US Army Corps of Engineers®

PUBLIC NOTICE

APPLICATION FOR PERMIT

Public Notice/Application No.: SPL-2008-1198-KAT
Comment Period: February 23, 2011 to March 24, 2011

Applicant
Arizona Department of Transportation
Mr. Lynn Johnson, P.E.
Holbrook District Engineer
2407 E. Navajo Blvd (H700)
Holbrook, AZ 86025-1828

Location

The proposed project area is located within the Lower Puerco Watershed (HUC 15020007) of the Lower Colorado River Basin. The general project area is centered at latitude 34.992280° North / longitude 109.948952° West (UTM 3872691.65 mN / 595920.66 mE Zone: 12S) along Interstate 40 from MP 300.18 to MP 303.55, with Little Lithodendron Wash located at MP 300.75, and Big Lithodendron Wash at MP 303.12. This project is approximately 14 miles east of Holbrook, Navajo County, Arizona. The project is located within portions of Section 6, T18N, R23E, Section 1, T18N, R22E, and Section 33, T19N, R23E. Refer to USGS 7.5' Quadrangle: *Carrizo Butte, Ariz.* (1982) and *Little Lithodendron, Ariz.* (1972).

Activity

To discharge dredged and/or fill material into 0.53 acre of the Little Lithodendron Wash and 0.69 acre of the Big Lithodendron Wash for the replacement of the existing bridge structure and bank protection. Total permanent loss of waters is 1.22 acres.

For more information, see page 4 of this notice and attached drawings.

Interested parties are hereby notified that an application has been received for a Department of the Army permit for the activity described herein and shown on the attached drawing(s). Interested parties are invited to provide their views on the proposed work, which will become a part of the record and will be considered in the decision. This permit application will be issued or denied under Section 404 of the Clean Water Act (33 U.S.C. 1344).

Comments can be e-mailed to: kathleen.a.tucker@usace.army.mil or mailed to:

U. S. Army Corps of Engineers
ATTENTION: Regulatory Division (SPL-2008-1198-KAT)
3636 North Central Avenue, Suite 900
Phoenix, Arizona 85012-1939

For additional information please call Kathleen A. Tucker at (602) 230-6956 or send an e-mail to kathleen.a.tucker@usace.army.mil. This public notice is issued by the Arizona Regulatory Branch of the Los Angeles District of the US Army Corps of Engineers.

Evaluation Factors

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof. Factors that will be considered include conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people. In addition, if the proposal will discharge dredged or fill material, the evaluation of the activity will include application of the EPA Guidelines (40 CFR 230) as required by Section 404 (b) (1) of the Clean Water Act.

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.

Preliminary Review of Selected Factors

EIS Determination- A preliminary determination has been made that an environmental impact statement is not required for the proposed work.

Water Quality- The applicant has applied for a water quality certification, under Section 401 of the Clean Water Act, from the Arizona Department of Environmental Quality. Section 401 of the Clean Water Act requires that any applicant for an individual Section 404 permit provide proof of water quality certification to the Corps of Engineers.

Cultural Resources- A survey of the project area indicated there were eligible sites. One site, consisting of portions of historic Route 66 was documented; two road segments occur within the current project area. In addition to the road segments, two historic bridges listed on the NRHP were identified in the areas surveyed. Both bridges are adjacent to, but not within, the current project area. SHPO concurred with ADOT's recommendation on July 7, 2008 that a finding of “no adverse effect” is appropriate for this project. FHWA is currently consulting with SHPO on the adequacy of the determination due to the federal funding status and change in project scope.

Endangered Species- No listed threatened or endangered species or their critical habitat occurs within the project area. A Biological Review (BR) was completed by ADOT for the project in January 2011, in which the current United States Fish and Wildlife Service list of threatened, endangered, proposed, and candidate species was reviewed; the BR determined that no suitable or critical habitat for any threatened, endangered, proposed, and candidate species will be impacted by the project.

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 hearing shall state with particularity the reasons for holding a public hearing.

Proposed Activity for Which a Permit is Required

Basic Project Purpose-The basic project purpose comprises the fundamental, essential, or irreducible purpose of the proposed project, and is used by the Corps to determine whether the applicant's project is water dependent. The basic project purpose for the proposed project is transportation and therefore, not water dependent.

Overall Project Purpose- The overall project purpose serves as the basis for the Corps' 404(b)(1) alternatives analysis and is determined by further defining the basic project purpose in a manner that more specifically describes the applicant's goals for the project, and which allows a reasonable range of alternatives to be analyzed. The overall project purpose for the proposed project is to replace the bridge structures over Big and Little Lithodendron Washes, install concrete scour floors and bank protection.

Overall Proposed Project Description - ADOT proposes to re-construct the bridge structures along I-40 that cross over the Little Lithodendron Wash at MP 300.75 and Big Lithodendron Wash at MP 303.12, in order to bring the bridge structures to the required operating level and to protect the new structures from scour, while allowing the adequate passing of flows through Little and Big Lithodendron washes at their crossings of I-40.

The proposed project includes the following:

- Construction of temporary traffic detours within the I-40 median from 300.18 and 300.51 and from 303.23 and 303.55;
- Removal of existing eastbound (EB) and westbound (WB) bridges over the Little and Big Lithodendron washes (to be replaced with new structures);
- Removal of existing riprap in front of abutments and installation of grouted riprap in front of new abutments, once constructed, which will be tied into the remaining existing riprap system. Gabion mattresses will be utilized during construction for temporary shoring;
- Replacement of the existing bridge structures across Little Lithodendron Wash (MP 300.75) with two new 310-foot-3/4-inch long, 10-span Closed Frame Continuous Concrete Slab Bridges. Structures will include 58-foot-5-inch wide mat foundations with concrete cutoff walls at upstream and downstream ends to eliminate scour. The new bridges will be dedicated to EB and WB traffic;
- Replacement of the existing bridge structures across Big Lithodendron Wash (MP 303.12) with two new 470-foot long, 15-span Closed Frame Continuous Concrete Slab Bridges. Structures will include 56-foot-10-inch wide mat foundations with concrete cutoff walls at upstream and downstream ends to eliminate scour. The new bridges will be dedicated to EB and WB traffic;
- Striping, installation of signing, guardrails, fencing, and other associated roadway improvements.

Approximately 1.22 acres of permanent impacts to Waters would occur as a result of the project. Additionally, approximately 3.16 acres of Waters would be temporarily disturbed.

Additional Project Information

Construction Methods

Construction access to work sites would occur via existing roadways and/or I-40 medians. Equipment and material storage would be limited to areas that would not affect the passage of normal and high flows. All areas within Waters that would be temporarily disturbed would be recontoured to match preconstruction conditions as close as possible after completing the construction work, wherever practicable. Pursuant to ADOT's Statewide Stormwater Discharge Permit, no greater than 750,000 square feet of erodible earth material would be exposed at any one location. The total area of ground disturbance for the overall project exceeds one acre; therefore, a Stormwater Pollution Prevention Plan (SWPPP) would be required pursuant to both the ADOT Statewide Storm Water Permit and the Construction General Permit under the Arizona National Pollution Discharge Elimination System.

