



PUBLIC NOTICE

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

BUILDING STRONG®

APPLICATION FOR PERMIT US 93 Antelope Wash

Public Notice/Application No.: SPL-2010-00697-KAT

Project: US 93, Antelope Wash (Tracs No. 093 MO 101 H7388 01C)

Comment Period: February 27, 2013 to March 29, 2013

Project Manager: Kathleen Tucker; 602-230-6956; Kathleen.A.Tucker@usace.army.mil

Applicant

Mike Kondelis
Kingman District
Arizona Department of Transportation
3660 East Andy Devine Road (MD K600)
Kingman, Arizona 86401-3453

Contact

Ralph Ellis
Arizona Department of Transportation
Environmental Planning Group
1611 W. Jackson MD EM02
Phoenix, Arizona 85007

Location

The project area is situated within the Big Sandy watershed (HUC 15030201) of the Lower Colorado River Basin. The general project area is centered at 35.004841° North, 113.664217° West (UTM 256869.90 mE / 3,876,824.01, Zone 12S) and within portions of Sections 16, 21, 28, and 33 in Township 19 N, Range 13 W in the Gila and Salt River Baseline and Meridian (Refer to USGS 7.5' Quadrangles: *Bottleneck Wash, Ariz.* [1978, 1980] and *Pilgrim Wash, Ariz.* [1969]).

Activity

This activity would involve the discharge of dredged and/or fill material into 3.30 acres of unnamed washes, Moss Wash and Antelope Wash for the widening of US 93 between MP 101.3 and MP 104.1 from a two-lane roadway to a four-lane divided highway. (see attached drawings). For more information see page 3 of this notice.

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). We invite you to review today's public notice and provide views on the proposed work. By providing substantive, site-specific comments to the Corps Regulatory Division, you provide information that support the Corps' decision-making process. All comments received during the comment period become part of the record and will be considered in the decision. This permit will be issued, issued with special conditions, or denied under . Comments should be mailed to:

US Army Corps of Engineers
Los Angeles District, Phoenix Office
3636 N. Central Ave., Suite 900
Phoenix, AZ 85012

Alternatively, comments can be sent electronically to: Kathleen.A.Tucker@usace.army.mil

The mission of the U.S. Army Corps of Engineers Regulatory Program is to protect the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands. The Regulatory Program in the Los Angeles District is executed to protect aquatic resources by developing and implementing short- and long-term initiatives to improve regulatory products, processes, program transparency, and customer feedback considering current staffing levels and historical funding trends.

Corps permits are necessary for any work, including construction and dredging, in the Nation's navigable water and their tributary waters. The Corps balances the reasonably foreseeable benefits and detriments of proposed projects, and makes permit decisions that recognize the essential values of the Nation's aquatic ecosystems to the general public, as well as the property rights of private citizens who want to use their land. The Corps strives to make its permit decisions in a timely manner that minimizes impacts to the regulated public.

During the permit process, the Corps considers the views of other Federal, state and local agencies, interest groups, and the general public. The results of this careful public interest review are fair and equitable decisions that allow reasonable use of private property, infrastructure development, and growth of the economy, while offsetting the authorized impacts to the waters of the United States. The permit review process serves to first avoid and then minimize adverse effects of projects on aquatic resources to the maximum practicable extent. Any remaining unavoidable adverse impacts to the aquatic environment are offset by compensatory mitigation requirements, which may include restoration, enhancement, establishment, and/or preservation of aquatic ecosystem system functions and services.

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 would discharge dredged or fill material, the evaluation of the activity will include application of the EPA Guidelines (40 CFR Part 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- Preliminary determinations indicate that the proposed project will not have any effect on any sites listed, or eligible for listing, in the National Register of Historic Places, or otherwise of national, state, or local significance. There is a Programmatic Agreement (PA) for the treatment of historical sites within this project area that was executed in November 2000 by several parties, including among others, Federal Highway Administration, Arizona Department of Transportation, U.S. Bureau of Land Management, U.S. Army Corps of Engineers and State Historic Preservation Office. All the mitigation and stipulations of the PA have been met for this project.

Endangered Species- Preliminary determinations indicate that the proposed activity would not affect federally-listed endangered or threatened species, or their critical habitat. Therefore, formal consultation under Section 7 of the Endangered Species Act does not appear to be required at this time.

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 (i.e., requires access or proximity to or siting within the special aquatic site to fulfill its basic purpose). Because no fills are proposed within special aquatic sites, identification of the basic project purpose is not necessary but the Corps has preliminarily determined that the basic project purpose is transportation. The project is 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 improve the US 93 roadway safety and traffic flow and reduce congestion.

Additional Project Information

Baseline information- The United States Highway 93 (US 93) corridor is classified as a principal rural arterial highway in the National Highway System. It serves as a major commercial corridor between Phoenix, northwestern Arizona, and Las Vegas. Additionally, the highway has been designated as a North American Free Trade Agreement (NAFTA) corridor between Canada and Mexico. This highway also provides access to recreation sites, such as Lake Mead, Lake Mohave, and portions of the Colorado River. When the existing two-lane roadway was constructed in the 1940s and 1950s, much of the asphalt surfacing was laid directly on existing soils without any base material, which has caused the need for constant maintenance. According to the July 2001 US 93: Wikieup to Interstate 40 Kingman-Wickenburg Highway Final Location/ Design Concept Report (DCR), the roadway currently carries higher traffic volumes and speeds than for which it was originally designed. This has caused the Level of Service (LOS) of the traffic corridor to decline and the LOS is currently well below the desired LOS for the route. Within portions of the project area the existing roadway design contains rolling vertical alignments which cause limited sight distances, limited opportunities for passing, and narrow shoulder widths. The limited sight distances, limited opportunities for passing, and narrow shoulder widths have contributed to high rates of traffic accidents within sections of the project area. Currently, the traffic capacity of the two-lane roadway is limited due to a high proportion of recreational vehicles and commercial trucks along the route. Traffic data collected as part of the DCR noted that in 2000, the average daily traffic for the roadway was 6,100 vehicles. An extrapolation of collected data yields a projected average daily traffic expectation for the year 2020 of 9,000 vehicles each day. Given the limitations of the existing roadway under current conditions, projected increases in traffic volume would be expected to drastically reduce the ability of the roadway to effectively conduct traffic in the future.

Lands adjacent to the project area are privately owned. The proposed project would be constructed in Arizona Department of Transportation (ADOT) right-of-way and easements through privately owned lands that have been procured for the project.

Project description- In order to address the current deficiencies of the US 93 corridor, ADOT is proposing to upgrade approximately 3.35 miles along US 93 from MP 100.85 and MP 104.2 from a two-lane roadway to a four-lane divided highway for the purpose of meeting anticipated traffic volumes and improving operational characteristics of the regional highway according to current ADOT roadway design standards. A new two-lane SB alignment would be constructed, and the existing two-lane US 93 alignment would be dedicated for northbound (NB) travel. The project would include drainage improvements at 20 jurisdictional washes. The proposed project would bring this segment of US 93 into compliance with current ADOT roadway standards by improving drainage structure stability and function, and would accommodate projected traffic needs. The project would allow the washes within the project area to continue to serve as wildlife corridors for a variety of species and the drainage structures would continue to serve as wildlife crossings to allow local wildlife movement safely between the east and west boundaries of the US 93 corridor, thereby reducing existing and potential conflicts with traffic.

The proposed project would require dredge and fill within designated "waters of the United States" (Waters), but no wetlands would be impacted. Total permanent impacts would exceed 0.50 acre within the jurisdictional limits of Wash 1, Moss Wash (Wash 8), and Antelope Wash (Wash 20); therefore, the proposed project would require a Section 404 Individual Permit.

In order to allow drainage of the jurisdictional washes within the project area across the two additional US 93 traffic lanes proposed under this project, the passages for 20 washes need to be modified. Within Waters, bridge structures would be constructed over two washes; a diversion channel would be constructed to redirect flows from three washes, concrete box culverts (CBCs) would be installed within five jurisdictional washes, corrugated metal pipes (CMPs) would be installed within six jurisdictional washes, and CMPs would be extended within two jurisdictional washes. Since US 93 is categorized as a Drainage Frequency Class 1 roadway, all drainage components are sized at a minimum for the 50-year storm event. Specifically, the proposed project includes the following:

- Construction of a new two-lane, SB roadway, which would impact Waters within 20 ephemeral washes (Washes 1, 2, 5, 7, 8, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 31, and 33);
- Conversion of the existing roadway to two NB lanes, including improvements to the existing shoulder;
- Construction of a diversion channel (Channel A) west of the new SB alignment within Waters to direct the flows from Washes 1, 2, and 7 to Wash 8 (Moss Wash);
- Construction of a diversion channel (Channel B) east of the new SB alignment in uplands to direct overland flows and roadside drainage into the new CMP at Wash 5;
- Removal of existing CBCs and installation of new CBCs with associated inlet/outlet protection measures (e.g., aprons, wingwalls, and riprap) within Waters at Washes 12, 16, 20 (southern crossing of Antelope Wash), 22, and 23;
- Removal of existing CMPs and installation of new CMPs with associated inlet/outlet protection measures within Waters at Washes 5, 11, 13, 14, 19, and 21;
- Extension of CMPs with associated inlet/outlet protection measures within Waters at Wash 31 and 33;
- Removal of the existing CBC and construction of bridge structures within Waters at Wash 8 (Moss Wash). The new SB and NB bridges would be 219.5-foot-long, 2-span precast prestressed concrete American Association of State Highway and Transportation Officials (AASHTO) Type V Girder bridges with associated steel sheet pile and railbank protection measures;
- Removal of the existing CBC and construction of bridge structures within Waters at Wash 20 (northern crossing of Antelope Wash). The new SB and NB bridges would be 299.0-foot-long, 3-span precast prestressed concrete AASHTO Type IV Girder bridges with associated railbank protection measures;
- Installation of a series of check dams and CMPs for drainage within the new median; and
- Striping, installation of new roadway lighting, signing, guardrails, fencing, and other associated roadway improvements.

Proposed Mitigation– The proposed mitigation may change as a result of comments received in response to this public notice, the applicant's response to those comments, and/or the need for the project to comply with the 404(b)(1) Guidelines. In consideration of the above, the proposed mitigation sequence (avoidance/minimization/compensation), as applied to the proposed project is summarized below:

Avoidance: Complete avoidance of impacts to Waters during project construction was determined to not be possible in achieving the project purpose. Impacts to Waters cannot be avoided because engineering restraints require the proposed structures to be constructed with Waters.

Minimization: The project has been designed and would be constructed to minimize adverse effects to Waters to the maximum extent practicable. Permanent impacts have been

minimized by maintaining downstream conveyance through culvert reconstruction or extensions and the redirection of flows through diversion channels into other Waters. Permanent impacts would include only the minimum area required for the redirection of flows to avoid damages to the new SB roadway and associated structures, and the construction or extension of the drainage structures to accommodate the two additional proposed traffic lanes. To avoid additional permanent impacts to Waters, channel bottoms of all washes that would not be permanently impacted would be recontoured to pre-construction grade conditions following the completion of construction, wherever practicable.

