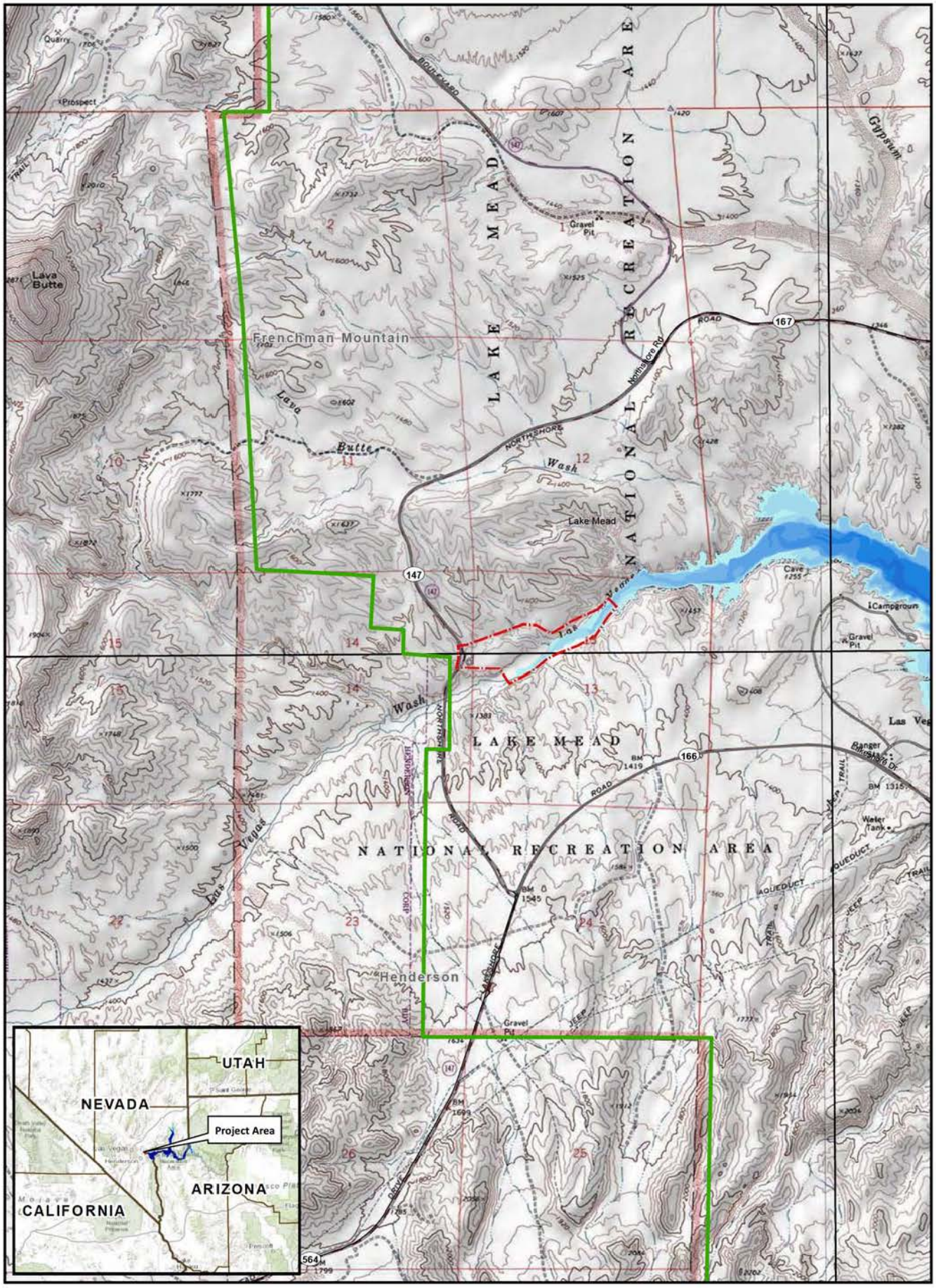



Federal Highway Administration-Central Federal Lands Highway Division

**Project: NV PRA 1(10) Las Vegas Wash Flow Regulation**

- Survey Area
- National Park Service Boundary
- USGS 24k Topo Map Boundaries

**Lake Mead Hydrograph**

**Elevation**

- 1100
- 1101 - 1110
- 1111 - 1120
- 1121 - 1130
- 1131 - 1140
- 1141 - 1150
- 1151 - 1160
- 1161 - 1170
- 1171 - 1180
- 1181 - 1190
- 1191 - 1200
- 1201 - 1210
- 1211 - 1220

1 inch = 2,000 feet

0 950 1,900 Feet

0 0.25 0.5 Miles

N

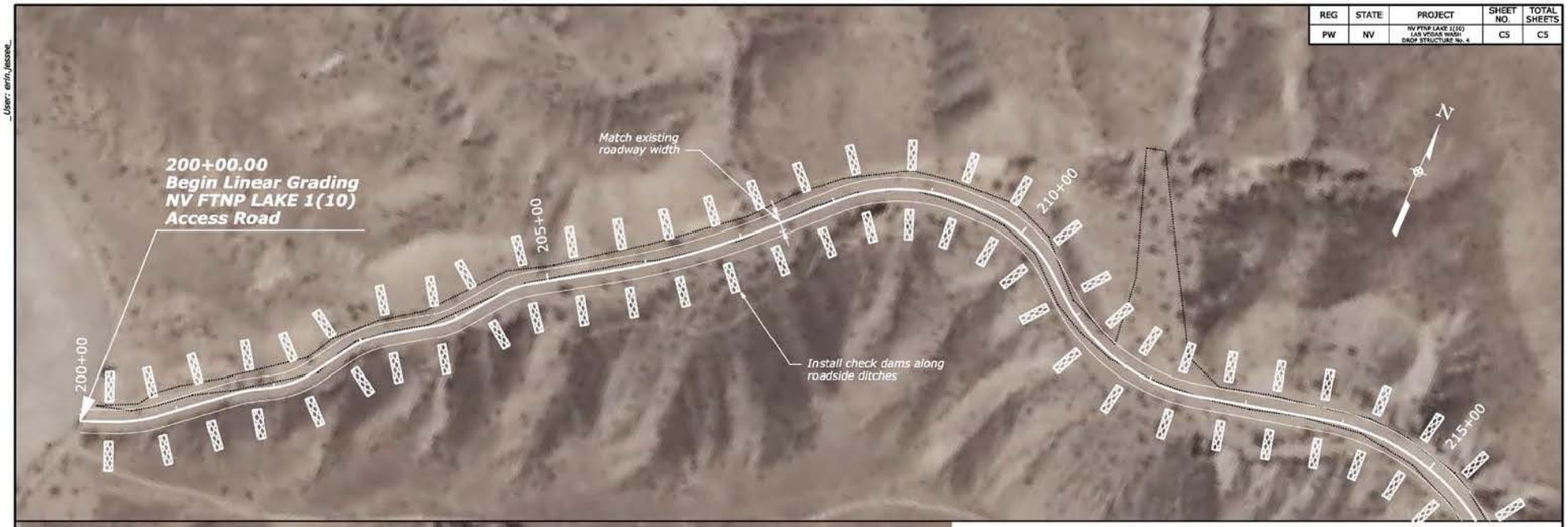
Background Imagery:
USGS 7.5 minute quadrangle topographic maps
Copyright © 2011 National Geographic Society, i-cubed