Rehabilitation of the new bridges at Little and Big Lithodendron Washes would occur with the use of temporary traffic detours. Temporary traffic detours would be constructed within the I-40 median, from MP 300.18 to MP 300.51, and from MP 303.23 to MP 303.55, in order to detour traffic onto the westbound wash crossings, allowing the new eastbound bridges at both crossings to be reconstructed first. Once the eastbound bridges are constructed, temporary traffic detours would detour traffic onto the eastbound bridge crossings, allowing the new westbound bridges at both crossings to be reconstructed. Following completion of project construction, temporary traffic detours would be removed from the I-40 median.

Activities associated with the reconstruction of the bridges over Little and Big Lithodendron washes along I-40 may require the general site clearing of vegetation within Waters and adjacent uplands within the project corridor. Due to project activities and construction access, approximately 3.16 acres within Waters may be cleared of vegetation; however, both Little and Big Lithodendron washes are largely unvegetated, with salt cedar (*Tamarix sp.*) and mixed grass species occurring in small patches. Additionally, approximately 2.700 acres of upland vegetation, consisting of mixed grass and shrub species, such as blue grama (*Bouteloua gracilis*), dropseed (*Sporobolus sp.*), fourwing saltbush (*Atriplex canescens*), and rabbitbush (*Chrysothamnus sp.*), may be removed from within the I-40 median in order to accommodate for the construction of temporary traffic detours. Following completion of project construction, disturbed areas not permanently altered would be reseeded with a native seed mix of species that occur within the project area.

<u>Little Lithodendron Wash</u>

New Bridge Construction, Bridge Replacement, and Associated Scour Protection:
Little Lithodendron Wash flows south across I-40 at MP 300.75. The existing 10-span, 321-foot and 11-and-3/4-inch-long EB and WB bridge structures at Lithodendron Wash would be removed and replaced with two new 10-span, 310-foot and 3/4-inch-long Closed Frame Continuous Concrete Slab Bridges. Construction would include installation of new mat foundations with concrete cutoff walls at upstream and downstream ends to eliminate scour. The new bridge structures would correct the structural deficiencies to the existing structures, and would provide the crossings with long service life and minimal maintenance costs while meeting AASHTO roadway requirements.

To support the new two new Closed Frame Continuous Concrete Slab Bridges, two new abutments with 2-foot-thick concrete walls would be constructed, which would be placed in front of existing abutments, in order to avoid conflict with existing pile foundations. The nine piers at each bridge would be constructed with 1-foot-3-inch-thick concrete walls. The bottom concrete slab would be a 58-foot-5-inch wide mat foundation that would incorporate the pier foundations from the existing structure. A 4-foot-wide concrete cut-off wall would be constructed at the upstream edge of the bottom slab, and a 6-foot-wide concrete cut-off wall would be constructed at the downstream edge. The piers and abutments would be set parallel to the channel at a 15 degree skew right to the centerline of construction on I-40.

Bank Protection:
Riprap and steel sheet piling currently located in front of existing abutments would be removed to an approximate depth of 5 feet, in order to allow for the construction of the new abutments. During construction, gabion mattresses would be utilized for temporary shoring. Once the new abutments are constructed, grouted riprap would be installed in front, which would be tied into the existing riprap system. Both abutments lie outside of the OHWM of Little Lithodendron Wash; therefore, the construction of new abutments and riprap grouting would not result in impacts within Waters.

The proposed construction of the new Little Lithodendron Wash bridges and associated structures would require dredge and fill within Little Lithodendron Wash. In order to accommodate for each of the new structures, approximately 3,150 cubic yards (CY) of native material would be excavated out of the

drainage, which would be transported outside of Waters and disposed off-site, or utilized to re-contour the channel to pre-construction grades. An estimated 1,300 CY of structural excavation and 125 CY of structure backfill would be associated with project activities at each of the new abutments. For each structure, approximately 240 CY of concrete and 53,520 pounds of reinforcing steel would be placed for pier construction, and an estimated 1,400 CY of concrete and 154,000 pounds of reinforcing steel would be placed for the construction of the new bottom slab. Any fill material discharged within Waters would comply with ADOT's Standard Specifications for suitable materials. The portions of the channel bottom not permanently impacted would be re-contoured to pre-construction grade conditions following the completion of construction. Approximately 0.53 acre of permanent impacts to Waters at Little Lithodendron Wash would occur as a result of the proposed project. Additionally, approximately 1.75 acre of Waters would be disturbed as a result of equipment access, bridge removal, and construction activities at Little Lithodendron Wash.

Big Lithodendron Wash

New Bridge Construction, Bridge Replacement, and Associated Scour Protection:
Big Lithodendron Wash flows south across I-40 at MP 303.12. The existing 15-span, 482-foot and 0-inch-long EB and WB bridge structures at Big Lithodendron Wash would be removed and replaced with two new 15-span, 470-foot and 0-inch-long Closed Frame Continuous Concrete Slab Bridges. Construction would include installation of new mat foundations with concrete cutoff walls at upstream and downstream ends to eliminate scour. The new bridge structures would correct the structural deficiencies to the existing structures, and would provide the crossings with long service life and minimal maintenance costs while meeting AASHTO roadway requirements.

To support the new two new Closed Frame Continuous Concrete Slab Bridges, two new abutments with 2-foot-thick concrete walls would be constructed, which would be placed in front of existing abutments, in order to avoid conflict with existing pile foundations. The 14 piers would be constructed with 1-foot-3-inch-thick concrete walls. The bottom concrete slab would be a 56-foot-10-inch wide mat foundation that would incorporate the pier foundations from the existing structure. A 4-foot-wide concrete cut-off wall would be constructed at the upstream edge of the bottom slab, and a 6-foot-wide concrete cut-off wall would be constructed at the downstream edge. The piers and abutments would be set parallel to the channel at a zero degree skew to the centerline of construction on I-40.

Bank Protection:
Riprap and steel sheet piling currently located in front of existing abutments would be removed to an approximate depth of 5 feet, in order to allow for the construction of new abutments. During construction, gabion mattresses may be utilized for temporary shoring. Once the new abutments are constructed, grouted riprap would be installed in front, which would be tied into the existing riprap system. Both banks and abutments lie outside of the OHWM of Big Lithodendron Wash; therefore, bank protection activities would not result in impacts within Waters.

