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Archeological Survey of the Loop 20 Improvement Project Webb County, Texas

Christopher Ringstaff

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Report for Archeological Survey

Archeological Survey of the Loop 20 Improvement Project Webb County, Texas

Christopher Ringstaff, Principal Investigator,
Antiquities Permit No. 7289

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, and executed by FHWA and TxDOT.

Abstract

The proposed Loop 20 Project is a new location roadway in southwestern Webb County originating at the intersection of Loop 20 and US 59 and ending at the intersection of Loop 20 and International Blvd. The Area of Potential Effect (APE) has a calculated length of approximately 7.8 miles with a total area of approximately 378.2 acres. The project consists of approximately 7.4 miles of new Right of Way (ROW) immediately adjacent to the existing Loop 20 ROW. The typical existing ROW width is 175 feet with a proposed addition of 225 feet for a total width of 400 feet. The area of the existing ROW is approximately 165.5 acres with a proposed addition of 175 acres of new ROW for a total of 340.5 acres. The typical depth of impact will be approximately 3 feet for the roadway construction and 6 feet for culverts.

The Loop 20 Project was conducted by a TxDOT archeologists between May and June (May 27-29 and June 16-18), 2015. Utilizing GIS, the project area was divided into high and low probability areas which shaped field methods accordingly. A total of 42 shovel tests were excavated in the high probability areas. Several parcels of the APE were inaccessible due to denied of Right of Entry (ROE). These parcels have a combined area of approximately 69.9 acres. All but one are within the defined low probability area and will not require survey due to extensive land-use impacts. The area of denied ROE within the high probability area consists of approximately 5.9 acres and will require survey once access is acquired.

The survey identified five previously recorded sites designated 41WB357, 41WB358, 41WB359, 41WB360, and 41WB367. All of the sites consist of prehistoric lithic scatters of burned rock and debitage representing either open campsites, lithic procurement sites, or both. Only sites 41WB358 and 41WB367 provided temporal diagnostic artifacts suggesting a late Archaic age for both. The remaining sites are of unknown prehistoric age. Due to ROE agreements, no artifacts were collected during the survey. Three of the five sites, 41WB357, 41WB358, and 41WB359, are considered potentially eligible for listing to the NRHP and for designation as a SAL and will require additional investigation.

As for additional survey or testing, the aforementioned 5.9 acres with denied ROE and immediately south of 41WB359 will require survey. Based on observed features and the potential for (albeit shallow) burial, sites 41357, 358, and 359 are recommended for NRHP/ SAL testing. Due to the absence of features, lack of deposition, and prior construction impacts, no further work is recommended at the two remaining sites 41WB360 and 41WB367 as they both lack sufficient integrity of location, association, and materials to be able to address important questions of prehistory or history and are not considered eligible for listing to the NRHP and for designation as a SAL.

Project Identification

- **Date:** 7/7/2015
- **Date(s) of Survey:** May 27-29 and June 16-18, 2015
- **Archeological Survey Type:** Reconnaissance ☐ Intensive ☒
- **Report Version:** Draft ☐ **Final ☒**
- **Jurisdiction:** Federal ☒ State ☒
- **Texas Antiquities Permit Number:** 7289
- **District:** Laredo
- **County or Counties:** Webb
- **USGS Quadrangle(s):** Laredo East
- **Highway:** Loop 20 (Bob Bullock Loop)
- **CSJ:** 0086-14-058
- **Report Author(s):** Christopher Ringstaff
- **Principal Investigator:** Christopher Ringstaff

Texas Historical Commission Approval

Signature Date

Project Description

Project Type: Roadway Widening requiring New ROW

Total Project Impact Acreage: 378.2 acres **New Right of Way (ROW) Acreage:** 175.0 acres

Area of Denied Right of Entry: 69.9 acres **Easement Acreage:** 0.0 acres

Area of Pedestrian Survey: 105.1 acres

Project Description Area of Potential Effects (APE):

The proposed Loop 20 Project is a new location roadway in southwestern Webb County originating at the intersection of Loop 20 and US 59 and ending at the intersection of Loop 20 and International Blvd. The Area of Potential Effect (APE) has a calculated length of approximately 7.8 miles. The project consists of approximately 7.4 miles of new Right of Way (ROW) immediately adjacent to the existing Loop 20 ROW. The typical existing ROW width is 175 feet with a proposed addition of 225 feet for a total width of 400 feet. The area of the existing ROW is approximately 203.2 acres with a proposed addition of 175 acres of new ROW for a total of 378.2 acres. The typical depth of impact will be approximately 3 feet for the roadway construction and 6 feet for culverts.

Project Area Ownership:

The proposed project is a widening of the existing Loop 20. All areas of proposed new ROW are presently privately owned. Existing is owned by TxDOT (State of Texas).

Project Setting

Topography:

The proposed APE is located on the rolling uplands of the Rio Grande in western Rio Grande Plains Physigraphic sub-region. Toward the southern terminus of the APE, the Chacon Creek is a major tributary that drains the eastern margin of the southern APE before turning west and intersecting the southern terminus.

Geology:

A GIS overlay analysis using the Bureau of Economic Geology Geologic Atlas of Texas (1:250,000 Laredo Sheet) depicts almost the entirety of the APE as Eocene Laredo Formation (Figure 2) although the northern APE is mapped as Quaternary Uvalde Gravels and the southern terminus as Holocene Alluvium and Quaternary Terrace Deposits (Pleistocene).