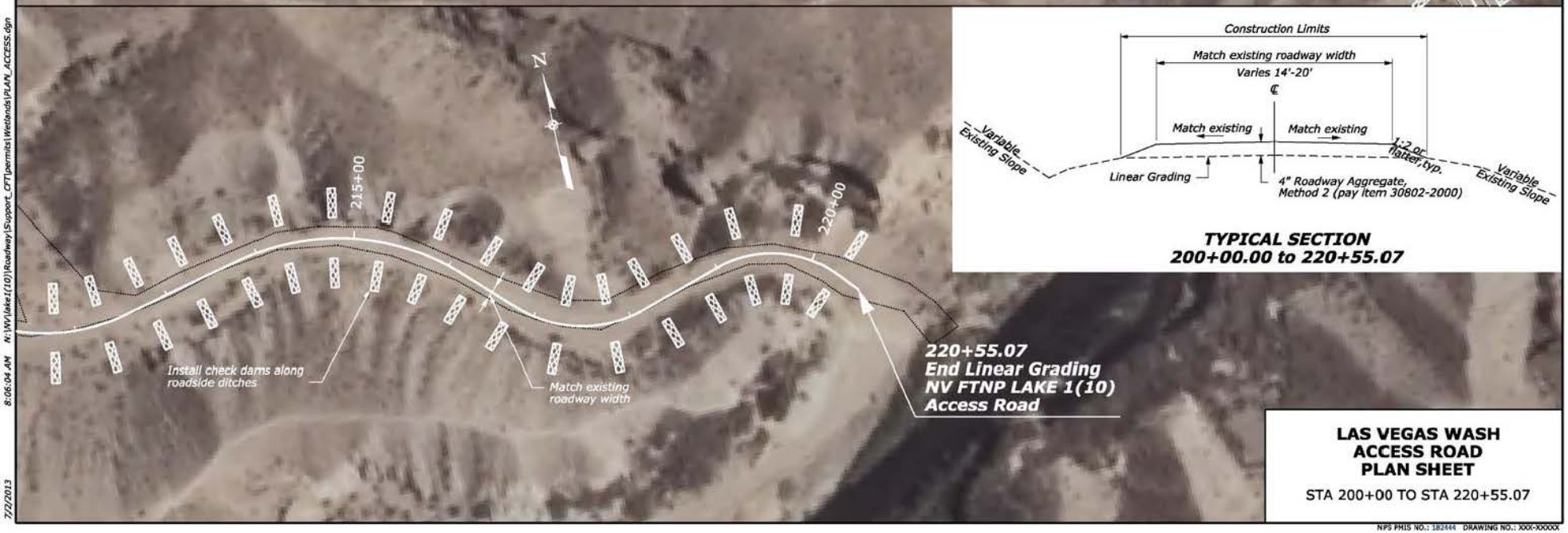
**Figure 1:**
**Vicinity Map**

**Wetland, Waters of the U.S., and Riparian Survey**

**Date:** April 2013

| REG | STATE | PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| PW | NV | NV FTNP LAKE 1(10) LAS VEGAS WASH DROP STRUCTURE No. 4 | C5 | C5 |







