



US Army Corps
of Engineers
Alaska District

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

Public Notice of Application for Permit

PUBLIC NOTICE DATE: December 4, 2008

EXPIRATION DATE: January 5, 2009

REFERENCE NUMBER: POA-2007-1741

WATERWAY: Noyes Slough

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

AGENT: Mr. Bob Effinger, Environmental Impact Analyst, ADOT&PF, 2301 Peger Road, Fairbanks, Alaska (907)451-5294

LOCATION: The Chena River Bridge at Barnette Street (Barnette Street Bridge) is located within Section 10, T.1S., R.1W., Fairbanks Meridian; USGS Quad Map Fairbanks D-2; Latitude 64.844° N., Longitude -147.723° W.; located at the intersection of Barnette Street and 1st Avenue, Fairbanks, Alaska. The Noyes Slough Bridge is located within Section 3, T.1S, R.1W, Fairbanks Meridian, USGS Quad Map Fairbanks D-2; Latitude 64.853° N., Longitude -147.716° W.; located at 0.6 mile Illinois Street from the intersection of College Road and Illinois Street, Fairbanks, Alaska.

PURPOSE: The applicant's stated purpose is to improve traffic flow to and from downtown Fairbanks, to improve drainage, and to provide adequate pedestrian facilities meeting current design standards throughout the project corridor.

PROPOSED WORK: The applicant proposes to discharge approximately 2,350 cubic yards (cy) of fill into 0.24 acres of waters of the U.S. for the construction of two bridges and four outfall pipes. Additionally, an estimated 697 cy of temporary fill would be placed in 0.07 acres of waters of the U.S. All work would be performed in accordance with the enclosed plan (Sheets 1-14), dated 12/2/08.

ADDITIONAL INFORMATION: Illinois Street would be widened and realigned from Cushman Street to College Road, and pedestrian facilities would be added. The project would involve constructing a new 2-span bulb-tee girder bridge over the Chena River immediately downstream of the existing Cushman Street Bridge and extending Barnette Street from the 1st Avenue intersection to Doyon/Terminal Street (Sheet 1). The new Barnette Street Bridge would have three 12-ft wide travel lanes, 1.5-ft shoulders, and 8.5-ft wide sidewalks on either side, with a total width of 58-ft from edge to edge (Sheet 5). The shoulders would accommodate pedestrian and bicycle use. The new

bridge would have a total length of 200 ft, and the east and west banks would be graded to a 2:1 slope. The new slopes around the abutments would be armored with class II riprap at a slope of 1.5:1 (Sheet 4). The new bridge is proposed to have one pier below the ordinary high water (OHW) mark.

A pedestrian path would be constructed below and between the new Barnette Street Bridge and the existing Cushman Street Bridge to connect Shoreway Overlook on the east side and the Barnette Street/Illinois Street pedestrian facilities on the west side (Sheet 7). The path would be 12-feet wide with a slope of 4:1 between the path and the river (Sheet 8).

Due to the widening along Illinois Street, the Noyes Slough Bridge would need to be completely removed and replaced with a structure that is over twice as wide as the existing bridge (Sheet 10). The project would replace the Noyes Slough Bridge with a single span precast, prestressed concrete I-girder bridge. The new Noyes Slough Bridge would consist of two 12-ft left turn lanes, a 12-ft right turn lane, a 12-ft through lane and a concrete median. In addition it would have one 8.5-ft sidewalk and one 12.5-ft sidewalk, giving it a maximum total width of 81-ft and a length of 117.75-ft (Sheet 10). The banks would be graded to 2:1 and the riprap graded at 1.5:1 (Sheet 11).

In addition to the new geometric features, the project would also up grade drainage throughout the project corridor. Four new storm drain outfalls would be constructed: two at the Noyes Slough Bridge and two at the Barnette Street Bridge (Sheets 9 and 14). The storm water leaving these outfalls would pass through storm water treatment units before entering their respective water bodies.

Bridge and Hydraulics Summary - Barnette Street Bridge

Existing Bridge		
Bridge Owner	ADOT&PF	
Type of Existing Bridge	N/A	
Mile Point	~10.4 (16.7 km)	
Clearance Datum	Ordinary High Water (OHW)	
OHW Elevation	429 ft	1424 m
Streambed Elevation	417 ft	1368 m
Water Depth btw. OHW & thalweg	12 ft	39 m
Water Width @ OHW	110 ft	361 m
Navigational Clearance @ OHW	N/A	N/A
Removal Extent	N/A	
Proposed Bridge		
Bridge Type	200' long, 58' wide, 2-span concrete bulb tee	
Horizontal Navigational Clearance (Navigational Span @ OHW)	80 ft	263 m
Vertical Navigational Clearance (Navigational Span @ OHW)	11 ft	36 m
Temporary Structures		
Bridge Type	N/A	
Minimum Horizontal Clearance (Navigational Span @ OHW)	80 ft	263 m
Minimum Vertical Clearance (Navigational Span @ OHW)	11 ft	36 m

Permanent Fill - Barnette Street Bridge

The approach fill would remain above the OHW mark of the Chena River. The new slopes around the bridge abutments would be armored with class II riprap keyed in at the

toe. The new bridge is proposed to have one pier within the active channel (Sheet 4). The estimated permanent pier fill within the OHW boundary of the Chena River would be 28 cy (five four-foot diameter pipe piles). The estimated permanent bridge riprap fill within the OHW boundary of the Chena River would be 1700 cy (Sheet 4). The estimated permanent fill for nearby storm drain outlets within the OHW boundary of the Chena River would be 39 cy (Sheet 9). Direct impacts for fill below OHW would be **0.20 acres**.

Temporary Fill - Barnette Street Bridge

In order to drive piles for the pier and to place girders, a temporary construction pad is anticipated on the north bank of the Chena River (Sheet 7). Temporary fill quantities below OHW would be 265 cy impacting 2,500 square feet (0.06 acres). The temporary construction pad is a potential plan. The contractor may propose a different plan for these items. The temporary construction pad would not affect the navigable opening.

Bridge and Hydraulics Summary - Noyes Slough @ Illinois Street

Existing Bridge		
Bridge Owner	ADOT&PF	
Type of Existing Bridge	Multiple span I-beam bridge	
Mile Point	~0.8 (1.3 km)	
Clearance Datum	Ordinary High Water (OHW)	
OHW Elevation	430 ft	1411 m
Streambed Elevation	428 ft	1404 m
Water Depth btw. OHW & thalweg	2 ft	6.6 m
Water Width @ OHW	30.5 ft	100 m
Navigational Clearance @ OHW	20 ft	66 m
Removal Extent	Complete removal - span & abutments	
Proposed Bridge		
Bridge Type	117.75' long, 81' wide, single span concrete girder	
Horizontal Navigational Clearance (Navigational Span @ OHW)	45 ft	148 m
Vertical Navigational Clearance (Navigational Span @ OHW)	11 ft	36 m
Temporary Structures		
Bridge Type	N/A	
Minimum Horizontal Clearance (Navigational Span @ OHW)	N/A	N/A
Minimum Vertical Clearance (Navigational Span @ OHW)	N/A	N/A

Permanent Fill - Noyes Slough Bridge @ Illinois Street

The approach fill would remain above OHW of Noyes Slough. The new slopes around the bridge abutments would be armored with class II riprap keyed in at the toe. The new bridge is proposed to be a single span (Sheet 10). Nearby storm drain outlets would be armored with riprap below OHW (Sheet 14). The estimated permanent riprap fill within the OHW boundary of Noyes Slough is 560 cy, directly impacting **0.04 acres** below OHW (Sheet 11).

Temporary Fill - Noyes Slough Bridge @ Illinois Street

In order to place girders, crane mats are anticipated on the north and south banks of Noyes Slough (Sheet 13). Crane mats would temporarily impact 432 square feet (0.01 acres) below OHW. The crane mats are a potential plan; the contractor may propose a different plan for these items. Crane mats will not significantly affect the navigable opening.

Material sites, disposal sites, staging areas, and/or bridge demolition methods will be determined by the contractor. Any necessary permitting for these areas would be the responsibility of the contractor. Construction is anticipated to begin in 2010.

ALTERNATIVES: In the planning and design stages of the overall project, and as part of the Environmental Assessment (EA) process, several bridge location and design alternatives were evaluated in order to determine which one best balanced the purpose and need of the project and avoided or minimized impacts to the environment.

Two bridge location alternatives were considered for the Chena River crossing:

Wickersham Street
Barnette Street

The Barnette Street Bridge location alternative was selected because it had the fewest right-of-way impacts, provided an attractive gateway to downtown Fairbanks, did not require relocating sections of the Alaska Railroad Spur, did not impact the Wickersham residential neighborhood, and by resolution was supported by the City of Fairbanks and the Fairbanks North Star Borough. The Wickersham Street and the Barnette Street Bridge locations had similar direct impacts to waters of the U.S.; however the Wickersham Bridge location had a greater impact to riparian areas because it would extend the linear length of the pedestrian path by 2.5 times along the river.

Three bridge design alternatives were considered for the new Barnette Street Bridge:

2-span Haunch Bridge
Single-span Box Girder Bridge
2-span Bulb-Tee Bridge

The Bulb-tee bridge design was selected because it was the least costly, and could accommodate the pedestrian path under the bridge. The box girder bridge had the least impacts to waters of the U.S. due to its single span design; however, it was over two times as expensive as the other alternatives, and did not accommodate the pedestrian path. The haunch bridge could accommodate a pedestrian path under the bridge and had similar impacts to waters of the U.S. as the bulb-tee bridge; however, it was 1.75 times as expensive as the bulb-tee bridge.