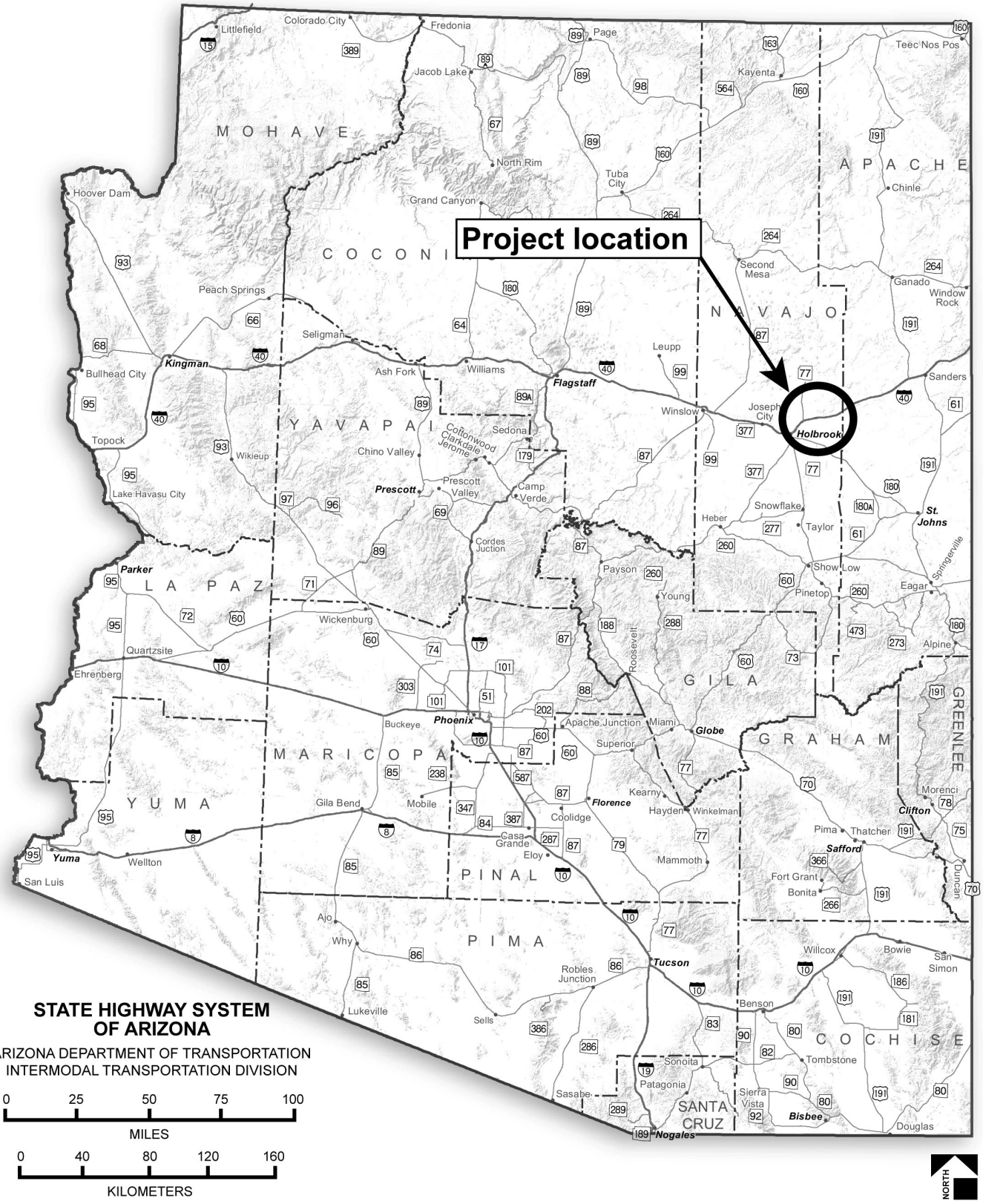
The proposed construction of the new Big Lithodendron Wash bridges and associated structures would require dredge and fill within Big Lithodendron Wash. In order to accommodate for each of the new structures, approximately 3,150 cubic yards (CY) of native material would be excavated out of the drainage, which would be transported outside of Waters and disposed off-site, or utilized to re-contour pre-construction grades. An estimated 1,300 CY of structural excavation and 125 CY of structure backfill would be associated with each of the new abutments. For each structure, approximately 255 CY of concrete and 57,375 pounds of reinforcing steel would be placed for pier construction, and an estimated 2,075 CY of concrete and 228,250 pounds of reinforcing steel would be placed for the construction of the new bottom slab. Any fill material discharged within Waters would comply with ADOT's Standard Specifications for suitable materials. The portions of the channel bottom not permanently impacted would

be re-contoured to pre-construction grade conditions following the completion of construction. Approximately 0.69 acre of permanent impacts to Waters at Big Lithodendron Wash would occur as a result of the proposed project. Additionally, approximately 1.41 acre of Waters would be disturbed as a result of equipment access, bridge removal, and construction activities at Big Lithodendron Wash.

On-site, in-kind mitigation is not feasible; therefore, ADOT would provide in-lieu fees for the acquisition, restoration, enhancement or preservation of high-quality habitat in Arizona. The Corps would include the payment of in-lieu fees as a special condition of the permit.

Proposed Special Conditions

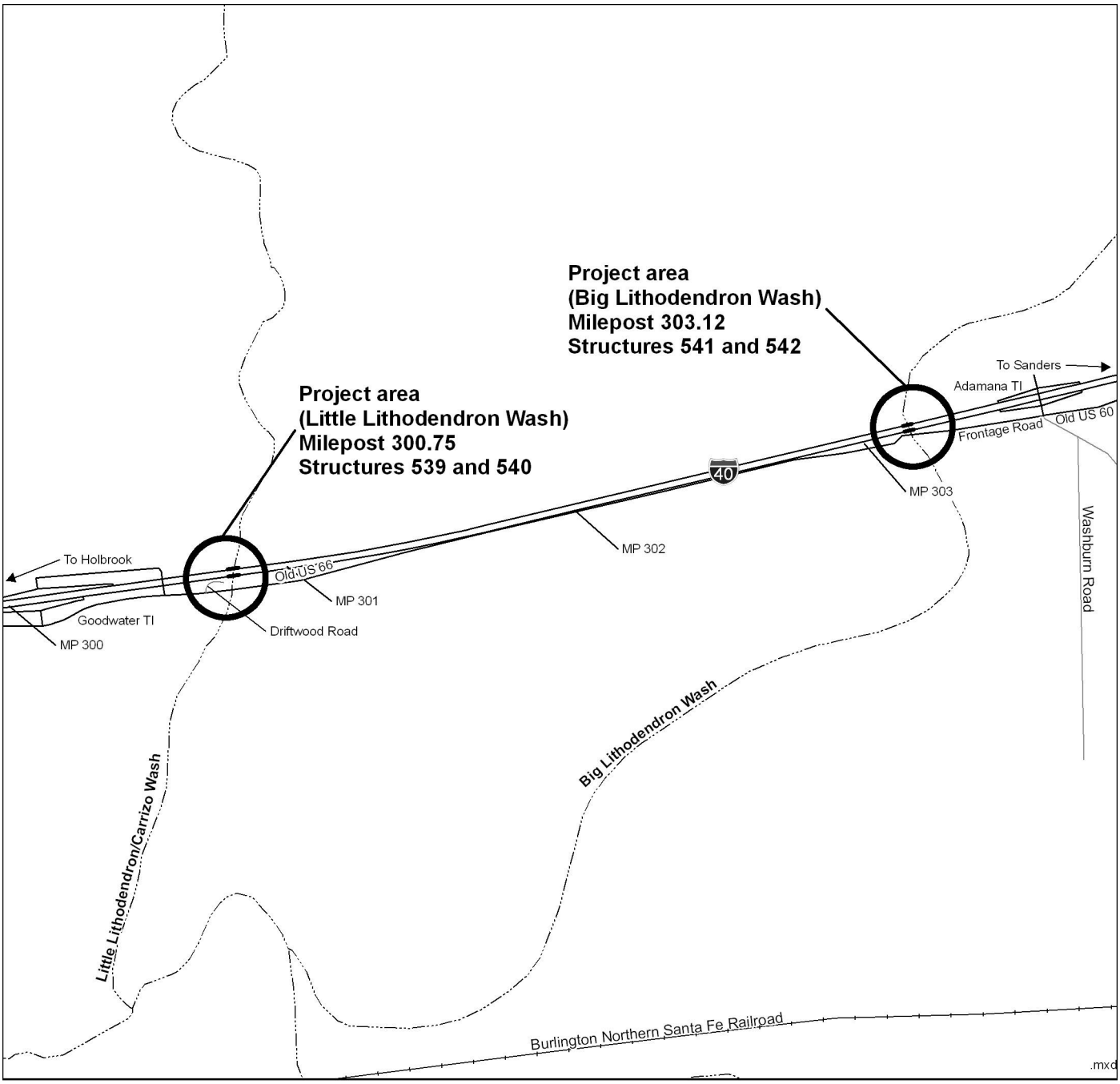
To be developed



State Location Map

Section 404 Individual Permit
Little and Big Lithodendron Wash Bridges
040 NA 300 H7008 01E