Bank protection measures within Waters would be required at the new bridge structures over Moss Wash (Wash 8) and Antelope Wash (Wash 20); however, these measures would be minimized to the greatest extent practicable while adequately protecting the proposed structures and adjacent roadways. Railbank protection and steel sheet pile bank protection was selected for use as the bank protection material for the Moss Wash and Antelope Wash crossings since it would be a stable material and would be able to withstand the high velocities associated with 50-year and 100-year events expected at the Moss Wash and Antelope Wash crossings. Additionally, the riprap used with railbank or steel sheet pile bank protection would allow some vegetation to grow along the banks of the washes. The selected designs for Moss Wash and Antelope Wash would also allow the channel beds to remain composed of native materials. Following completion of construction, the channel bottoms between the north and south alignments of the bridge structures at Moss Wash and Antelope Wash would be graded in order to allow greater flows through the structures, keep flow patterns smooth, prevent obstruction of the flow, and reduce potential for scour. In addition, temporary disturbance within Waters would be minimized by the provision of construction site access from the US 93 NB alignment and/or new SB alignment, eliminating the need for temporary access roads.

Activities associated with site access, drainage structure removal and construction, bridge construction, and other drainage improvements may require the general site clearing of desert scrub vegetation from within Waters and immediately adjacent uplands throughout the project corridor. Vegetation removal would be only the minimum amount necessary to provide an adequate work zone, construction access, and adequate flow capacity through the new bridge structures. Although relatively valuable habitat and/or wildlife values currently exist in some areas within the project area, project activities would occur primarily within riparian scrubland along the banks of largely unvegetated sandy-bottomed channels. In addition, the proposed wash crossings would continue to serve as wildlife crossings after construction is complete. Therefore, impacts to wildlife and/or their habitat during and after construction of the proposed project would be minor. All disturbed upland areas not permanently altered would be reseeded with a native seed mix of plants endemic to the project area. ADOT would provide in-lieu fees to compensate for the loss of Waters associated with this project at Wash 1, Moss Wash, and Antelope Wash, which would offset any adverse affects at those washes.

Compensation: The proposed action will result in a permanent discharge of dredged and/or fill material into Waters. ADOT will provide in-lieu fees to compensate for the loss of Waters associated with this project. The Corps will include the payment of in-lieu fees as a special condition of the permit.

Proposed Special Conditions

The list of proposed Permit Special Conditions is being developed.

For additional information please call Kathleen Tucker of my staff at 602-230-6956 or via e-mail at Kathleen.A.Tucker@usace.army.mil. This public notice is issued by the Chief, Regulatory Division.



Regulatory Program Goals:

- To provide strong protection of the nation's aquatic environment, including wetlands.
- To ensure the Corps provides the regulated public with fair and reasonable decisions.
- To enhance the efficiency of the Corps' administration of its regulatory program.

U.S. ARMY CORPS OF ENGINEERS – LOS ANGELES DISTRICT

US Army Corps of Engineers
Los Angeles District, Phoenix Office
3636 N. Central Ave., Suite 900
Phoenix, AZ 85012
WWW.SPL.USACE.ARMY.MIL

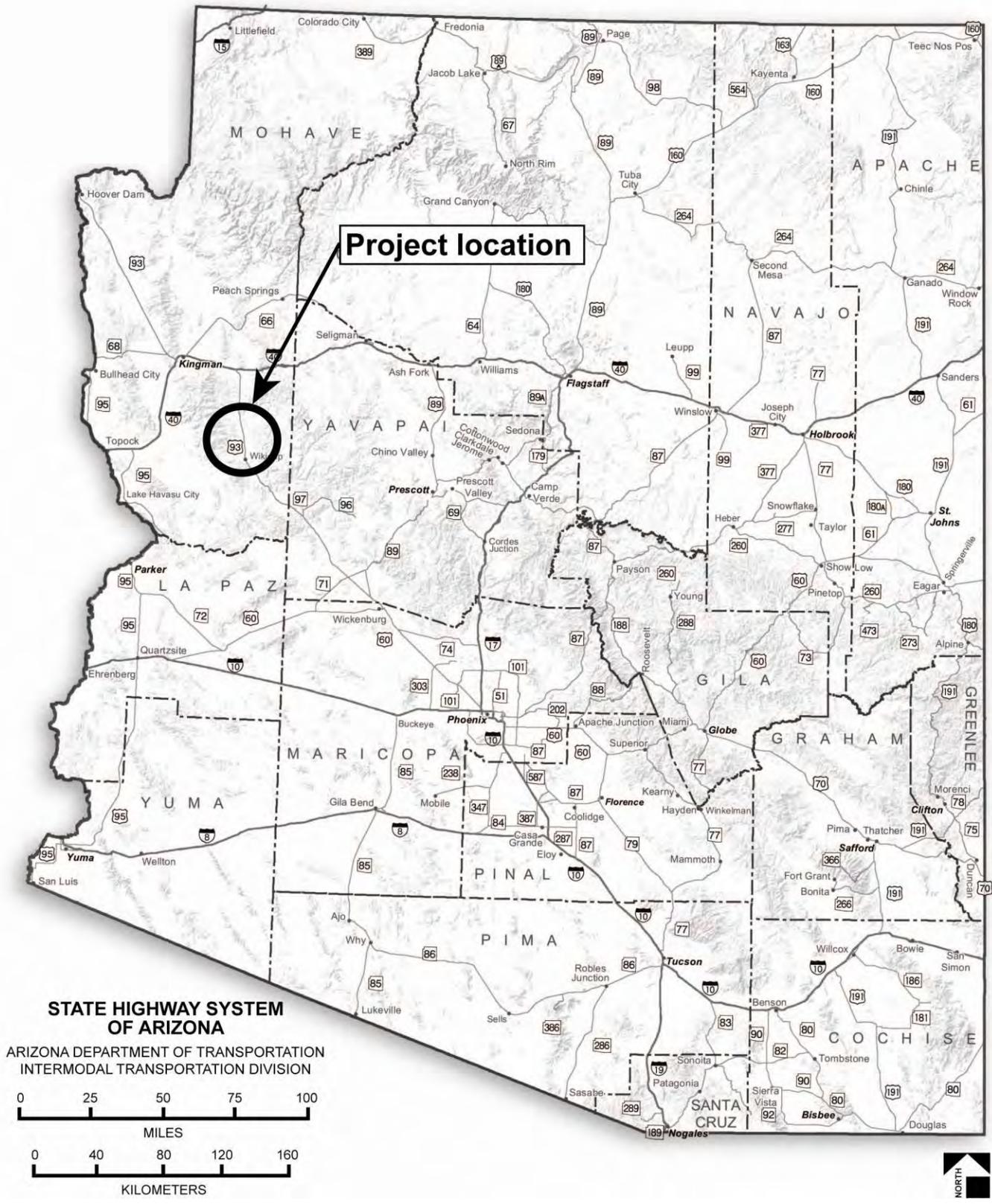
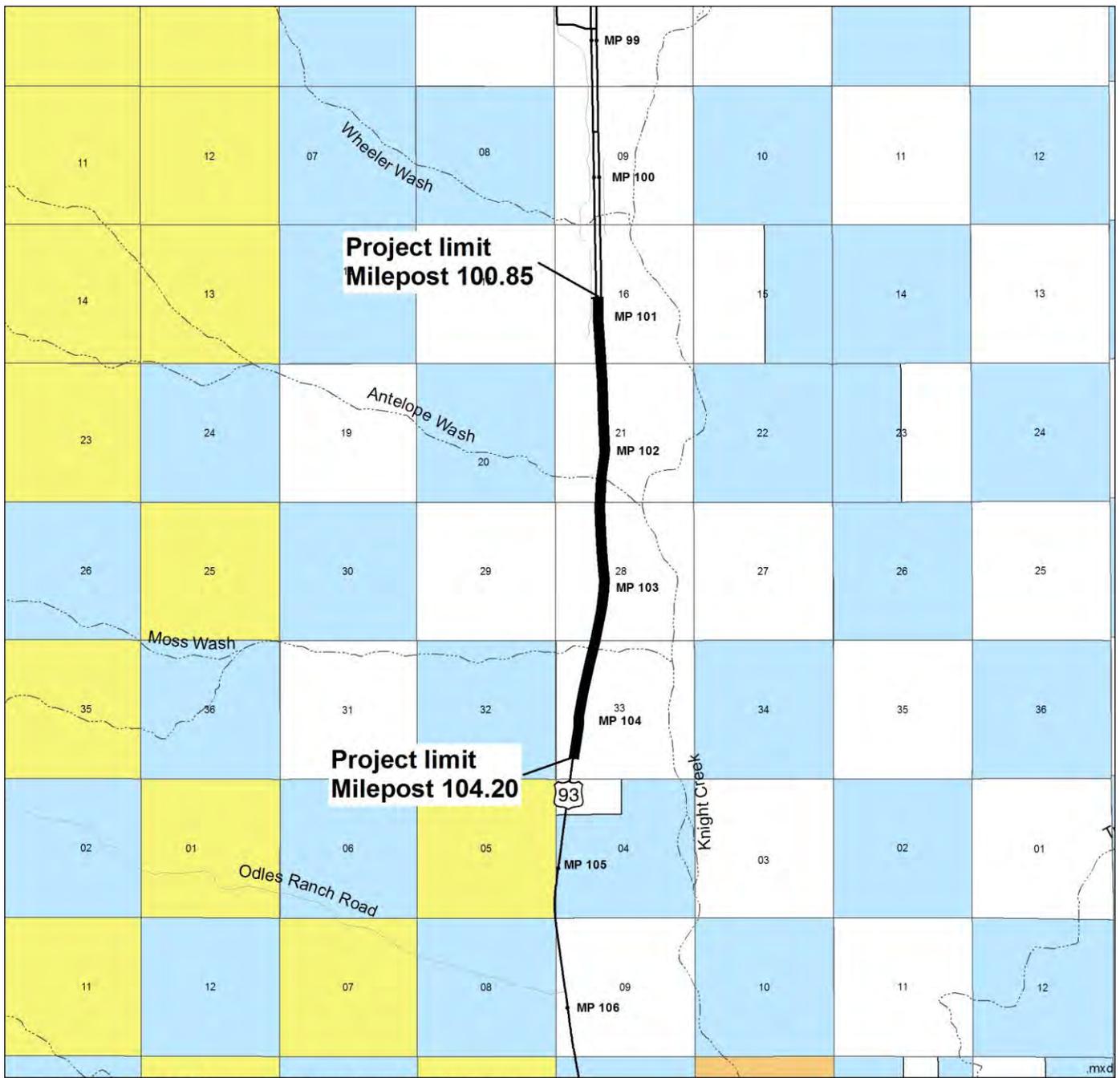


Figure 1. State Location Map



Source: Land Ownership GIS Coverage provided by Arizona State Land Department

Key

- Project area
- Bureau of Land Management
- Private
- Indian Allotment
- State Trust