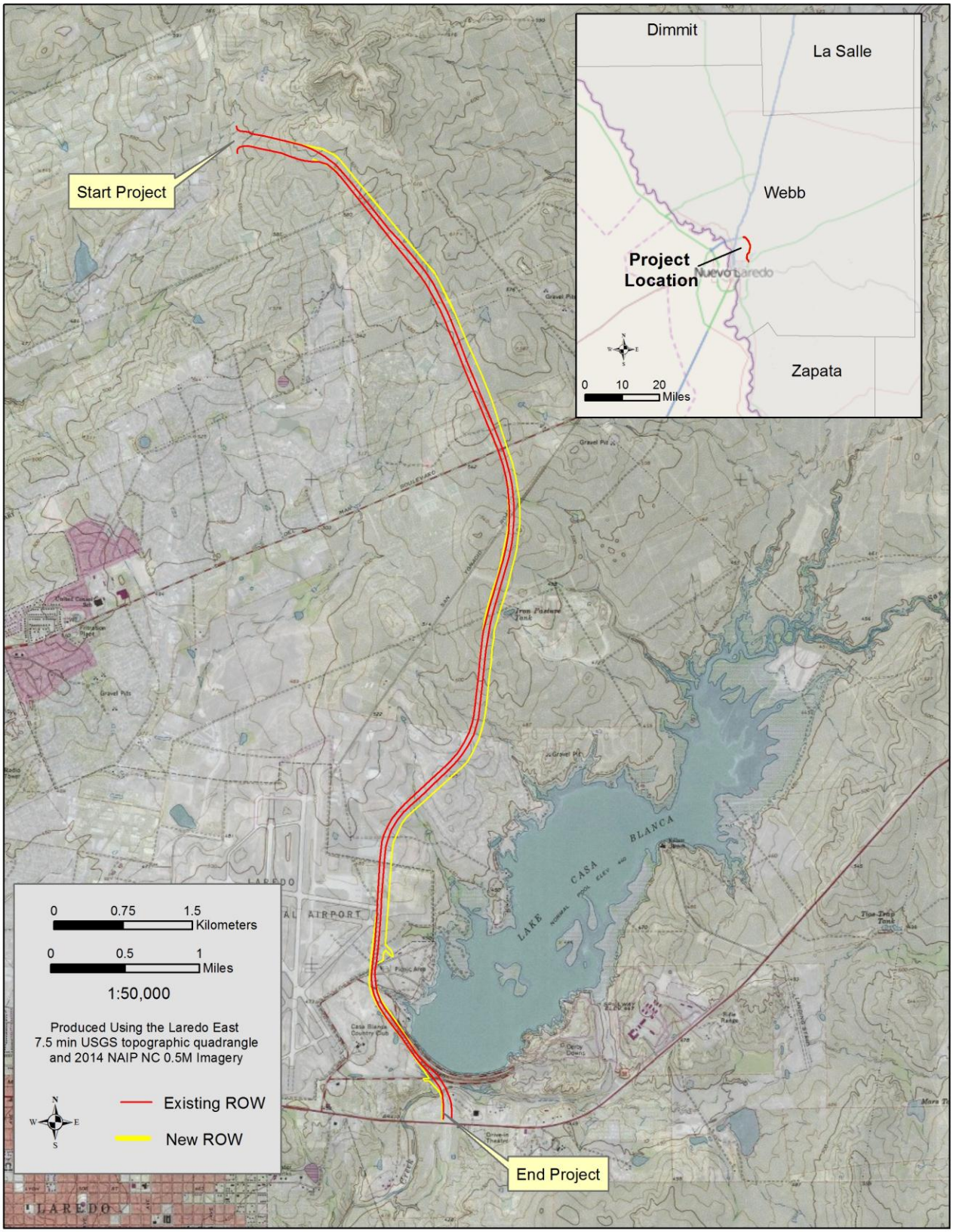

Figure 1. Loop 20 Improvement Project Location Map, Webb County, Texas

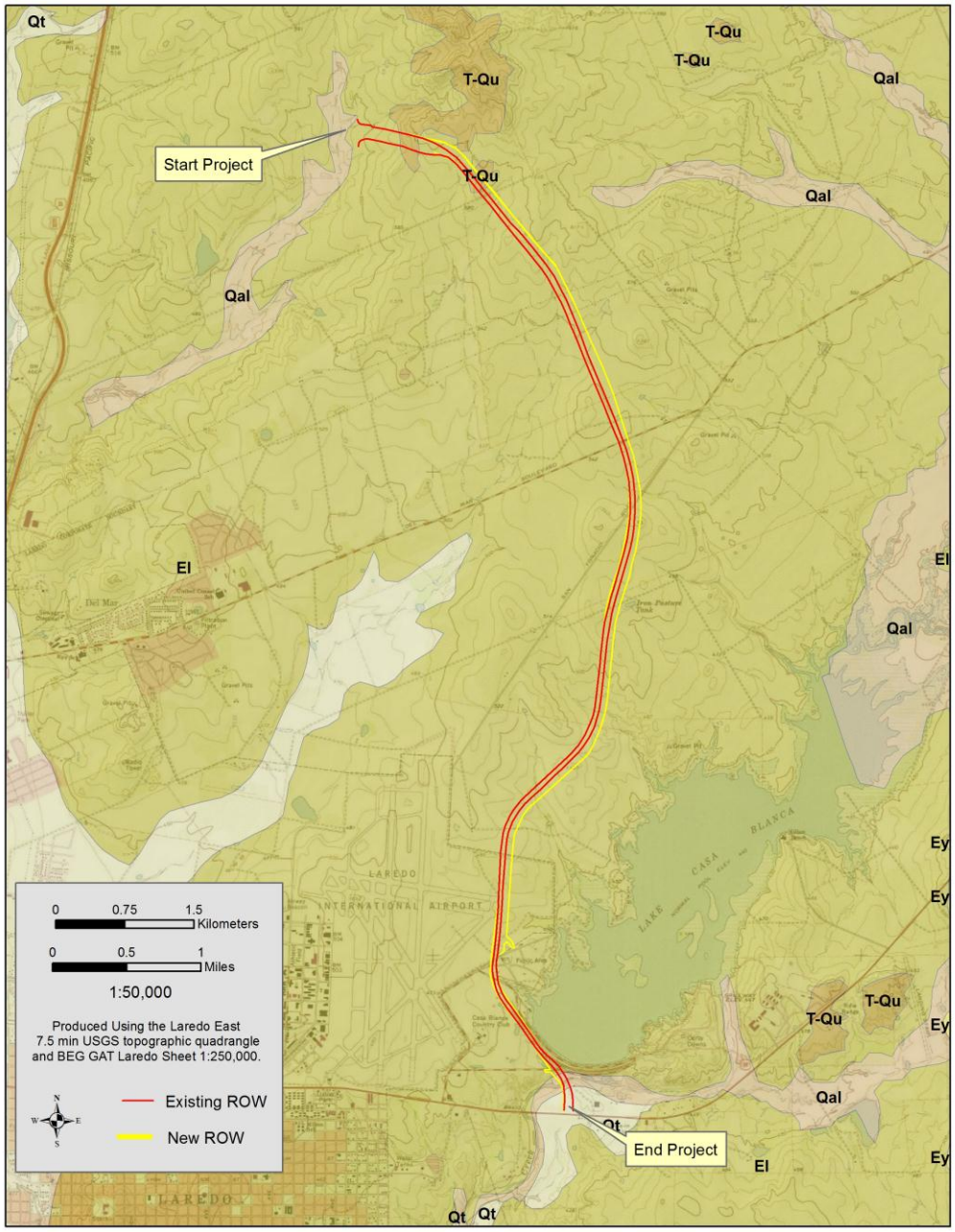

Figure 2. Loop 20 Project Area Geology Map, Webb County, Texas

Soils: A Geographic Information System (GIS) overlay analysis using the United States Department of Agriculture (USDA) State Soil Survey Geographic Database (STATSGO) maps revealed soils in the project area are dominated by Copita fine sandy loam 0-3 percent slopes. The south-central APE is mapped as Maverick-Catarina complex gently rolling and Verick fine sandy loam 1-5 percent slopes is mapped in the northern APE (Figure 3).

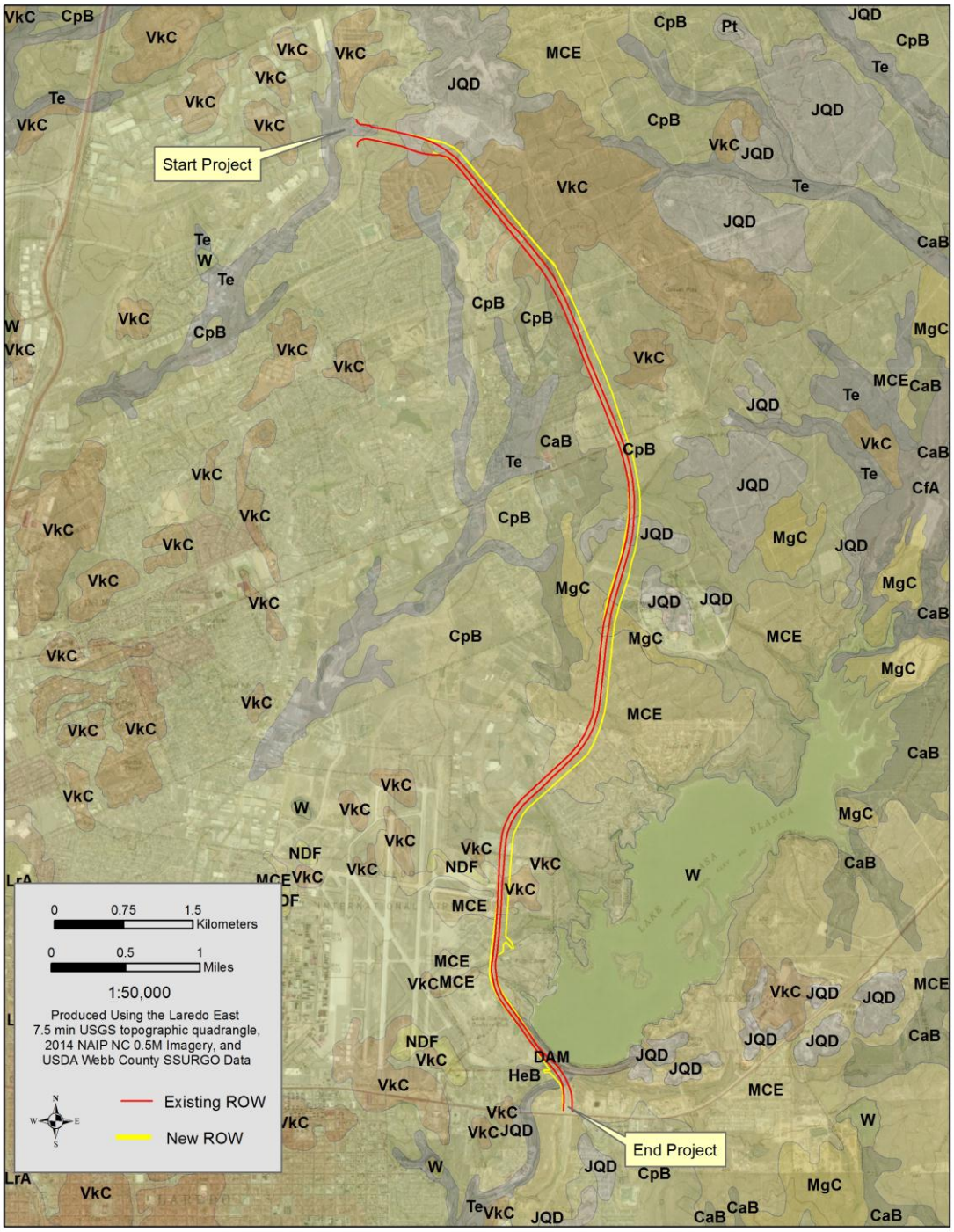

Figure 3. Project Area Soils across the Loop 20 APE

Land Use: Land use across areas of proposed new ROW in the Project Area consists of ranchland, and suburban development.

Vegetation: Vegetation across the project area consists largely of native brushland as well post-clearing secondary growth mesquite forests with brush and cacti. Many areas recently cleared or under cultivation are completely devoid of vegetation.

Estimated Ground Surface Visibility: Overall good to excellent 60-100 %

Previous Investigations and Known Archeological Sites:

A record search of the Texas Historical Commissions Archeological Sites Atlas (Atlas) was conducted and revealed five recorded archeological sites within the APE and nine recorded sites within one kilometer (0.62 mile) of the APE. In addition eight archeological surveys have been conducted within the APE or within one kilometer of the APE (see Table 1).

