0.25 TOTAL PERMANENT IMPACT AREA (AC.				**1,600** TOTAL PERMANENT FILL (C.Y.)				

Applicant/Owner:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
Northern Region

RICHARDSON HWY. SHAW CREEK BRIDGE
SHAW CREEK, ~Mile 0.02 (0.03 km)
Project #62077

ADOT&PF
POA-2006-1393, Shaw Creek
Plans prepared: June 25, 2008, by S. Seim

Table of Impacts