The Noyes Slough Bridge also had three alternatives:

Single-span Pre-cast I-girder Bridge
Cast-in-place Box Girder Bridge
Bulb-tee Bridge

The first and third options (I-girder and bulb-tee) had identical costs, however, the I-girder alternative was chosen because it did not require falsework to construct the bridge. The Single-span Pre-cast I-girder Bridge minimized in-water work for construction, accommodated the required roadway geometry within a smaller area, and was the least costly. The cast-in-place bridge option required falsework in the waterway which would impact habitat and it cost 1.5 times as much as the other two options. The bulb-tee bridge was not selected because it required a larger area to accommodate the roadway geometry and thus would increase project impacts.

Alternatives were also considered for the pedestrian path design between the Cushman Street Bridge and the proposed Barnette Street Bridge. The original cross section consisted of a 2% (50:1) slope between the pedestrian path and river. This alternative would result in the complete removal of vegetation near the OHW boundary. A second alternative would be to move the path northward between the Barnette Street Bridge and Cushman Street Bridge to minimize work near the OHW boundary. However, the

majority of the minimized area would be over the storm drain outfall, the construction of which would necessitate removing most of the fish habitat along the OHW boundary. The final selected alternative consisted of changing the slope between the path and the river to 4:1, which would result in fewer impacts to habitat along the OHW boundary between the Barnette and Cushman Street Bridges.

MITIGATION: The applicant proposes the following mitigation measures to avoid, minimize, and compensate for impacts to waters of the U.S. from activities involving discharges of fill material:

The bridge design would **avoid** impacts to waters of the U.S. in the following ways:

1. Span lengths of the bulb-tee girder were optimized to accommodate the clearance for the pedestrian path and minimize the number of piers that would be placed in the water.
2. A round pier design for the drilled shaft piers was selected due to the morphology of the river (angle of curve of the river at the proposed bridge location) and to avoid potential scour issues.
3. Bridge footing locations, orientations, and designs were reviewed and selected to minimize scour and channel impacts to the river.
4. River morphology and scour potential were considered in choosing bridge location alternatives.

ADOT&PF would **minimize** unavoidable impacts to waters of the U.S. in the following ways:

5. Permanent riprap fill below the OHW would be minimized to what is needed to provide a stable slope around the abutments.
6. Temporary fill would be removed from the stream when construction is complete and material stockpiles would be located above the OHW mark in upland areas.
7. Only clean fill, meeting the requirements for Select A or cleaner, would be used for temporary fill placed below the OHW mark.
8. Equipment refueling and storage areas would be located at least 100 feet from the active river channel.
9. Appropriate erosion and sediment control measures would be implemented on and at the perimeters of disturbed soil surfaces to minimize the transport of sediment to waters of the U.S.
10. Construction would retain a six-foot strip of existing vegetation, measured landward from the OHW mark, to the extent practicable by reasonable construction techniques. Where disturbance within this six-foot strip is unavoidable, ADOT&PF construction would plant disturbed areas with a combination of the grasses and shrubs listed below. ADOT&PF would also plant areas between the six-foot strip of retained vegetation to within four feet of the proposed pathway with a combination of the grasses and shrubs listed below. Areas within four feet of the pathway would be planted with only the grass mix.

Shrubs

- Shrubby Cinquefoil (*Potentilla fruticosa*)
- Dwarf Birch (*Betula nana*)
- Red Osier Dogwood (*Cornus stolonifera*)

Grasses

- Bluejoint Reedgrass (*Calamagrostis Canadensis*)
- Tufted Hairgrass (*Deschampsia caespitosa*)
- Norcoast hairgrass (*Deschampsia beringensis*) or Nortran Hairgrass (*Deschampsia caespitosa*)

ADOT&PF would **compensate** for 0.24 acres of permanent, unavoidable impacts to waters of the U.S. by means of an in-lieu fee payment to The Conservation Fund. Payment is proposed at the estimated base ratio of 2:1 for preservation of wetlands. Payment would be made prior to construction. See table below for impact calculations:

	Impacts (Acres)	Impacts (cubic yards)
Chena River		
Bridge	0.19	1728
Riprap/Piers		
Storm Drains	0.01	39
Noyes Slough		
Bridge Riprap	0.04	560
Storm Drains	0.00	17
Total Impacts	0.24 acres	2344

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 registered or eligible properties within the vicinity of the worksite, which include: **Illinois Street (FAI-524), Immaculate Conception Church (FAI-030), Illinois Street Historic District (FAI-349), and properties within the Illinois Street Historic District; FE Co. Administrative Offices (FAI-426), FE Co. Housing (FAI-356, FAI-357, FAI-358, and FAI-359), Noyes House (FAI-350), Mapleton-Sexton House (FAI-275), and the Johnson-Hayr House (FAI-274).** In consultation with the Federal Highway Administration (FHWA), the State Historic Preservation Officer (SHPO) reviewed ADOT&PF's preferred alternative for this project, and concurred with a finding of no adverse effect on April 22, 2005. Consultation of the AHRs, and **documentation provided by ADOT&PF** constitutes the extent of cultural resource investigations by the District Commander at this time. 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: 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).

The ADF&G Catalog of Water Important to the Spawning, Rearing or Migration of Anadromous Fishes indicates that the stretch of the lower Chena River (ADF&G #334-40-11000-2490-3301) in which the proposed project would be located supports Coho (Onchorhynchus kisutch) and King (Onchorhynchus tshawytscha) salmon during adult and smolt migration. The reach of Noyes Slough (ADFG# 334-40-11000-2490-3301-4015) in which the proposed project would be located supports King salmon during adult and smolt migration. **Conservation measures regarding revegetation along the Chena River have changed since ADOT&PF's June 17, 2008, correspondence with NOAA (see item #10 under "MITIGATION," above).** Preliminarily, the described activity may 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 authorities:

(X) Perform work in or affecting navigable waters of the United States - Section 10 Rivers and Harbors Act 1899 (33 U.S.C. 403).

(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 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

ANCHORAGE

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

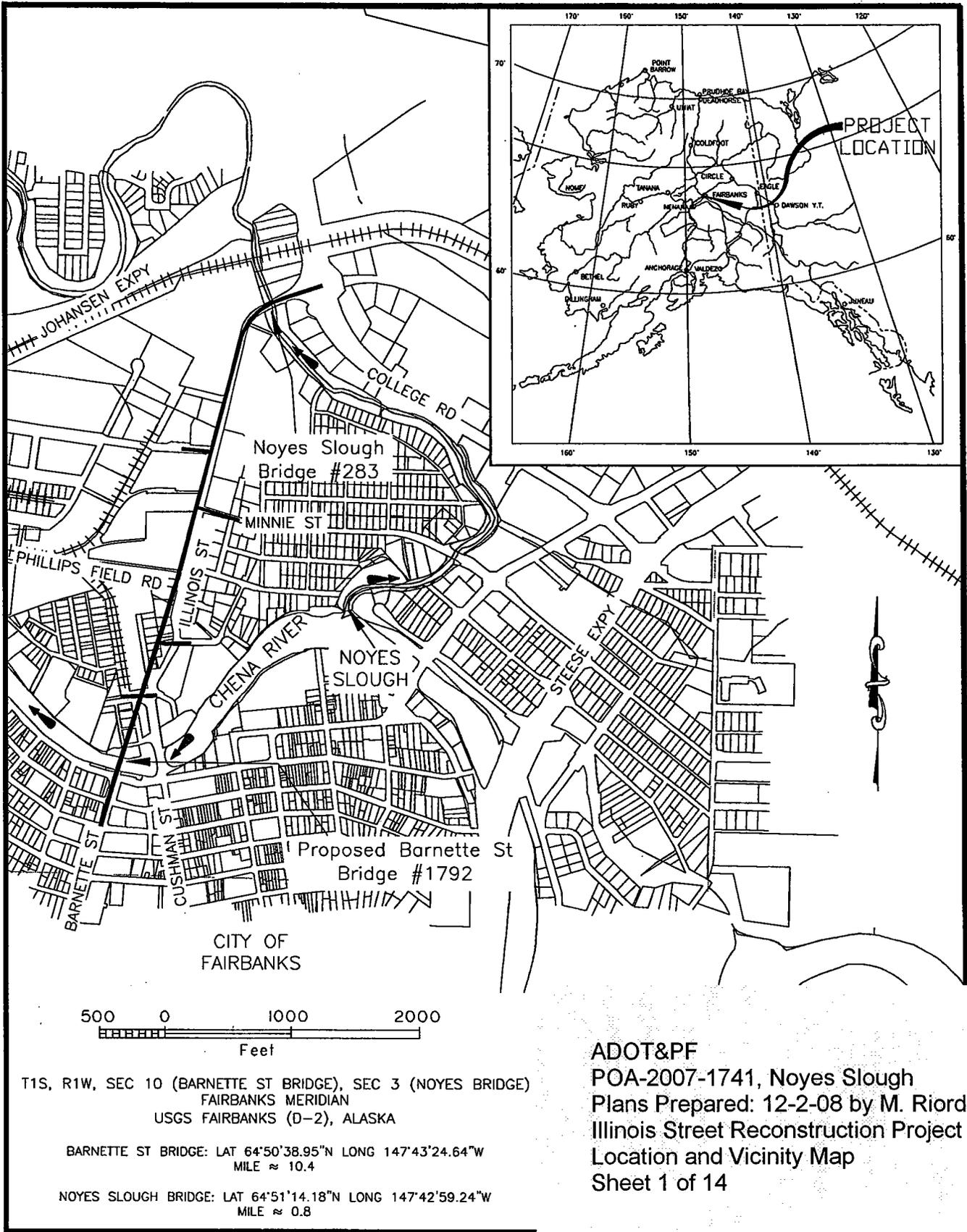
NOTICE OF APPLICATION FOR STATE WATER QUALITY CERTIFICATION

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-2007-1741, Noyes Slough**, 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.

