



# Draft Environmental Assessment

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**FM 494 (Shary Road)**

**Pharr District**

**From SH 107 to FM 1924 (Mile 3 North Road)**

**CSJs: 0864-01-068 & 0864-01-069**

**Hidalgo County, Texas**

**June 2016**

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.

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## Abbreviations and Acronyms

**-A-**

AADT	Annual Average Daily Traffic
ACHP	Advisory Council on Historic Preservation
ACM	Asbestos-Containing Material
ACS	American Community Survey
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
AOI	Area of Influence
APE	Area of Potential Effect

**-B-**

BEA	Bureau of Economic Analysis
BEARFACTS	BEA Regional Facts
BG	Block Group
BMP	Best Management Practices

**-C-**

CAAA	Clean Air Act Amendments
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CGP	Construction General Permit
CMP	Congestion Management Process
CSJ	Control Section Job
CT	Census Tract

**-D-**

DHHS	Department of Health and Human Services
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**-E-**

EA	Environmental Assessment
EO	Executive Order
EPA	Environmental Protection Agency
ETJ	Extra Territorial Jurisdiction

**-F-**

FHWA	Federal Highway Administration
FM	Farm-to-Market
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FY	Fiscal Year

**-G-**

GIS	Geographic Information System
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**-H-**

HCMPO	Hidalgo County Metropolitan Planning Organization
HCID	Hidalgo County Irrigation District

**-I-**

IBWC	International Boundary and Water Commission
ISA	Initial Site Assessment

**-J-****-K-****-L-**

LEP	Limited English Proficiency
LBP	Lead Based Paint
LOS	Level of Service
LPST	Leaking Petroleum Storage Tanks
LWCF	Land and Water Conservation Fund

**-M-**

MAPO	Meeting with Affected Property Owners
MBTA	Migratory Bird Treaty Act
MPH	Miles Per Hour
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
MSAT	Mobile Source Air Toxics
MTP	Metropolitan Transportation Plan

**-N-**

NAAQS	National Ambient Air Quality Standards
NCHRP	National Cooperative Highway Research Program Report
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NOI	Notice of Intent
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory

**-O-**

OTHM	Official Texas Historical Markers
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**-P-**

PA-TU	Programmatic Agreement for Cultural Resources
PCN	Pre-Construction Notice
PCR	Project Coordination Request
PMSA	Primary Metropolitan Statistical Area
PST	Petroleum Storage Tanks

**-Q-****-R-**

ROW	Right-Of-Way
RTHL	Recorded Texas Historic Landmarks

**-S-**

SAL	State Archeological Landmarks
SH	State Highway
SHPO	State Historic Preservation Officer
SW3P	Storm Water Pollution Prevention Plan

**-T-**

TAC	Texas Administrative Code
TARL	Texas Archeological Research Laboratory
TCEQ	Texas Commission on Environmental Quality
THC	Texas Historical Commission
TIP	Transportation Improvement Program
TPDES	Texas Pollutant Discharge Elimination System
TPP	Transportation Planning and Programming
TPWD	Texas Parks & Wildlife Department
TTI	Texas Transportation Institute
TxDOT	Texas Department of Transportation

**-U-**

US	United States
USACE	United States Army Corps of Engineers
USDOT	United States Department of Transportation
USFWS	United States Fish & Wildlife Service
USGS	United States Geological Survey

**-V-**

VMT	Vehicle Miles Traveled
VPD	Vehicles Per Day

**-W-****-X-****-Y-****-Z-**

## I. Introduction

### A. Purpose of this Document

Hidalgo County in cooperation with the Texas Department of Transportation (TxDOT) and the cities of Palmhurst, Alton, and McAllen, proposes to reconstruct and widen Farm-to-Market (FM) 494 (Shary Road) located in Hidalgo County, Texas. **Figure 1** depicts the vicinity of the project in the TxDOT Pharr District. The logical termini and construction limits for FM 494 are State Highway (SH) 107 and FM 1924 (Mile 3 North Road); a length of 4.4 miles. See **Figure 2** for the project location map. **Figure 3** shows the project on the U.S. Geological Survey (USGS) topographic map. FM 494 is functionally classified as a principal arterial.

This Environmental Assessment (EA) has been developed to study the potential social, economic, and environmental impacts resulting from constructing the proposed project. The EA is organized to provide concise information with accompanying technical reports that support the finding within the document. The EA has been prepared in accordance with the procedural provision of the National Environmental Policy Act (NEPA); the Council on Environmental Quality (CEQ) regulations in *Implementing Procedural Provision of NEPA* (40 Code of Federal Regulations [CFR] Parts 1500-1508) and *Environmental Impact and Related Procedures* (23CFR Par 771); and Texas Administrative Code (TAC) Title 43, Part 1, Chapter 2, *Environmental Review of Transportation Projects*.

### B. Public Review of the Environmental Assessment

A Notice of Availability (NOA) of the EA will be published on [www.txdot.gov](http://www.txdot.gov) and in the local newspapers after environmental document certification. Interested parties and stakeholders will be notified via email about the availability of the document and how to access it. Written comments regarding the environmental document can be submitted to the Project Manager's office at 900 S. Stewart Road, Mission, Texas 78572 or by fax at (956)585-1927.

Hidalgo County and TxDOT will thoroughly consider all comments submitted during the comment period. Based on the analysis conducted in this EA and comments received during the comment period, TxDOT will determine whether the potential environmental effects warrant the preparation of an Environmental Impact Statement. If TxDOT determines that there are no significant adverse effects, a Finding of No Significant Impact (FONSI) will be prepared, signed, and made available to the public.