January 2011



Key

Project area

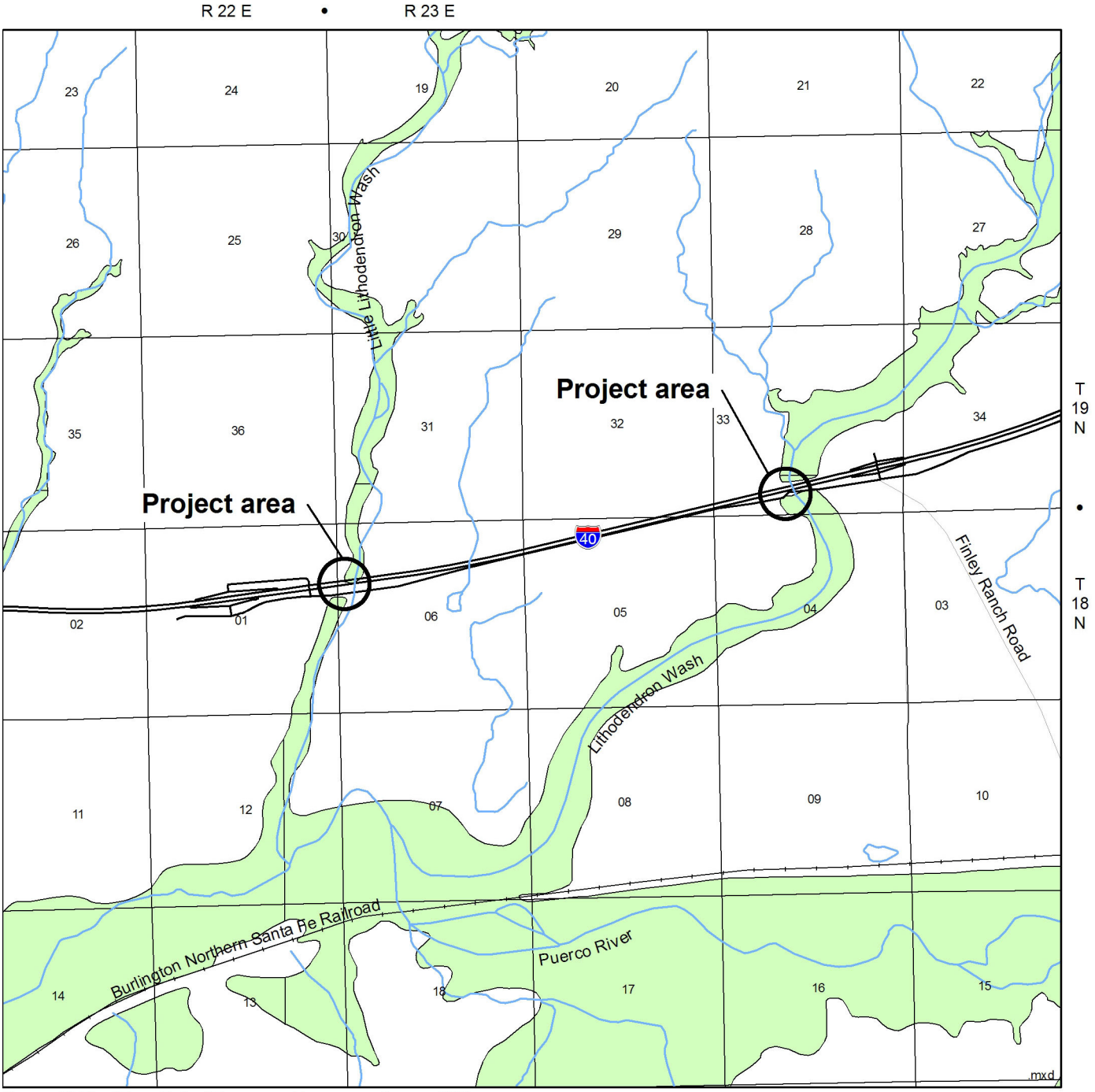
Bridge structure

Mile

0 1

NORTH

Project Vicinity Map



Source: Q3 Flood Data, Federal Emergency Management Agency, 1997

Key

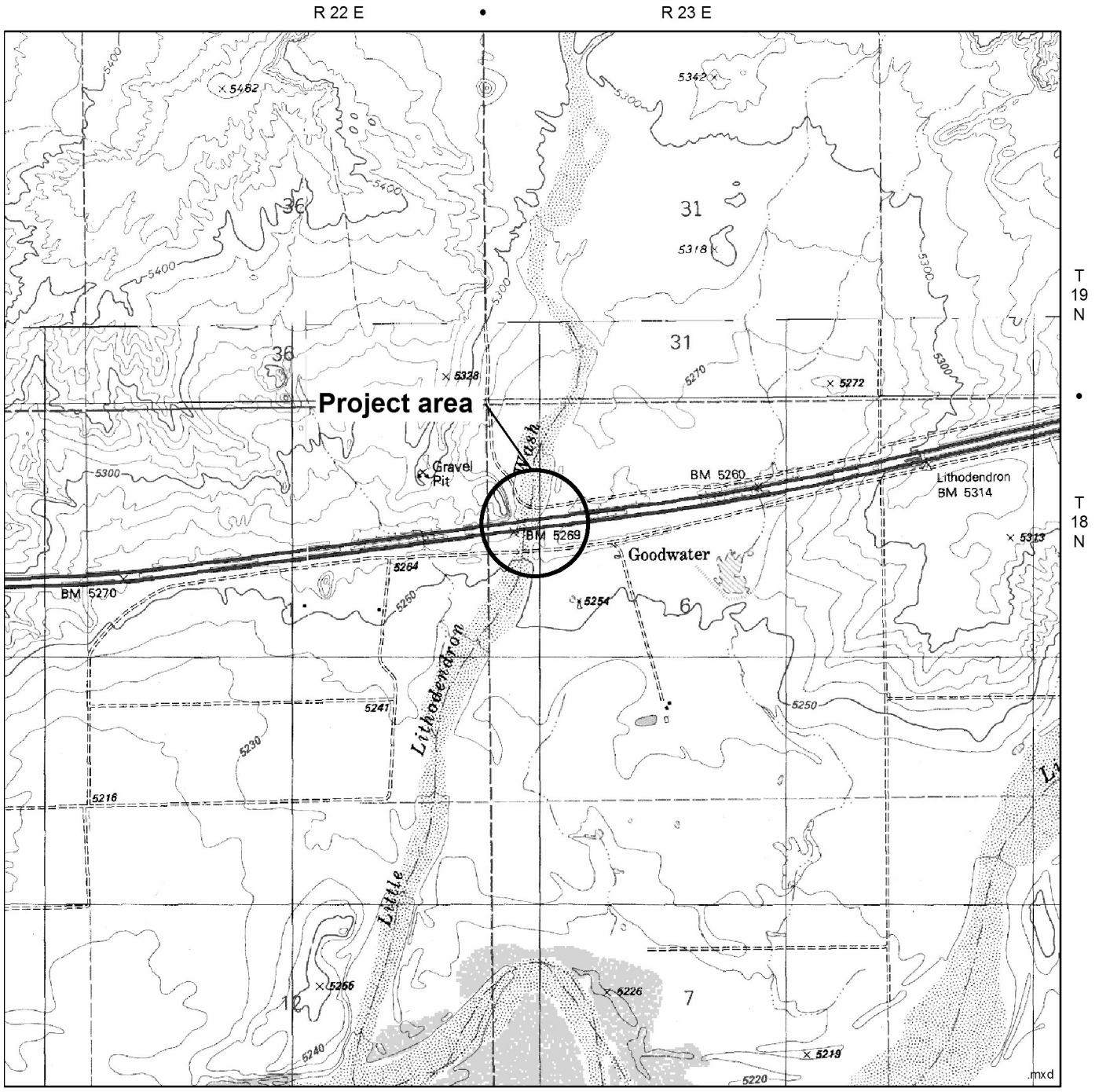
- Project area
- 100-Year floodplain
- >500-Year floodplain