A GIS query utilizing data using the Texas Historic Overlay (THO) revealed several maps that provided sufficient large-scale project-level resolution to be useful for the background review. These maps include:

1. Laredo, Texas 1906 1:63,000 Soils Map
2. Laredo East, Texas 1942 USACE 1:62,000 topographic quadrangle

A subsequent overlay analysis using the above listed maps and the vector design schematic revealed no historic cemeteries, homesteads, or historic features within the proposed APE. In addition to the maps listed above, a review of the 1936 Highway Map of Webb County did not indicate any historic cemeteries, homesteads, or historic features within the proposed APE.

Organization/ Survey Date	Permit	Site Number	Site Type	Project Distance from APE (m)/ Site Distance from APE
Avocational/ January 1977	N/A	41WB9	Multi-component Prehistoric and Historic	Site located 250 meters west of southern terminus
TWDB/ January 1989	MOU	41WB160	Prehistoric Lithic Procurement Site and Open Campsite	Site located 100 meters west of southern terminus
TxDOT/ May 1992	MOU	41WB357	Prehistoric Lithic Procurement Site and Open Campsite	Within APE
TxDOT/ May 1992	MOU	41WB358	Prehistoric Lithic Procurement Site and Open Campsite	Within APE
TxDOT/ May 1992 ECOMM/ August 2007	MOU	41WB359	Prehistoric Lithic Procurement Site and Open Campsite	Within APE
Mariah Associates/ June 1992	1124	41WB363	Prehistoric Lithic Procurement Site and Open Campsite	Project area and site 950m east of APE

AR Consultants/ December 2006	N/A	41WB656	Lithic Procurement	Site located 330 meters north of northern APE
TxDOT/ May 1992 ECOMM/ August 2007	4612	41WB360	Lithic Procurement	Within APE
	N/A	41WB366	Prehistoric Lithic Scatter	Project area and site 540m west of eastern APE
TPWD June 1992	N/A	41WB367	Unknown Prehistoric Lithic Scatter	Within APE? Based on TPWD map, the site was completely destroyed by Loop 20 Construction.
Hicks and Company January 2006	3989	41WB645	Unknown Prehistoric Lithic Scatter	Project area and site 500m east of southern APE
PBS&J/ June 2008	N/A	41WB670	Historic Trash Scatter	Site 340m east of southern APE
PBS&J/ June 2008	N/A	41WB671	Historic Dump	Site 450m east of southern APE
PBS&J/ June 2008	N/A	41WB672	Unknown Prehistoric Lithic Scatter	Site 340m east of southern APE

Table 1. Previous Investigations and recorded sites within one kilometrer of the APE.

Survey Methods

Surveyors: Christopher Ringstaff and Mike Graham.

The survey consisted of a pedestrian survey with shovel testing. Due to very high Spring rainfall, vegetation was quite dense. Despite this, overall surface visibility was good at ground level. As detailed below, the project area was broken up into low and moderate-high probability areas. All moderate-high probability survey areas were examined by pedestrian survey and, where soil presence/depth allowed, shovel testing. All shovel tests were plotted using GPS and sediments screened through ¼'' inch hardware cloth. Since the land owners requested no collection, the survey was conducted as a no collection survey.

Project Area Impacts and Considerations to Field Methods

Prior to the survey, GIS overlay analysis was conducted to identify high and low probability areas. This was accomplished using raster and vector data layers including, aerial photography (for land use/ land cover), geology (BEG-GAT), soils (STATSGO), Atlas, THO, and topography. Considering the majority of the project is located on an upland setting with Eocene sandstone substrates, landuse/ land cover proved to be the most significant factor in evaluating the potential for intact archeological sites.

As shown in Figures 4a and 4b below, encroaching suburban sprawl and associated residential, commercial, and industrial land clearing is often catastrophically damaging to surficial or shallowly buried archeological sites in these thin soil upland settings.

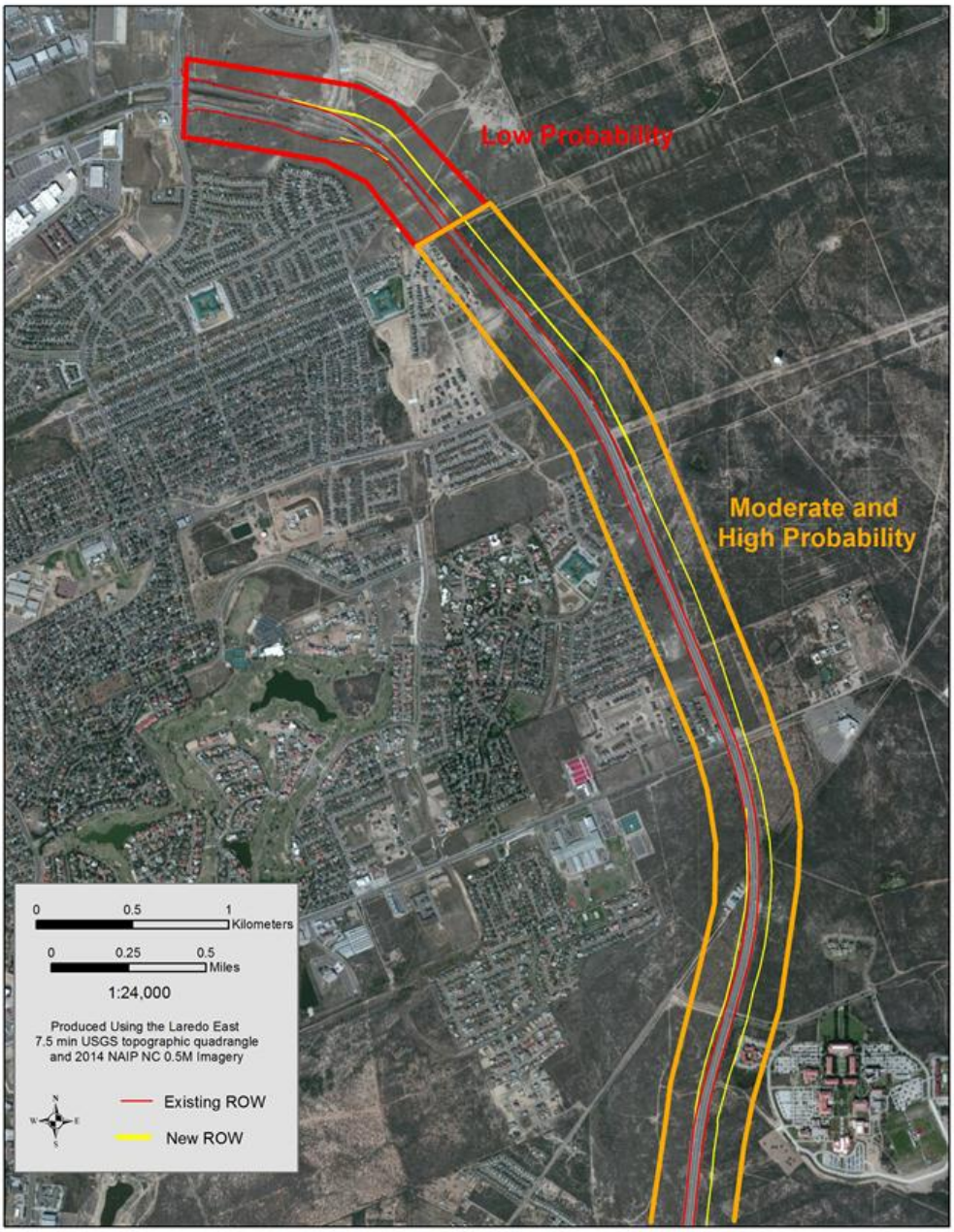

Figure 4a. Designated Low and Moderate-High Probability Areas in Northern APE.

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As seen in Figure 4a, extensive land-use clearing extends approximately one mile south of the northern terminus with an approximate area of 55 acres. Likewise, Figure 4b reveals extensive land-use clearing extending approximately 2.9 miles north of the southern terminus with an approximate area 117 acres. These segments are designated as Low Probability Areas (LPA) and include both existing and new ROW. The remaining 3.9-miles of the APE exhibits areas of limited clearing and areas containing un-cleared potentially old-growth brush country vegetation or at least old secondary growth vegetation based on the botanical biodiversity (Mike Graham personal communication).