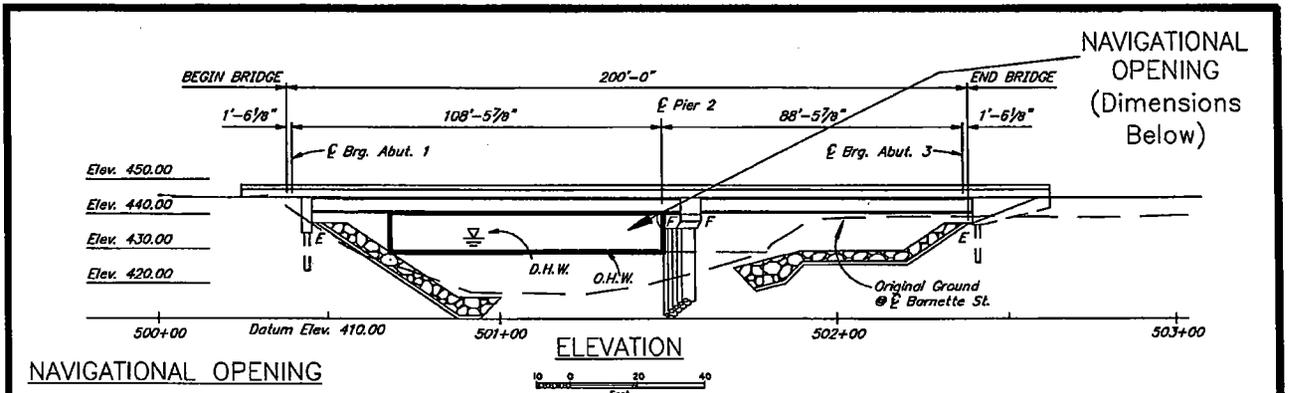


T1S, R1W, SEC 10 (BARNETTE ST BRIDGE), SEC 3 (NOYES BRIDGE)
 FAIRBANKS MERIDIAN
 USGS FAIRBANKS (D-2), ALASKA

BARNETTE ST BRIDGE: LAT 64°50'38.95"N LONG 147°43'24.64"W
 MILE ≈ 10.4

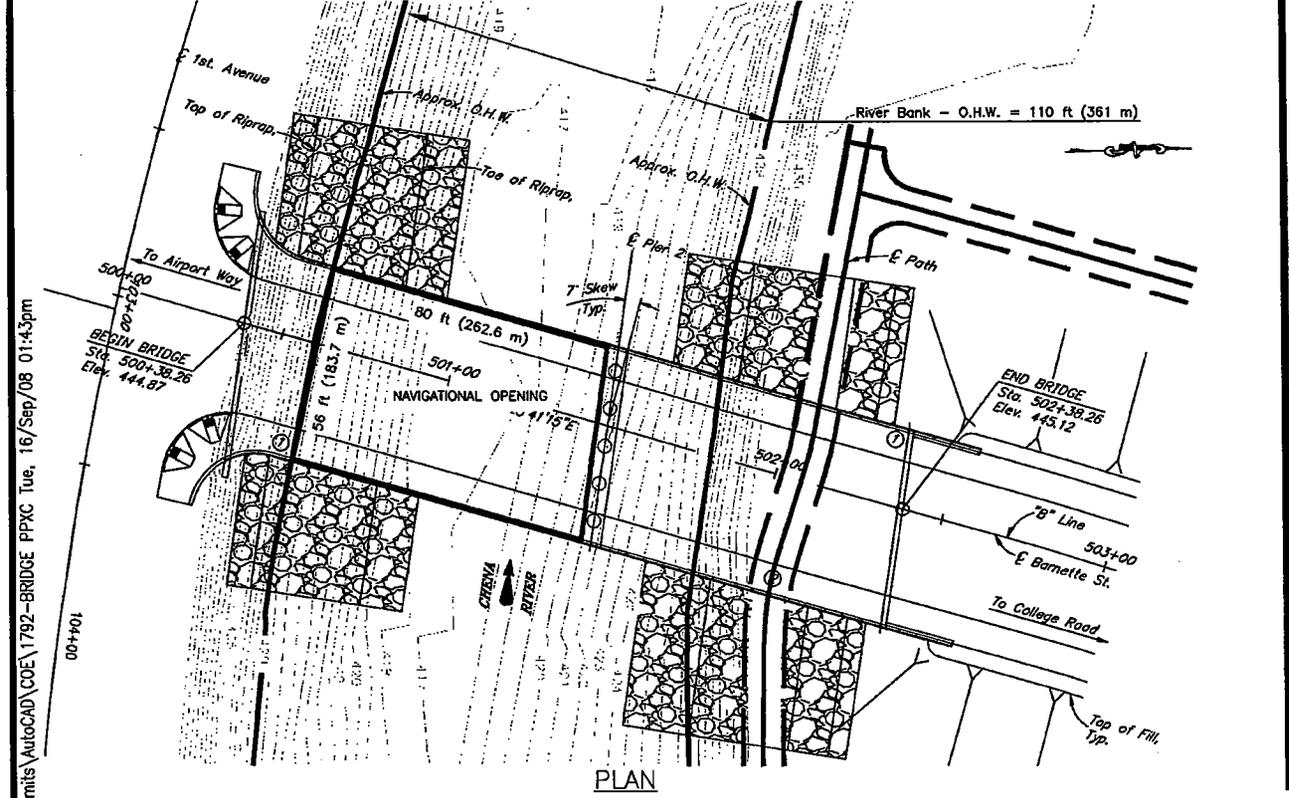
NOYES SLOUGH BRIDGE: LAT 64°51'14.18"N LONG 147°42'59.24"W
 MILE ≈ 0.8

ADOT&PF
 POA-2007-1741, Noyes Slough
 Plans Prepared: 12-2-08 by M. Riordan
 Illinois Street Reconstruction Project
 Location and Vicinity Map
 Sheet 1 of 14



NAVIGATIONAL OPENING

- Horizontal Clearance (O.H.W. to Pier 2) = 80 ft (262.6 m)
- Vertical Clearance (O.H.W. to Low Member) = 11 ft (36.1 m)
- Water Depth (Channel Bottom to O.H.W.) = 12 ft (39.4 m)