## II. Project Description

The proposed project has been divided into two sections for planning purposes. The limits of Section I are from SH 107 to FM 676 (Mile 5); a distance of 2.4 miles. The limits of Section II are from FM 676 to FM 1924; a distance of 2.0 miles. The proposed project has been assigned two Control Section Job (CSJ) numbers by TxDOT for accounting purposes. **Table 1** summarizes the CSJ numbers.

**Table 1: Control Section Job Numbers**

Section	Control Section Job (CSJ)	From	To	Length
Section I	0864-01-068	SH 107	FM 676	2.4 miles
Section II	0864-01-069	FM 676	FM 1924	2.0 miles

**A. Existing Facility**

FM 494 is currently a rural 40-foot-wide roadway consisting of two 12-foot-wide travel lanes with eight-foot-wide shoulders within an 80-foot-wide Right-Of-Way (ROW). Drainage for the roadway is handled through roadside ditches. See **Figure 4** for the existing typical section. See **Appendix A** for photographs of the existing roadway.

**Table 2** reflects the Average Daily Traffic (ADT) for the operational years 2021 and 2041 as provided by TxDOT’s Transportation Planning and Programming (TPP) Division.

**Table 2: Average Daily Traffic**

Section	From	To	2021	2041
Section I	SH 107	FM 676	5,400	7,400
Section II	FM 676	FM 1924	11,200	15,300

*TPP, 2014*

**B. Proposed Facility**

The proposed improvements include the reconstruction and widening of FM 494 to an 84-foot-wide urban roadway with four 12-foot-wide travel lanes, two 10-foot-wide shoulders, and a 16-foot-wide continuous left turn lane. A six-foot-wide sidewalk would be included on both sides of the roadway throughout the length of the project, except on the east side for approximately 400-feet south of Toucan Avenue and for approximately 1,750-feet south of Mile 4 North Road. The proposed ROW would be 120-foot-wide throughout the length of the project. Drainage would be handled by a storm drain system. See **Figure 5, Page 1** for the proposed typical section.

An approximate 1,296-foot section of the proposed roadway, from 0.5 mile north of FM 1924 to 0.3 mile south of Mile 4 North Road, would be built within the existing 80-foot-wide ROW to avoid impacts to a historical property. This area would include two 11-foot-wide travel lanes, two 14-foot-wide shared use lanes, one 11-foot-wide continuous left turn lane, and six-foot-wide sidewalks matching the existing profile on both sides of the roadway. Because this is a low-lying area, the proposed retaining wall is being utilized to address the narrow ROW. No new ROW would be required within this section. See **Figure 5, Page 2** for the proposed typical section.

The proposed project would require approximately 22.5 acres (106 parcels) of new ROW, and no residential or business relocations would be required.

### **C. Pedestrian and Bicycle Facilities**

With stronger emphasis for multimodal transportation facilities, the Cities of Palmhurst, Alton, and McAllen, Hidalgo County, and TxDOT are committed to proactively plan, design, and construct facilities to safely accommodate bicyclists and pedestrians. TxDOT would take into consideration existing and anticipated bicycle and pedestrian facility systems and needs as stated in the March 23, 2011 TxDOT Memorandum and the March 11, 2010 U.S. Department of Transportation (USDOT) Policy Statement on Bicycle and Pedestrian Accommodations, Regulations and Recommendations.

A six-foot-wide sidewalk would be included on both sides of the roadway throughout the length of the project, except on the east side for approximately 400-feet south of Toucan Avenue and for approximately 1,750-feet south of Mile 4 North Road.

The proposed project would include two 10-foot-wide shoulders for bicycles throughout the project limits, except at the 1,296-foot section between 0.5 mile north of FM 1924 to 0.3 mile south of Mile 4 North Road, where two 14-foot-wide shared use lanes would be included for bicycle and vehicle traffic.

## **III. Purpose and Need**

### **A. Purpose**

The proposed project aims to improve mobility, pedestrian accommodations, and complete the network. To achieve this goal, the proposed facility would provide a roadway that meets or exceeds current TxDOT design standards. The proposed project would enhance mobility in the regional roadway network by providing additional travel lanes and turn lanes. The proposed project would complete the network by matching the existing roadway to the south.

### **B. Need**

***Need One: The current FM 494 cannot accommodate for existing and projected traffic volumes.***

Population increases and ongoing development have resulted in increased traffic in the study area. The current condition of the roadway does not allow for efficient operation, nor does it carry the maximum amount of traffic possible under the current design. The proposed action must ensure an acceptable Level of Service (LOS) under anticipated traffic conditions. An acceptable LOS means that the proposed facility must operate at a LOS rating of C or higher under future traffic conditions. See **Table 3** for the LOS descriptions.

**Table 3: Level of Service (LOS) Descriptions**

<b>LOS Category</b>	<b>Description of Operating Conditions</b>
<b>LOS A</b>	Free flow. LOS A represents high speed, smooth flow with little or no interference between vehicles.
<b>LOS B</b>	Lower speeds than LOS A, although flow is still good and little congestion exist. In urban areas, average over-all speeds drop due to intersection delay and vehicular conflicts.
<b>LOS C</b>	Lower speeds than LOS B, although flow is still good and little congestion exists. Operation is still stable with acceptable delays, but becoming more critical.
<b>LOS D</b>	Level D shows still lower speeds than previous levels. There is some congestion, and conditions become slightly unstable with respect to travel time and delay. The traffic flow is beginning to tax the capabilities of the street section. In urban and suburban areas, delays at intersections may be extensive with some cars waiting two or more cycles.
<b>LOS E</b>	The traffic flow is unstable, and the volumes are at capacity. Any momentary stoppage may create an immediate and significant amount of congestion. Traffic is backed up continuously at intersection approaches.
<b>LOS F</b>	Level of service F is demonstrated by conditions of heavy congestion and stop-and-go traffic. All intersections are handling traffic in excess of capacity. Vehicular back-ups extend back from signalized intersections, through unsignalized intersections.