Mile

0 0.5 1

NORTH

Floodplain Illustration



Sources: USGS 7.5' Quadrangles Carrizo Butte, Ariz. (1982) and Little Lithodendron, Ariz. (1972)

Key

Project area

Miles

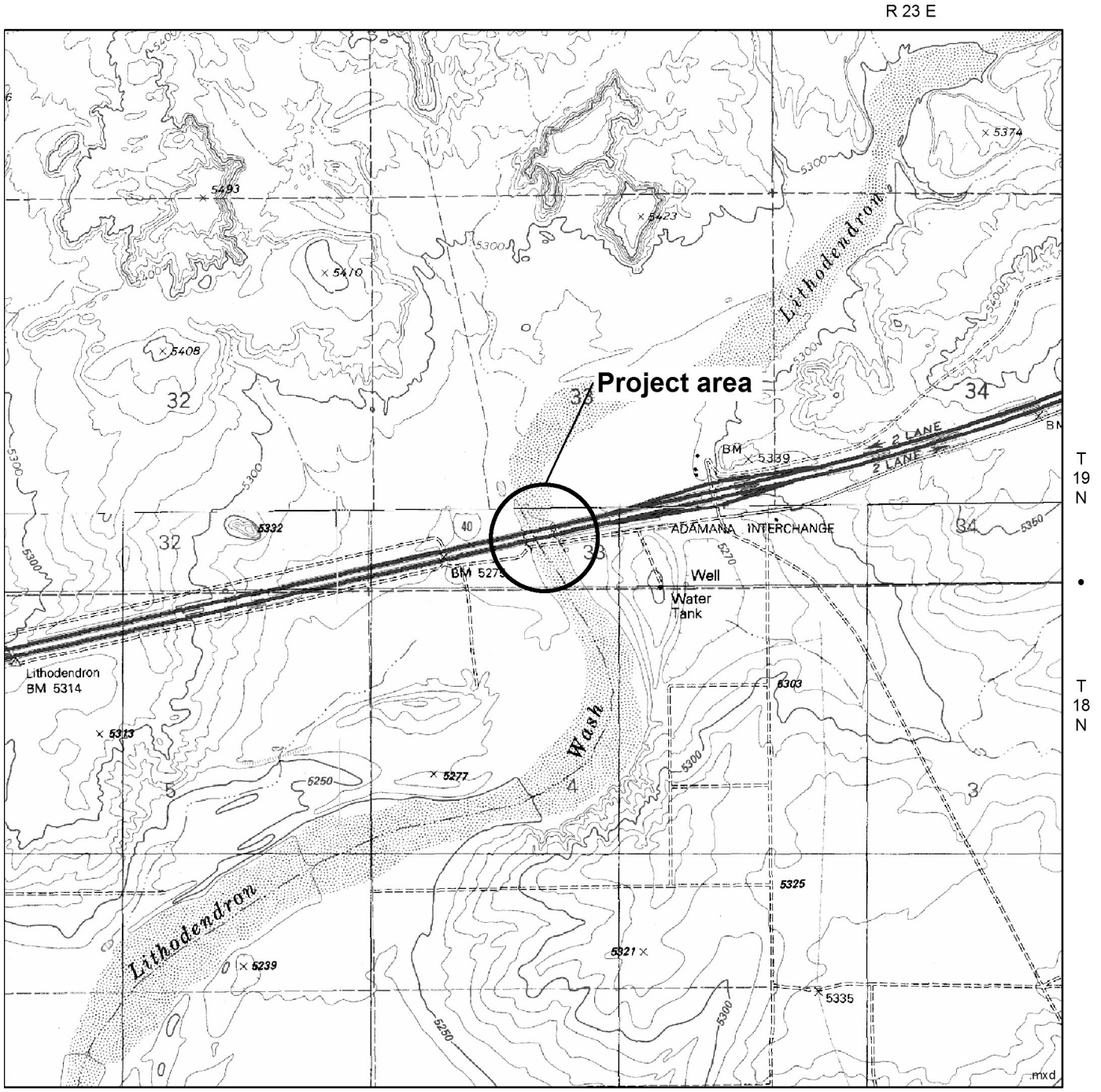
0 0.25 0.5

NORTH

Topographic Illustration

Section 404 Individual Permit
Little and Big Lithodendron Wash Bridges
040 NA 300 H7008 01E