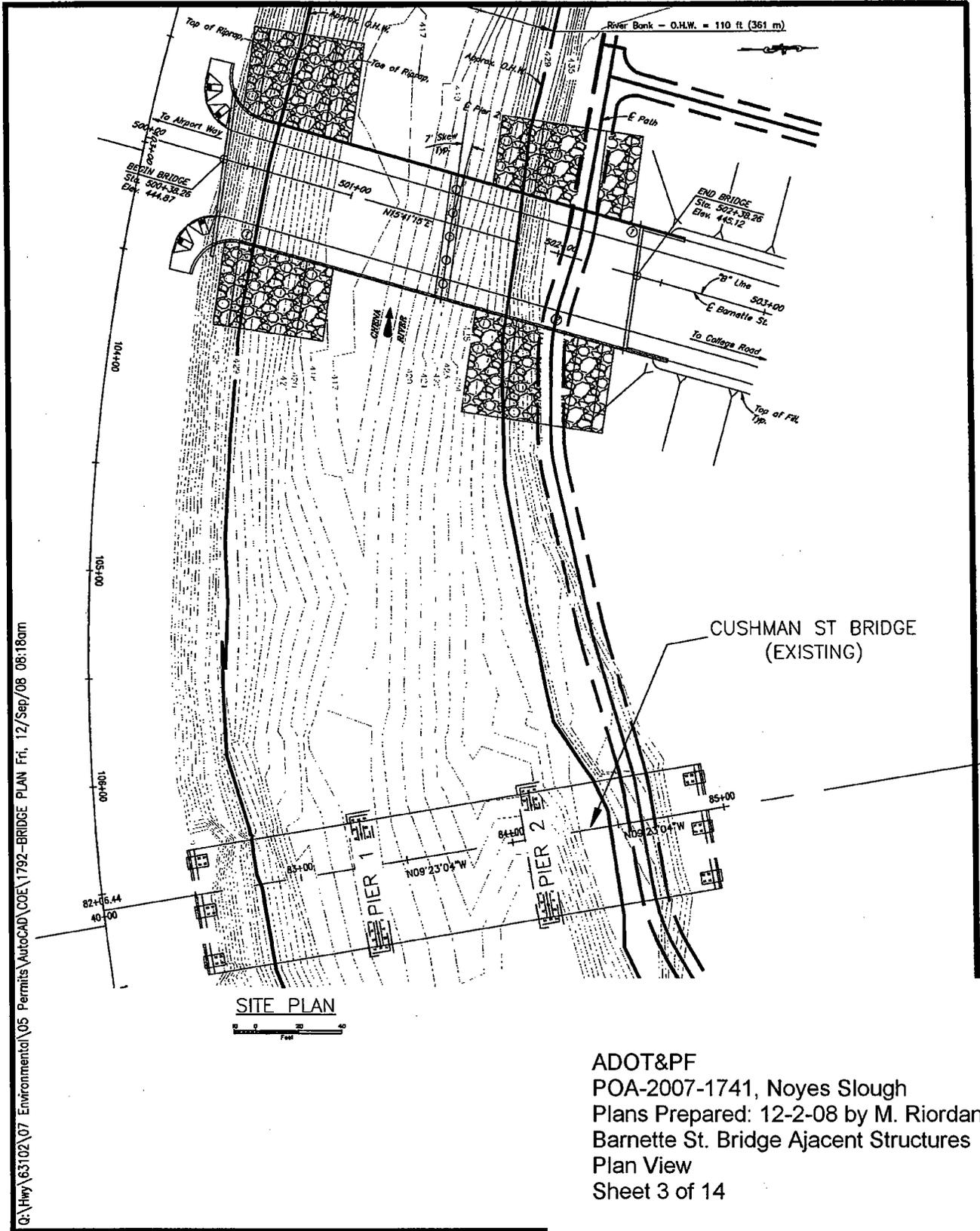
ELEVATIONS

1. Low Cord Elevation = 434 ft (1424 m)
2. 100 Year Flood Elevation (D.H.W.) = 435 ft (1427 m)
3. Ordinary High Water (O.H.W.) = 429 ft (1408 m)
4. Bottom of Waterway = 417 ft (1368 m)

NOTE: D.H.W. = Design High Water

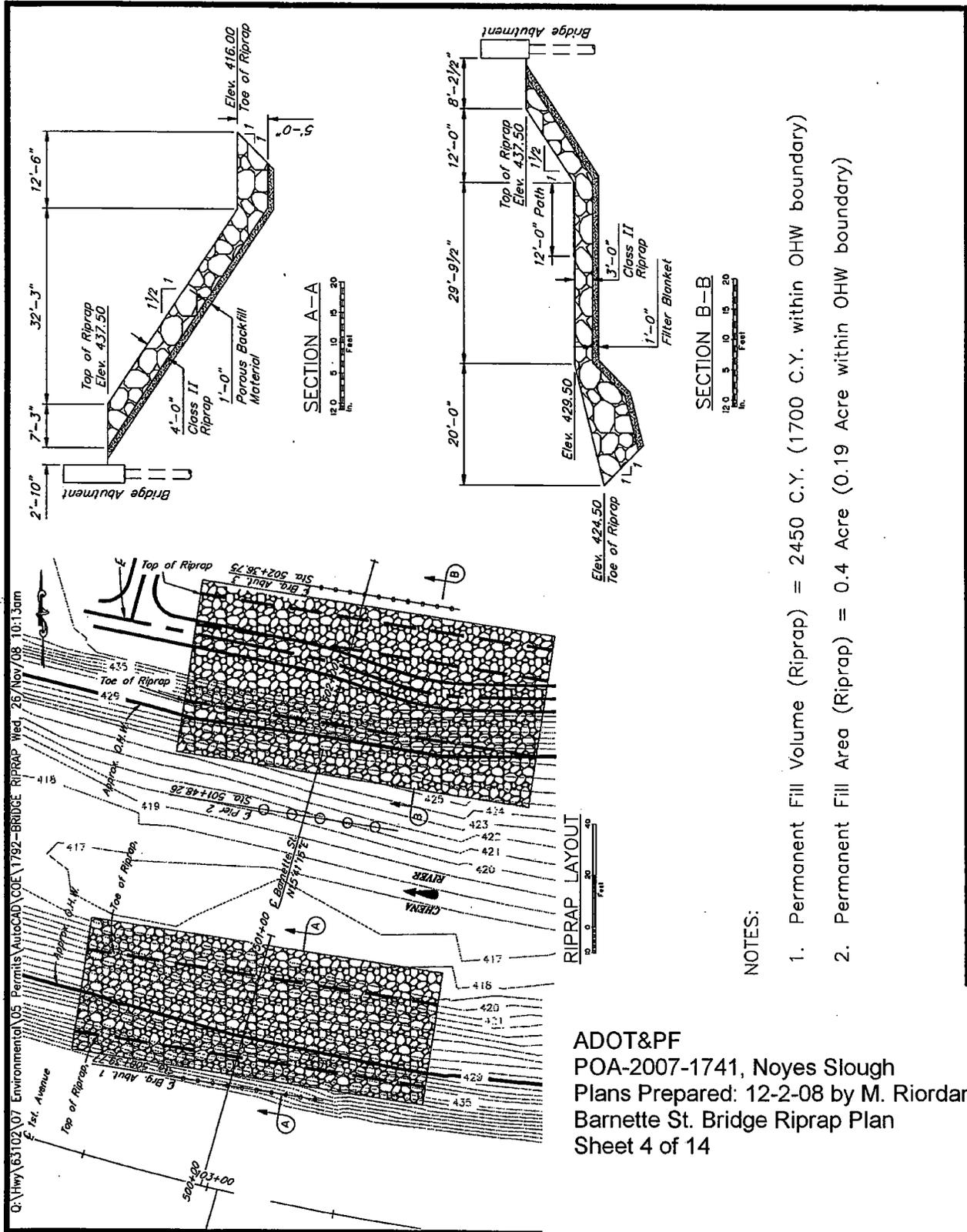
ADOT&PF
 POA-2007-1741, Noyes Slough
 Plans Prepared: 12-2-08 by M. Riordan
 Barnette St. Bridge Elevation and Plan View
 Sheet 2 of 14

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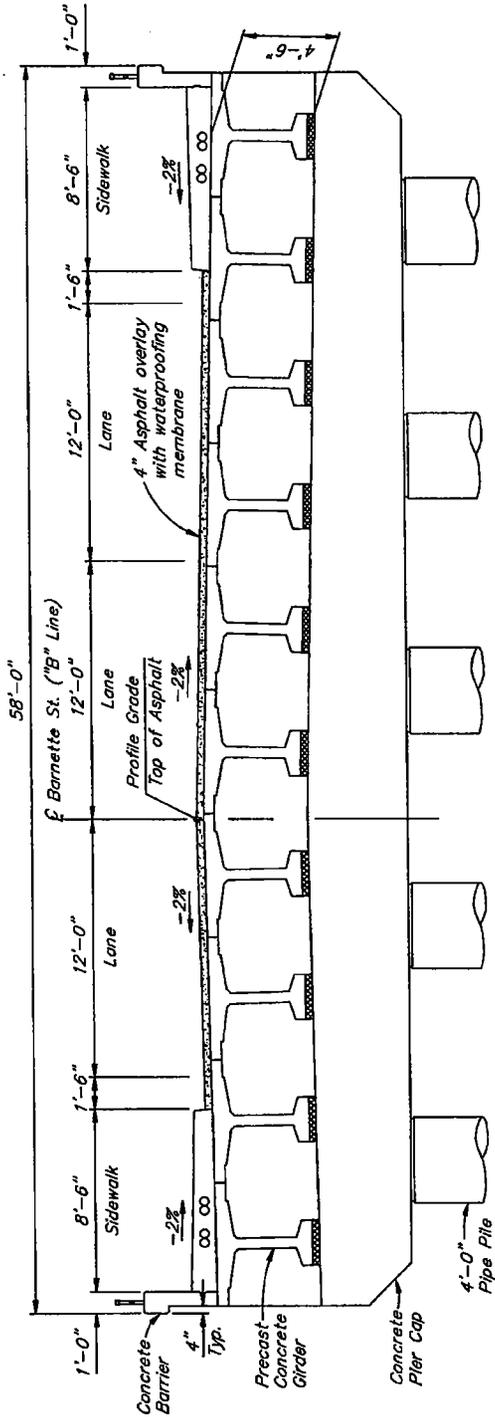
ADOT&PF
 POA-2007-1741, Noyes Slough
 Plans Prepared: 12-2-08 by M. Riordan
 Barnette St. Bridge Adjacent Structures
 Plan View
 Sheet 3 of 14



- NOTES:**
1. Permanent Fill Volume (Riprap) = 2450 C.Y. (1700 C.Y. within OHW boundary)
 2. Permanent Fill Area (Riprap) = 0.4 Acre (0.19 Acre within OHW boundary)

ADOT&PF
 POA-2007-1741, Noyes Slough
 Plans Prepared: 12-2-08 by M. Riordan
 Barnette St. Bridge Riprap Plan
 Sheet 4 of 14