*Highway Capacity Manual, 2000*

Based on the ADT of 5,400 vehicles per day for Section I and 11,200 for Section II for the year 2021, the existing two lane rural roadway received a LOS rating of E and D, respectively. Widening and reconstructing FM 494 would improve the LOS rating to an A based on the 2041 traffic projections. It can be ascertained that with the increase in projected traffic and the congestion along FM 494, the existing roadway would continue to deteriorate, thereby reducing its overall effectiveness.

***Need Two: There is a lack of pedestrian accommodations.***

The existing rural roadway does not include pedestrian accommodations. Population increases have provided an increase in residential areas, commercial businesses, and schools within the project area. The proposed project is needed to provide sidewalks and 10-foot-wide shoulders for bicycles.

***Need Three: There is a need to complete the network.***

FM 494 is a major commuted within the cities of Palmhurst, Alton and McAllen. The existing roadway south of FM 1924 is a four lane, urban roadway. The proposed project is needed to complete the urban corridor. The existing rural roadway lacks turning lanes and the existing shoulders are inconsistent.

**IV. Alternatives Analysis**

The development of alternatives began with the primary objective of improving the existing FM 494 by providing additional travel lanes, a turn lane, and sidewalks within a 120-foot-wide ROW. The information used to develop and evaluate the different

alternatives was obtained from aerial photography, elevation models, USGS topographic maps, field visits, internal design team meetings, discussions with the county, cities, and elected officials, stakeholder meetings, a public meeting, and Meetings with Affected Property Owners (MAPO). Constraints driving the development of the alternatives were the impacts to vegetation, and residential and business displacements. Economic considerations included: potential costs and benefits of implementing the alternative, length of roadway, and the feasibility of successfully mitigating the effects of the alternative. Other sources consulted included: the National Wetlands Inventory (NWI) and United States Fish and Wildlife Service (USFWS) maps, literary review at the Texas Historical Commission (THC), Texas Archeological Research Laboratory (TARL), Texas Historical Site Atlas, and site files at TARL.

Using the process discussed above, a total of five alternatives, including the no build alternative, were developed and evaluated. See **Appendix B** for a matrix of the alternatives as presented at the public meeting. Alternative E (Best Fit) was selected as the preferred (build) alternative because it would: meet the purpose and need of the project and would not require residential or business relocations.

#### **A. No-Build Alternative**

The No-Build Alternative involves taking no major action to improve or change the existing FM 494. The No-Build Alternative was considered and is utilized for comparison purposes. Under this alternative, there would be no mobility improvements and traffic would continue to utilize existing routes to access residences, schools, and businesses in the area. There would be no impacts on adjacent commercial or residential properties or agricultural lands since this alternative would not reduce congestion on the existing roadway or surrounding street network, or require the acquisition of any new ROW.

#### **B. Build Alternative**

The Build Alternative would acquire new ROW from both sides of the existing roadway in a best fit situation and would meet the purpose and need of the project.

Following the public meeting, through additional coordination and MAPOs with the THC and the City of Palmhurst, it was determined that to avoid impacts to the John H. Shary Historical property, no ROW would be taken along an approximate 1,296-foot section of the proposed roadway, from 0.5 mile north of FM 1924 to 0.3 mile south of Mile 4 North Road.

As a result of this change, the proposed ROW required was reduced to 22.5 acres (106 parcels). This alternative would not require any residential or business relocations. **Figure 6** depicts the Build Alternative.

### **V. Planning & Programming**

The proposed project is included in the Hidalgo County Metropolitan Planning Organization's (HCMPO) 2015-2040 Metropolitan Transportation Plan (MTP) and the 2015-2018 Transportation Improvement Plan (TIP) for preliminary engineering in Fiscal Year (FY) 2015, which makes it eligible for Federal/State transportation funds.

Section I, from SH 107 to FM 676, is currently listed in the HCMPO's MTP and TIP in FY 2017 with a construction cost of \$8.0 million and a total project cost of \$12.5 million.

Section II, from FM 676 to FM 1924, is currently listed in the HCMPO's 2015-2040 MTP in FY 2020 with a construction cost of \$7.4 million and a total project cost of \$11.5 million. Project cost estimates were prepared in January 2016. The proposed project is an on-system roadway and would receive 80 percent federal and 20 percent local funding for construction. The appropriate pages of the MTP and TIP are available in **Appendix C**.

## VI. Affected Environment & Environmental Consequences

The technical reports prepared in support of this EA are listed in **Table 4**. The reports are incorporated by reference in this environmental document and are currently available for review at the TxDOT Pharr District and on the project website.

**Table 4: Environmental Technical Reports**

Technical Report	Date of Report
Biological Technical Report	April 2015
Biological Evaluation Form	April 2015
Water Resources Technical Report	April 2015
Air Quality Technical Report	April 2015
Traffic Noise Analysis	June 2015
Community Impacts Analysis	March 2015
Historical Project Coordination Request (PCR)	March 2015
Historical Research Design	August 2015
Historical Resources Survey	November 2015
Archeological PCR and Background Study	March 2015
Archeological Survey	October 2015
Hazardous Materials Initial Site Assessment	January 2015
Public Meeting Summary & Analysis	May 2015

Based on the above technical reports, scope, and thorough analysis, it was determined that the proposed project would have no impact on the following resource categories: Wetlands, Navigable Waters, Wild & Scenic Rivers, International Boundary & Water Commission (IBWC), Coastal Coordination, Sections 404 and 401 of the Clean Water Act, and Floodplains. Resources with the potential to be affected by the proposed project are discussed in the following sections.