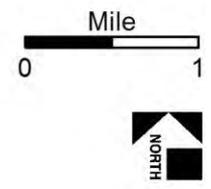


Figure 2. Project Vicinity Map



Source: Q3 flood data, Federal Emergency Management Agency, 1997

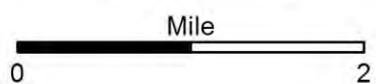
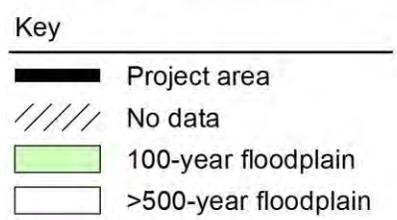
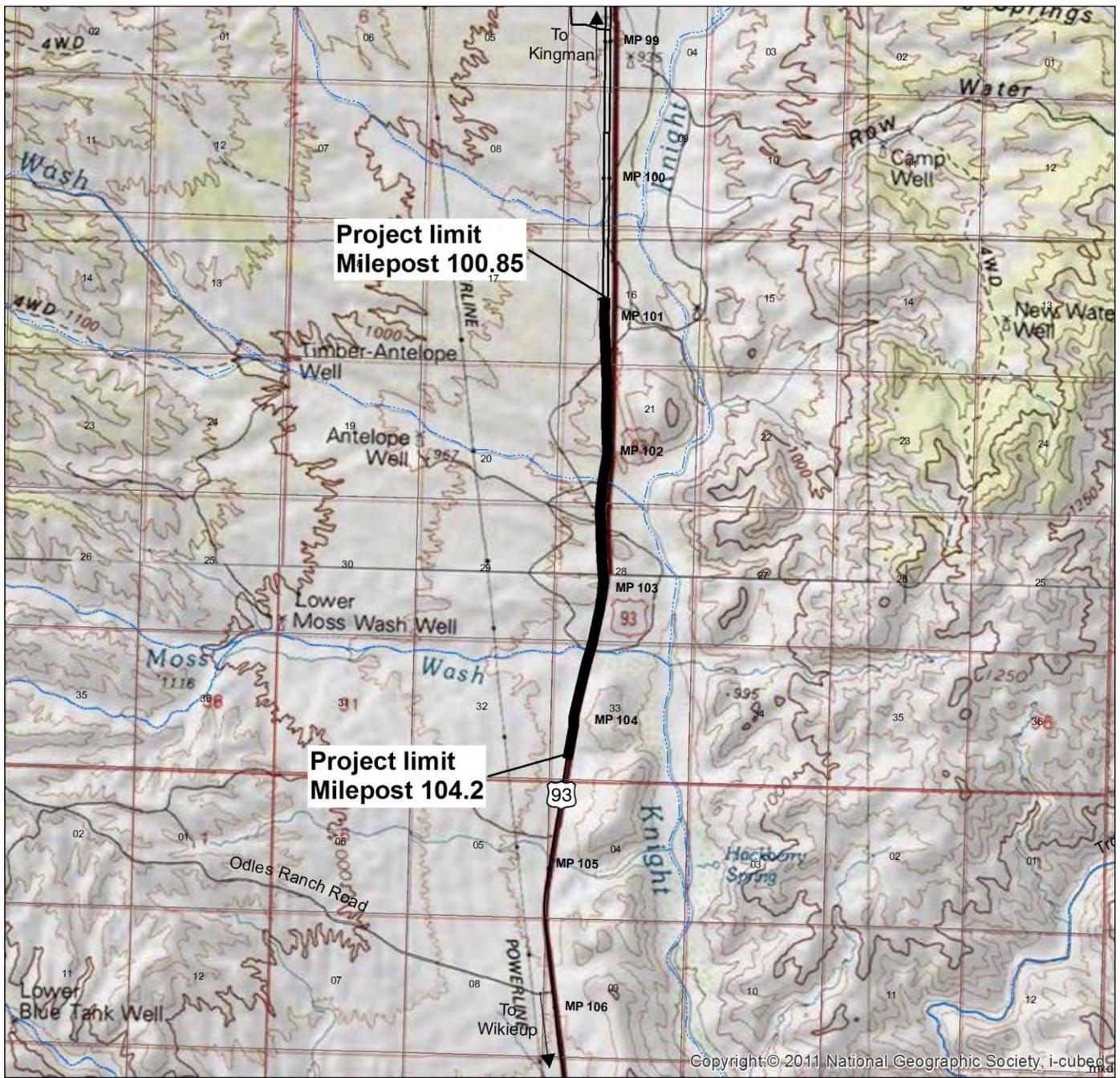


Figure 3. Floodplain Illustration



Key

 Project area

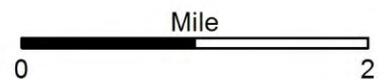
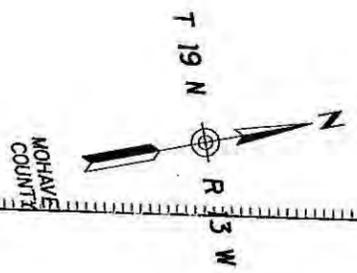


Figure 4. Topographic Illustration

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	093-B(204)N	79		

093 MO 101

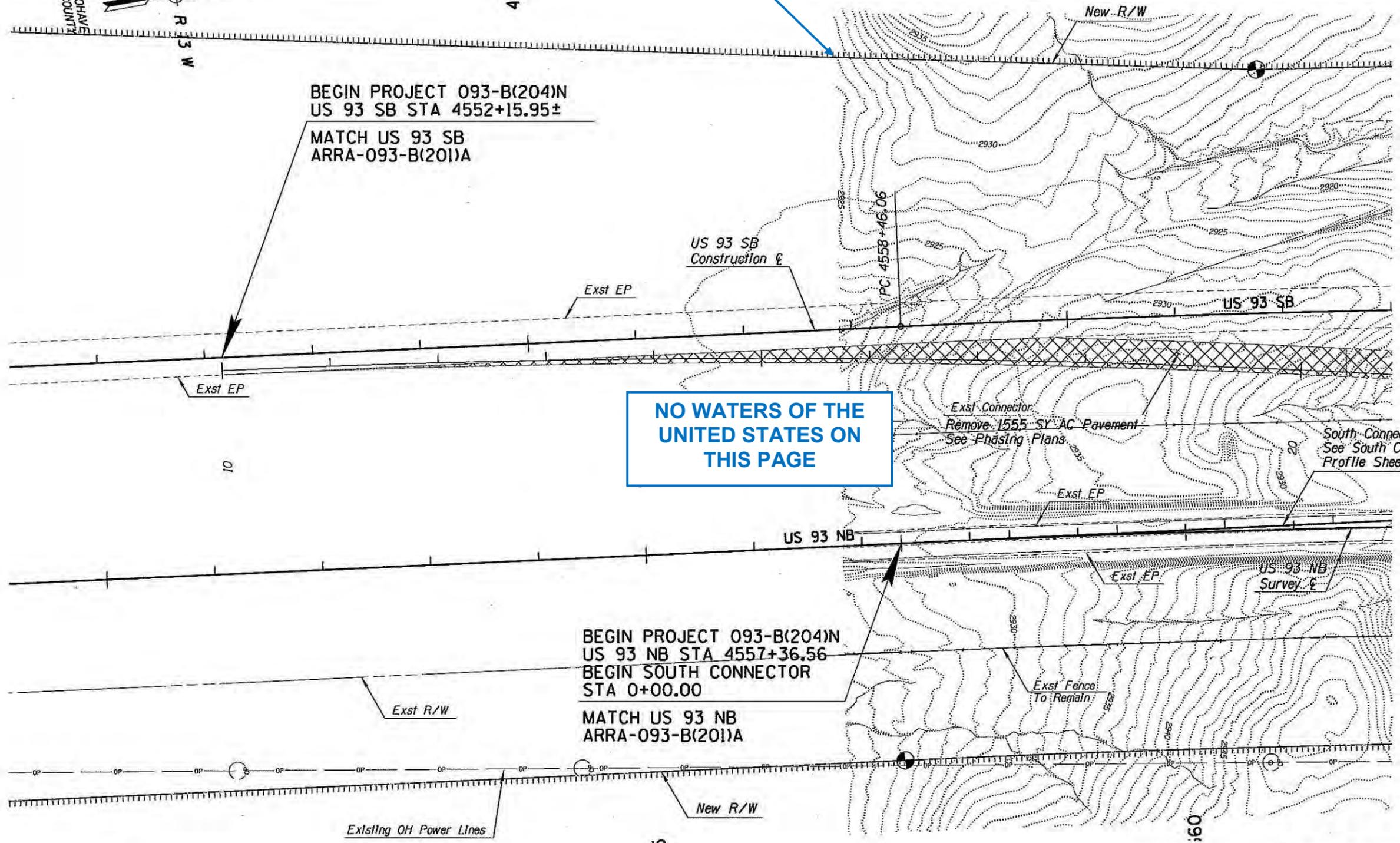


34.983051, -113.669109

BEGIN PROJECT 093-B(204)N
US 93 SB STA 4552+15.95±
MATCH US 93 SB
ARRA-093-B(201)A

NO WATERS OF THE
UNITED STATES ON
THIS PAGE

BEGIN PROJECT 093-B(204)N
US 93 NB STA 4557+36.56
BEGIN SOUTH CONNECTOR
STA 0+00.00
MATCH US 93 NB
ARRA-093-B(201)A



DESIGN	JH, AR	07-12	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION ROADWAY DESIGN SECTION	PRELIMINARY STAGE IV Review Not for Construction or Recording
DRAWN	JH, AR	07-12		
CHECKED	HE	07-12		
TEAM LEADER	HE	07-12		
ROUTE US 93 LOCATION WIKIEUP TO INTERSTATE 40			PLAN SHEET Sta 4552+15.95± to 4562+00	SHEET 1 OF 26
TRACS NO.	H7388 01 C	093-B(204)N		OF

DATE: FINISHED PLANS: REVISIONS: SURVEY NO. DATE: FINISHED PLANS: REVISIONS: SURVEY NO.

SPECIAL H. TBL

US 93 SB STA 4569+00
BEGIN NEW CONSTRUCTION
Match Existing

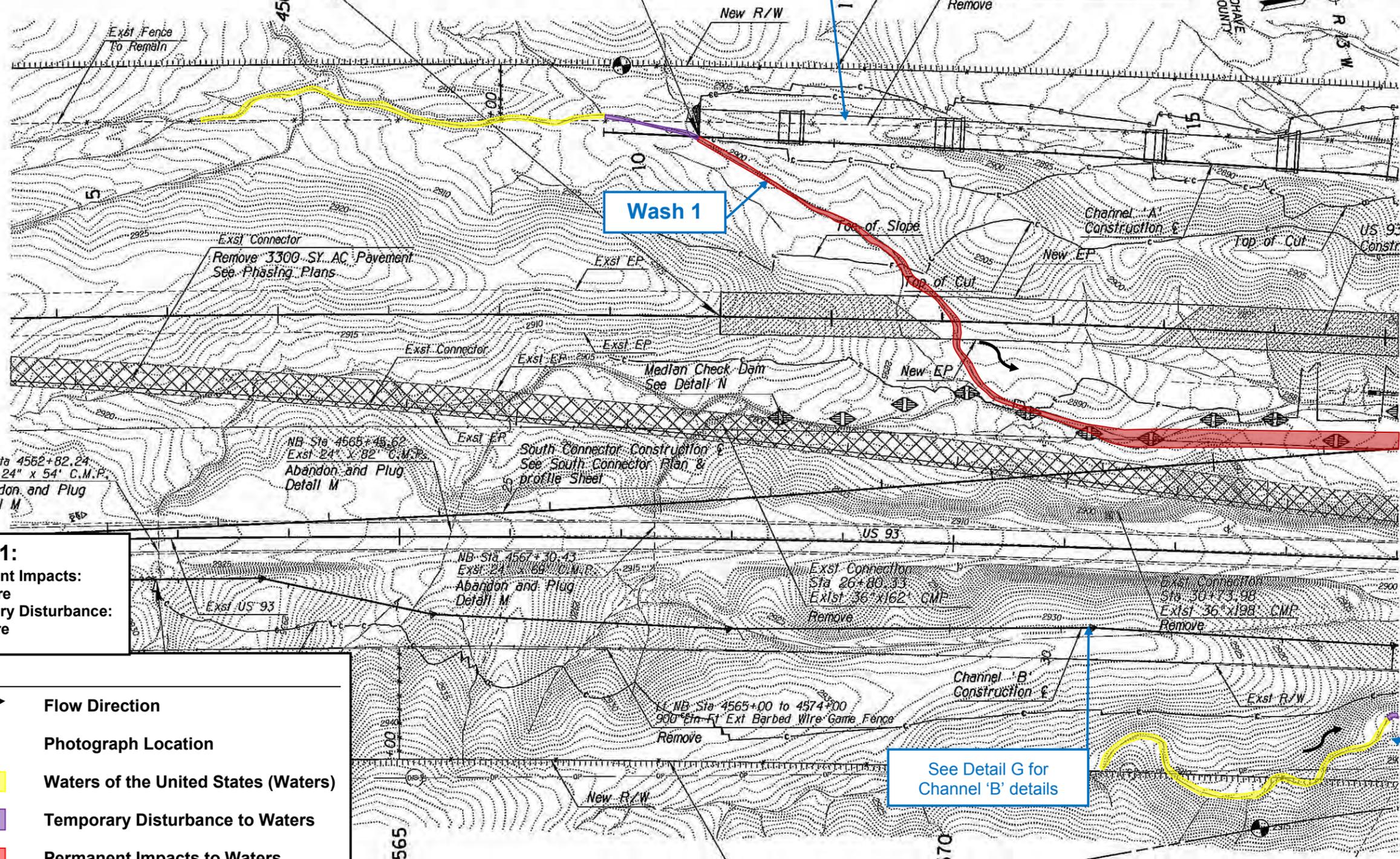
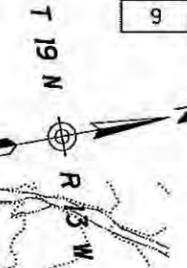
BEGIN CHANNEL 'A' CST &
STA 168+78.00
SEE DETAIL 'G'
161.47' LT US 93 SB CST &
STA 4568+78.00