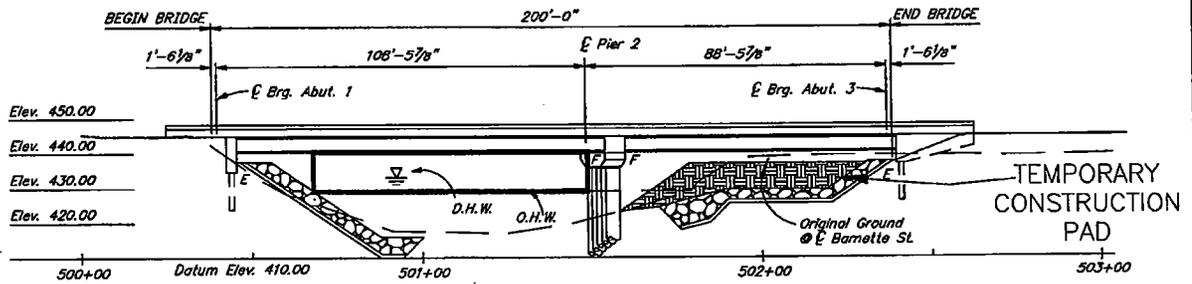
Q:\Hwy\63102\07 Environmental\05 Permits\Autocad\COE\1792-BRIDGE TYP SEC Thu, 11/Sep/08 01:10pm



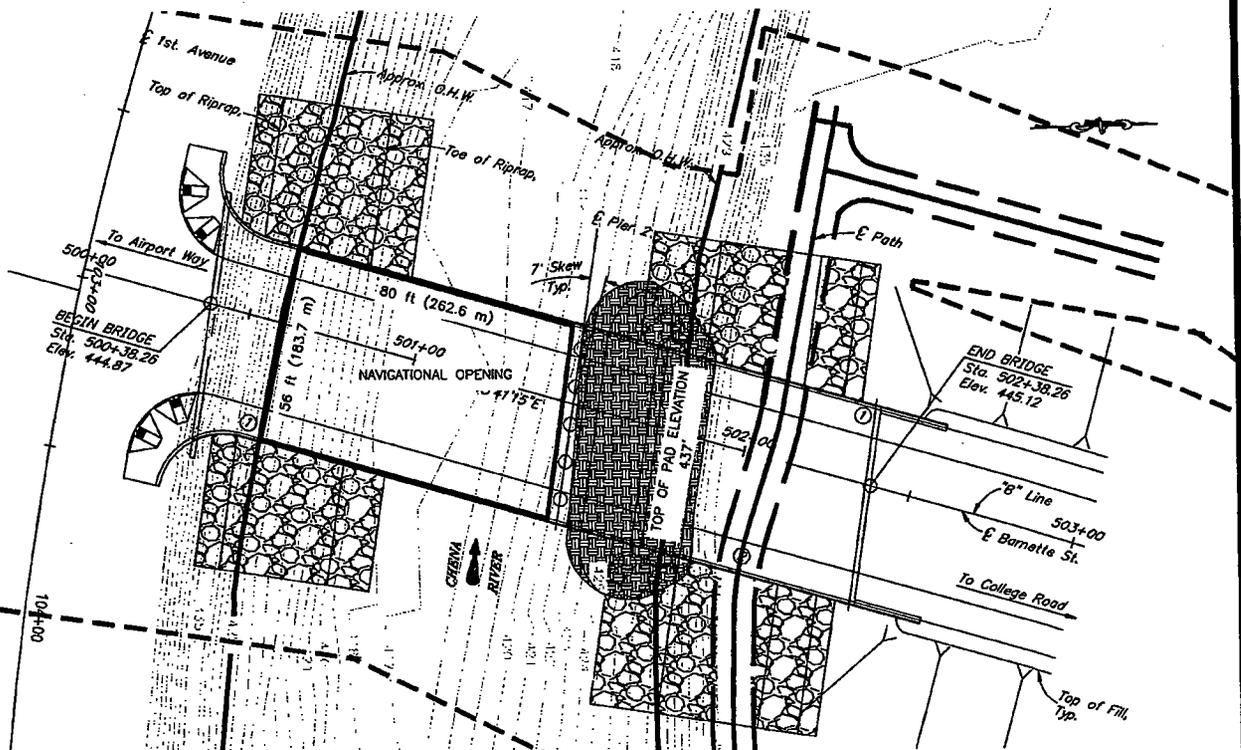
BRIDGE TYPICAL SECTION (PIER 2)



ADOT&PF
POA-2007-1741, Noyes Slough
Plans Prepared: 12-2-08 by M. Riordan
Barnette St. Bridge Typical Section
Sheet 5 of 14



TEMPORARY CONSTRUCTION PAD ELEVATION VIEW



TEMPORARY CONSTRUCTION PAD PLAN VIEW



KEY



Estimated Project Work Limits



Temporary Construction Fill for Bridge Pier Construction

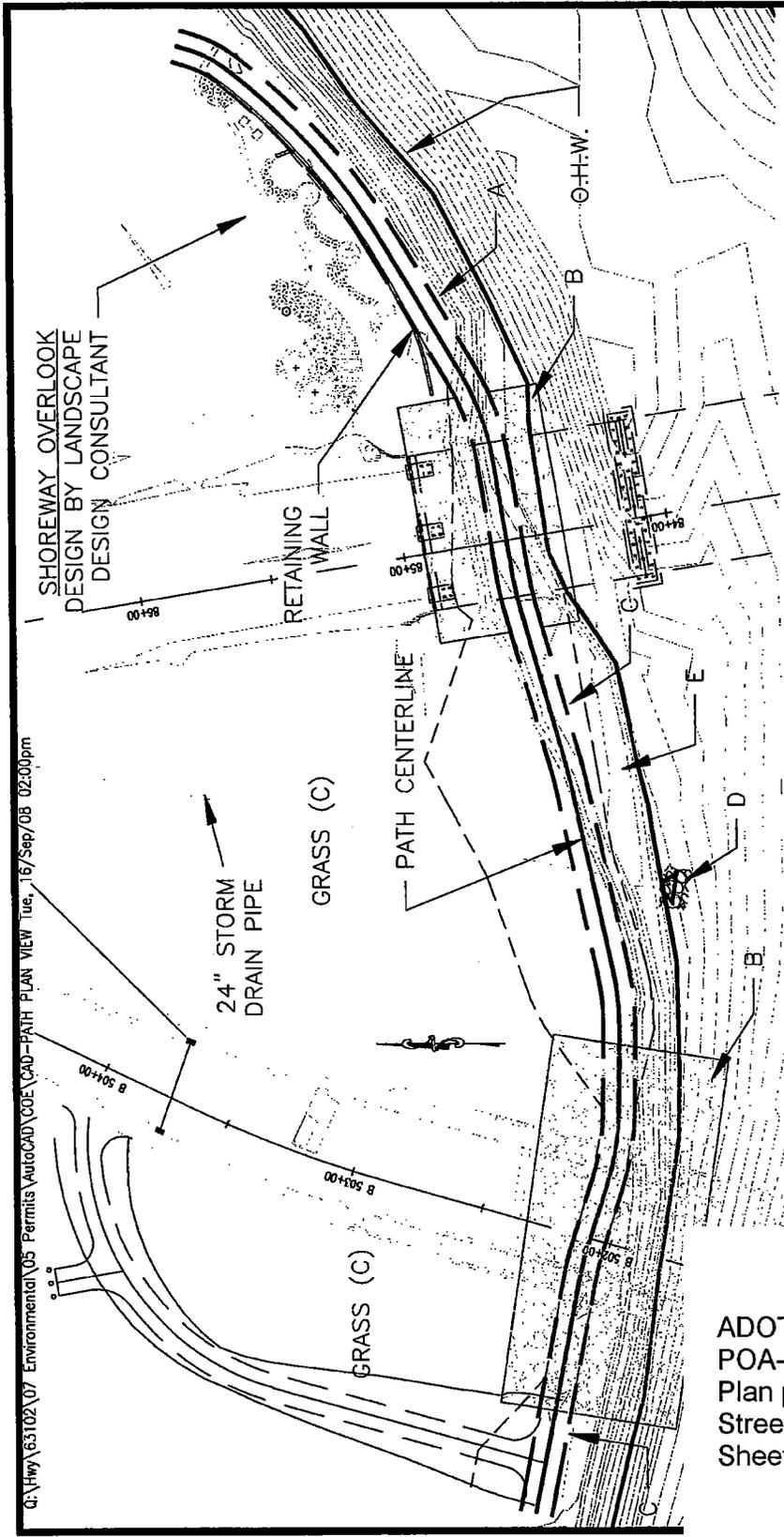
NOTES

1. The temporary construction pad is a potential construction plan. The contractor may propose a different plan.
2. Temporary construction fill area = 3150 S.F. (2500 S.F. within OHW boundary)
3. Temporary construction fill volume = 570 C.Y. (265 C.Y. within OHW boundary)

ADOT&PF
 POA-2007-1741, Noyes Slough
 Plans Prepared: 12-2-08 by M. Riordan
 Barnette St. Bridge Temporary Construction
 Plan Detail
 Sheet 6 of 14

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C:\Hwy\63102\07 Environmental\05 Permits\AutoCAD\COE\CAD-PAINT PLAN VIEW Tue, 16/Sep/08 02:00pm



SHOREWAY OVERLOOK
DESIGN BY LANDSCAPE
DESIGN CONSULTANT

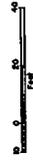
RETAINING
WALL

24" STORM
DRAIN PIPE

GRASS (C)

PATH CENTERLINE

O-H-W.