### A. Right-Of-Way

#### A.1 Existing Right-of-Way

The proposed project is located on existing location, within the city limits of Palmhurst, Alton, and McAllen. An 80-foot-wide existing ROW is available throughout the length of the project.

A total of 40.1 acres of existing ROW would be utilized for the proposed project. The existing ROW is comprised of mowed and maintained vegetation, pavement, and agriculture; mowed and maintained land makes up the majority of the existing ROW. Approximately 22.3 acres (55.6 percent) of the existing ROW is comprised of mowed

and maintained vegetation, 0.3 acre (0.8 percent) of agricultural land, and 17.5 acres (43.6 percent) is comprised of pavement. See **Table 5** for a breakdown of existing ROW components.

**Table 5: Existing ROW Components**

<b>Component</b>	<b>Acres</b>	<b>Percent</b>
Mowed and Maintained	22.3	55.6
Pavement	17.5	43.6
Agricultural	0.3	0.8
Scrub Shrub	0.0	0.0
<b>Total</b>	<b>40.1</b>	<b>100</b>

**A.2 Proposed Right-of-Way**

The proposed project would require the conversion of approximately 22.5 acres of land to transportation ROW. The proposed project would not require any residential or business relocations. A total of 106 parcels of land would be affected by the proposed project. The proposed ROW consists of approximately 16.0 acres (71.1 percent) of mowed and maintained vegetation, 6.2 acres (27.6 percent) of agriculture, and 0.3 acre (1.3 percent) of scrub shrub vegetation. See **Table 6** for a breakdown of proposed ROW components.

**Table 6: Proposed ROW Components**

<b>Component</b>	<b>Acres</b>	<b>Percent</b>
Mowed and Maintained	16.0	71.1
Pavement	0.0	0.0
Agriculture	6.2	27.6
Scrub Shrub	0.3	1.3
<b>Total</b>	<b>22.5</b>	<b>100</b>

No impacts to easements are anticipated as a result of the proposed project. The ROW acquisition process would be conducted according to Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

Under the No-Build Alternative, no additional ROW would be required; therefore, no impacts to properties would occur.

**B. Land Use**

The proposed project is located in a rapidly developing area and is partially within the city limits of Palmhurst, Alton, and McAllen. Land use in the area is a mixture of residential, commercial, and agricultural land. See **Figure 7** for the land use map. Much of the area has been converted from agricultural to urban use. A study area of 1.5 miles was selected because this area would receive the most influence from the proposed project based on existing development, land use, and commuteshed. A total of eight schools are located within 1.5 miles of the project area: Faith Christian Academy,

Pioneer High School, Sharyland North Junior High, Donna Wernecke Elementary, Hendricks Elementary, South Texas Christian Academy, Olivero Garza, Sr. Academy, and Rafael Cantu Junior High. Four churches are located within 1.5 miles of the project area: Faith Baptist Church, Iglesia Union Cristiana, Church of the King, and First Korean Presbyterian Church. Palmhurst City Hall and Police Department are located within the project area. See **Figure 8** for a map of facilities in the area.

The No-Build Alternative would not impact land use.

### **C. Section 4(f) & Section 6(f)**

Construction of the proposed project would not affect publicly owned parkland, recreational areas, historic sites, or wildlife or waterfowl management areas. One historical marker associated with a historical property is located along the proposed project approximately 0.5 mile north of FM 1924. See **Figure 9** for the historical property location map. No ROW would be required from the property and no constructive use would occur. As a result of additional analyses at the historic site and coordination with the THC, the proposed project would not impact this area; therefore, a Section 4(f) statement is not required.

No Land and Water Conservation Fund (LWCF) Act protected properties (i.e. parks and recreations areas improved by LWCF funds) are present in the project area; therefore, no Section 6(f) properties would be impacted.

The No-Build Alternative would not impact Section 4(f) or Section 6(f) properties.

### **D. Community Impacts**

The *Community Impacts Analysis Technical Report* identified the demographics of the project area, as well as the potential effects of the proposed project on economic conditions, community resources, and environmental justice populations, as summarized below.

The No-Build Alternative would not change community cohesion or access from the existing condition in the area. No impacts would occur to public facilities and services, or environmental justice populations.

#### **D.1 Community Cohesion**

No isolation or division of neighborhoods, individual residences, businesses or other substantial alterations would occur due to the proposed project. The proposed project would be an expansion of an existing roadway; therefore no change in travel patterns would occur as a result of the project.

#### **D.2 Public Facilities and Services**

The proposed project area consists of residences, commercial businesses, and agricultural land. Facilities in the study area include eight schools, four churches, Valley

Memorial Gardens Cemetery, John H. Shary House Historical Marker and properties, and the Palmhurst City Hall and Police Department.

### **D.3 Access**

Access to driveways, businesses, schools and other facilities would remain intact. No medians would be included and access to cross streets would not be altered. TxDOT procedures require that access to properties be maintained through at least one access point to the nearest roadway. During the ROW acquisition process, the ROW Acquiring Agency would follow the guidelines of the TxDOT ROW acquisition process to determine if additional measures are required to provide additional access points, livestock access, or other specific concerns.