**TYPICAL SECTION**
**200+00.00 to 220+55.07**

**LAS VEGAS WASH**
**ACCESS ROAD**
**PLAN SHEET**

STA 200+00 TO STA 220+55.07

User: erin_jessee_

8:06:04 AM N:\NV\lake1(10)\Roadway\Support_CFT\permits\Wetlands\PLAN_ACCESS.dgn

7/2/2013

NPS PMIS NO.: 182444 DRAWING NO.: XXX-XXXXX

| REG | STATE | PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
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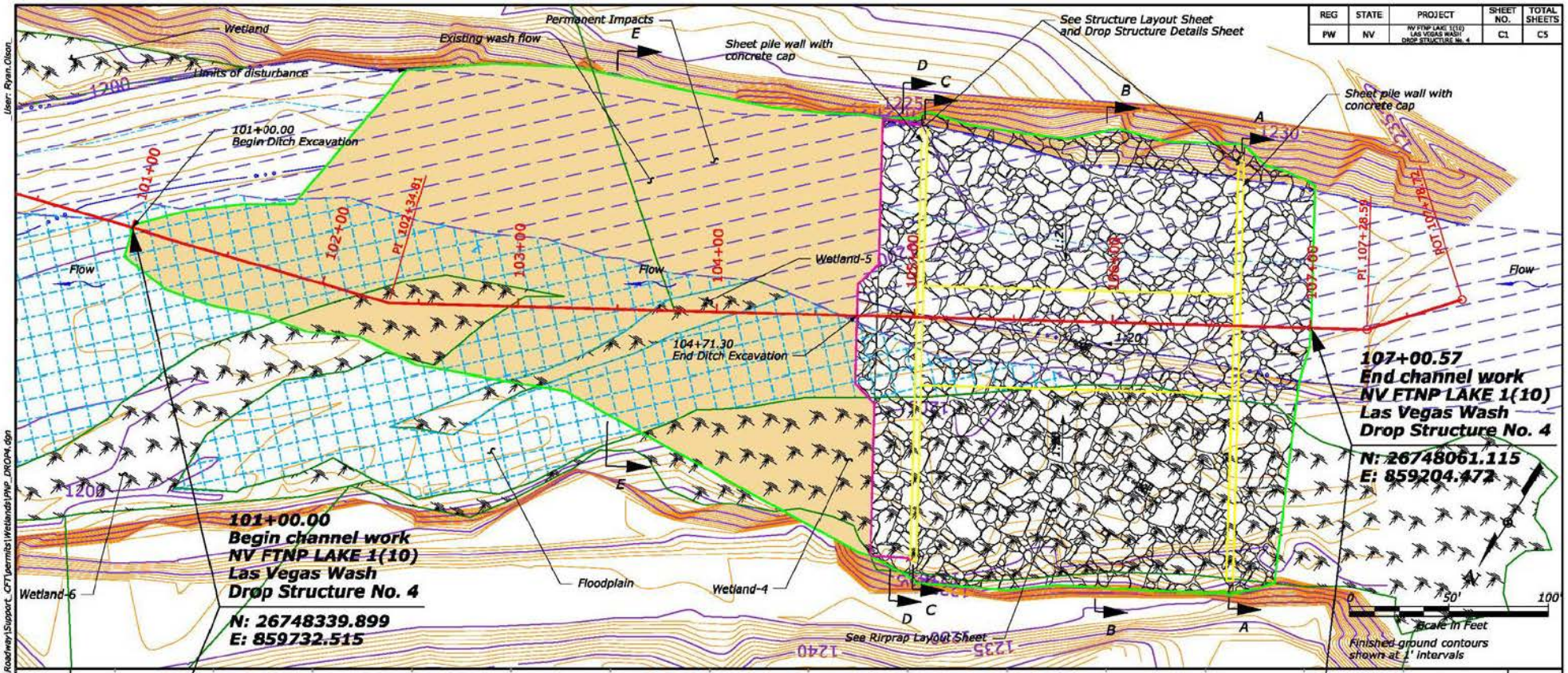


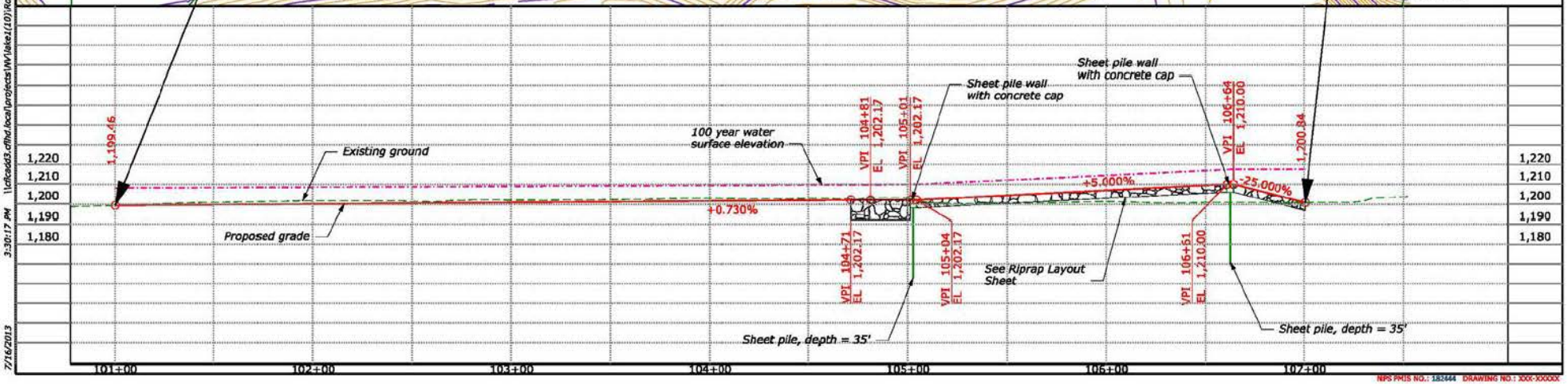


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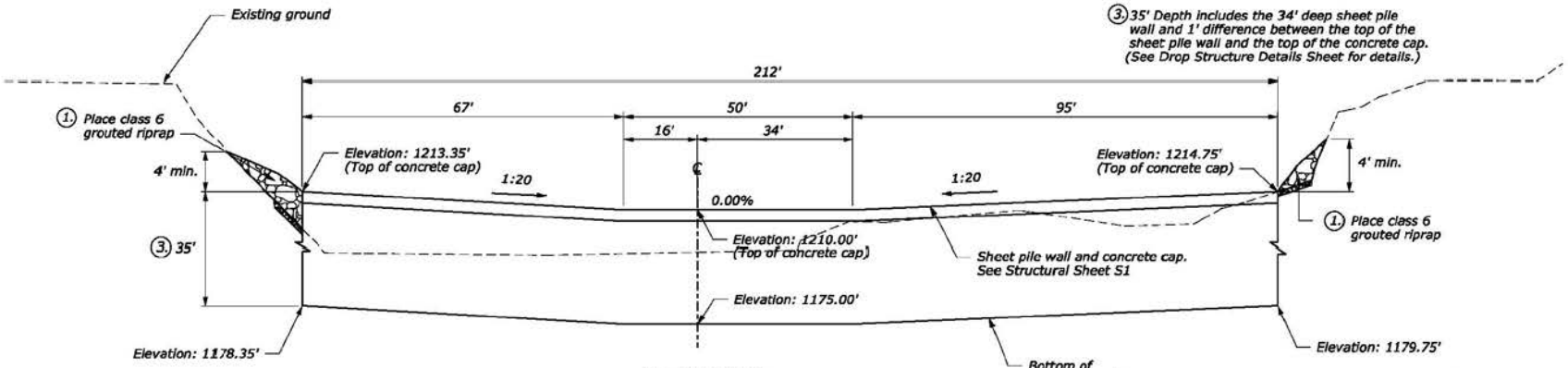
7/16/2013

NPS PMIS NO.: 182444 DRAWING NO.: XXX-XXXXX

| REG | STATE | PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| PW | NV | NV FTNP LAKE 1(10) LAS VEGAS WASH DROP STRUCTURE No. 4 | C2 | C5 |