January 2011



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Key

Project area

Miles

0 0.25 0.5

NORTH

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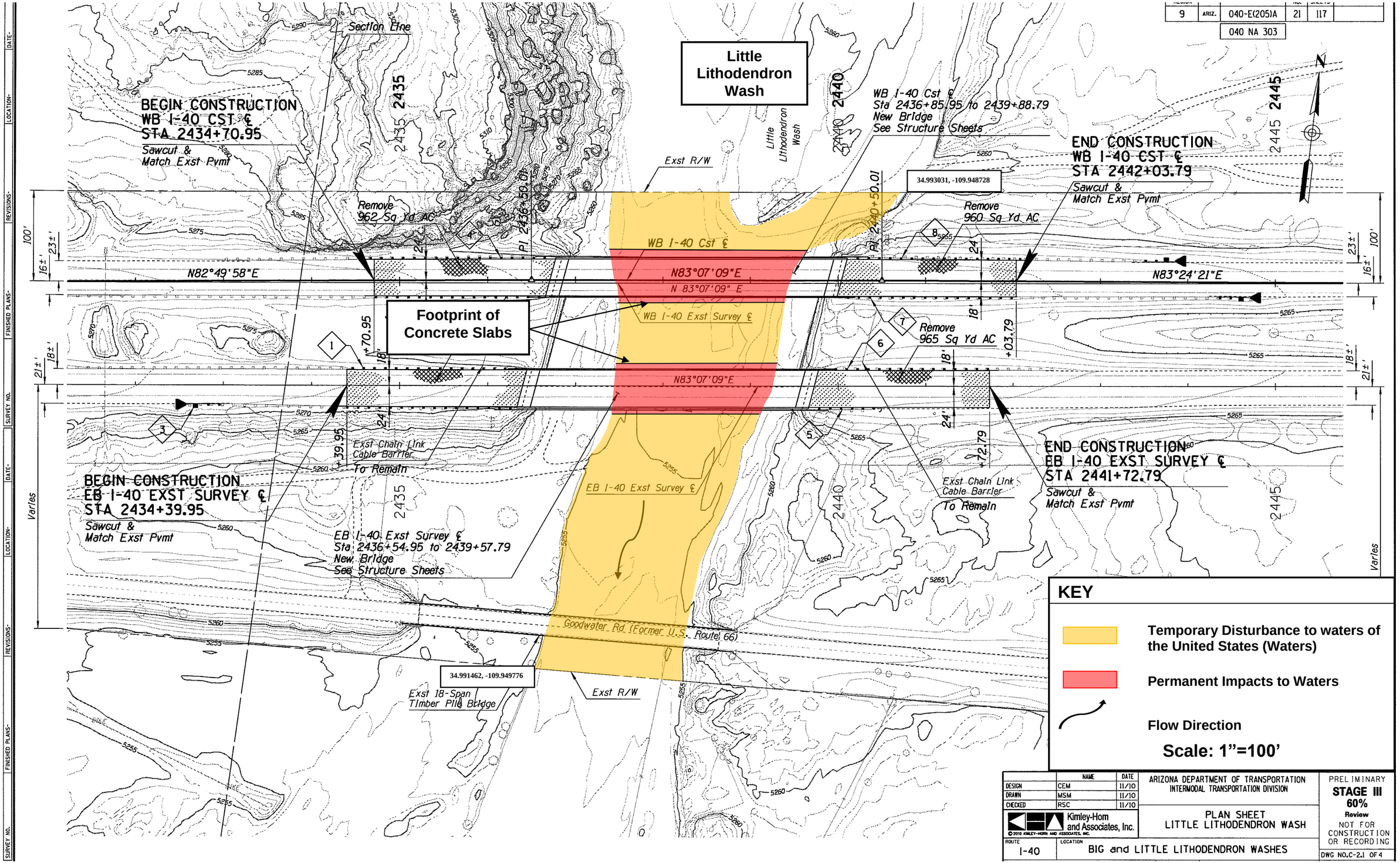

Little Lithodendron Wash Plan View Impact

Section 404 Individual Permit Application
Little and Big Lithodendron Wash Bridges
040 NA 300 H7008 01E

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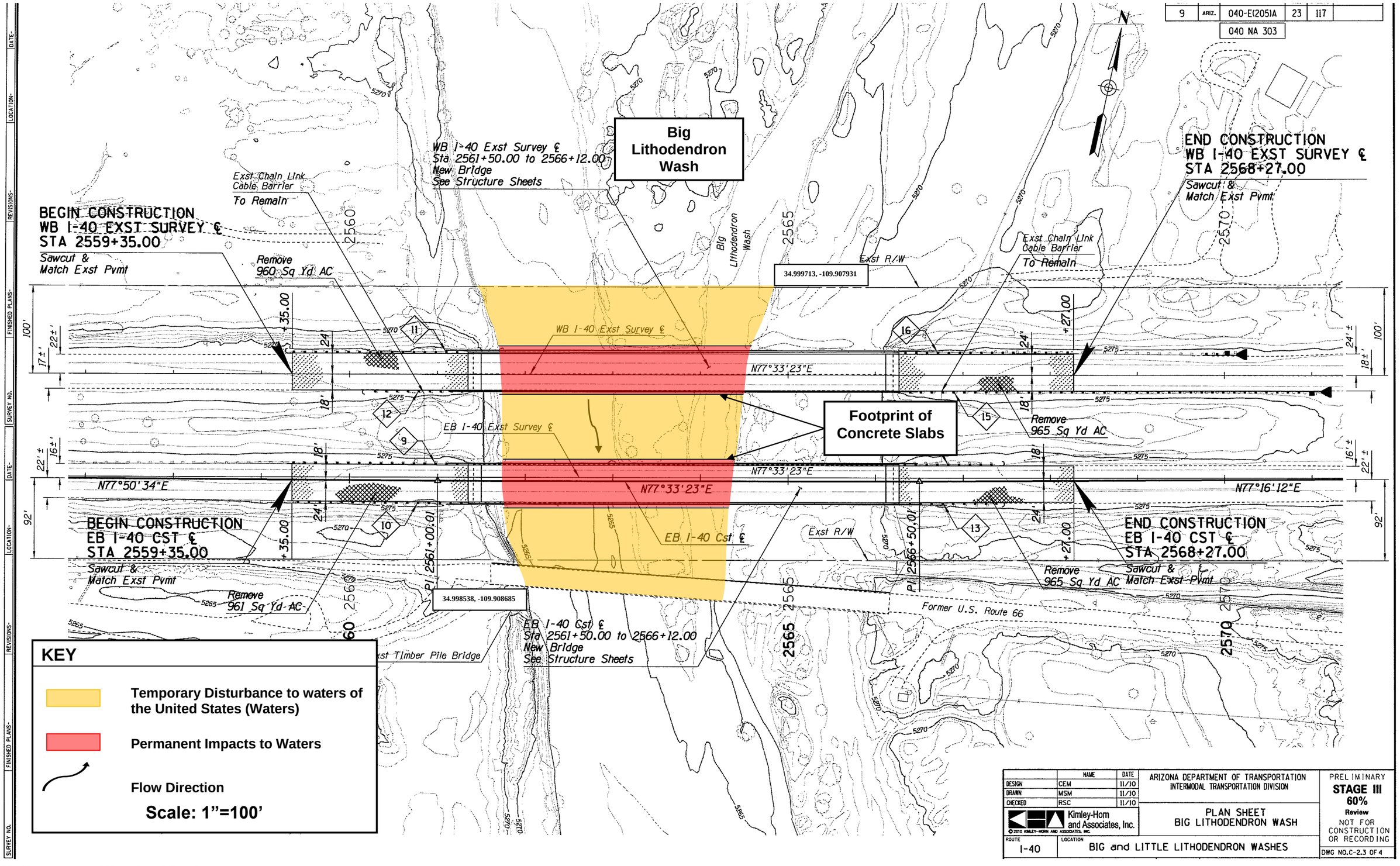