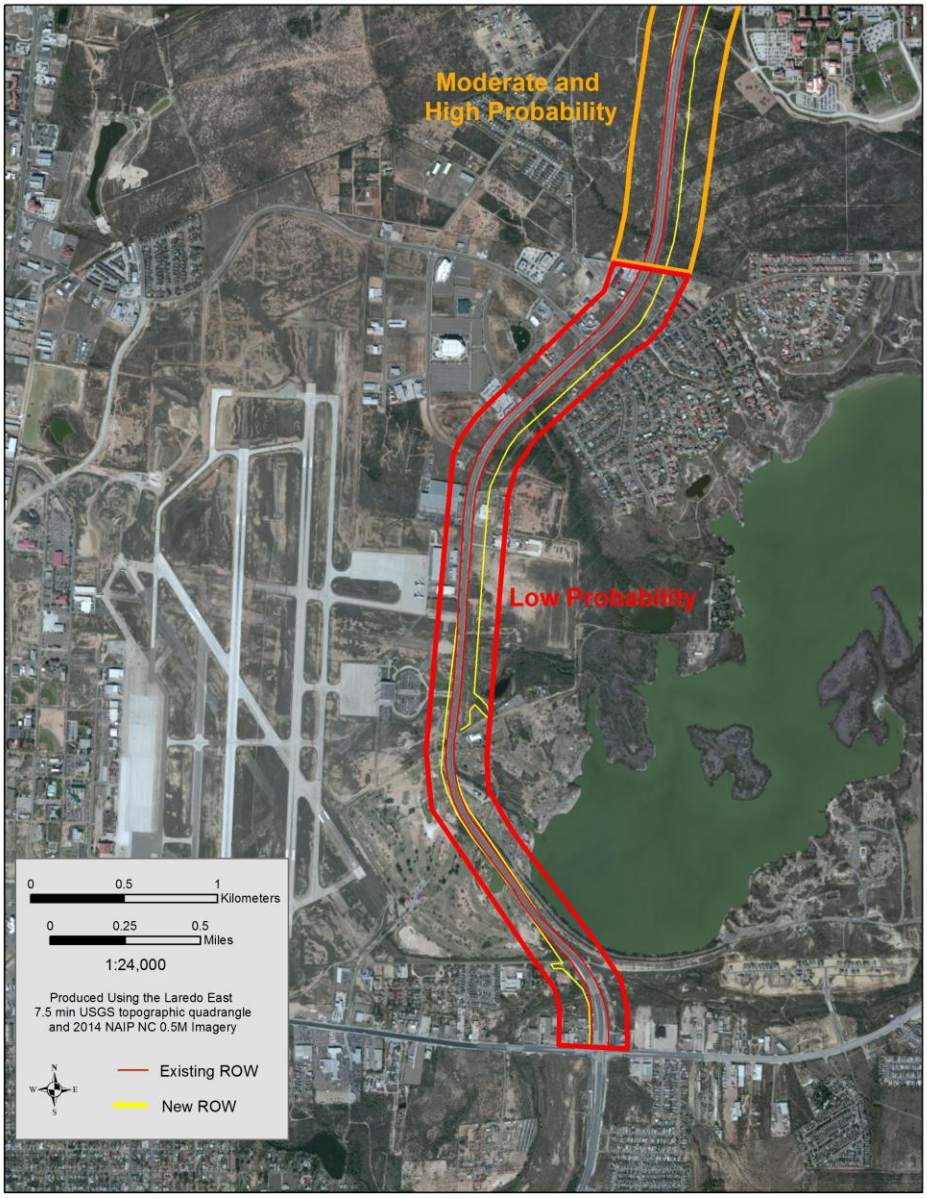


Figure 4b. Designated Low and Moderate-High Probability Areas in Southern APE.

Within the segments designated Moderate-High Probability Areas (M-HPA) shown in Figures 4a and 4b, the 81.8-acre 175-foot existing ROW has been subtracted from the acreage calculation of 186.9 for an area of 105.1 acres subjected to intensive survey. As calculated in Table 3, the 81.8 acres of section of existing ROW has been excluded from the M-HPA. Within the M-HPA, approximately 70.1 acres of surface gravels (Figure 5) were excluded from shovel testing which is considered as justifiable deviation from the CTA Survey Standards for intensive archeological survey subsurface testing. When factoring in the excluded areas such as low probability and gravels, the sub-surface testing meets the THC/CTA Survey Standard (see Table 3).

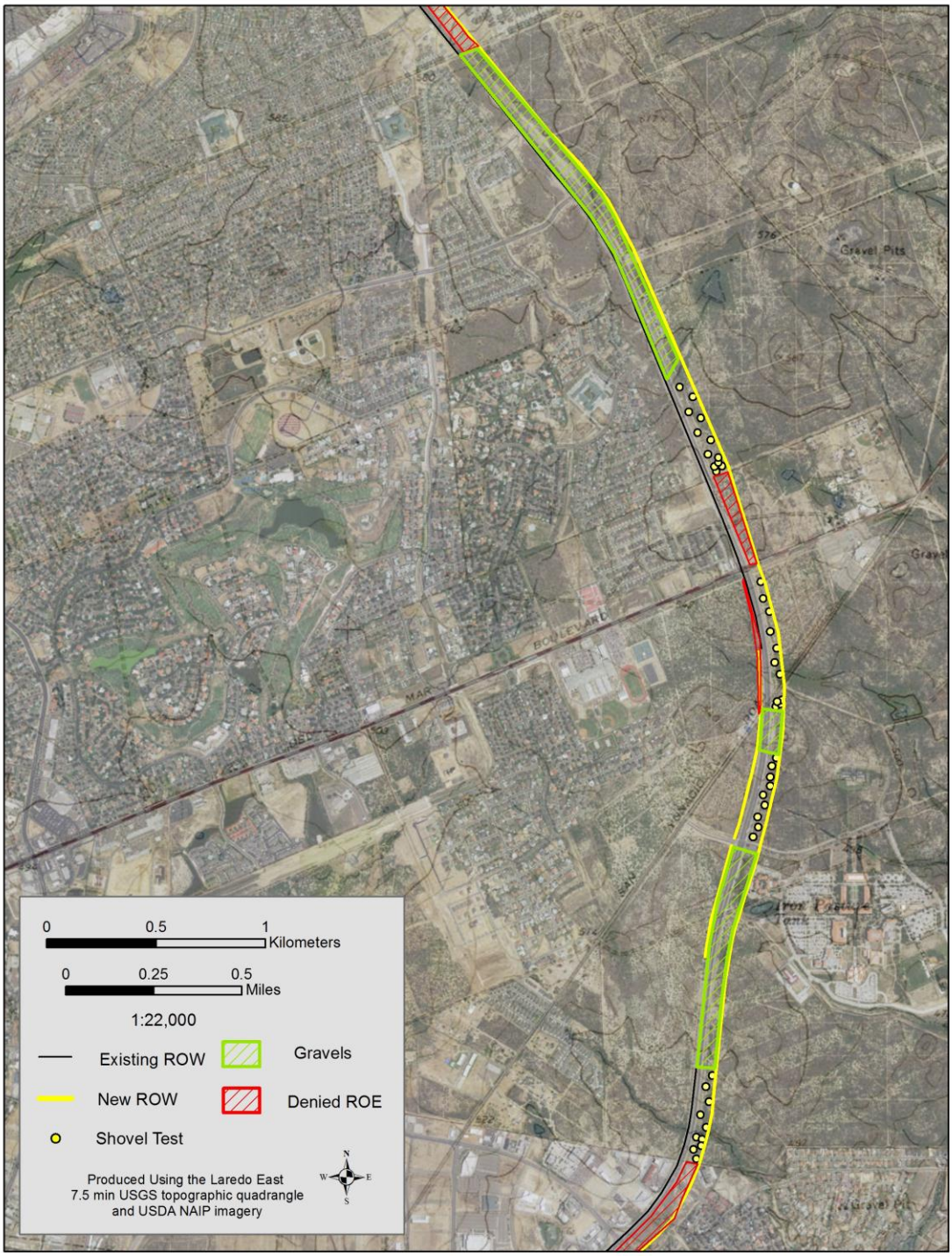


Figure 5. Delineated areas of Gravel across the Moderate-High Probability Areas Surveyed.

Collection and Curation: **NO ☒** YES ☐ If yes, specify facility

	Low Probability Area (Excluded from Pedestrian Survey)	Existing ROW in High Probability Area (Excluded from Pedestrian Survey)	High Probability Area subjected to shovel testing	Areas of Gravel in High Probability Area (Excluded from Shovel Testing)	Total Shovel Tests per Acre/Mile
Shovel Tests	0	0	42	0	
Acreage	172	81.8	35	70.1	1.2/acre
Linear Distance	4.0	3.8	1.1	2.7	17.6/mile (@2.25 x100 ft)

Table 3. Subsurface Probes across High Probability Area

Right of Entry Issues: Seven parcels of the APE were inaccessible due to denied of Right of Entry (ROE) totalling 75.8 acres. Of this acreage, 69.9 acres are located in the LPA. The remaining 5.9 acres is within the area designated as HPA and will require survey once ROE is granted.

Survey Results

Project Area Description: The entirety of the proposed project area is located on the uplands of the Chacon Creek Watershed East of the Rio Grande. This area is dominated by thin eolian and colluvial soils of varying thickness ranging from absent to a nearly a meter in thickness. As such, shovel testing and was employed despite the overall good surface visibility. Historic land use has impacted many of the sites observed to varying degrees although a few areas revealed buried cultural materials.

APE Integrity: Despite the broad ubiquitious upland lithic scatter setting often found in the Region, the potential for intact archeological features and components is typically low. The causes vary from historic brush clearing, ranching, mining, and oil and gas exploration. However, on occasion intact features are found in upland setting that have escaped land-use impacts.