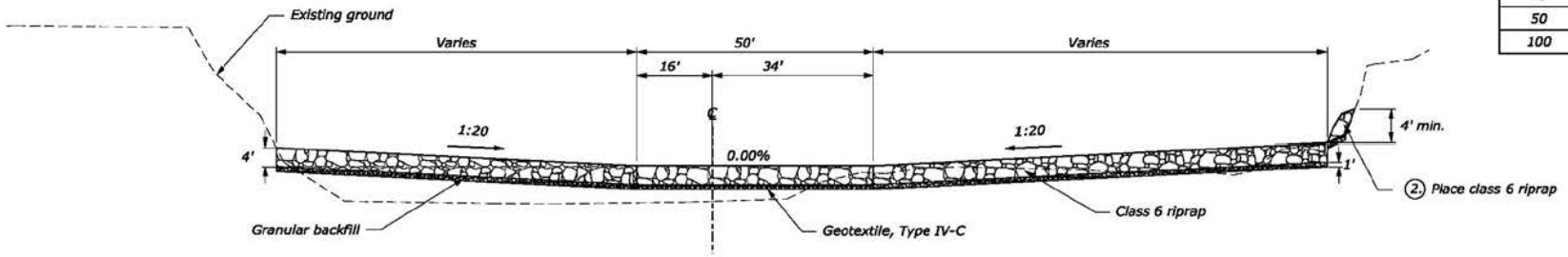
NOTE:

1. Place class 6 grouted riprap with granular backfill, 1' depth, and geotextile, Type IV-C, between the edge of sheet pile wall and channel edge to prevent erosion. (See Riprap Layout Sheet for details.)
2. Place class 6 riprap granular backfill, 1' depth, and geotextile, Type IV-C, along channel edge to prevent erosion. (See Riprap Layout Sheet for details.)
3. 35' Depth includes the 34' deep sheet pile wall and 1' difference between the top of the sheet pile wall and the top of the concrete cap. (See Drop Structure Details Sheet for details.)




**Section A-A**
**Upstream Sheet Pile Wall**

| Water Surface Elevation at Crest of Drop Structure | | |
|---|---|---|
| Return Period (Years) | Flow (CFS) | Elevation (Ft) |
| Base | 350 | 1211.45 |
| 2 | 1,125 | 1212.51 |
| 25 | 7,850 | 1215.85 |
| 50 | 10,840 | 1216.71 |
| 100 | 14,430 | 1217.68 |




**Section B-B**
**Riprap Between Sheet Pile Walls**

Not to Scale

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**Las Vegas Wash**
**Drop Structure No. 4**
**Sections**

Sheet 1 of 3

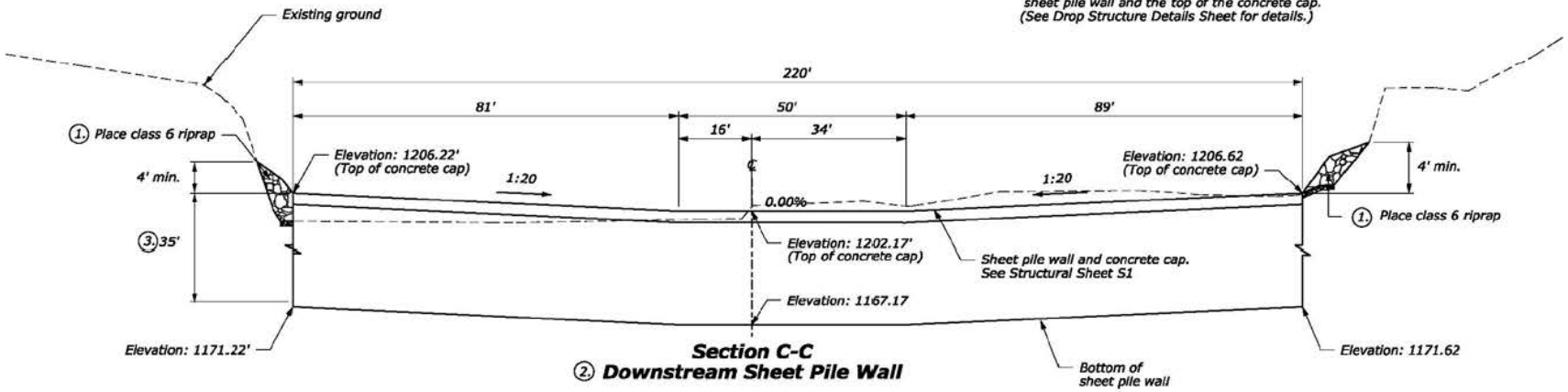
NPS PMIS NO.: 182444 DRAWING NO.: XXX-XXXXX

User: erin.jessee
8:06:30 AM N:\NV\lake1(10)\Roadway\Support_CFT\permits\Wetlands\TYP_DROP_4.dgn
7/2/2013

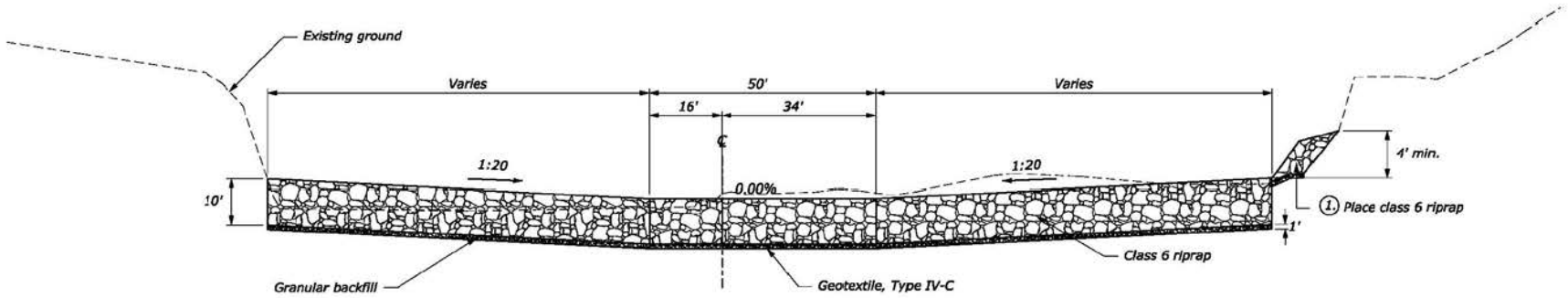
| REG | STATE | PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| PW | NV | NV FTNP LAKE 1(10) LAS VEGAS WASH DROP STRUCTURE No. 4 | C3 | C5 |

NOTE:

1. Place class 6 riprap with granular backfill, 1' depth, and geotextile, Type IV-C, along channel to edge to prevent erosion. (See Riprap Layout Sheet for details.)
2. Location of downstream sheet pile wall may be adjusted by CO to fit existing contours.
3. 35' Depth includes the 34' deep sheet pile wall and 1' difference between the top of the sheet pile wall and the top of the concrete cap. (See Drop Structure Details Sheet for details.)