### **D.4 Displacements**

No residential relocations or business relocations. The ROW acquisition process would be conducted according to Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

### **D.5 Limited English Proficiency**

Executive Order (EO) 13166 on Limited English Proficiency (LEP) ensures agencies provide federally conducted programs and activities which are meaningfully accessible to LEP individuals. Data for “Ability to Speak English” for the population five years and over indicates 20.5 percent of the population within the CTs and 15.7 percent within the BGs in the study area speaks English “Not Well” or “Not at All.” Visual surveys indicated the presence of signage in both English and Spanish. Furthermore, TxDOT ensures that opportunities for community input in the NEPA process would be provided. A public meeting was held in November 2014. The meeting was advertised in English and Spanish in local newspapers and bilingual notices were sent to property owners. Translation services were available at the public meeting; however, the services were not utilized. Accommodations for all LEP populations will be made for any future public involvement.

### **D.6 Demographics, Minority, Age, and Income Characteristics**

The proposed project is located within three Census Tracts (CT) and five Block Groups (BG): CT 241.05, BGs 1 and 4, CT 241.06, BGs 1 and 2, and CT 241.11, BG 2.

Of the five BGs located within the project limits, all contained minority populations that exceeded 50 percent of the BG population. At the block level, the majority of the blocks consisted of minority populations that approached or exceeded 50 percent along the proposed project area; however, nine blocks in the study area contained populations with less than 50 percent minority.

There are no concentrations of children or elderly in the area; therefore, no impacts to these vulnerable populations are anticipated.

With respect to income characteristics, none of the three CTs and one of the BGs was below the Department of Health and Human Services (DHHS) 2015 Poverty Guideline of \$24,250.

#### **D.7 Environmental Justice**

Based on the analysis, the project area contains minority and low-income populations. A review of the census data at the CT, BG, and block level revealed that the proposed project is in an area that consists predominantly of a Hispanic population. The community in the area is considered to be an environmental justice population based on race. The median income in one BG (BG 1 of CT 241.05) in the project area falls below the poverty guidelines; therefore, the area contains low-income populations.

Positive impacts to the community as a result of the project include: improved access to residences, businesses, and public facilities through the addition of a turning lane, and reduced congestion along the roadway as a result of the additional travel lanes. These improvements are considered beneficial to the entire population, including environmental justice populations, in the study area. An alternatives analysis and public involvement, including individual MAPOs and a public meeting, occurred to discuss the proposed project and receive feedback from the community.

No disproportionately high or adverse effects to minority or low income populations in the area are anticipated as per EO 12898.

#### **E. Utilities**

Utilities such as water lines, sewer lines, gas lines, telephone cables, electrical lines and other subterranean and aerial utilities may require adjustment. The adjustment of any utilities would be handled by each utility company and in such a way that no substantial disruption of service would take place while the adjustments are being made. No temporary or permanent easements would be required. Utility adjustments, if required, would occur in accordance with standard TxDOT procedures. It is anticipated the proposed project would not affect any services to the public.

The No-Build Alternative would leave the current roadway in its existing condition and would not impact utilities.

#### **F. Visual and Aesthetics**

Aesthetics is defined as “dealing with the visual integration of highways and other transportation modes into the fabric of a landscape in a way that blends with or complements that setting” (*TxDOT Landscape & Aesthetics Design Manual, 2015*). The existing visual landscape of the project area includes agricultural land, residences and commercial properties. The project would widen and reconstruct the existing roadway; no changes in viewshed would occur as a result of the proposed project. The proposed project would not result in a noticeable change in the physical characteristics of the existing environment. A mix of introduced grasses and forbs would be used to reseed the ROW outside of paved areas according to TxDOT standards and disturbed areas

would be restored and reseeded where appropriate. As with all construction projects, the aesthetics of the project area would be temporarily reduced during the construction phase of the project; however, the aesthetic and visual qualities of this area would be restored post-construction.

The No-Build Alternative would not change any visual or aesthetic elements in the landscape.

## **G. Cultural Resources**

### **G.1 Historic Resources**

Cultural resources are structures, buildings, archeological sites, districts (a collection of related structures, buildings, and/or archeological sites), cemeteries, and objects. Both federal and state laws require consideration of cultural resources during project planning. At a federal level, NEPA and the National Historic Preservation Act (NHPA) of 1966, among others, apply to transportation projects such as this one. In addition, state laws such as the Antiquities Code of Texas apply to these projects. Compliance with these laws often requires consultation with the THC/Texas State Historic Preservation Officer (SHPO) and/or federally-recognized tribes to determine the project's effects on cultural resources. Review and coordination of this project followed approved procedures for compliance with federal and state laws.

A review of the National Register of Historic Places (NRHP), the list of State Archeological Landmarks (SAL), and the list of Recorded Texas Historic Landmarks (RTHL) indicated that one historically significant resource has been previously documented within the area of potential effects (APE), the John Shary Estate (**Figure 9**). The estate was determined eligible for listing in the NRHP in 2007 under Criterion C-Landscape Design at the local level of significance. It has been determined through consultation with the SHPO that the APE for the proposed project is 150 feet beyond the existing and proposed ROW boundaries. Based on a site visit, desktop research, and staff evaluation, it was determined that one historic property is present in the project area. In addition, there is one Official Texas Historical Markers (OTHM) located within the APE, the John H. Shary Home. The proposed project would not diminish any aspect of the Shary property's integrity; therefore, a finding of No Adverse Effect was recommended.