Site Descriptions

During the survey, a total of five previously recorded sites were revisited. The description of each site is provided below and gives an overview of the site type, size, cultural materials observed, site

physiographic context and impacts, and a recommendation whether additional work is warranted. Associated site maps and shovel test data for each site can be found in Appendix A and B of this report.

41WB357

The site is a prehistoric open campsite marked by a scatter of chipped stone artifacts and scattered/ clustered burned rock. These materials are primarily found in the southern portion of the site adjacent to an unnamed southeast flowing tributary of the Chacon Creek. Outcropping gravel in the northern portion of the site functioned as a lithic procurement area (Figure 6) and is largely devoid of burned rock or late stage chipping debris. However, since the overall scatter of lithic artifacts is continuous from north to south, the site is delineated as a single site with two functionally different sub areas. Clearing impacts as well as an abandoned gravel pit are greater in central and northern portions of the site and already thin soils in this area are further denuded due to mechanical removal and loss of anchoring vegetation.

In terms of its physiographic setting, the site is located on the adjacent uplands northwest of the Chacon Creek. The drainage dissects Eocene Laredo Formation exposing siliceous gravel, sandstone, caliche, conglomerate, and unconsolidated sand, silt, and clay. Despite areas of thick brush, surface visibility was typically good. The southern portion of the site has relatively thin sandy soils with the mineral fraction likely localized alluvial and/or colluvial in origin. The site was originally recorded by TxDOT in 1992 and measures approximately 810 meters north-south by 280 meters east-west. As shown in Appendix A, the site has been redelineated within the new ROW extending approximately 380 meters to north and approximately 110 meters to the east in the southeast corner.

A total of ten shovel tests were excavated across the site (see Appendix B). Three of the shovel tests excavated in the southern portion of the site yielded fire-cracked rock (FCR). Surficial artifacts noted at the site include chipped stone flaking debris, failed stage bifaces, tested cobbles, scattered and clustered burned rock. The western portion of the site has procurement debris. Cores, stage biface failures and discards, flaking debris, and tested cobbles. Two burned rock clusters (features) were noted in the southern portion of the site. The first, designated Feature 1, is a surficial cluster of large burned chert cobbles (Figure 7) measureing approximately 1.5 by 2 meters in size. The second feature, Feature 2, was discovered in an front-end loader blade scar adjacent to the fence line access road. The feature was composed of tightly clustered burned gravel with sediment staining and charcoal (Figures 8 and 9). Due to a non-collection clause in the Right of Entry, the feature was left in place for potential further work upon New ROW acquisition. Hence, the dimensions of Feature 2 are presently unknown.

Based on the recorded impacts and the results of the survey, the northern portion of the site within the proposed APE would likely lack sufficient integrity of location, association, and materials to be able to address important questions of prehistory or history (36CFR60.4) and no additional work is recommended in those areas. However, further work is recommended in the southern portion of the site where Features 1 and 2 were recorded.

Figure 6. Upland gravels at 41WB357.

Figure 7. Feature 1 in southern portion of 41WB357. (shovel in foreground is 150 cm for scale)

Figure 8. Front-end loader scar exposing Feature 2.

Figure 9. Close-up Feature 2, 41WB357.

41WB358

Site 41WB358 is a lithic procurement site and prehistoric open campsite marked by scattered chipped stone artifacts and scattered and clustered burned rock. The cultural material density is highest in the central portion of the site. Outcropping gravel on a hilltop in the central portion of the site functioned as a lithic procurement area (Figure 10) with burned rock features and scatters found on the southern and northern slopes of the hill. However, the overall scatter of lithic artifacts is continuous from north to south. Landuse impacts, possibly small scale quarrying, were observed in central portions of the site and already thin soils in this area are further denuded due to slopewash erosion.

In terms of its physiographic setting, the site is located on the adjacent uplands northwest of the Chacon Creek. The drainage dissects Eocene Laredo Formation exposing siliceous gravel, sandstone, caliche, conglomerate, and unconsolidated sand, silt, and clay. Despite areas of thick brush, surface visibility was typically good. The southern and northern portions of the site have thin sandy soils with the mineral fraction likely colluvial in origin. The site was originally recorded by TxDOT in 1992 and measures approximately 1050 meters north-south by 410 meters east-west. As shown in Appendix A, the site has not been re-delineated within the proposed new ROW.

As shown in Appendix B, a total of seventeen shovel tests were excavated across the site. Fifteen were sterile and two yielded FCR. Both positive shovel tests were located in shallow soils near Feature 2. Surficial artifacts noted at the site include chipped stone flaking debris, a complete *Tortugas* point (Figure 11), failed stage bifaces, tested cobbles, scattered and clustered burned rock. The central portion of the site has procurement debris including cores, stage biface failures and discards, flaking debris, and tested cobbles. Two burned rock features were noted in the central portion of the site. The first, designated Feature 1, is a semi-circular surficial cluster of large burned chert cobbles (Figure 12) with an approximate diameter of 80cm located on the southern slope of the central hilltop. The cobbles appear largely intact and not heat fractured. On the northern slope, Feature 2, was observed and is composed of a cluster of angular fractured burned chert gravel approximately 1.6 by 1.1 meters in size.

Based on the recorded impacts and the results of the survey, the central portion of the site within the proposed APE would likely lack sufficient integrity of location, association, and materials to be able to address important questions of prehistory or history (36CFR60.4) and no additional work is recommended in those areas. However, further work is recommended in areas of thin soils north and south of the central hilltop where Features 1 and 2 were recorded**.**

41WB359

Much like 41WB357 and 358, site 41WB359 is a lithic procurement site and prehistoric open campsite marked by scattered chipped stone artifacts and scattered/ clustered burned rock. The cultural material density is highest in the northern portion of the site where lithic procurement is evident. The northern terminus of the site is marked by a cleared transmission line corridor that has been scraped to the substrate with outcropping gravel extending into the central portion of the site. (see Appendix A).

Figure 10. Surface gravels overlying Eocene substrate on central hilltop at 41WB358.

Figure 11. *Tortugas* point in central portion of 41WB358.

Figure 12. Feature 2 at 41WB358.

The physiographic setting of 41WB359, is located on the adjacent uplands northwest of the Chacon Creek. This portion of the APE is near Quaternary Uvalde Gravel outcrops immediately to the north that drape thick gravels into the APE. The drainage basin itself dissects Eocene Laredo Formation exposing sandstone, caliche, conglomerate, and unconsolidated sand, silt, and clay. Despite areas of thick brush, surface visibility was typically good (Figure 13) The northern portion of the site is gravel draped substrate with the southern and central portions of the site exhibiting thin sandy soils. Like 41WB357 and 358, the site was originally recorded by TxDOT in 1992. The site, as recorded, measures approximately 1130 meters north-south by 390 meters east-west. It is worthy to note that the 1992 site form map clearly differs from the digitized Atlas plotting and both plots are shown on the site map presented in Appendix A. Based on the survey, the site has been re-delineated within the proposed new ROW extending approximately 150 meters to the north and 85 meters to the east (see Appendix A).

A total of twelve shovel tests were excavated across the site. Three shovel tests excavated in the southern part of the site near Features 1 and 2 (described below) yielded FCR (see Appendix B). Surficial artifacts noted at the site include chipped stone flaking debris, a, failed stage bifaces, tested cobbles, scattered and clustered burned rock. The northern portion of the site has procurement debris including cores, stage biface failures and discards, flaking debris, and tested cobbles. Two burned rock clusters (features) were noted in the southern portion of the site. The first, designated Feature 1, is a sizable surficial cluster of highly fractured burned chert cobbles (Figure 14) with an approximate size of 2,5 by 3 meters. A second feature, Feature 2, was observed approximately 20 meters to the northeast and

Figure 13. Typical setting at 41WB359 note thorny vegetation and good surface visibility.

Figure 14. Close-up of burned chert cluster designated Feature 1 at 41WB359.

is composed of a cluster of angular fractured burned chert gravel approximately 2.0 by 1.5 meters in size. In addition to scattered chipped stone debitage in the areas of Feature 1 and 2, near Feature 2, a small prismatic blade core was indentified (Figure 15). Otherwise, no other chipped stone tools were observed.

Based on the results of the survey, the northern central portion of the site within the proposed APE would likely lack sufficient integrity of location, association, and materials to be able to address important questions of prehistory or history (36CFR60.4) and no additional work is recommended in those areas. However, further work is recommended in the southern portion of the site where Features 1 and 2 were recorded.

Figure 15. Small prismatic blade core from Feature 2 at 41WB359.

41WB360

Site 41WB360 is a lithic procurement site prehistoric marked by a scatter of chipped stone artifacts amongst a broad expanse of Uvalde Gravel. The physiographic setting consists of rolling uplands northwest of the Chacon Creek. The site was originally recorded by TxDOT in 1992 and measures approximately 1170 meters north-south by 310 meters east-west. As shown in Appendix A, the site has been re-delineated within the proposed new ROW extending south-eastward approximately 350 meters and eastwards approximately 115 meters.