**Section C-C**
**2. Downstream Sheet Pile Wall**




**Section D-D**
**Launchable Riprap Toe**

Not to Scale

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**Las Vegas Wash**
**Drop Structure No. 4**
**Sections**

Sheet 2 of 3

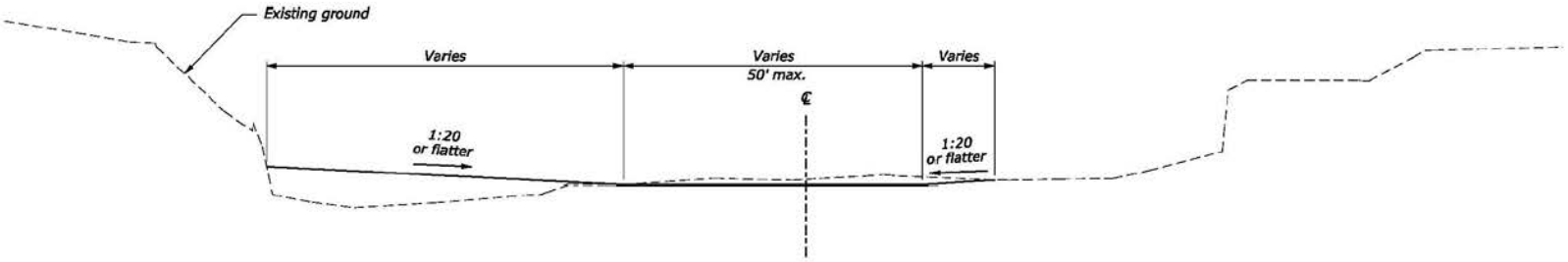
NPS PMIS NO.: 182444 DRAWING NO.: XXX-XXXXX

User: erin.jessee
8:06:41 AM N:\NV\lake1(10)\Roadway\Support_CFT\permits\Wetlands\TYP_DROP_4.dgn
7/2/2013

| REG | STATE | PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| PW | NV | NV FTNP LAKE 1(10) LAS VEGAS WASH DROP STRUCTURE No. 4 | C4 | C5 |

**NOTE:**

1. Ditch excavation widths to be be directed by the CO.




**Section E-E**
**Ditch Excavation**

Not to Scale

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**Las Vegas Wash**
**Ditch Excavation**
**Section**

Sheet 3 of 3

NPS PMIS NO.: 182444 DRAWING NO.: XXX-XXXXX

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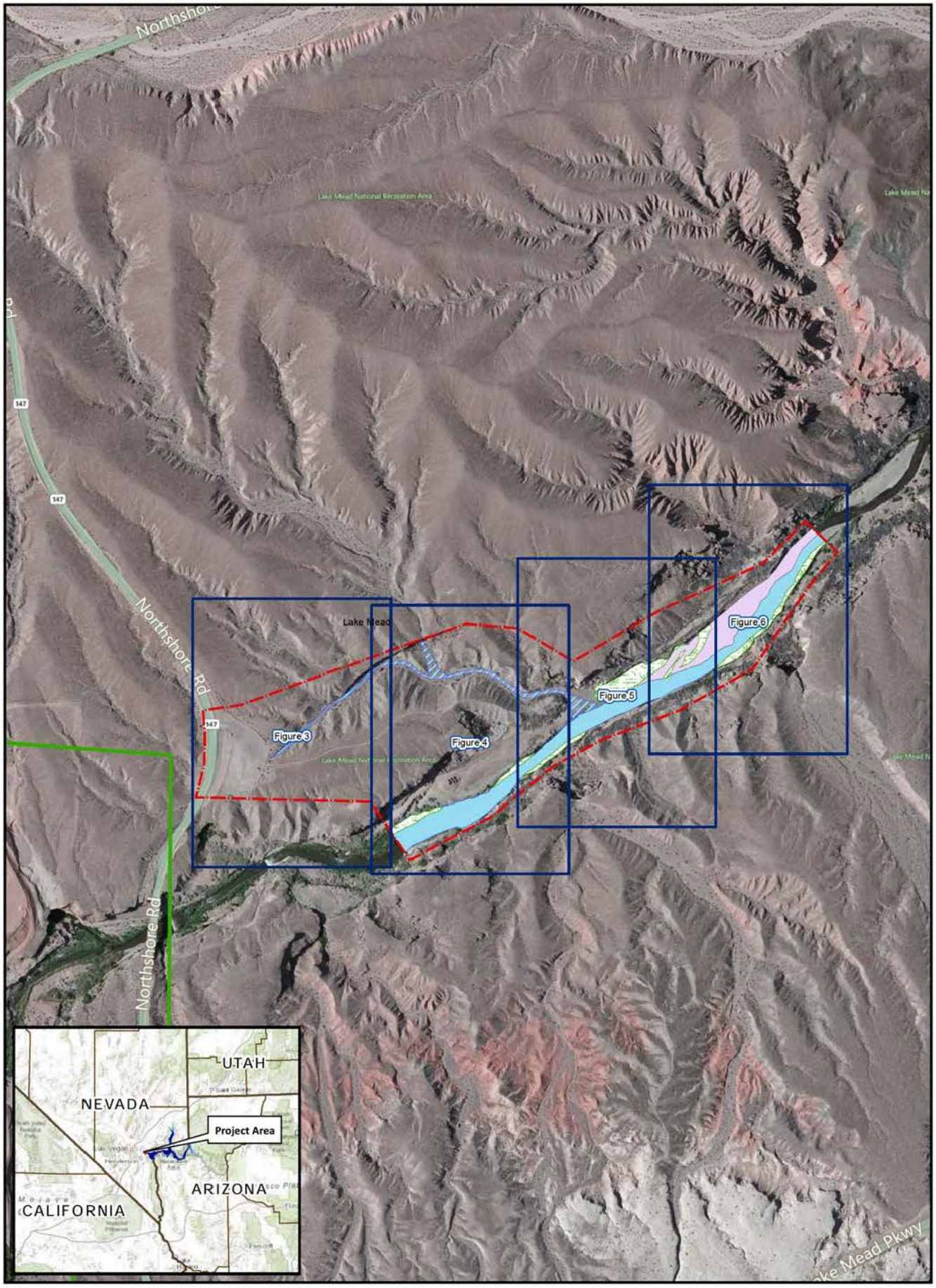
7/2/2013