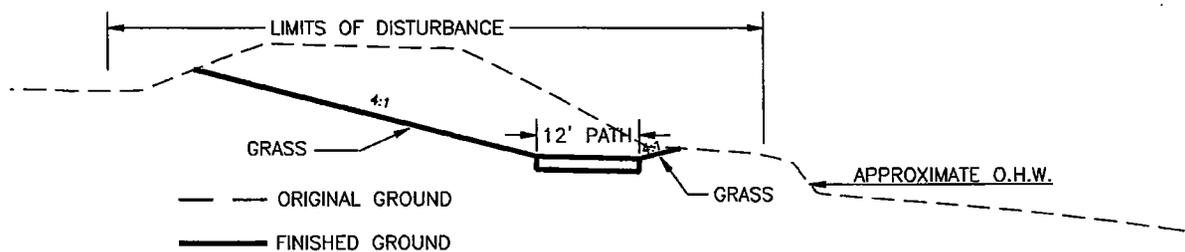
LEGEND

- A. Continue Existing Plantings
- B. Bridge Riprap
- C. Grass
- D. Storm Drain Outfall Riprap
- E. Preserve Existing Vegetation Where Practical
- Cut Catchline (Path)
- Fill Catchline (Path)

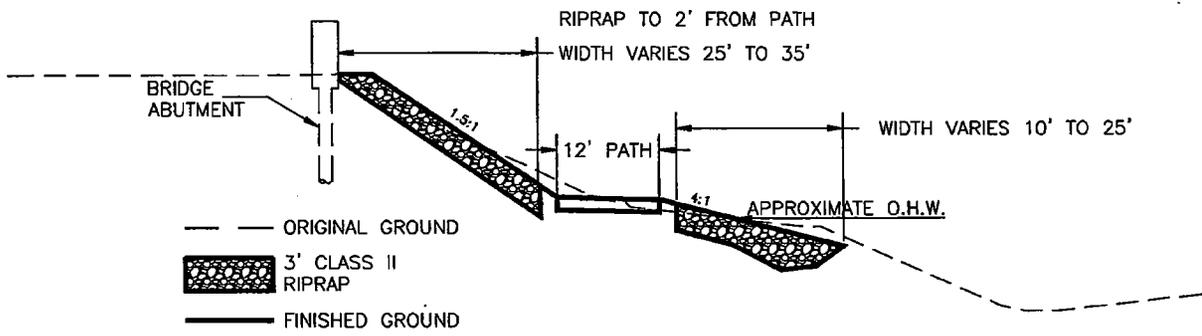
NOTES:

1. Parks & Recreation to maintain all areas

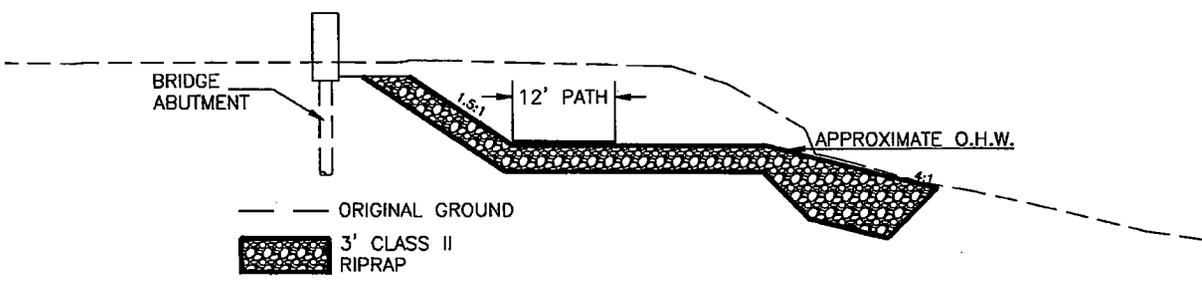
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POA-2007-1741, Noyes Slough
Plan prepared: 12-2-08 by M. Riordan
Streetscape Plan View
Sheet 7 of 14



PATH TYPICAL CROSS-SECTION EXCLUDING BRIDGES

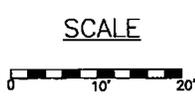


PATH TYPICAL CROSS-SECTION UNDER CUSHMAN ST BRIDGE



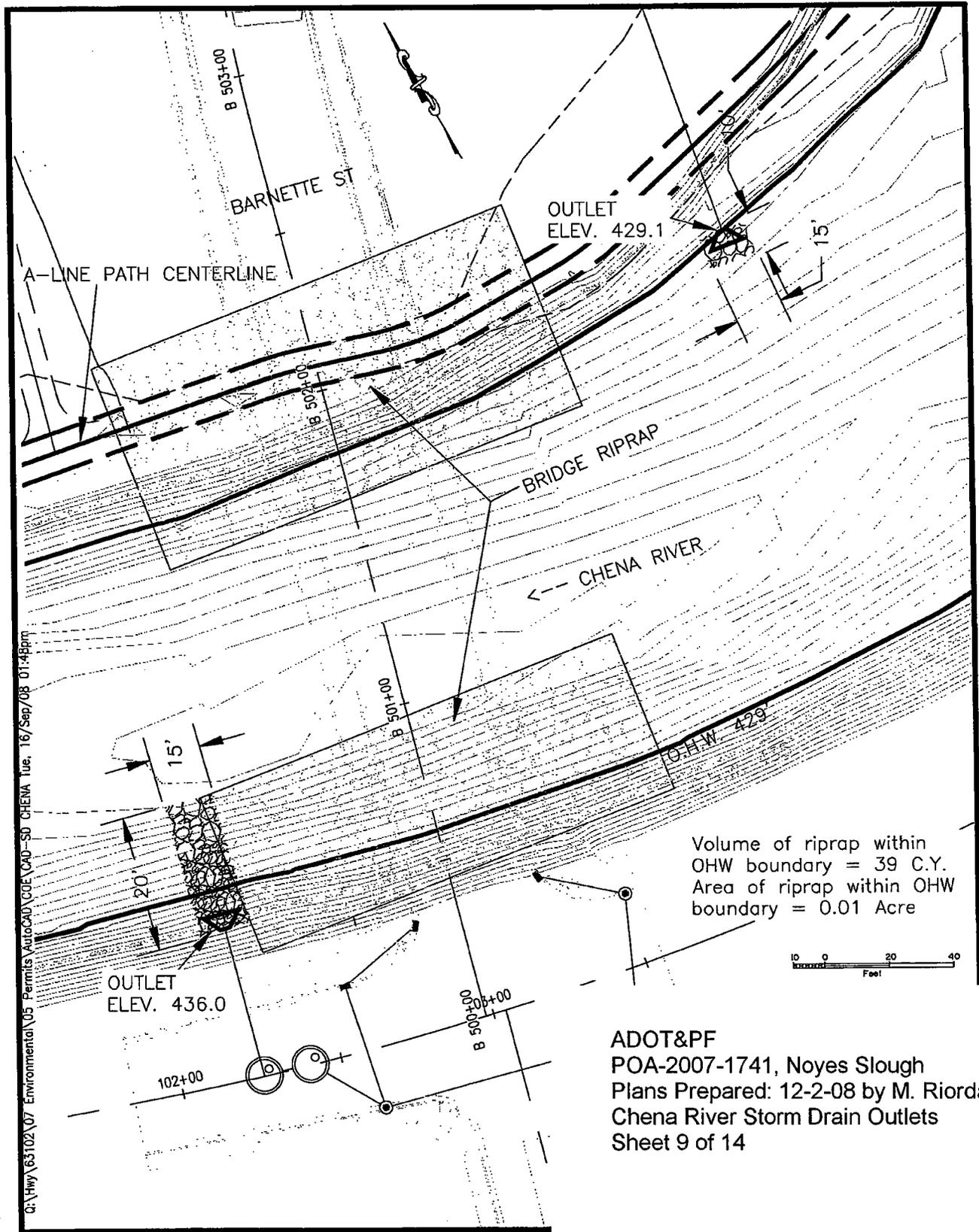
PATH TYPICAL CROSS-SECTION UNDER BARNETTE ST BRIDGE

NOTE: O.H.W = 429.1 FT



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 Pathway Typical Cross-Section
 Sheet 8 of 14

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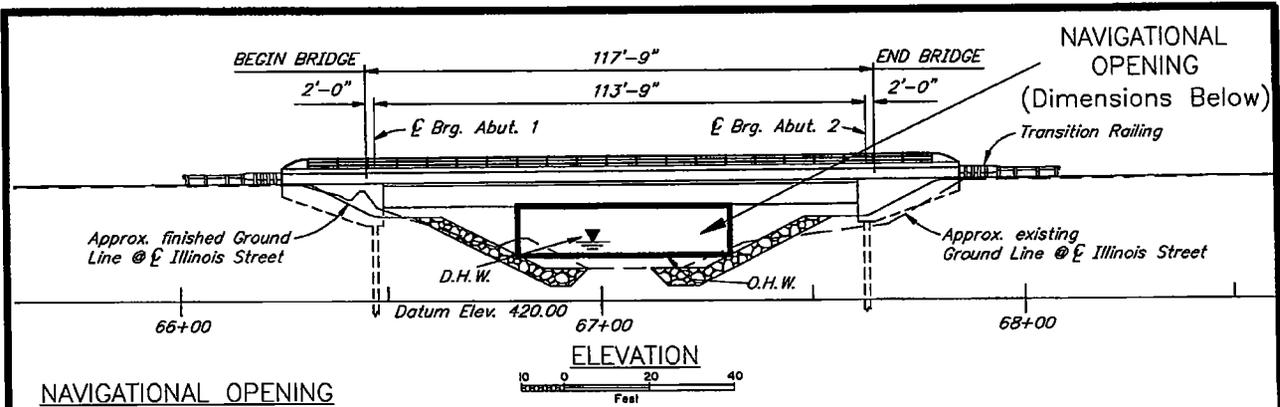