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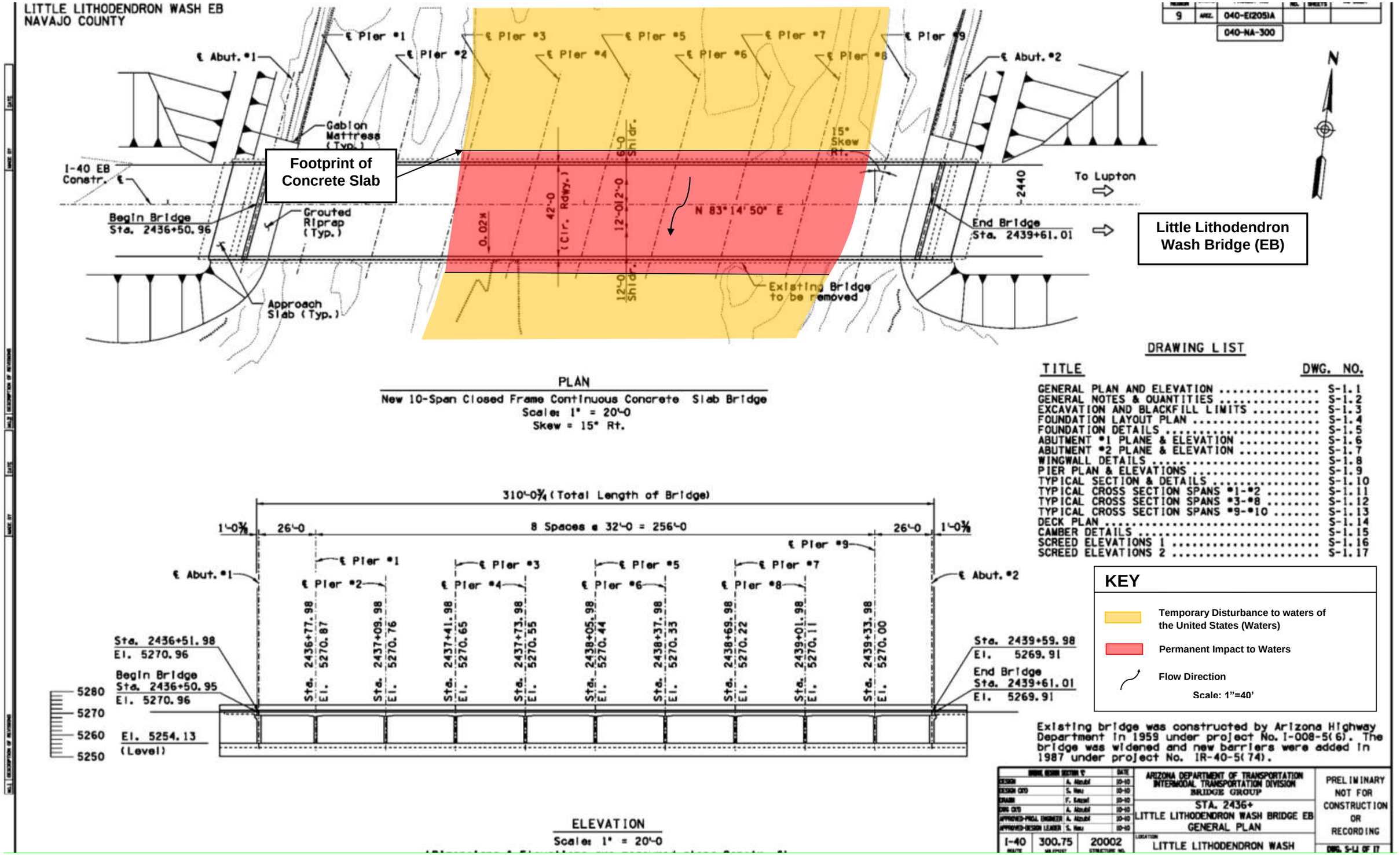