No shovel tests were necessary in this environment due to surficial Quaternary gravel across the entirety of the site. Artifacts observed across the site are typical of lithic procurement debris including cores, stage biface failures and discards, flaking debris, and tested cobbles. Based on the results of the survey, the central portion of the site within the proposed APE would likely lack sufficient integrity of location, association, and materials to be able to address important questions of prehistory or history (36CFR60.4) and no additional work is recommended at the site as presently delineated.

Figure 16. Gravel outcrop at 41WB360 note thorny brush and good surface visibility.

41WB367

Recorded in June 1992, 41WB369 was recorded as being located "In Lake Casa Blanca State Park 30m west of the swimming pool and 120 m NE of the park entrance, between the gravel road to El Ranchito and the main paved park entrance road". Recorded prior to the construction of Loop 20, this description, site form drawings, and plotted location on the Atlas clearly places the site in center of the the now Loop 20 ROW (see Appendix A). The site was described a prehistoric lithic scatter approximately 40 meters in size. Based on the results of the survey, this once surface scatter obliterated by the Loop 20 ROW and now within the proposed APE lacks sufficient integrity of location, association, and materials to be able to address important questions of prehistory or history (36CFR60.4) and no additional work is recommended..

Summary and Recommendations

A TxDOT archeologist evaluated the potential for the proposed undertaking to affect archeological historic properties (36 CFR 800.16(l)) or State Archeological Landmarks (13 TAC 26.12) in the area of potential effects (APE). The survey was conducted by TxDOT archeologists between May and June, 2015. Utilizing GIS, the project area was divided into high and low probability areas in which shaped field methods accordingly. A total of 42 shovel tests were excavated in the high probability areas that

had any appreciable soil development. During the survey, TxDOT revisited each of the recorded sites all consisting of prehistoric open campsitesand/ or lithic procurement sites.

The survey identified five previously recorded sites designated 41WB357, 41WB358, 41WB359, 41WB360, and 41WB367. Three of the five sites, 41WB357, 41WB358, and 41WB359, are considered potentially eligible for listing to the NRHP and for designation as a SAL (13 TAC 26.8) and will require additional investigation. The remaining two sites, 41WB360 and 41WB367 consist of an upland lithic procurement site with no apparent features and a road construction obliterated site (respectively). Both lack sufficient integrity of location, association, and materials to be able to address important questions of prehistory or history and is not considered eligible for listing to the NRHP (36 CFR 60.4) or for designation as a SAL (13 TAC 26.8) and no additional work is warranted for these sites. A summary of the sites and eligibility is presented in Table 4.

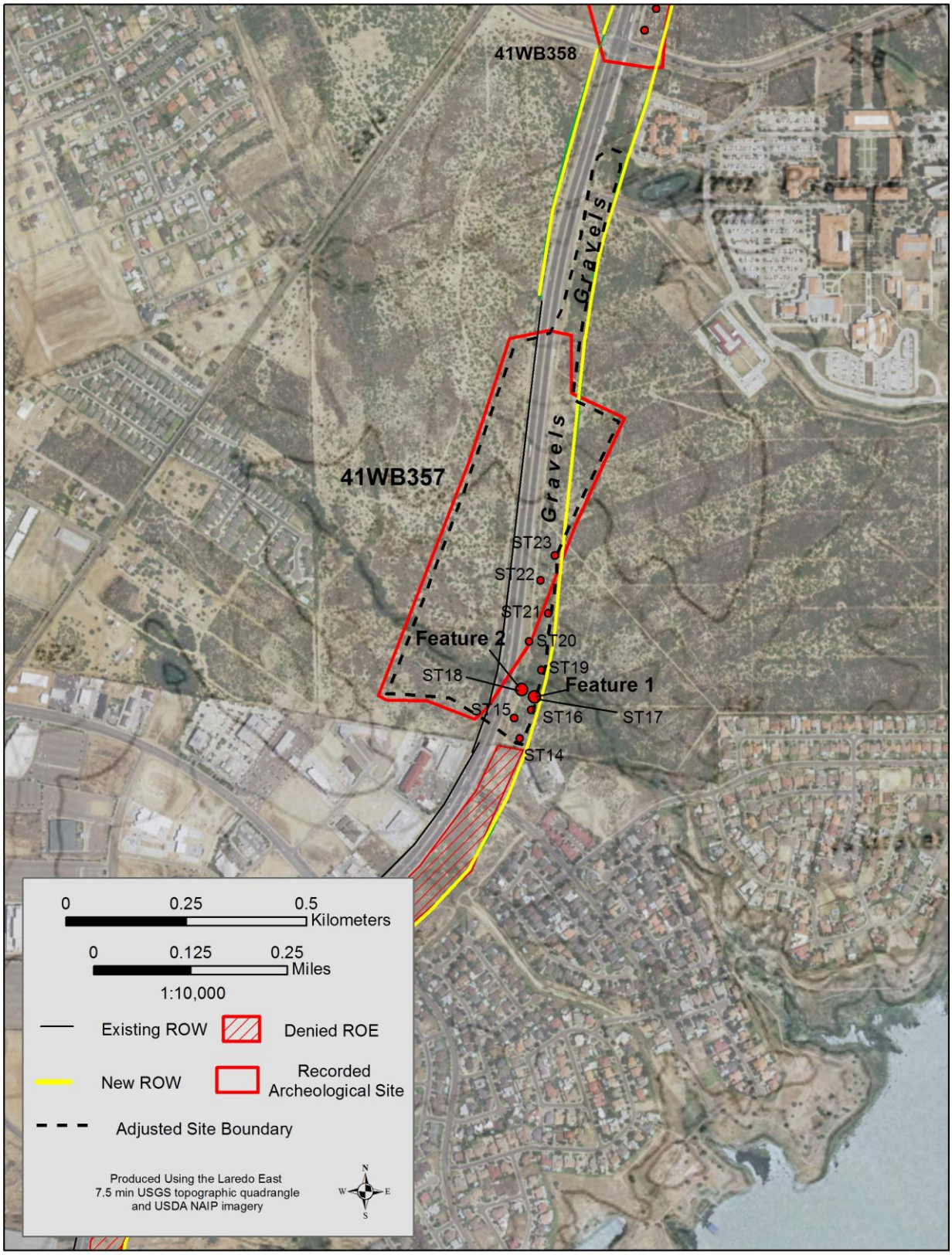
Site Number	Site Type	Approximate Site Area	NRHP/SAL Eligibility
41WB357	Unknown Prehistoric open campsite and lithic procurement site.	51.4 acres	Potentially eligible, additional work recommended in southern portion.
41WB358	Late Archaic open campsite and lithic procurement site.	65.2 acres	Potentially eligible, additional work recommended north and south of central hilltop.
41WB359	Unknown Prehistoric open campsite and lithic procurement site.	89.2 acres	Potentially eligible, additional work recommended in southern portion of site
41WB360	Unknown Prehistoric lithic procurement site	87.5 acres	Not considered eligible, no further work recommended
41WB367	Late Archaic lithic scatter	Unknown	Not considered eligible, no further work recommended

Table 4. Loop 20 Project site summary and recommendation table.