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Volume of riprap within
 OHW boundary = 39 C.Y.
 Area of riprap within OHW
 boundary = 0.01 Acre

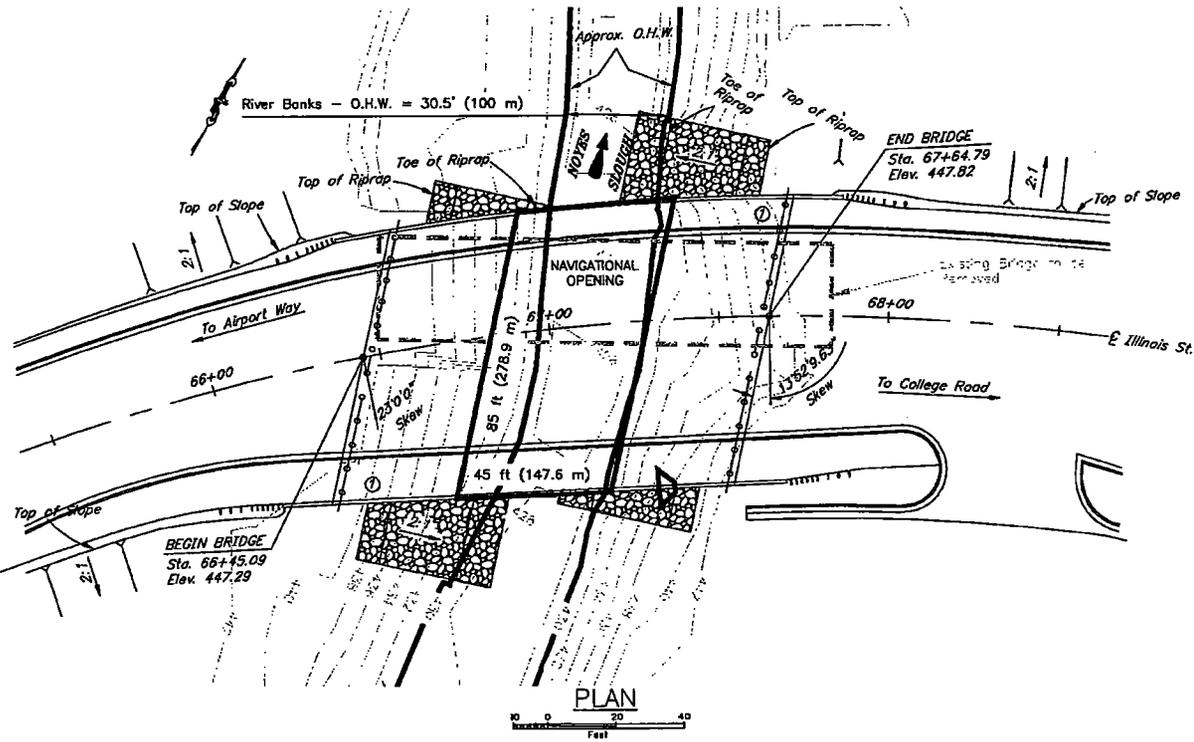


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 Chena River Storm Drain Outlets
 Sheet 9 of 14



NAVIGATIONAL OPENING

- Horizontal Clearance (O.H.W. to Riprap) = 45 ft (147.6 m)
- Vertical Clearance (O.H.W. to Low Member) = 11 ft (36.1 m)
- Water Depth (Channel Bottom to O.H.W.) = 2.5 ft (8.2 m)



ELEVATIONS

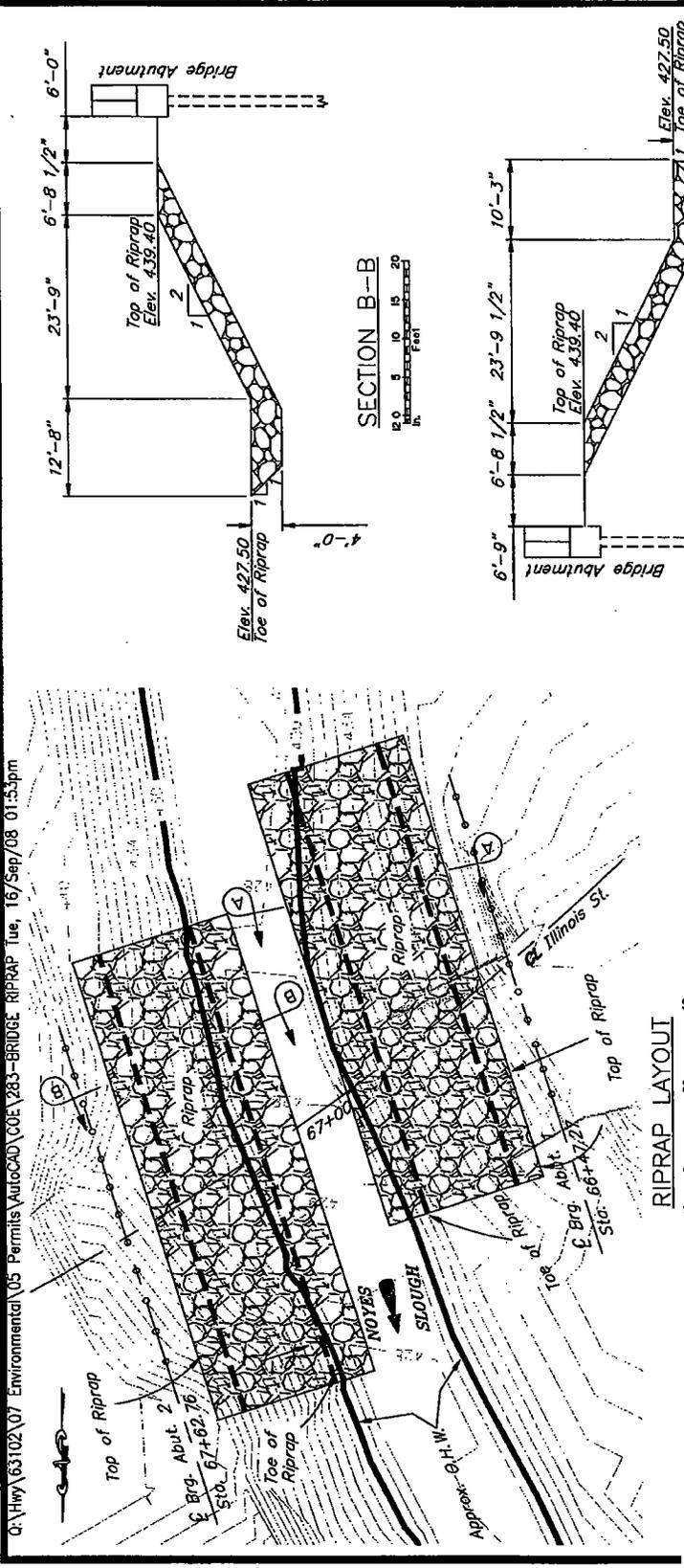
1. Low Cord Elevation = 436 ft (1430 m)
2. 100 Year Flood Elevation (D.H.W.) = 434 ft (1424 m)
3. Ordinary High Water (O.H.W.) = 430 ft (1411 m)
4. Bottom of Waterway = 428 ft (1404 m)

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Noyes Slough Bridge Elevation and
Plan View
Sheet 10 of 14

NOTE: D.H.W. = Design High Water

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D:\Hwy\63102\07 Environmental\05 Permits\AutoCAD\COE\283--BRIDGE- RIPRAP Tue, 16/Sep/08 01:53pm

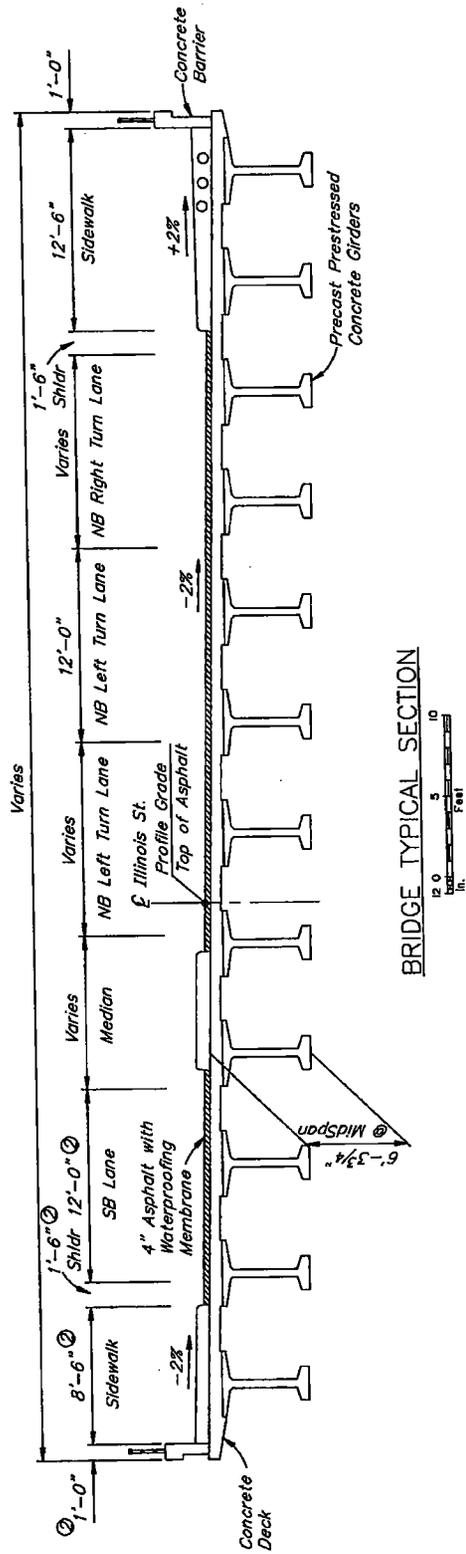


NOTES

1. Permanent Fill Volume (Riprap) = 1081 C.Y. (560 C.Y. within OHW boundary)
2. Permanent Fill Area (Riprap) = 0.2 Acre (0.04 Acre within OHW boundary)