TxDOT staff determined that there were 14 historic-age properties located within the project APE: 12 residences, one agricultural property, and one commercial property. Pursuant to Stipulation VI, "Undertakings with Potential to Cause Effects" of the First Amended Programmatic Agreement, regarding the Implementation of Transportation Undertakings (PA-TU) between the FHWA, the Texas SHPO, the Advisory Council on Historic Preservation, and TxDOT and the MOU, TxDOT historians determined that one property is eligible for listing in the NRHP, the John Shary Estate. The SHPO concurred with the determination of no adverse effect to the historical property on March 10, 2016 (**Appendix D**), pending review of the 60% plan set.

The No-Build Alternative would not affect listed or eligible historic resources.

## **G.2 Archeological Resources**

A field investigation was conducted and a total of 50 shovel tests were taken along the proposed project. No new archeological sites were identified during the survey; however, archeologists documented two features which represent a twentieth century valve access and/or well associated with irrigation. It was determined that the potential for buried archeological materials at this location is low. Based on the results of the survey, no additional archeological investigations within the proposed APE are warranted.

TxDOT archeologists completed their review of this project on November 9, 2015 and determined that the project would have no effect or no adverse effect on archeological sites or cemeteries that would require further consideration under cultural resource laws. The SHPO concurred on November 12, 2015 that the project would not affect archeological sites or cemeteries (**Appendix D of EA**). Per the terms of the Programmatic Agreement with federally recognized Native American tribes with a demonstrated historic interest in the area, Section 106 consultation is not necessary. In addition, no public controversy exists regarding the project's potential impacts on archeological sites or cemeteries. In the event that unanticipated archeological deposits are encountered during construction, work in the immediate area would cease, and TxDOT archeological staff would be contacted to initiate post-review discovery procedures under the provisions of the PA-TU and MOU.

The No-Build Alternative would not affect listed or eligible archeological resources.

## **H. Air Quality Conformity**

The proposed action is consistent with the HCMPO's 2015-2040 MTP and the 2015-2018 TIP. This project is located in Hidalgo County which is in an area in attainment or unclassifiable for all National Ambient Air Quality Standards (NAAQS); therefore, the transportation conformity rules do not apply. See the *Air Quality Technical Report* for more details.

The No-Build Alternative would provide no improvements to the existing roadway; therefore, there is a potential for traffic volumes and congestion to increase over time. Vehicle and fuel regulations, coupled with fleet turnover, are expected to cause region-wide air quality improvements.

### **H.1 Carbon Monoxide Traffic Air Quality Analysis**

Traffic data for the design year 2041 is 7,400 vehicles per day (vpd) from SH 107 to FM 676 and 15,300 vpd from FM 676 to FM 1924. A prior TxDOT modeling study and previous analyses of similar projects demonstrated that it is unlikely that a carbon monoxide standard would ever be exceeded as a result of any project with an average annual daily traffic (AADT) below 140,000 vpd. The AADT projections for the project do not exceed 140,000 vpd; therefore, a Traffic Air Quality Analysis was not required.

## **H.2 Congestion Management Process**

This project is located in an area that is in attainment or unclassifiable for all NAAQS; therefore a Congestion Management Process (CMP) analysis was not required.

## **H.3 Mobile Source Air Toxics**

A qualitative Mobile Source Air Toxics (MSAT) analysis was provided for this project in the *Air Quality Technical Report*. The additional travel lanes contemplated as part of the project alternatives will have the effect of moving some traffic closer to nearby homes, schools, and businesses; therefore, under each alternative there may be localized areas where ambient concentrations of MSAT could be higher under certain Build Alternatives than the No Build Alternative. The localized increases in MSAT concentrations would likely be most pronounced along the expanded roadway under all the alternatives. However, the magnitude and the duration of these potential increases compared to the No-Build alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts. In sum, when a highway is widened, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSAT will be lower in other locations when traffic shifts away from them. However, on a regional basis, the Environmental Protection Agency's (EPA) vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

## **I. Biological Resources**

A *Biological Technical Report* was prepared, which analyzed potential impacts to vegetation, threatened and endangered species, migratory birds, fish and wildlife, and farmland. A summary of the findings is below.

The No-Build Alternative would require no construction activities; therefore, no impacts to vegetation, federally-listed species, state-listed species, or farmland would occur.

### **I.1 Vegetation**

As discussed in **Section VI, A.2** of this EA (page 7), the proposed ROW consists primarily of mowed and maintained vegetation (16.0 acres), with some agricultural (6.2 acres) and scrub shrub (0.3 acres). Vegetation diversity in the project area is low due to the presence of residential areas and agricultural land. The vegetation threshold requirements for mowed and maintained vegetation, as listed in the TPWD Threshold Table Programmatic Agreement, were exceeded; TPWD coordination was completed May 2015 and there were no adverse impacts to vegetation.

### **I.2 Federally-Listed Species**

Based on field visits on April 2 and July 28, 2014, conducted by a qualified biologist, there is no potential habitat for federally listed species in the project area. No impacts to federally listed species are anticipated.

### **I.3 State-Listed Species**

Approximately 14 state-listed species may be impacted by the proposed project. TxDOT-TPWD Best Management Practices (BMP) would be utilized to minimize and avoid impacts. BMPs would include: Bird BMPs, Tree Bat BMPs, Reptile BMPs, Amphibian BMPs, Plains Spotted Skunk BMPs, and Vegetation BMPs. Additional details regarding BMPs can be found in **Section VIII. Permits and Commitments** of this EA (page 17). Contractors would be advised of potential occurrence of species in the project area, and to avoid harming the species if encountered and to avoid unnecessary impacts to dens. For more information of these species and their habitat, see the *Biological Technical Report*. Coordination with TPWD was completed on May 15, 2015 (**Appendix D**).