Federal Highway Administration-
Central Federal Lands
Highway Division

Project: NV PRA 1(10) Las Vegas Wash Flow Regulation

- Map Key
- Survey Area
- Wetlands
- NRPW
- Floodplain
- Las Vegas Wash Low Flow Channel
- National Park Service Boundary

1 inch = 500 feet

0 255 510 Feet

0 0.05 0.1 Miles

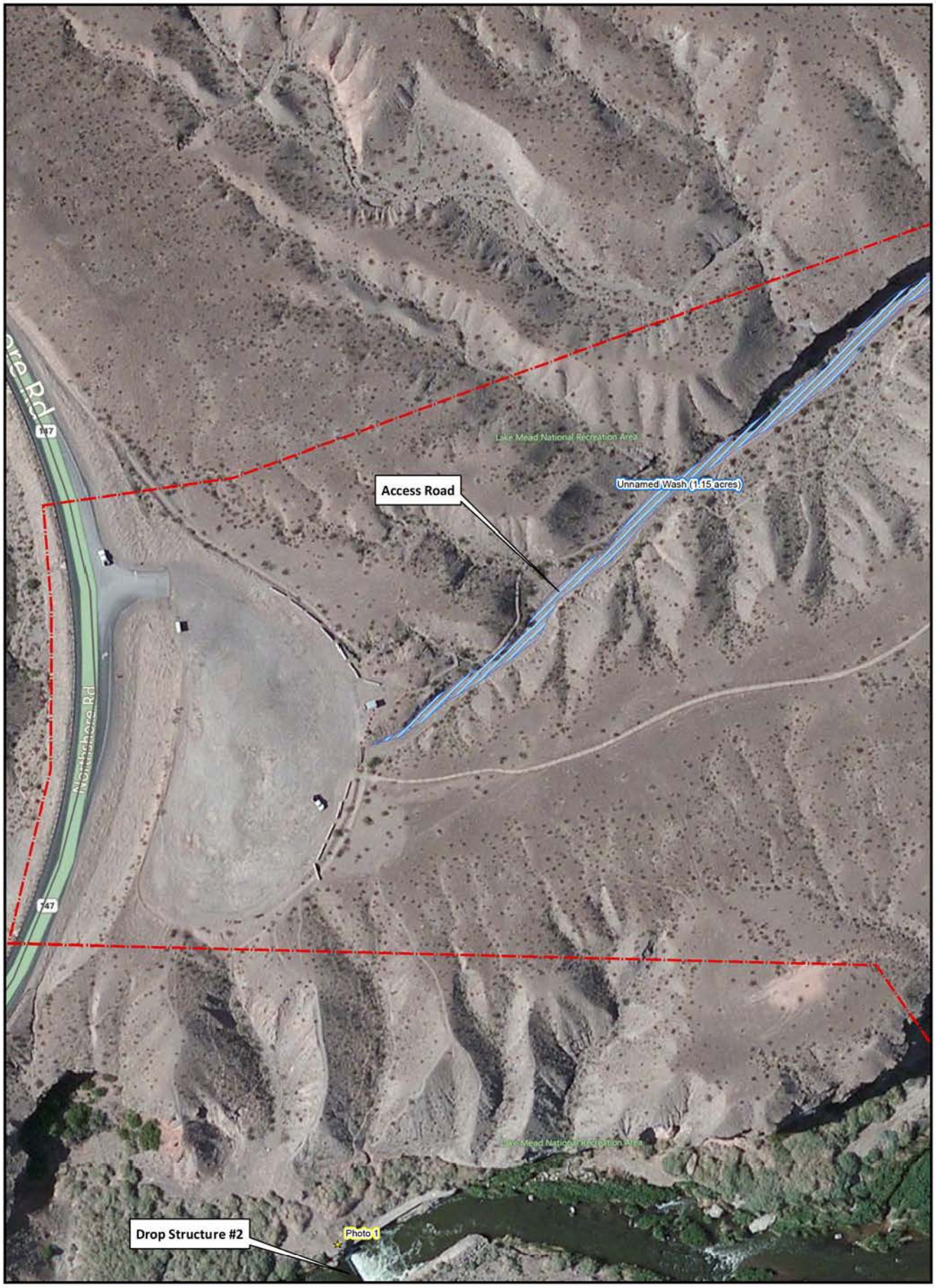
N

Background Imagery:
Bing Maps aerial imagery (c) 2010 Microsoft Corporation and its data suppliers

Figure 2:
Vicinity Map

Wetland, Waters of the U.S., and Riparian Survey

Date: April 2013




Federal Highway Administration-
Central Federal Lands
Highway Division

Project: NV PRA 1(10) Las Vegas Wash Flow Regulation

- Survey Area
- Photo Points
- Wetlands
- NRPW
- Floodplain
- Las Vegas Wash Low Flow Channel