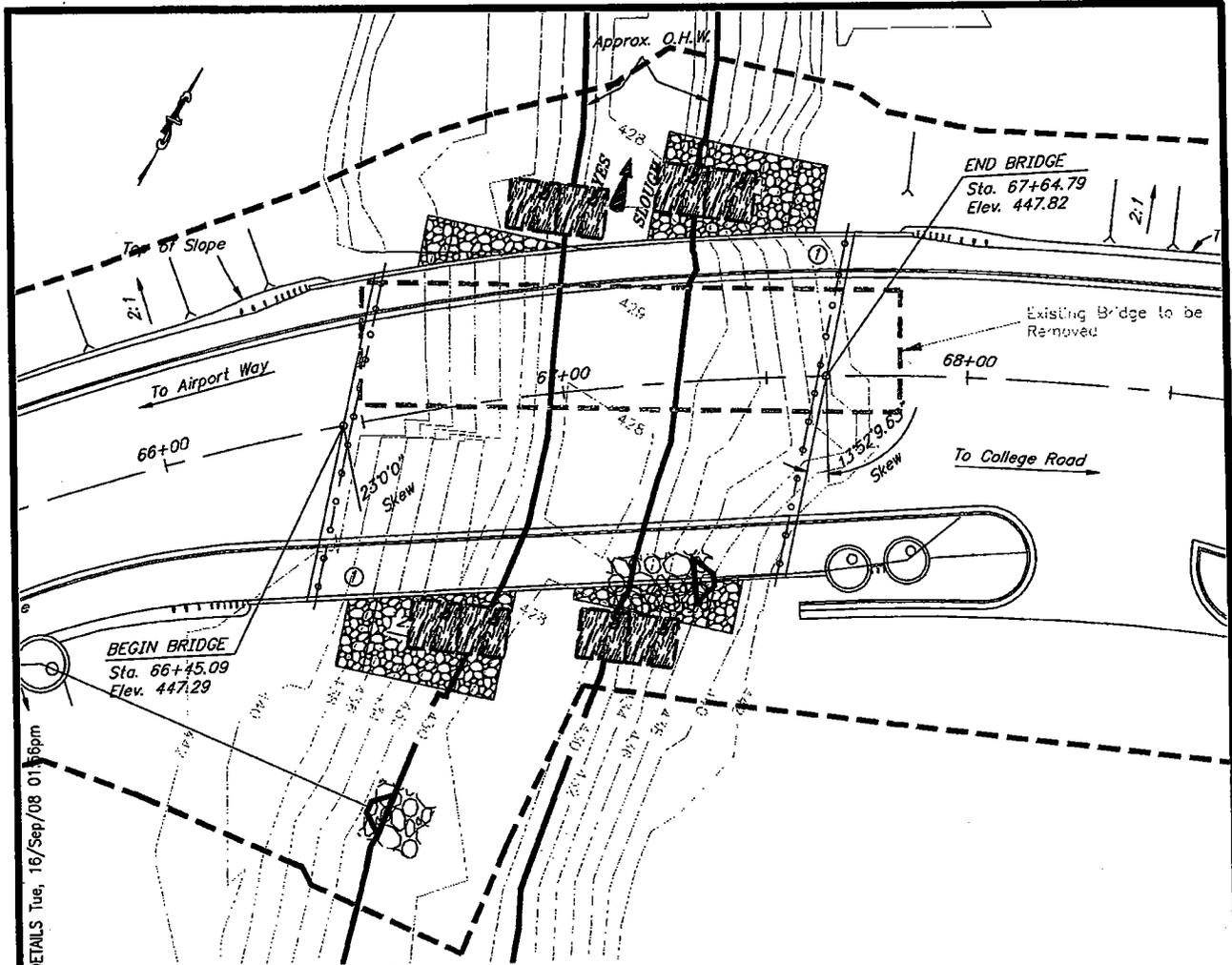
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 Plan Prepared: 12-2-08 by M. Riordan
 Noyes Slough Bridge Riprap Plan
 Sheet 11 of 14

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BRIDGE TYPICAL SECTION

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Noyes Slough Bridge Typical Section
Sheet 12 of 14



PRELIMINARY CONSTRUCTION PLAN



KEY

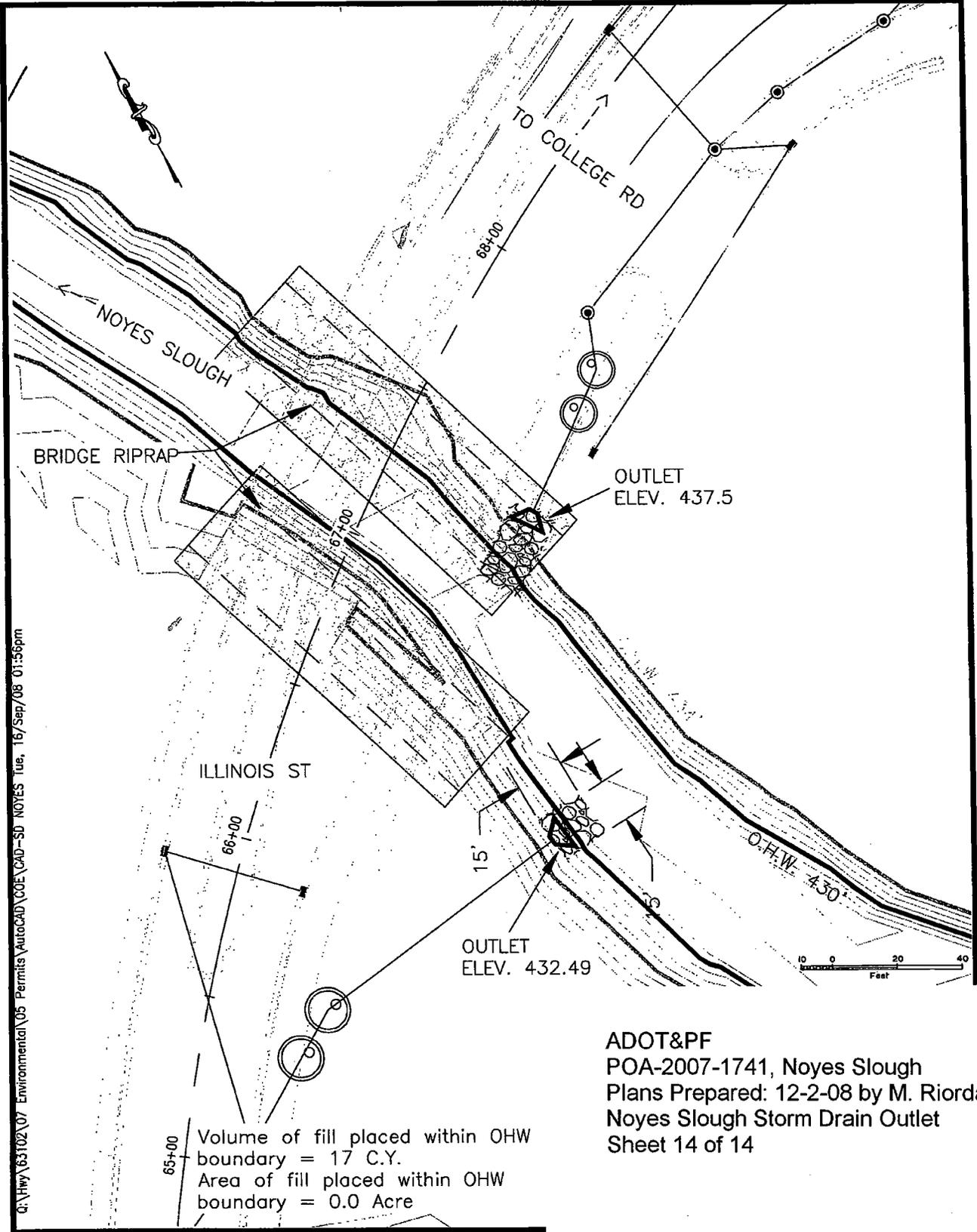
- Estimated Project Work Limits
- Temporary Crane Mats for Bridge Girder Placement

NOTES

1. The crane mat layout is a potential construction plan. The contractor may propose a different plan.
2. Temporary construction fill area = 576 S.F. (432 S.F. within OHW boundary)
3. Area under crane mats will be graded to be level.

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 Noyes Slough Bridge Construction Plan
 Sheet 13 of 14

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 Noyes Slough Storm Drain Outlet
 Sheet 14 of 14