See Detail G for
Channel 'A' details

Lt SB Sta 4567+00 to 4574+00
750 LIn Ft New Barbed Wire Game Fence
Std C-12.10

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	093-B(204)N	80		

093 MO 101



Wash 1

See Detail G for
Channel 'B' details

Wash 5

Wash 1:
Permanent Impacts:
0.910 acre
Temporary Disturbance:
0.007 acre

KEY

- Flow Direction
- Photograph Location
- Waters of the United States (Waters)
- Temporary Disturbance to Waters
- Permanent Impacts to Waters

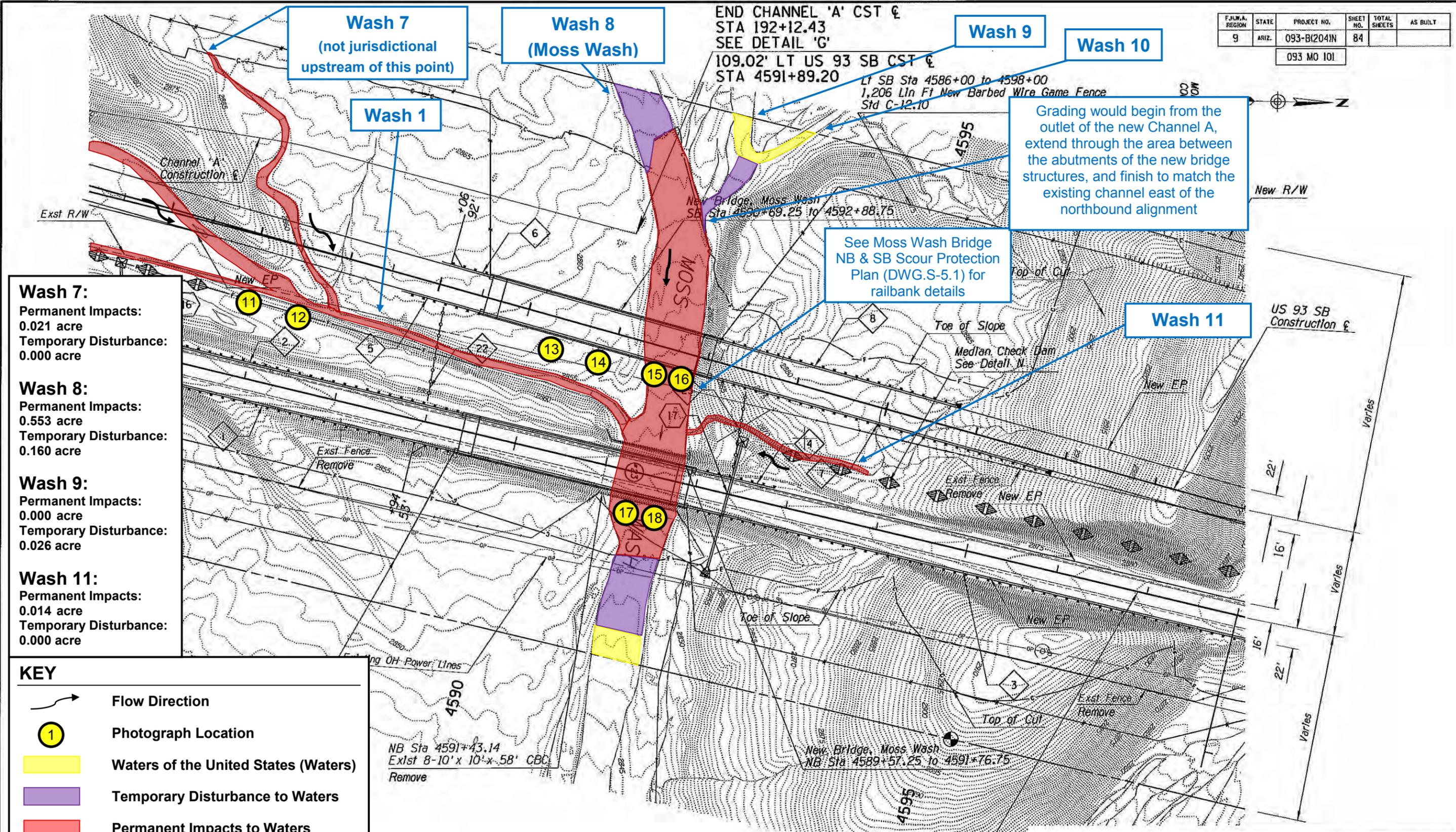
Scale: 1"=100'

Note: Illustration of Waters completed by Logan Simpson Design Inc. September 2012

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CHECKED	HE	07-12		
TEAM LEADER	HE	07-12		
ROUTE: US 93			LOCATION: WIKIEUP TO INTERSTATE 40	SHEET 2 OF 26
TRACS NO. H7388 01 C			093-B(204)N	OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	093-B(204)N	84		

093 MO 101



- Wash 7:**
Permanent Impacts: 0.021 acre
Temporary Disturbance: 0.000 acre
- Wash 8:**
Permanent Impacts: 0.553 acre
Temporary Disturbance: 0.160 acre
- Wash 9:**
Permanent Impacts: 0.000 acre
Temporary Disturbance: 0.026 acre
- Wash 11:**
Permanent Impacts: 0.014 acre
Temporary Disturbance: 0.000 acre

KEY

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- Photograph Location
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- Permanent Impacts to Waters

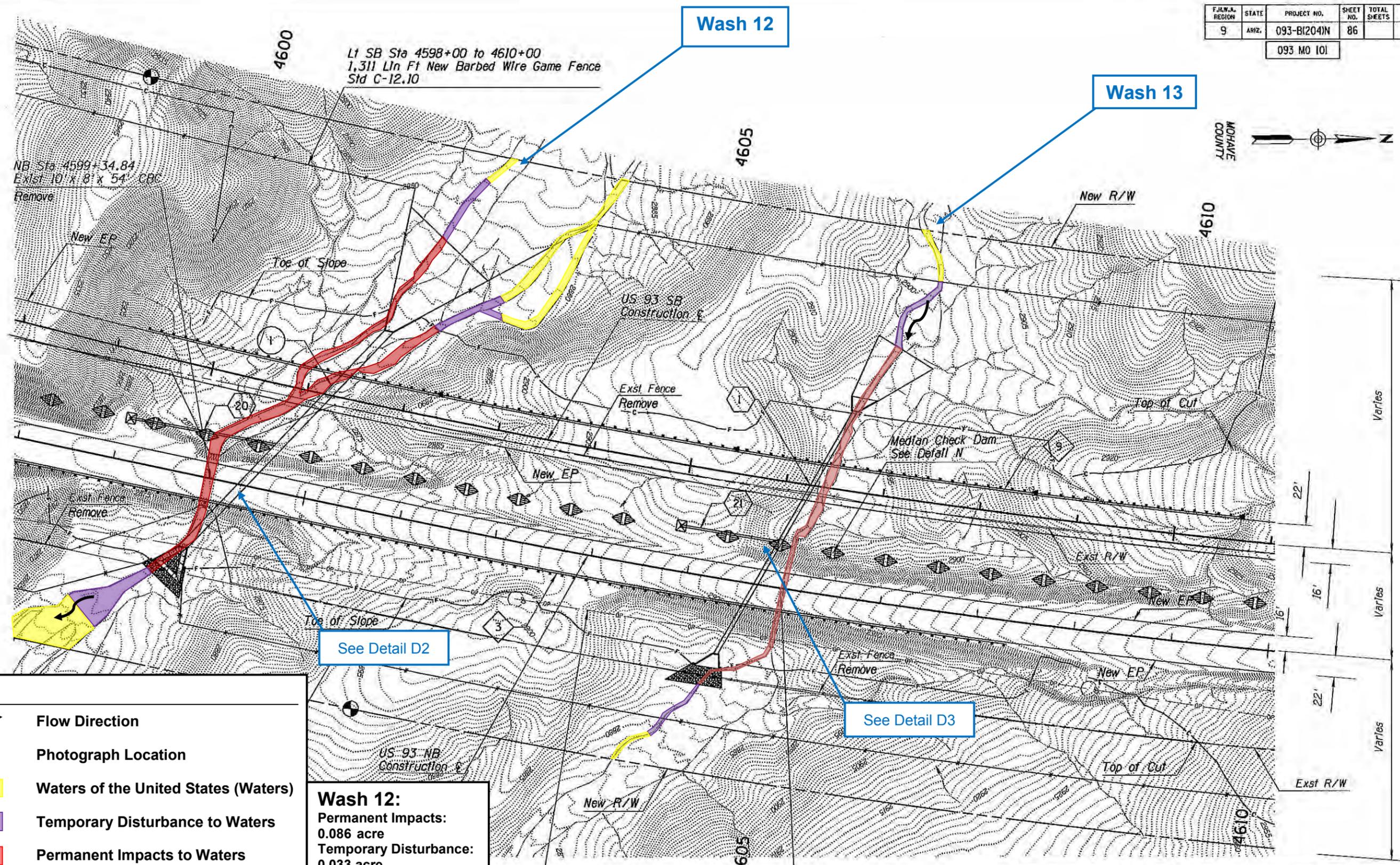
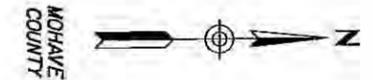
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Note: Illustration of Waters completed by Logan Simpson Design Inc. September 2012

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CHECKED	HE	07-12		
TEAM LEADER	HE	07-12		
ROUTE	US 93	LOCATION	WIKIEUP TO INTERSTATE 40	SHEET 6 OF 26
TRACS NO.	H7388 01 C		093-B(204)N	OF

F.J.N.W. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	093-B(204)N	86		

093 MO 101



Wash 12

Wash 13

See Detail D2

See Detail D3

KEY

- Flow Direction
- Photograph Location
- Waters of the United States (Waters)
- Temporary Disturbance to Waters
- Permanent Impacts to Waters