Little Lithodendron Wash Detail View Impact

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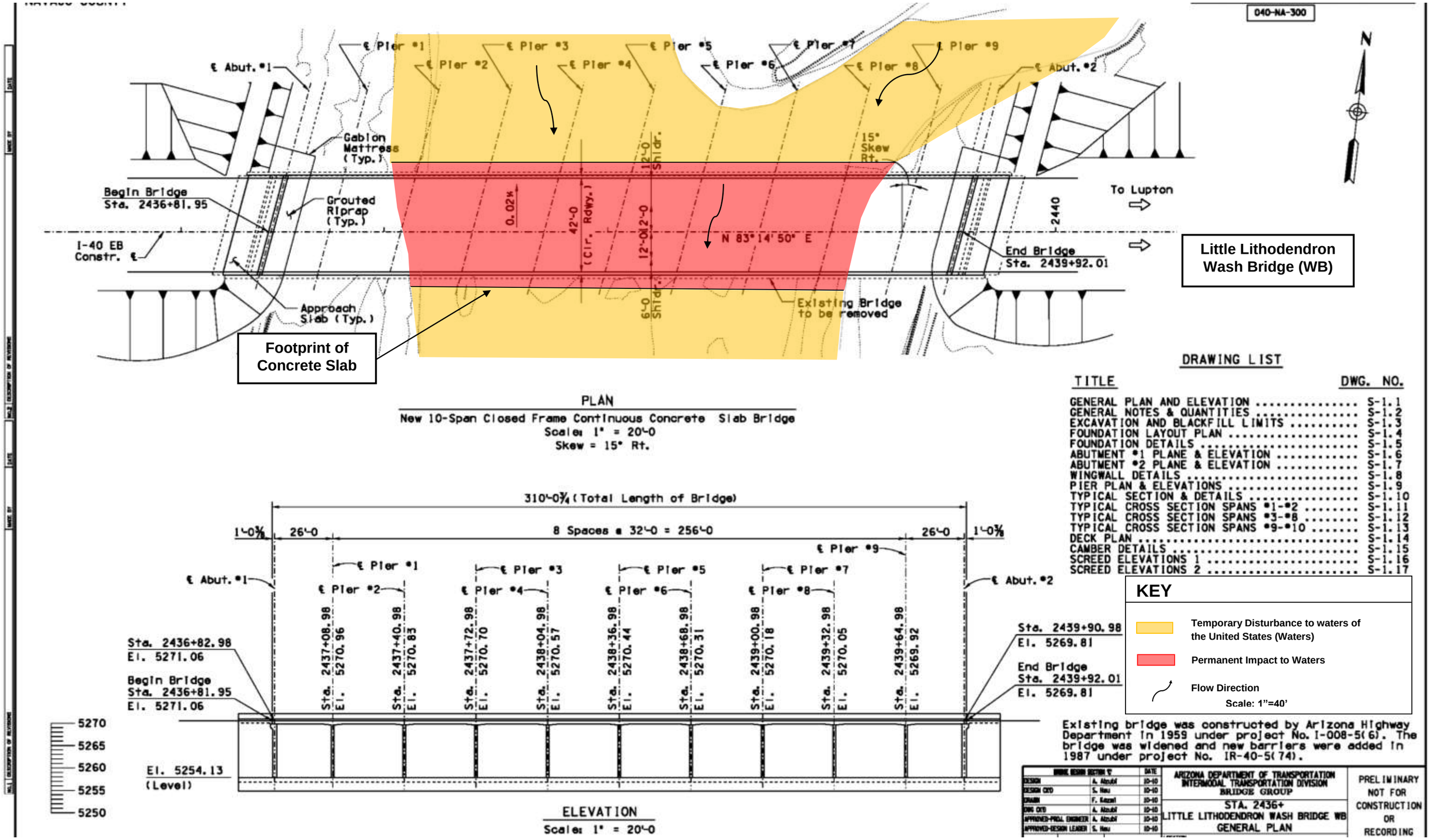
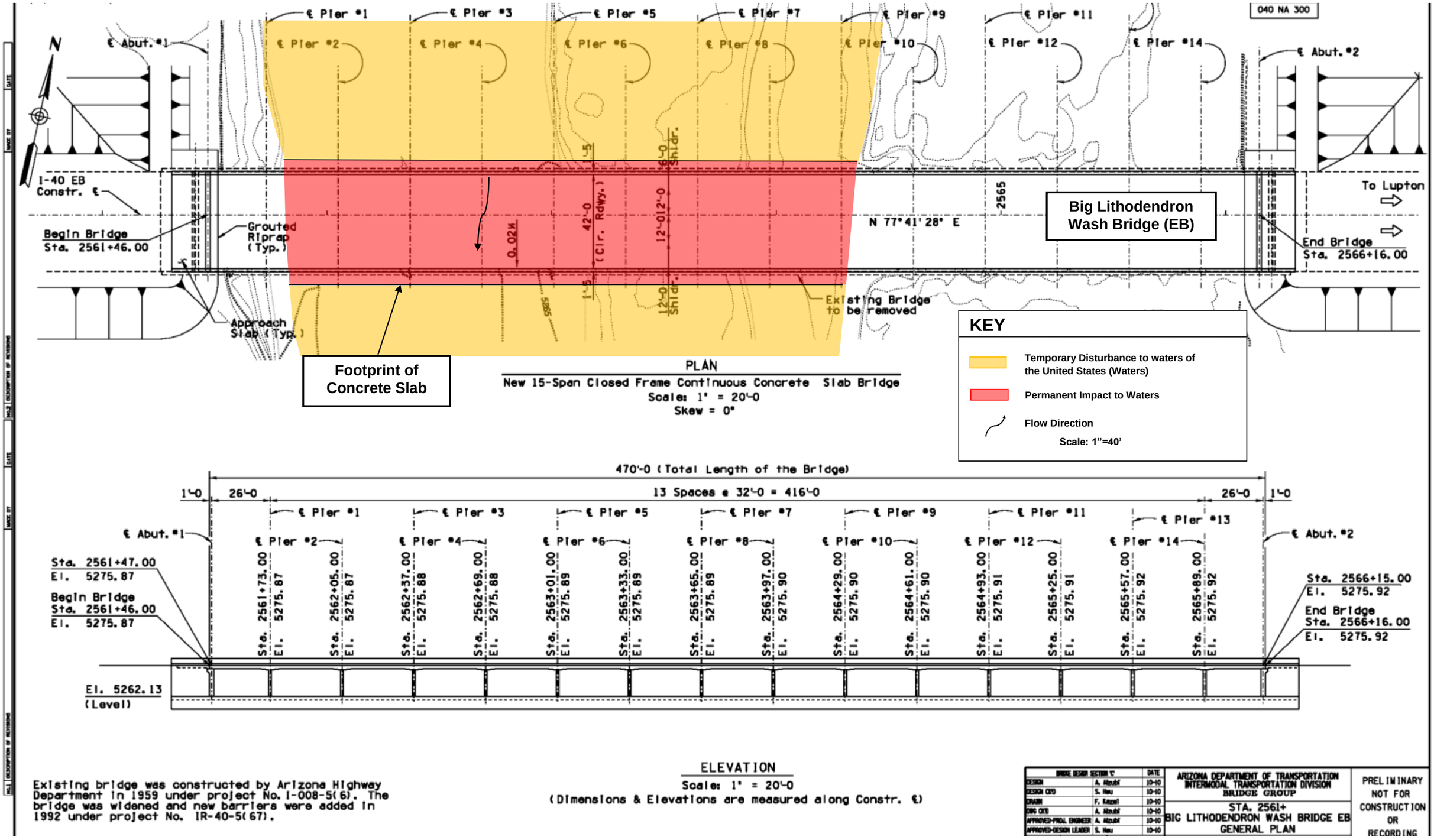
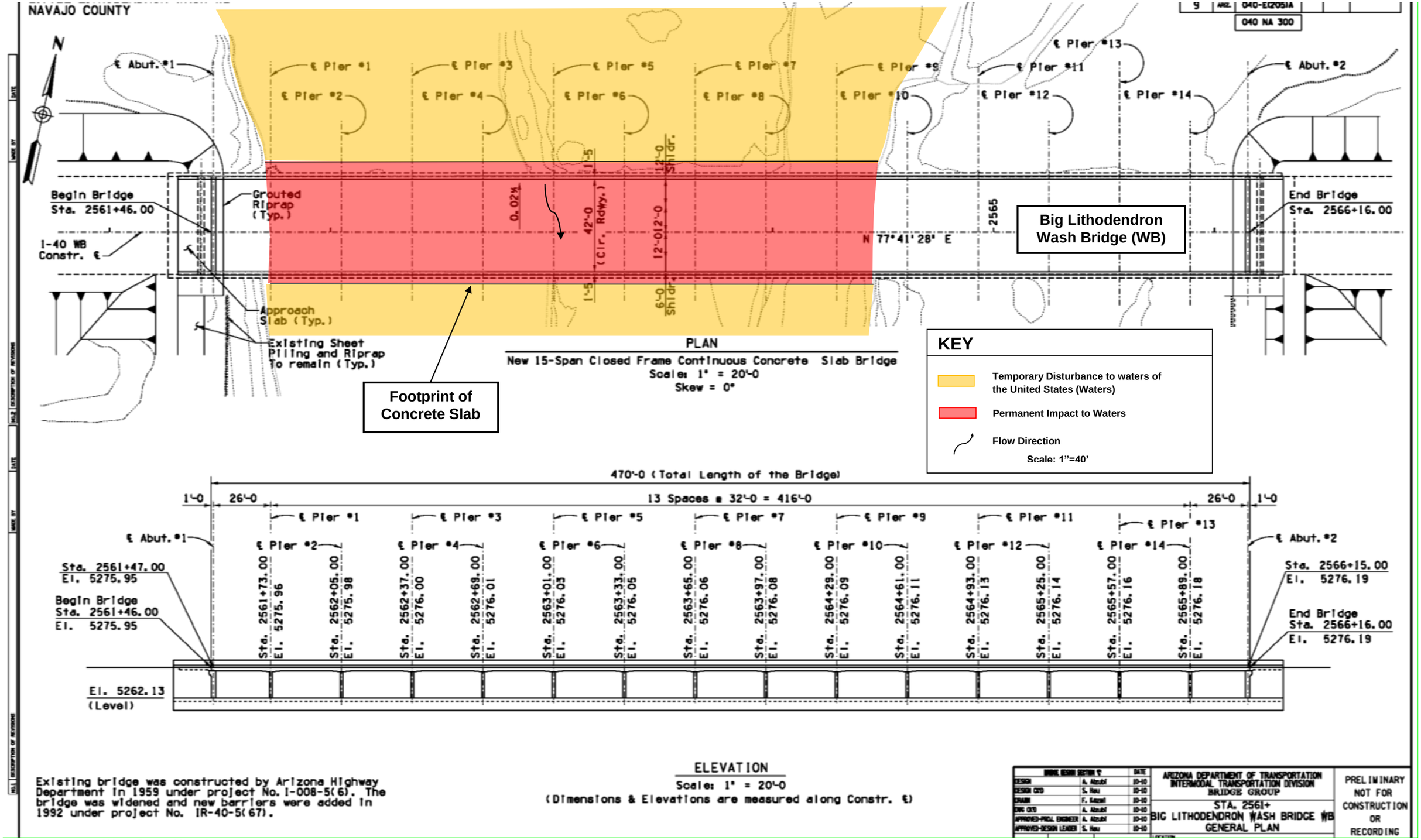


Little Lithodendron Wash Detail View Impacts



Big Lithodendron Wash Detail View Impacts



Big Lithodendron Wash Detail View Impacts