### **I.4 Farmland**

Based on coordination with the National Resource Conservation Service (NRCS), the proposed project is considered “prior converted” farmland and is exempt from the Farmland Protection Policy Act (FPPA). Coordination with NRCS was completed on January 23, 2015 (**Appendix D**).

## **J. Water Resources**

A *Water Resources Technical Report* was prepared and analyzed potential impacts to waters of the United States (U.S.), wetlands, water quality, and floodplains.

The No-Build Alternative would require no construction activities; therefore no impacts to waters of the U.S, including wetlands, water quality, or floodplains would occur.

### **J.1 Waters of the U.S., Including Wetlands**

No waters of the U.S. and no wetlands are present in the project area. No U.S. Army Corps of Engineers (USACE) permits would be required and no impacts to wetlands would occur.

### **J.2 Water Quality**

The proposed project would comply with the Texas Commission on Environmental Quality (TCEQ) Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit. A Stormwater Pollution Prevention Plan (SW3P) would be implemented and a Notice of Intent (NOI) would be required. The proposed project is located within the Hidalgo County Municipal Separate Storm Sewer System (MS4) boundary; therefore, MS4 compliance is required.

The proposed project is located within five miles of a threatened or impaired stream, the Arroyo Colorado Above Tidal (2202\_04); however, the project is not within the Arroyo Colorado watershed. Coordination with the TCEQ was completed on June 24, 2015 (**Appendix D**). The 2012 TCEQ 303(d) list was utilized in the assessment. TxDOT would utilize several pollution prevention procedures, including TxDOT’s BMPs to ensure minimal impacts to water resources.

### **J.3 Floodplains**

Approximately 1.9 acres of the proposed project ROW is located within a 100 year floodplain. The hydraulic design for this project would be in accordance with Federal Highway Administration (FHWA) & TxDOT design standards. The facility would permit the conveyance of the 100-year flood, inundation of the roadway being acceptable, without causing significant damage to the facility, stream or other property. The proposed project would not increase the base flood elevation to a level that would violate applicable ordinances or regulations. The floodplain administrator was notified of the project on January 13, 2015 and no comments were received.

### **K. Noise**

A *Noise Analysis Technical Report* was prepared in accordance with TxDOT's (FHWA approved) *Guidelines for Analysis and Abatement of Roadway Traffic Noise* (2011). Existing and predicted traffic noise levels were modeled at receiver locations that represent land use activity area adjacent to the proposed project that might be impacted by traffic noise and potentially benefit from feasible and reasonable noise abatement. A total of 27 receivers (25 residences and two schools) (**Figure 10**) were analyzed. Predicted noise levels ranged from 47 dBA (A-weighted decibels) to 65 dBA; increases between existing and perceived levels did not exceed five dBA. Based on the analysis, none of the receivers approached, equaled or exceeded the FHWA Noise Abatement Criteria or substantially exceeded (10 dBA or more) the existing noise level; therefore, the proposed project would not cause traffic noise impacts. To avoid noise impacts that may result from future development of properties adjacent to the project, local officials responsible for land use control programs should ensure, the maximum extent possible, no new activities are planned or constructed along or within the predicted (2041) noise impact contours, 30 feet from the ROW for residential properties and zero (0) feet for other developed properties. Local officials would be notified within 30 days of environmental clearance that a noise analysis was completed, an increase in noise would occur as a result of the proposed project, and a copy of the traffic noise analysis will be made available. On the date of approval of this document (Date of Public Knowledge), TxDOT is no longer responsible for providing noise abatement for new development adjacent to the project.

The No-Build Alternative would not provide improvements in the project area; therefore, traffic levels may increase over time, leading to congestion and increased traffic noise levels.

### **L. Hazardous Materials**

An Initial Site Assessment (ISA) was completed in January 2015. It was determined that no adverse impacts related to hazardous materials are anticipated as a result of the proposed project. The proposed project would not require any residential or business relocations, or bridge modifications; therefore, no issues with Asbestos Containing Materials (ACM) or Lead Based Paints (LBP) are anticipated.

Hazardous materials that require special handling would be managed, including onsite treatment, removal, or combination thereof, on an as needed basis only by appropriately licensed and certified abatement contractors having documentation of successfully completing prior similar abatement work and receiving regulatory acceptance. No dewatering is anticipated; however, additional investigation may be undertaken if dewatering is required during construction.

In addition, updated ISAs would be obtained during final design if additional ROW is required or any additional excavation is anticipated on or adjacent to any properties identified with potential hazardous material contamination.

The No-Build Alternative would require no construction activities; therefore no impacts to hazardous materials would occur.

## **VII. Indirect and Cumulative Impacts**

### **A. Indirect Impacts**

Indirect effects are “caused by the action and are later in time and farther removed in distance, but are still reasonably foreseeable; indirect impacts may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate and related effects on air and water and other natural systems, including ecosystems” (40 CFR 1508.8). Probability also helps distinguish indirect effects from direct effects; direct effects are often inevitable, while indirect effects are merely probable.

The TxDOT Risk Assessment for Indirect and Cumulative Impacts (ICI) and the Induced Growth Indirect Impacts decision tree were utilized to determine if a detailed analysis of indirect impacts was required:

- Does the purpose and need include economic development or is the project proposed to serve a specific development?  
No. As discussed in **Section III**, the purpose and need include improving safety and mobility.
- Are economic development or new opportunities for growth/development cited as benefits of the proposed project?  
No. Economic development or new opportunities for growth/development are not cited as benefits of the proposed project.
- Is land in the project area available for development and/or redevelopment?  
Yes. Land use in the project area is mainly agricultural and residential. There is a potential for development of the agricultural areas; however, city zoning and planning is in place to regulate potential development.
- Does the project add capacity?  
Yes. The proposed project would add two additional travel lanes
- Is the project located in a rural area outside the MPO boundary?  
No, the project is in an urban area within the MPO boundary.
- Does the project substantially increase access or mobility in the project area?