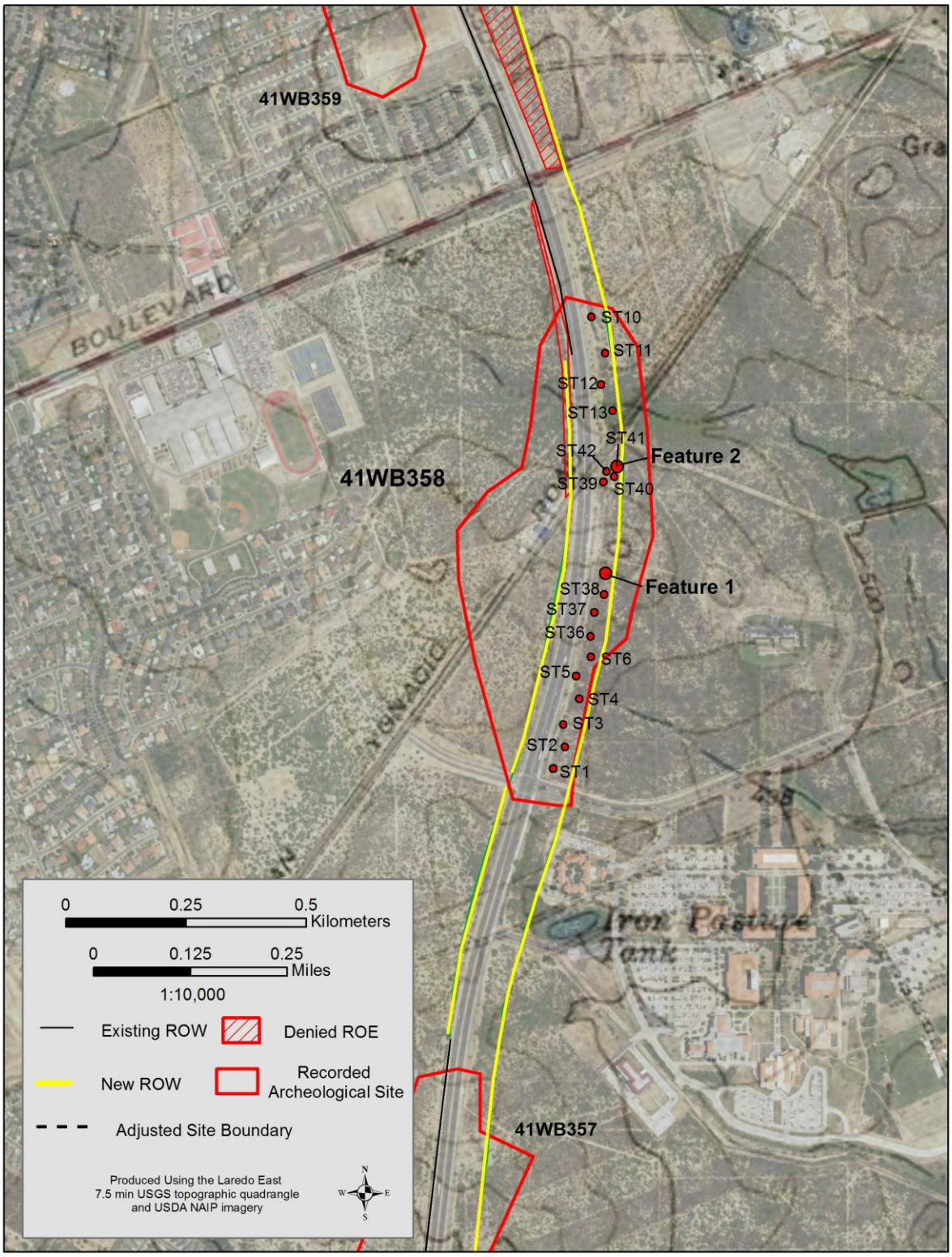
It is important to note that the scope of the proposed testing will be limited given the relative paucity of materials found, restricted areas where features were found, and relatively shallow soils. However, little is known about these ephemeral upland sites and their function in prehistoric times. In addition, given the charcoal and organic stains observed in the shallowly buried context at 41WB357 (see Figure 9) providing datable material and/ or macroflora that might aid in interpretation of these sites. A feature focused scraping methodology similar to methods used for upland site 41HG240 and 41HG241 in Hidalgo County (Carpenter et al 2015) is recommended.

APPENDIX A

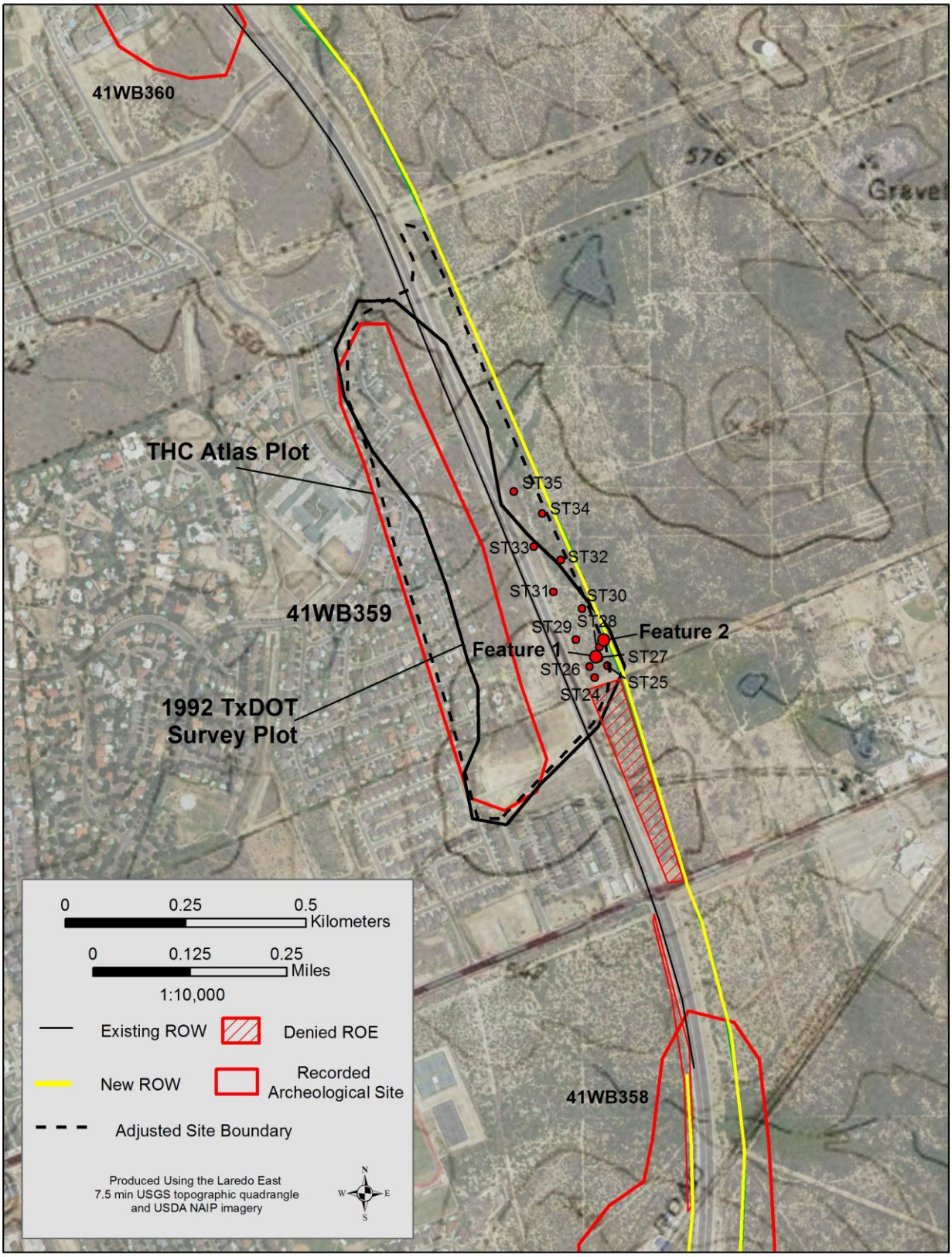
Site Maps



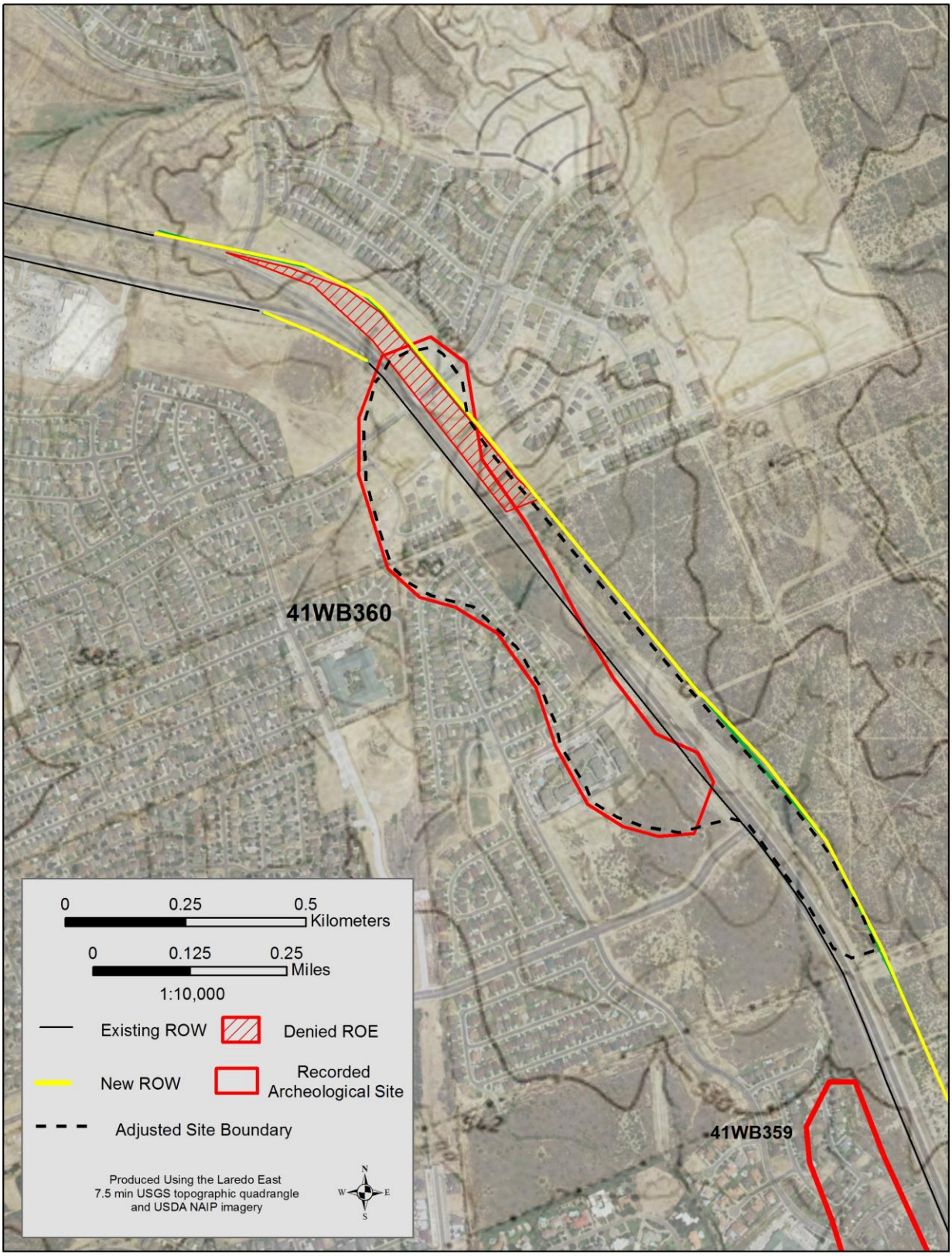
41WB357 Site Location Map.