Scale: 1"=100'

Note: Illustration of Waters completed by Logan Simpson Design Inc. September 2012

Wash 12:
 Permanent Impacts:
 0.086 acre
 Temporary Disturbance:
 0.033 acre

Wash 13:
 Permanent Impacts:
 0.055 acre
 Temporary Disturbance:
 0.015 acre

DESIGN	JH, AR	07-12	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION ROADWAY DESIGN SECTION	PRELIMINARY STAGE IV Review Not for Construction or Recording
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CHECKED	HE	07-12		
TEAM LEADER	HE	07-12		
ROUTE: US 93		LOCATION: WIKIEUP TO INTERSTATE 40	PLAN SHEET Sta 4598+00 to 4610+00	SHEET 8 OF 26
TRACS NO. H7388 01 C		093-B(204)N		OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	093-B(204)N	88		

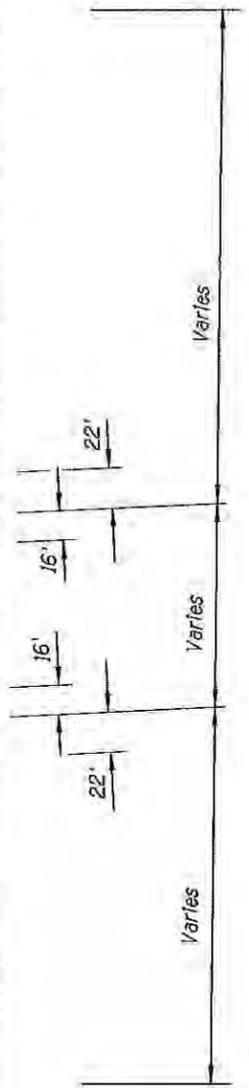
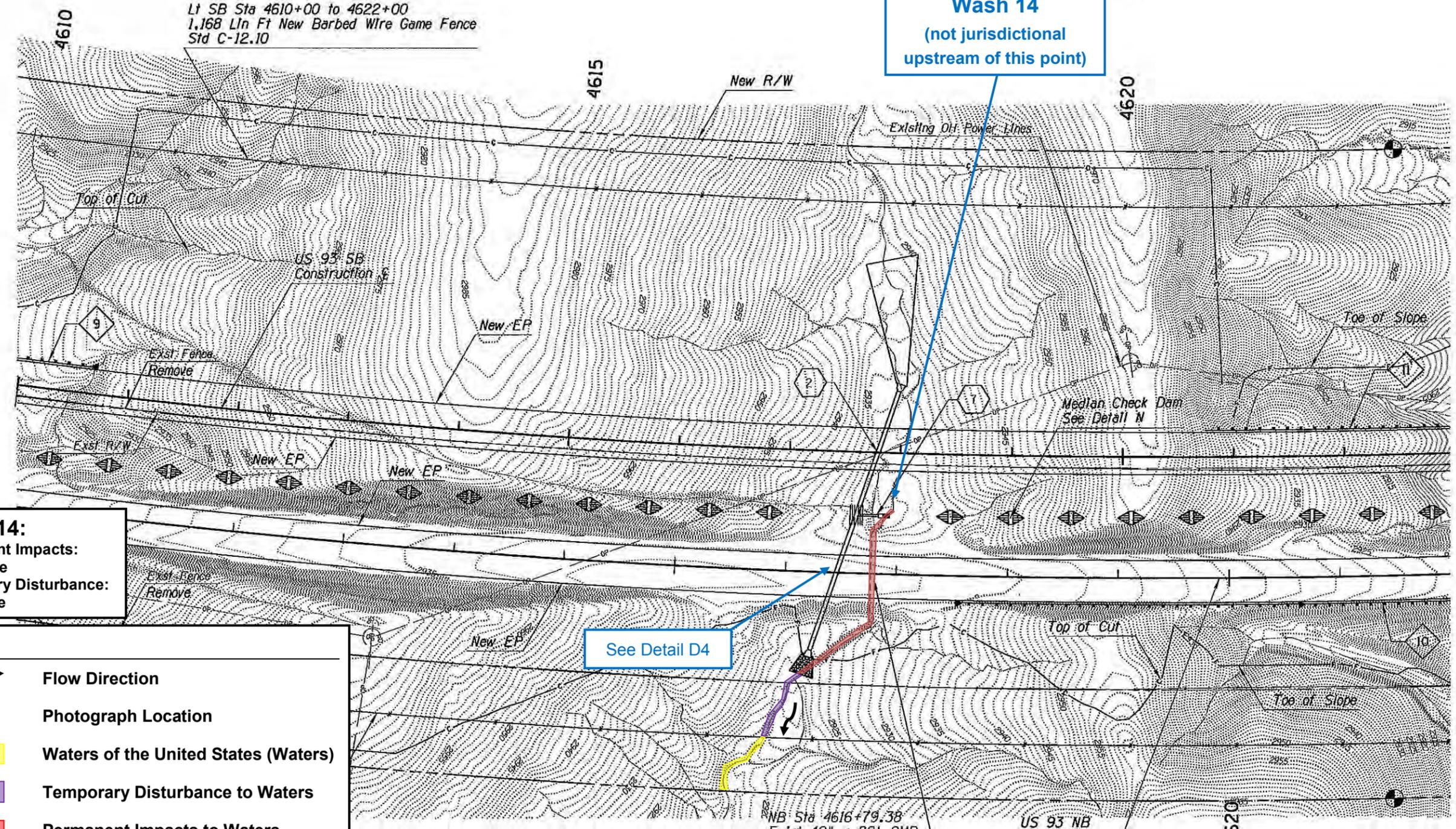
093 MO 101

MOHAVE COUNTY



Wash 14
(not jurisdictional upstream of this point)

Lt SB Sta 4610+00 to 4622+00
1,168 Lin Ft New Barbed Wire Game Fence
Std C-12.10



Wash 14:
Permanent Impacts:
0.014 acre
Temporary Disturbance:
0.004 acre

KEY

- Flow Direction
- Photograph Location
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- Temporary Disturbance to Waters
- Permanent Impacts to Waters

Scale: 1"=100'

Note: Illustration of Waters completed by Logan Simpson Design Inc. September 2012

DESIGN	JH, AR	DATE	07-12	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION ROADWAY DESIGN SECTION	PRELIMINARY STAGE IV Review Not for Construction or Recording
DRAWN	JH, AR	DATE	07-12		
CHECKED	HE	DATE	07-12		
TEAM LEADER	HE	DATE	07-12		
ROUTE			US 93	WIKIEUP TO INTERSTATE 40	
TRACS NO.			H7388 01 C	093-B(204)N	
SHEET			10	OF 26	
DATE			07-12	OF	

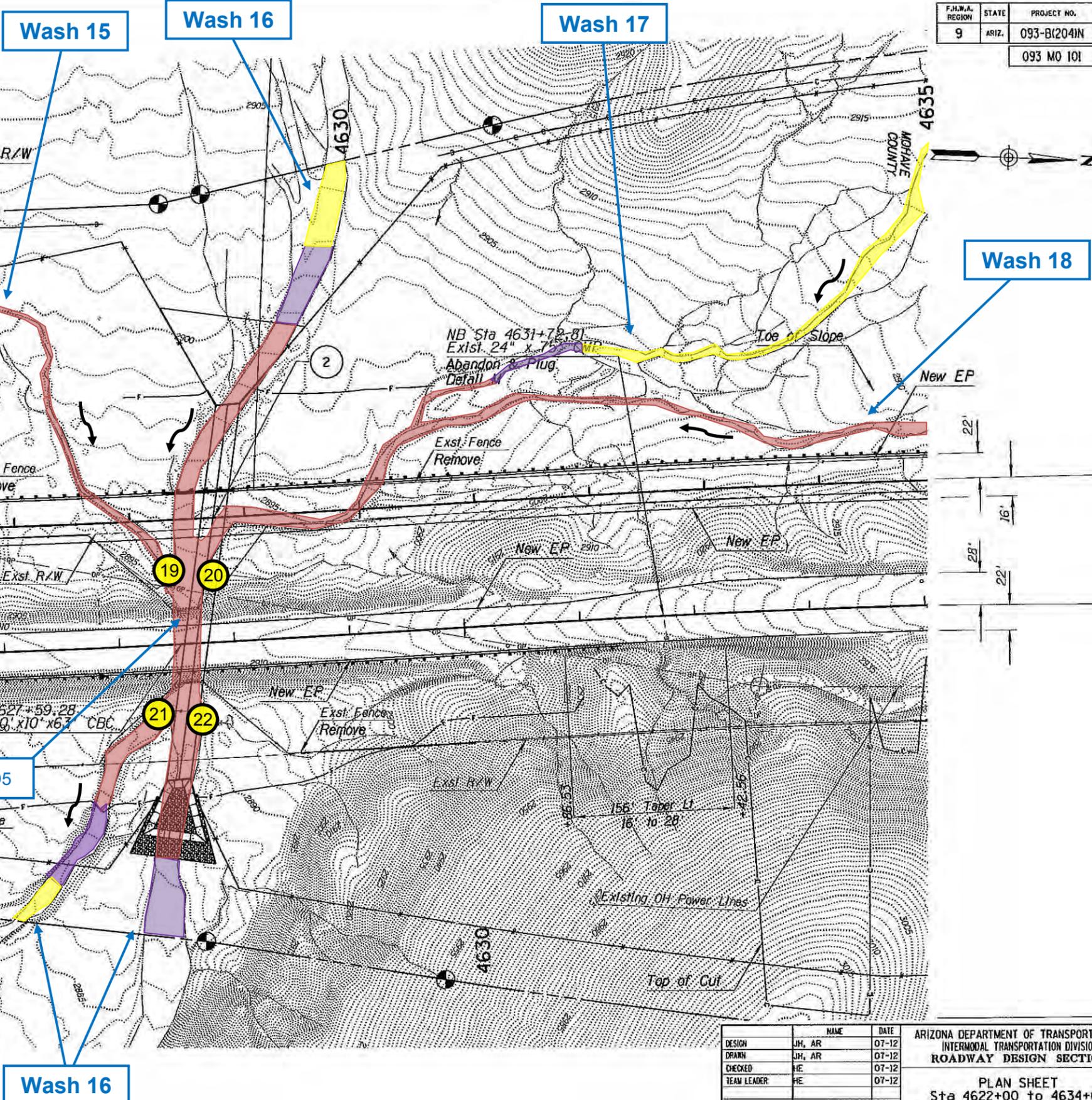
SURVEY NO. LOCATION DATE SURVEY NO. FINISHED PLANS LOCATION DATE REVISIONS FINISHED PLANS LOCATION DATE

SPECIAL TEL

Lt SB Sta 4622+00 to 4634+00
1,313 Lin Ft New Barbed Wire Game Fence
Std C-12.10

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	093-B(204)N	90		

093 MO 101



- Wash 15:**
Permanent Impacts:
0.037 acre
Temporary Disturbance:
0.000 acre
- Wash 16:**
Permanent Impacts:
0.202 acre
Temporary Disturbance:
0.095 acre
- Wash 17:**
Permanent Impacts:
0.005 acre
Temporary Disturbance:
0.012 acre
- Wash 18:**
Permanent Impacts:
0.070 acre
Temporary Disturbance:
0.005 acre

KEY

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- Photograph Location
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- Temporary Disturbance to Waters
- Permanent Impacts to Waters