1 inch = 100 feet

0 50 100 Feet

0 0.0125 0.025 Miles

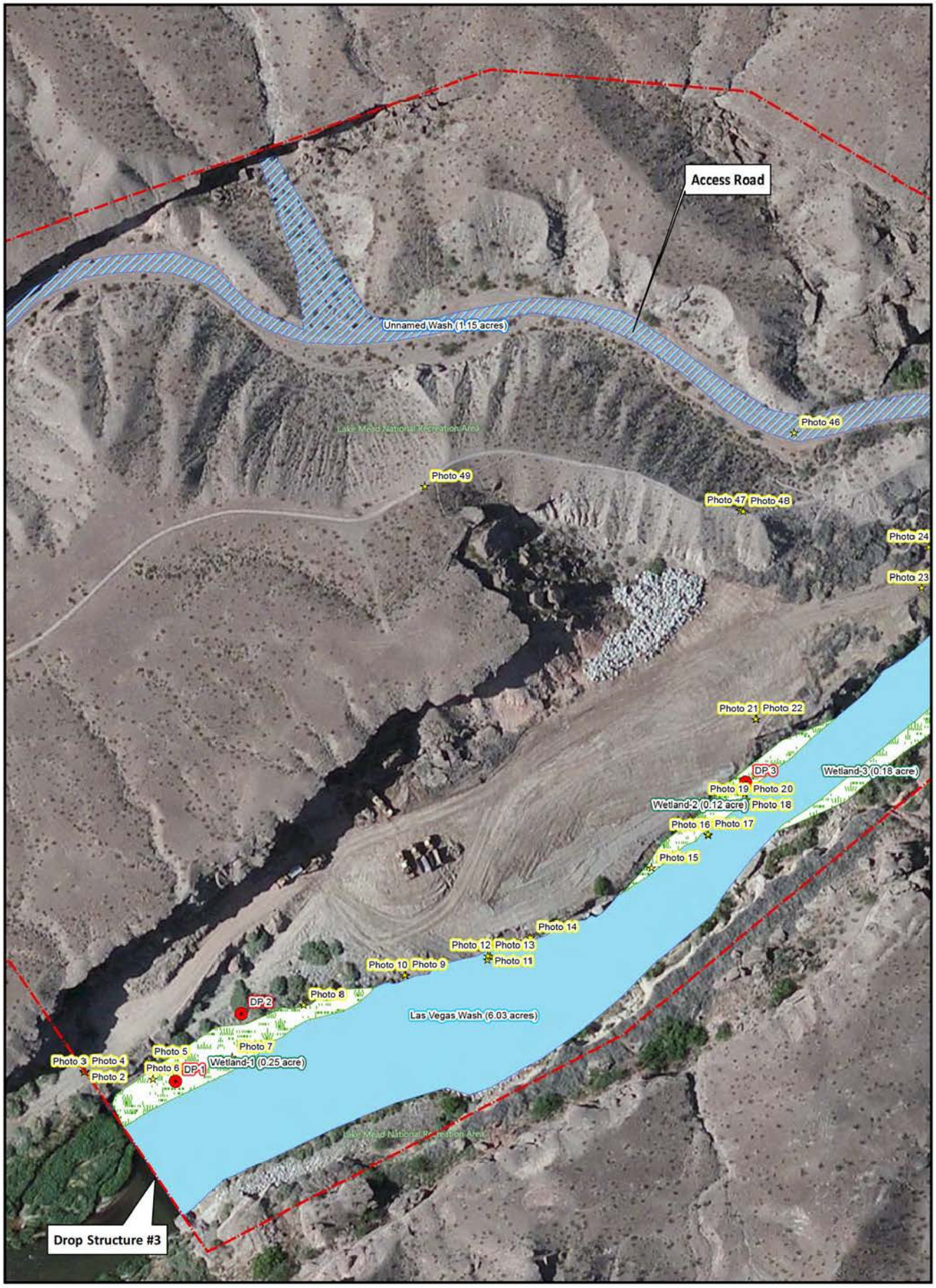
N

Background Imagery:
Bing Maps aerial imagery (c) 2010 Microsoft Corporation and its data suppliers

Figure 3:
Delineation Map 1

Wetland, Waters of the U.S., and Riparian Survey

Date: April 2013




Federal Highway Administration-
Central Federal Lands
Highway Division

Project: NV PRA 1(10) Las Vegas Wash Flow Regulation

- Survey Area
- Photo Points
- Data Points
- Wetlands
- NRPW
- Floodplain
- Las Vegas Wash Low Flow Channel