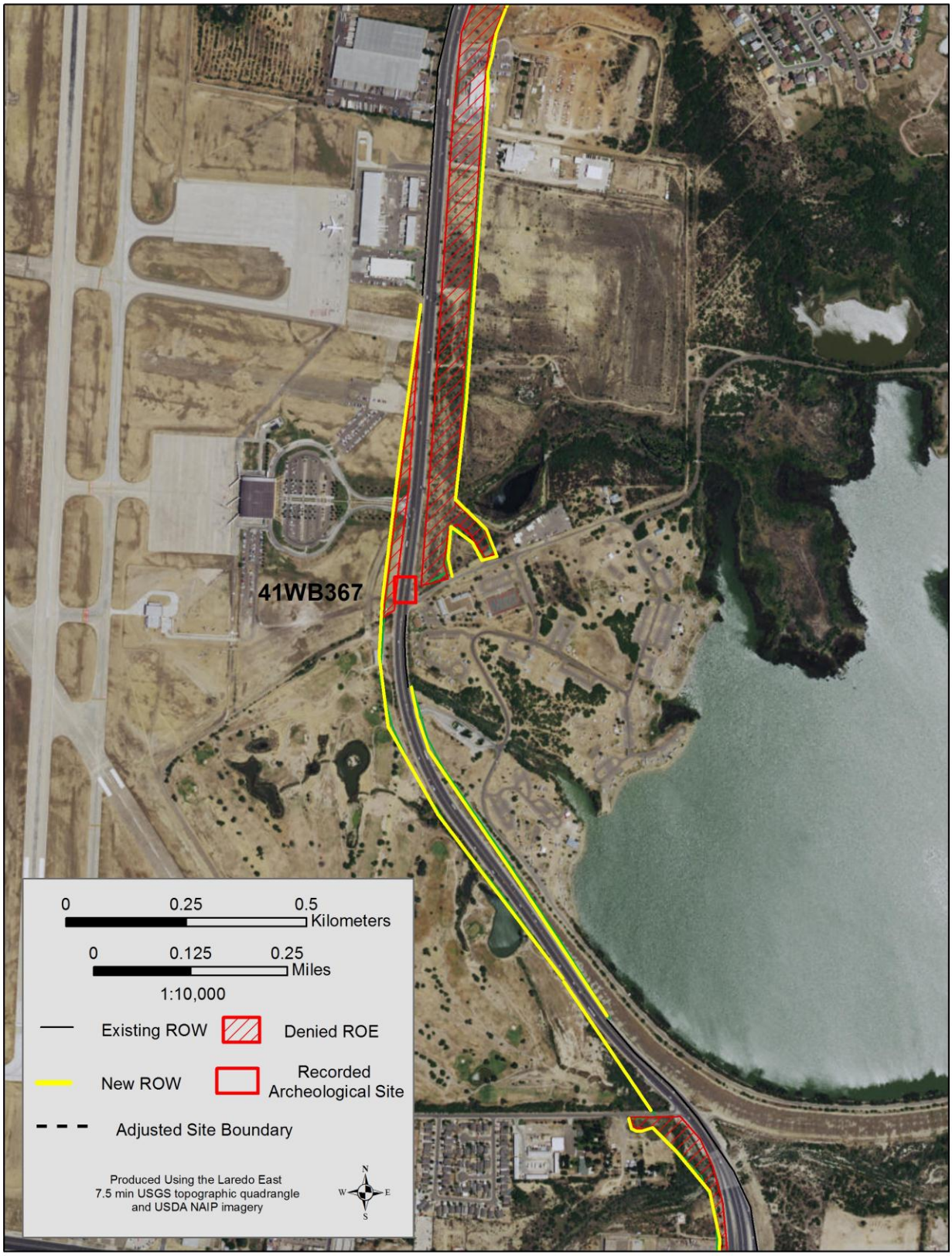
41WB358 Site Location Map.



41WB359 Site Location Map.



41WB360 Site Location Map.



41WB367 Site Location Map.

APPENDIX B

Shovel Test Tables

Shovel Test Number	Depth (cm)	Site Number	Recovery
1	0-20	41WB358	No Recovery
1	20-40	41WB358	No Recovery
1	40-60	41WB358	No Recovery
2	0-20	41WB358	No Recovery
2	20-40	41WB358	No Recovery
2	40-60	41WB358	No Recovery
3	0-20	41WB358	No Recovery
3	20-40	41WB358	No Recovery
3	40-60	41WB358	No Recovery
4	0-20	41WB358	No Recovery
5	0-20	41WB358	No Recovery
5	20-40	41WB358	No Recovery
5	40-60	41WB358	No Recovery
5	60-80	41WB358	No Recovery
6	0-20	41WB358	No Recovery
6	20-40	41WB358	No Recovery
7	0-20	N/A	No Recovery
7	20-40	N/A	No Recovery
7	40-50	N/A	No Recovery
8	0-20	N/A	No Recovery
8	20-30	N/A	No Recovery
9	0-20	N/A	No Recovery
9	20-40	N/A	No Recovery
9	40-50	N/A	No Recovery
10	0-20	41WB358	No Recovery
10	20-40	41WB358	No Recovery
10	40-50	41WB358	No Recovery
11	0-20	41WB358	No Recovery
11	20-40	41WB358	No Recovery
12	0-20	41WB358	No Recovery
12	20-40	41WB358	No Recovery
12	40-60	41WB358	No Recovery
13	0-20	41WB358	No Recovery
13	20-40	41WB358	No Recovery
14	0-20	41WB357	No Recovery
14	20-40	41WB357	No Recovery
14	40-60	41WB357	No Recovery
15	0-20	41WB357	No Recovery

15	20-40	41WB357	No Recovery
15	40-60	41WB357	No Recovery
15	60-70	41WB357	No Recovery
16	0-20	41WB357	No Recovery
16	20-40	41WB357	2 FCR
16	40-50	41WB357	No Recovery
17	0-20	41WB357	No Recovery
17	20-40	41WB357	No Recovery
17	40-60	41WB357	No Recovery
18	0-20	41WB357	No Recovery
19	0-20	41WB357	No Recovery
19	20-40	41WB357	No Recovery
20	0-20	41WB357	No Recovery
20	20-40	41WB357	No Recovery
21	0-20	41WB357	No Recovery
21	20-40	41WB357	No Recovery
22	0-20	41WB357	No Recovery
22	20-40	41WB357	No Recovery
23	0-20	41WB357	No Recovery
23	20-40	41WB357	No Recovery
23	40-60	41WB357	No Recovery
24	0-20	41WB359	3 FCR
24	20-40	41WB359	No Recovery
24	40-60	41WB359	No Recovery
25	0-20	41WB359	No Recovery
25	20-40	41WB359	No Recovery
25	40-50	41WB359	No Recovery
26	0-20	41WB359	No Recovery
26	20-40	41WB359	No Recovery
27	0-20	41WB359	4 FCR
27	20-40	41WB359	No Recovery
27	40-50	41WB359	No Recovery
28	0-20	41WB359	2 FCR
28	20-40	41WB359	No Recovery
29	0-20	41WB359	No Recovery
29	20-40	41WB359	No Recovery
29	40-50	41WB359	No Recovery
30	0-20	41WB359	No Recovery
30	20-40	41WB359	No Recovery
31	0-20	41WB359	No Recovery

31	20-40	41WB359	No Recovery
32	0-20	41WB359	No Recovery
32	20-40	41WB359	No Recovery
33	0-20	41WB359	No Recovery
33	20-40	41WB359	No Recovery
34	0-20	41WB359	No Recovery
34	20-40	41WB359	No Recovery
34	40-50	41WB359	No Recovery
35	0-20	41WB359	No Recovery
35	20-40	41WB359	No Recovery
35	40-50	41WB359	No Recovery
36	0-20	41WB358	No Recovery
36	20-40	41WB358	No Recovery
37	0-20	41WB358	No Recovery
37	20-40	41WB358	No Recovery
38	0-20	41WB358	No Recovery
38	20-30	41WB358	No Recovery
39	0-20	41WB358	No Recovery
39	20-30	41WB358	No Recovery
40	0-20	41WB358	2 FCR
40	20-30	41WB358	No Recovery
41	0-20	41WB358	No Recovery
42	0-20	41WB358	3 FCR