Scale: 1"=100'

Note: Illustration of Waters completed by Logan Simpson Design Inc. September 2012

See Detail D5

Wash 16

DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION ROADWAY DESIGN SECTION	PRELIMINARY STAGE IV Review Not for Construction or Recording
DRAWN	JH, AR	07-12		
CHECKED	HE	07-12		
TEAM LEADER	HE	07-12		
ROUTE: US 93			LOCATION: WIKIEUP TO INTERSTATE 40	
TRACS NO. H7388 01 C			093-B(204)N	
			SHEET 12 OF 26	
			OF	

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	093-B(204)N	92		
093 MO 101					

Wash 17

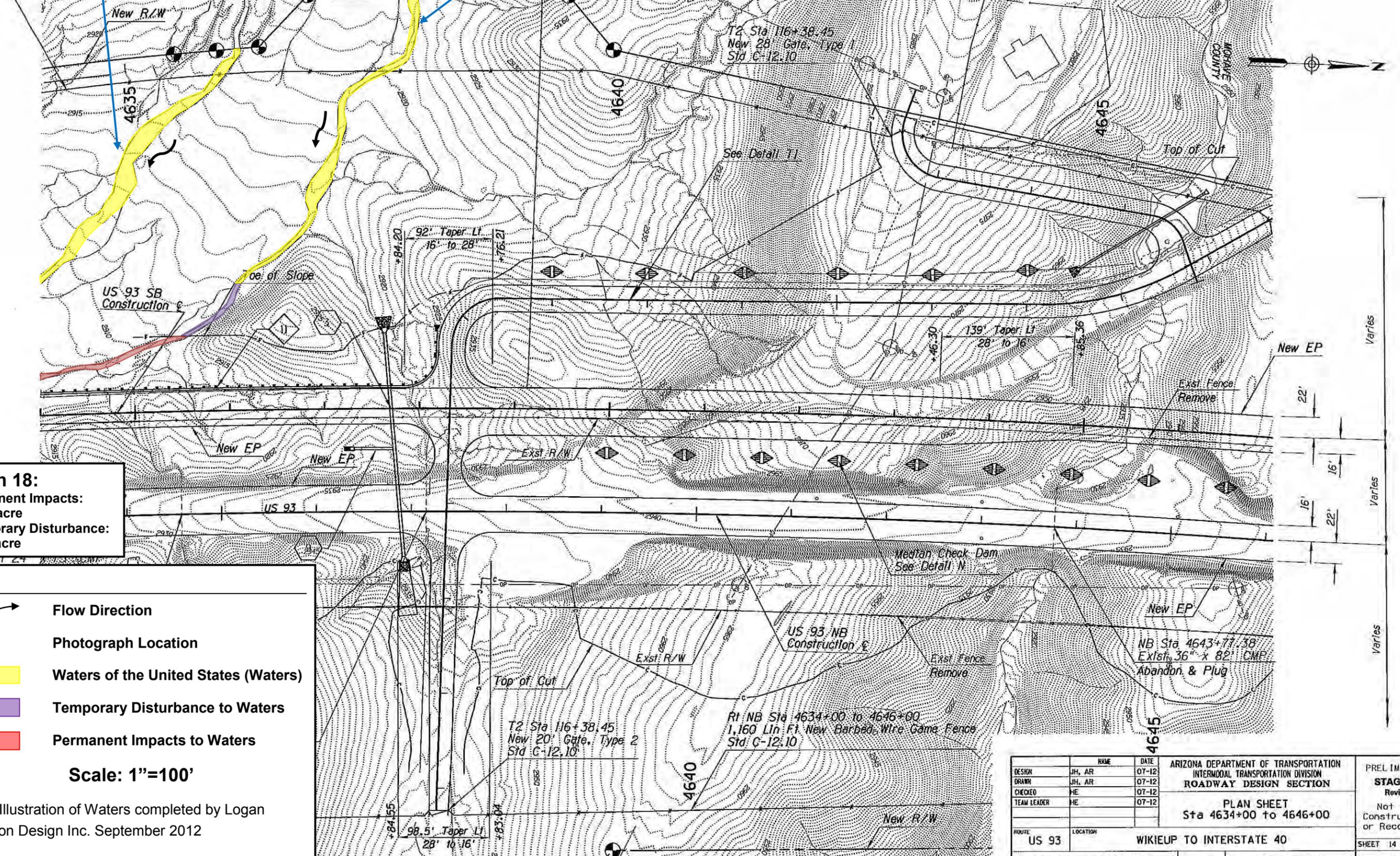
Wash 18

Lt SB Sta 4634+00 to 4646+00
1,217 LIn Ft New Barbed Wire Game Fence
Std C-12.10

T2 Sta 116+38.45
New 28' Gate, Type 1
Std C-12.10

T2 Sta 116+38.45
New 20' Gate, Type 2
Std C-12.10

Rt NB Sta 4634+00 to 4646+00
1,160 LIn Ft New Barbed Wire Game Fence
Std C-12.10



Wash 18:
Permanent Impacts:
0.070 acre
Temporary Disturbance:
0.005 acre

KEY

- Flow Direction
- Photograph Location
- Waters of the United States (Waters)
- Temporary Disturbance to Waters
- Permanent Impacts to Waters

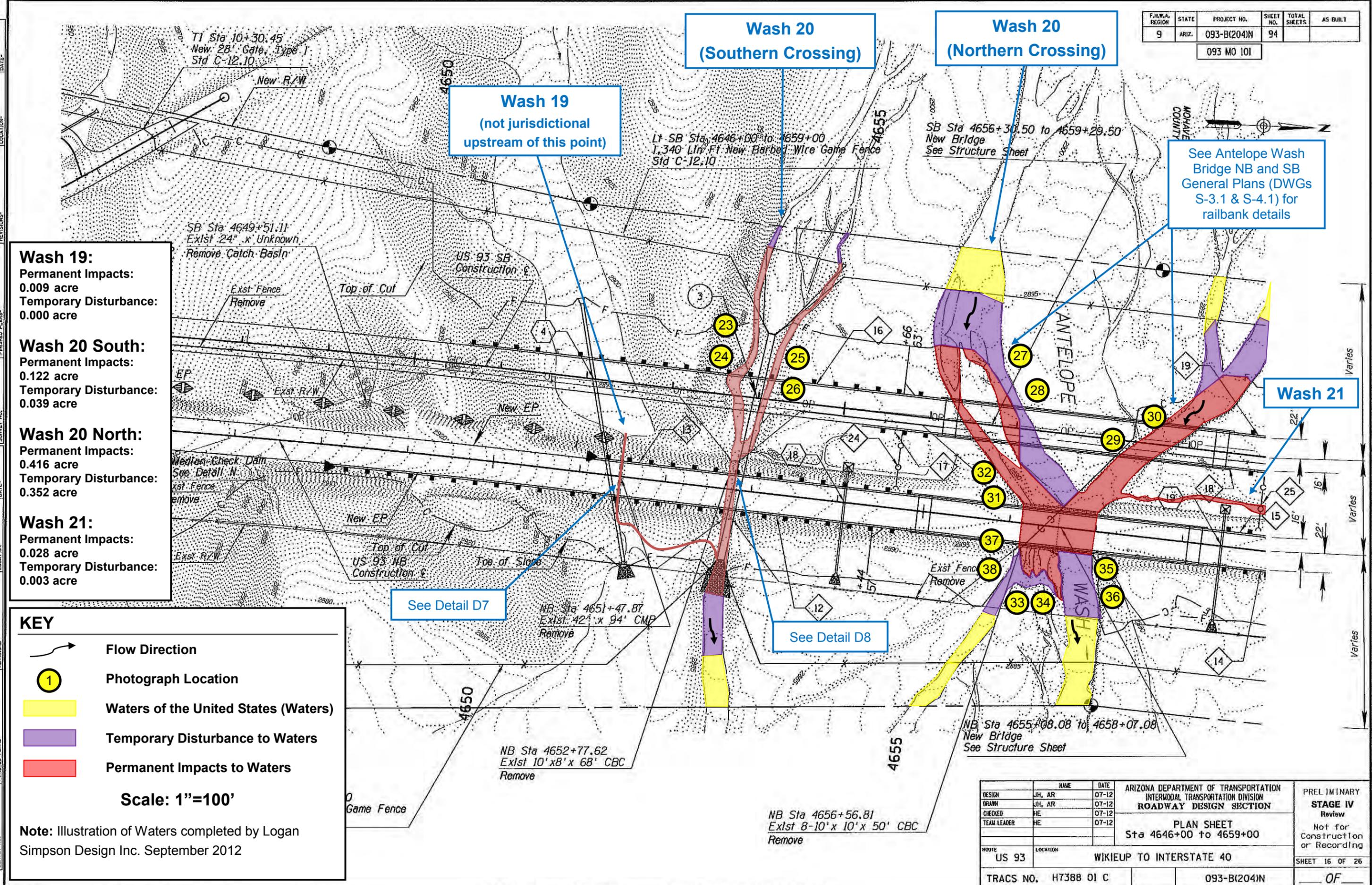
Scale: 1"=100'

Note: Illustration of Waters completed by Logan Simpson Design Inc. September 2012

DESIGN	JH, AR	07-12	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION ROADWAY DESIGN SECTION	PRELIMINARY STAGE IV Review Not for Construction or Recording
DRAWN	JH, AR	07-12		
CHECKED	HE	07-12		
TEAM LEADER	HE	07-12		
PLAN SHEET Sta 4634+00 to 4646+00				
ROUTE	US 93	LOCATION	WIKIEUP TO INTERSTATE 40	SHEET 14 OF 26
TRACS NO.	H7388 01 C		093-B(204)N	OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	093-B(204)N	94		

093 MO 101



- Wash 19:**
Permanent Impacts: 0.009 acre
Temporary Disturbance: 0.000 acre
- Wash 20 South:**
Permanent Impacts: 0.122 acre
Temporary Disturbance: 0.039 acre
- Wash 20 North:**
Permanent Impacts: 0.416 acre
Temporary Disturbance: 0.352 acre
- Wash 21:**
Permanent Impacts: 0.028 acre
Temporary Disturbance: 0.003 acre

KEY

- Flow Direction
- Photograph Location
- Waters of the United States (Waters)
- Temporary Disturbance to Waters
- Permanent Impacts to Waters

Scale: 1"=100'