1 inch = 100 feet

0 50 100 Feet

0 0.0125 0.025 Miles

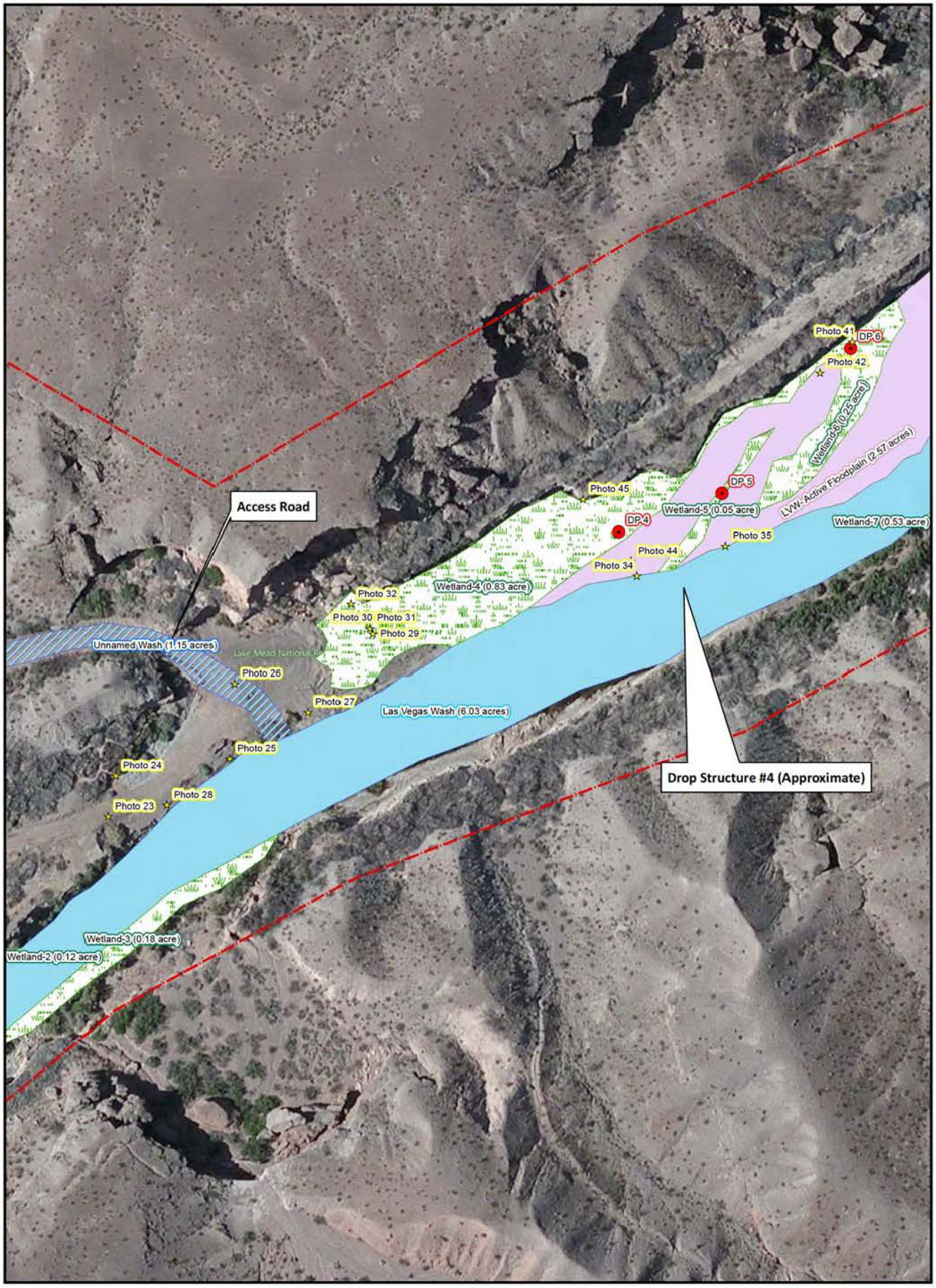
N

Background Imagery:
Bing Maps aerial imagery (c) 2010 Microsoft Corporation and its data suppliers

Figure 4:
Delineation Map 2

Wetland, Waters of the U.S., and Riparian Survey

Date: April 2013




Federal Highway Administration-
Central Federal Lands
Highway Division

Project: NV PRA 1(10) Las Vegas Wash Flow Regulation

- Survey Area
- Photo Points
- Data Points
- Wetlands
- NRPW
- Floodplain
- Las Vegas Wash Low Flow Channel

1 inch = 100 feet

0 50 100 Feet

0 0.0125 0.025 Miles

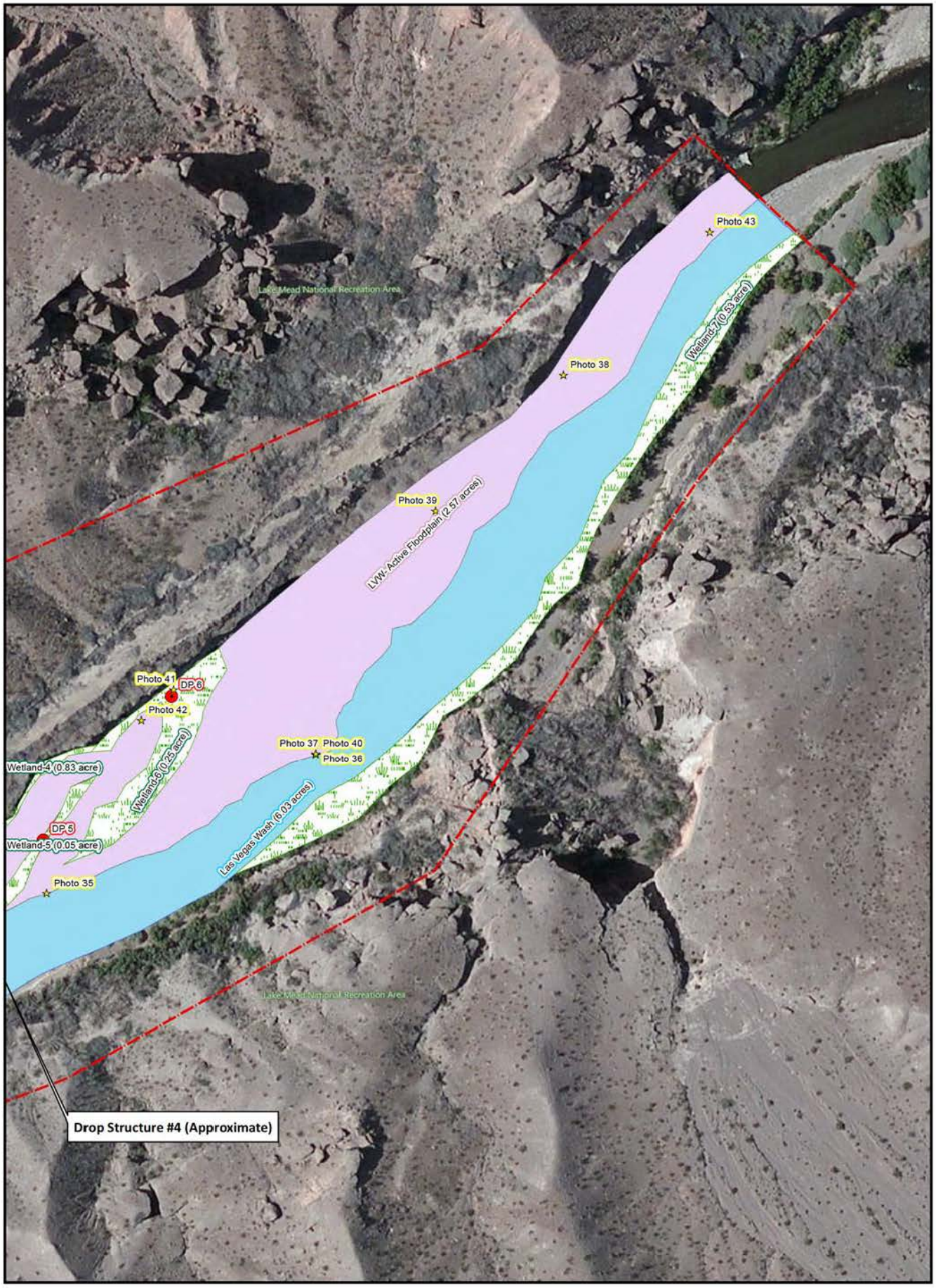
N

Background Imagery:
Bing Maps aerial imagery (c) 2010 Microsoft Corporation and its data suppliers

Figure 5:
Delineation Map 3

Wetland, Waters of the U.S., and Riparian Survey

Date: April 2013




Federal Highway Administration-
Central Federal Lands
Highway Division

Project: NV PRA 1(10) Las Vegas Wash Flow Regulation

- Survey Area
- Photo Points
- Data Points
- Wetlands
- NRPW
- Floodplain
- Las Vegas Wash Low Flow Channel

1 inch = 100 feet

0 50 100 Feet

0 0.0125 0.025 Miles

N

Background Imagery:
Bing Maps aerial imagery (c) 2010 Microsoft Corporation and its data suppliers

Figure 6:
Delineation Map 4

Wetland, Waters of the U.S., and Riparian Survey

Date: April 2013