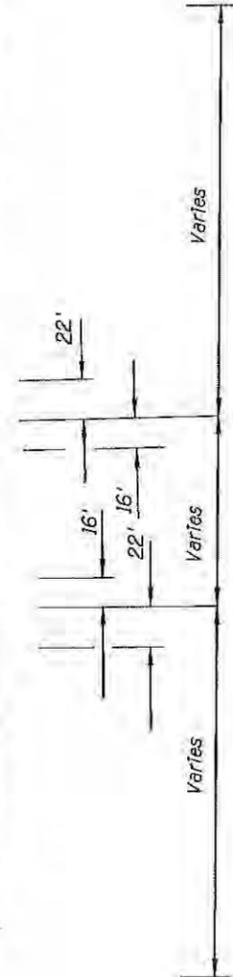
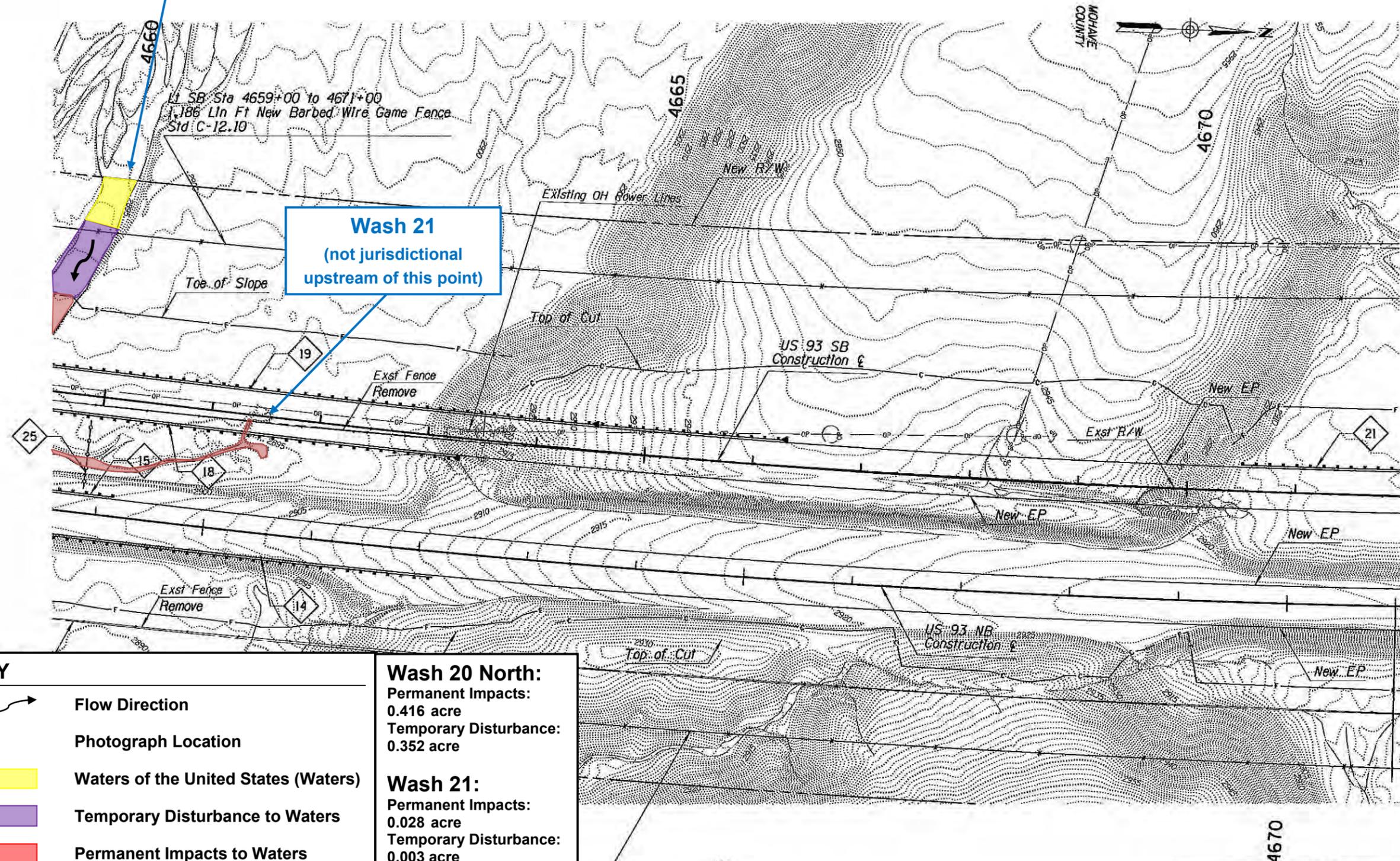
Note: Illustration of Waters completed by Logan Simpson Design Inc. September 2012

DESIGN	JH, AR	07-12	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION ROADWAY DESIGN SECTION	PRELIMINARY STAGE IV Review Not for Construction or Recording
DRAWN	JH, AR	07-12		
CHECKED	HE	07-12		
TEAM LEADER	HE	07-12		
ROUTE US 93			LOCATION WIKIEUP TO INTERSTATE 40	SHEET 16 OF 26
TRACS NO.	H7388 01 C	PROJECT NO.	093-B(204)N	OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	093-B(204)N	96		
093 MO 101					

Wash 20
(northern crossing)

Wash 21
(not jurisdictional upstream of this point)



KEY

- Flow Direction
- Waters of the United States (Waters)
- Temporary Disturbance to Waters
- Permanent Impacts to Waters

Scale: 1"=100'

Note: Illustration of Waters completed by Logan Simpson Design Inc. September 2012

Wash 20 North:
 Permanent Impacts: 0.416 acre
 Temporary Disturbance: 0.352 acre

Wash 21:
 Permanent Impacts: 0.028 acre
 Temporary Disturbance: 0.003 acre

DESIGN	JH, AR	07-12	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION ROADWAY DESIGN SECTION	PRELIMINARY STAGE IV Review Not for Construction or Recording
DRAWN	JH, AR	07-12		
CHECKED	HE	07-12		
TEAM LEADER	HE	07-12		
PLAN SHEET Sta 4659+00 to 4671+00				
ROUTE	US 93	LOCATION	WIKIEUP TO INTERSTATE 40	
TRACS NO.	H7388 01 C		093-B(204)N	OF

KEY

-  Flow Direction
-  Photograph Location
-  Waters of the United States (Waters)
-  Temporary Disturbance to Waters
-  Permanent Impacts to Waters

Scale: 1"=100'

Note: Illustration of Waters completed by Logan Simpson Design Inc. September 2012

Wash 22:

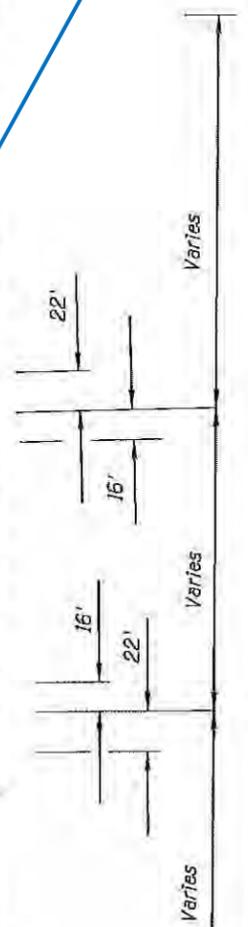
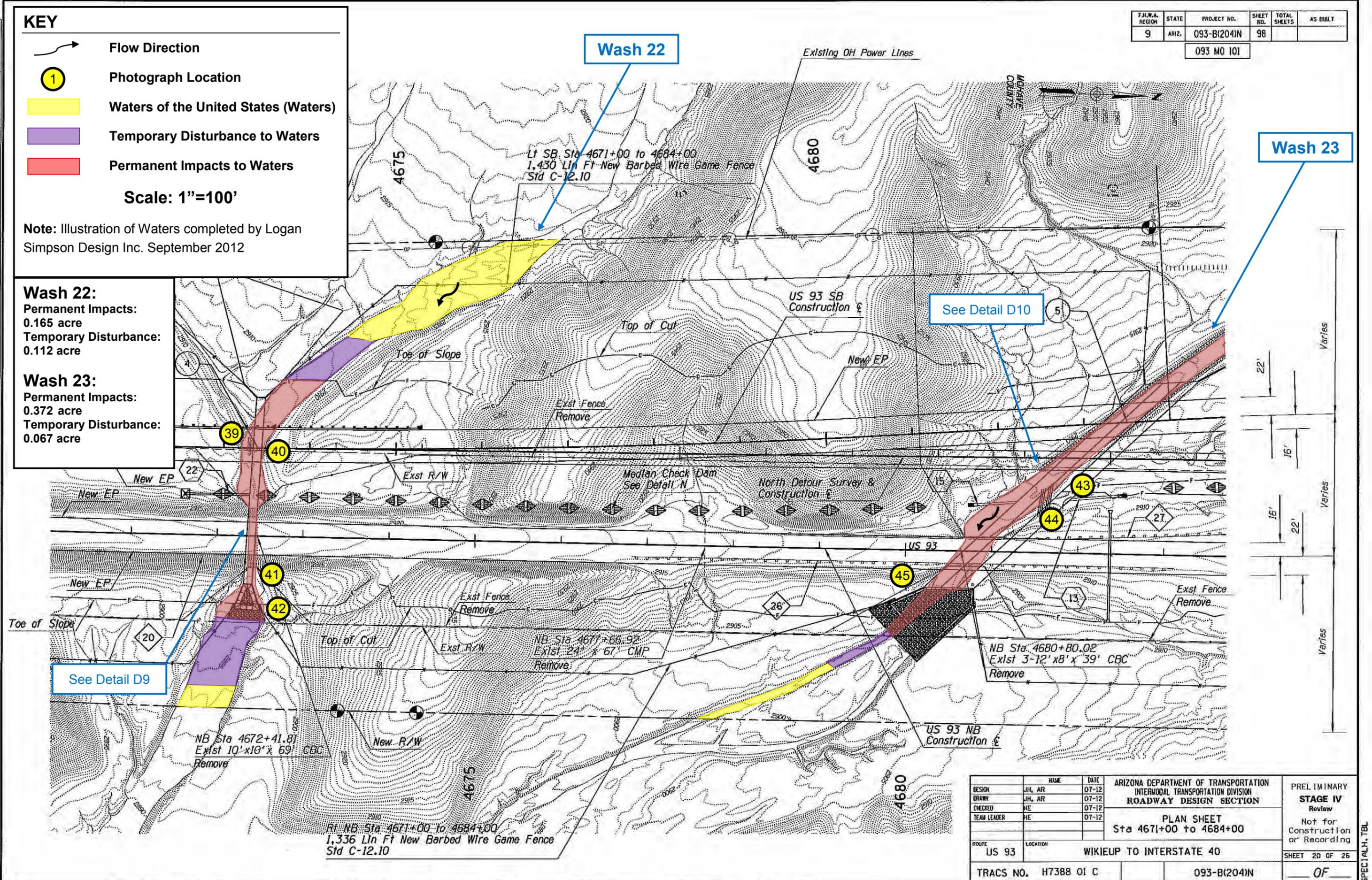
Permanent Impacts:
0.165 acre
Temporary Disturbance:
0.112 acre

Wash 23:

Permanent Impacts:
0.372 acre
Temporary Disturbance:
0.067 acre

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	093-B(204)N	98		

093 MO 101

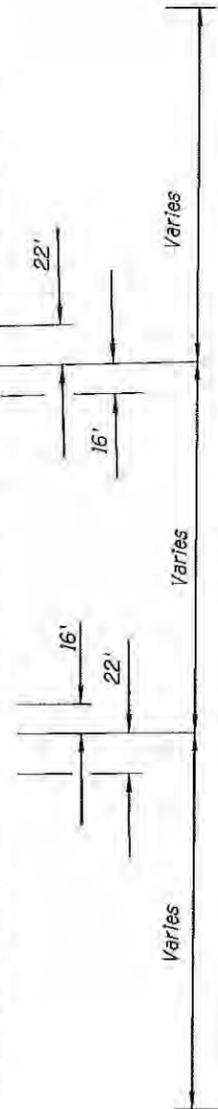
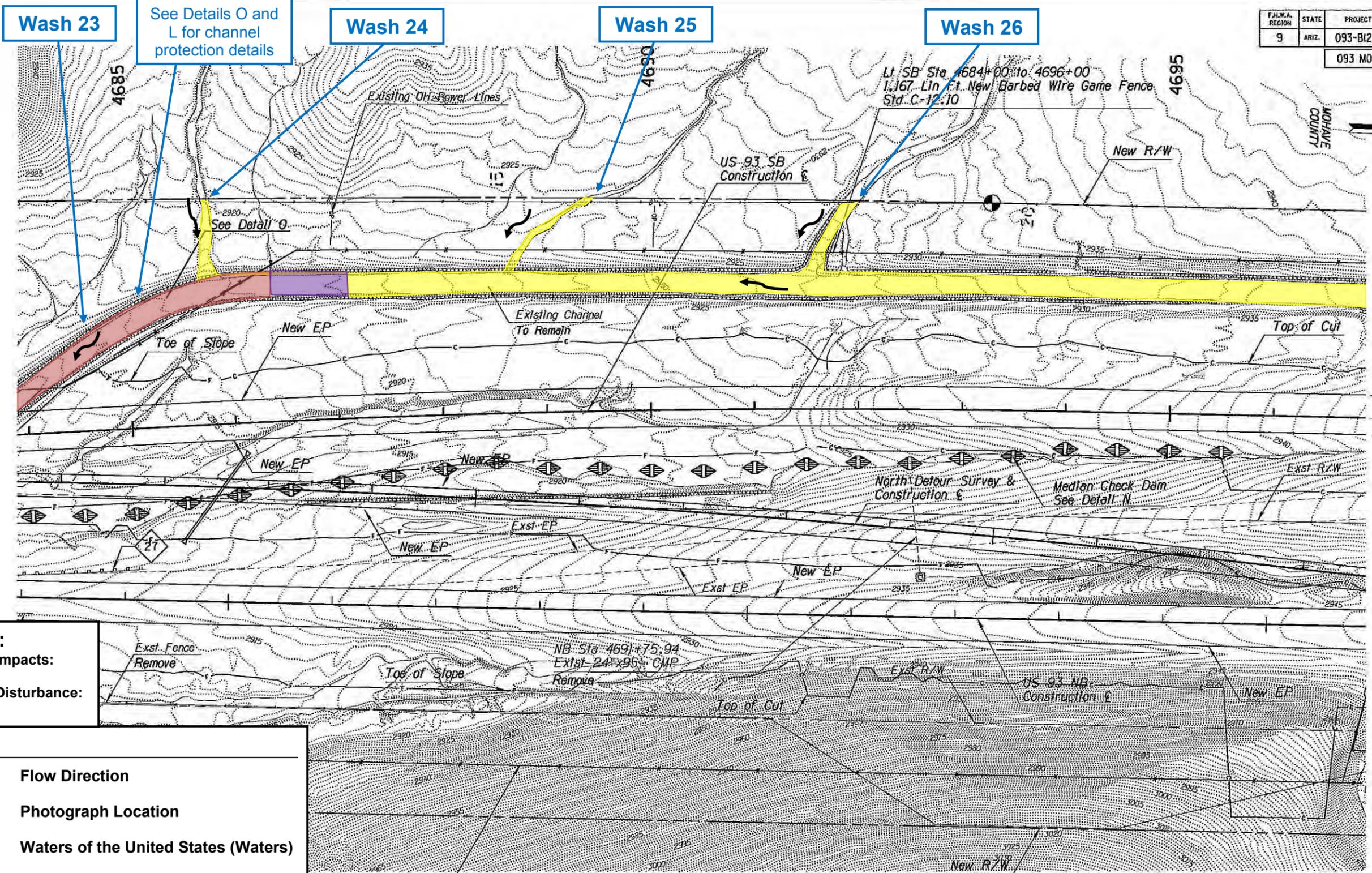
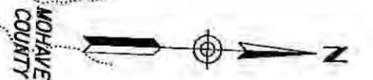


DESIGN	JH, AR	07-12	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION ROADWAY DESIGN SECTION	PRELIMINARY STAGE IV Review Not for Construction or Recording
DRAWN	JH, AR	07-12		
CHECKED	HE	07-12		
TEAM LEADER	HE	07-12		
PLAN SHEET Sta 4671+00 to 4684+00				
ROUTE	US 93	LOCATION	WIKIEUP TO INTERSTATE 40	SHEET 20 OF 26
TRACS NO.	H7388 01 C		093-B(204)N	OF

SPECIALIST: TBL

F.M.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	093-B(204)N	100		

093 MO 101



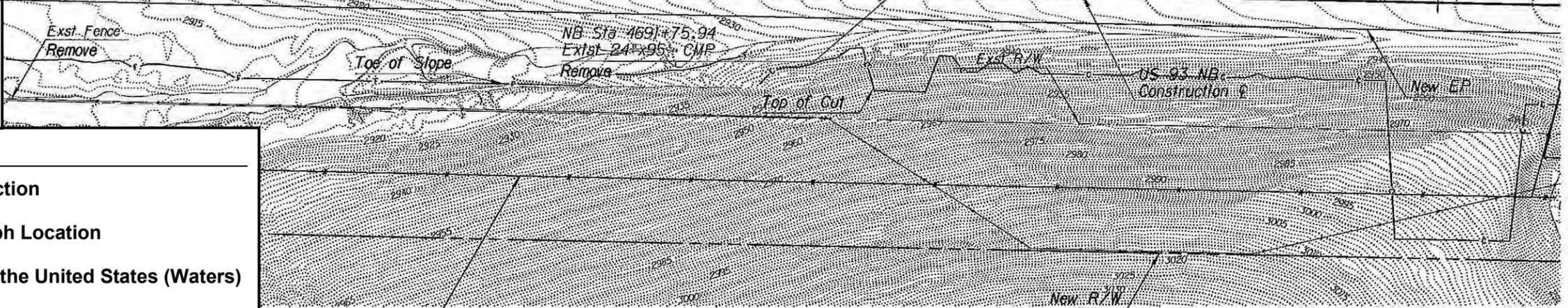
Wash 23:
 Permanent Impacts:
 0.372 acre
 Temporary Disturbance:
 0.067 acre

KEY

- Flow Direction
- Photograph Location
- Waters of the United States (Waters)
- Temporary Disturbance to Waters
- Permanent Impacts to Waters

Scale: 1"=100'

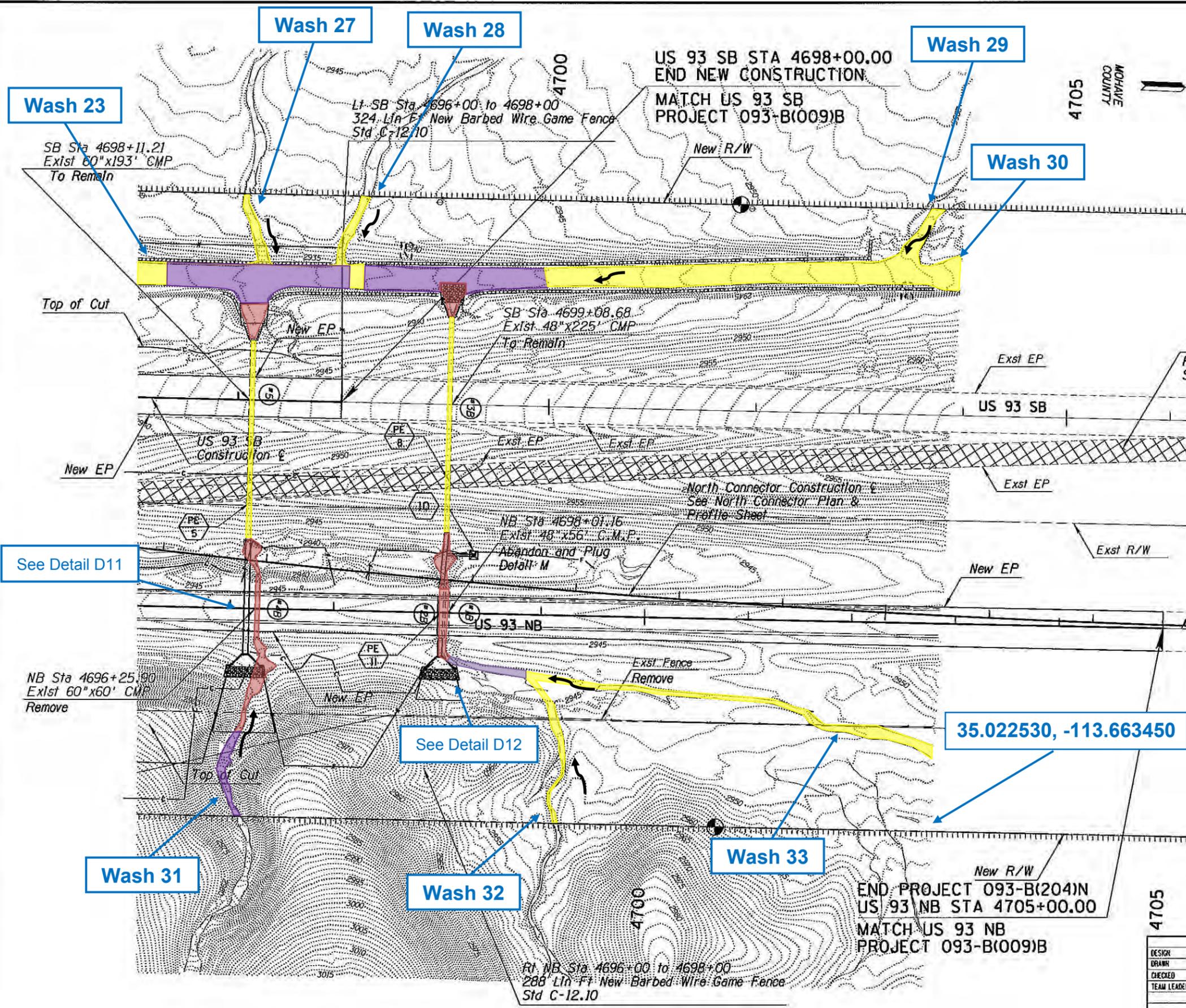
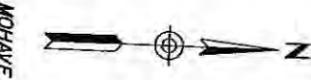
Note: Illustration of Waters completed by Logan Simpson Design Inc. September 2012



Rt NB Sta 4684+00 to 4696+00
 1,274 Lin Ft New Barbed Wire Game Fence
 Std C-12.10

DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION ROADWAY DESIGN SECTION	PRELIMINARY STAGE IV Review Not for Construction or Recording
DRAWN	JH, AR	07-12		
CHECKED	HE	07-12		
TEAM LEADER	HE	07-12		
ROUTE: US 93			LOCATION: WIKIEUP TO INTERSTATE 40	
TRACS NO. H7388 01 C			093-B(204)N	
			SHEET 22 OF 26	
			OF	

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	093-B(204)N	102		
093 MO 101					



Wash 23:
 Permanent Impacts: 0.372 acre
 Temporary Disturbance: 0.067 acre

Wash 31:
 Permanent Impacts: 0.029 acre
 Temporary Disturbance: 0.033 acre

Wash 33:
 Permanent Impacts: 0.023 acre
 Temporary Disturbance: 0.040 acre

KEY

- Flow Direction
- Photograph Location
- Waters of the United States (Waters)
- Temporary Disturbance to Waters
- Permanent Impacts to Waters

Scale: 1"=100'

Note: Illustration of Waters completed by Logan Simpson Design Inc. September 2012

35.022530, -113.663450

DESIGN	JH, AR	07-12	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION ROADWAY DESIGN SECTION	PRELIMINARY STAGE IV Review Not for Construction or Recording
DRAWN	JH, AR	07-12		
CHECKED	HE	07-12		
TEAM LEADER	HE	07-12		
ROUTE	US 93	LOCATION	WIKIEUP TO INTERSTATE 40	SHEET 24 OF 26
TRACS NO.	H7388 01 C		093-B(204)N	OF