No. Although mobility would be improved as a result of the proposed project, impacts would not be considered substantial. The project would widen an existing roadway.

It was determined through the screening process that an indirect analysis was not required.

**B. Cumulative Impacts**

The regulations implementing NEPA define cumulative impacts as the impact on the environment that result from “the incremental impact” of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time 40 CFR § 1508.8. Cumulative impacts include both direct and indirect impacts.

The TxDOT Risk Assessment for ICI and the Cumulative Impacts decision tree were utilized to determine if a detailed analysis of indirect impacts is required (**Table 7**).

**Table 7: Determination of Resources Included in the Cumulative Impacts Analysis**

Resource	Direct Impacts	Indirect Impacts	Topic to be included in Cumulative Impact Analysis	Reason Eliminated from Cumulative Impact Analysis
Air Quality	Direct impacts to air quality are not anticipated.	No indirect impacts anticipated.	No	Impacts were analyzed in the <i>Air Quality Technical Report</i> and determined not to be adverse; resource not at risk.
Community Resources	Blocks containing minority and low-income populations are located within the proposed ROW.	No indirect impacts anticipated.	No	Although considered notable and “at-risk,” impacts would not be adverse as per the <i>Community Impacts Analysis Technical Report</i> .
Cultural Resources	Historic properties were avoided and coordination with the SHPO occurred to ensure cooperation under Section 106 of the National Historic Preservation Act of 1966. No archeological sites are located within the project area.	No indirect impacts anticipated.	No	No impacts; resource not at risk.

Resource	Direct Impacts	Indirect Impacts	Topic to be included in Cumulative Impact Analysis	Reason Eliminated from Cumulative Impact Analysis
Threatened and Endangered Species	State threatened and/or endangered species may be impacted.	No indirect impacts anticipated.	No	Impacts were analyzed in the <i>Biological Technical Report</i> and determined to not be adverse. BMPs would be implemented in accordance with the TPWD MOU.
Vegetation	22.5 acres of proposed ROW would be converted to transportation use	No indirect impacts anticipated.	No	Impacts were analyzed in the <i>Biological Technical Report</i> and determined to not be adverse.
Water Resources	The proposed project is located within five miles of a threatened or impaired stream.	No indirect impacts anticipated.	No	Impacts were analyzed in the <i>Biological Technical Report</i> and determined to not be adverse. TxDOT BMPs would be put in place to minimize impacts.
Floodplains	Approximately 1.9 acres of the proposed project ROW is located within a 100 year floodplain.	No indirect impacts anticipated.	No	Impacts were analyzed in the <i>Biological Technical Report</i> and determined to not be adverse.

The proposed project would not have adverse direct or indirect impacts to any resource and none of the resources are in poor or declining health. It was determined through the screening process that a cumulative impacts analysis was not required.

**C. Construction Impacts**

**C.1 Noise Impacts-Construction**

Noise associated with the construction of the proposed project is difficult to predict. Heavy machinery, the major source of noise in construction, is constantly moving and the movement patterns are unpredictable. However, construction normally occurs during daylight hours when occasional loud noises are more tolerable. None of the receivers are expected to be exposed to construction noise for a long duration; therefore, extended disruption of normal activities is not expected. Provisions would be included in the plans and specifications that require the contractor to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls and proper maintenance of muffler systems.

**C.2 Air Quality Impacts-Construction**

During the construction phase of this project, temporary increases in air pollutant emissions may occur from construction activities. The primary construction-related emissions are particulate matter (fugitive dust) from site preparation. These emissions are temporary in nature (only occurring during actual construction); it is not possible to reasonably estimate impacts from these emissions due to limitations of the existing models. However, the potential impacts of particulate matter emissions would be minimized by using fugitive dust

control measures such as covering or treating disturbed areas with dust suppression techniques, sprinkling, covering loaded trucks, and other dust abatement controls, as appropriate.

The construction activity phase of this project may generate a temporary increase in MSAT emission from construction activities, equipment and related vehicles. The primary MSAT construction-related emissions are particulate matter from site preparation and diesel particulate matter from diesel powered construction equipment and vehicles. However, considering the temporary and transient nature of construction-related emissions, as well as the mitigation actions to be utilized, it is not anticipated that emissions from construction of this project would have any significant impact on air quality in the area.

### **VIII. Permits and Commitments**

The following commitments would be implemented to avoid and minimize impacts to the human and natural environment.

- Limited use of herbicides and other chemicals for ROW maintenance would further minimize impacts to riparian and aquatic wildlife communities.
- In accordance with EO 13112 on Invasive Species and the Executive Memorandum on Beneficial Landscaping, landscaping would be limited to seeding and replanting the ROW with native species of plants (TxDOT Seed Mix 164-006). Reseeding disturbed areas after construction and planting native prairie species within suitable areas of the project ROW could mitigate vegetation impacts and restore much of the native vegetation.
- The SHPO concurred with the determination of no adverse effect to the historical property on March 10, 2016 (**Appendix D**), pending review of the 60% plan set.
- Minimizing the construction of work roads and construction areas would minimize construction impact in the area. Following construction, work areas would be restored to equal or better conditions than existed before construction.
- Provisions for waste materials and storage, storm water management measures, and appropriate road maintenance measures, along with TPDES procedures and TxDOT's BMPs and Sedimentation Control Guidelines, must be followed during construction. An erosion and sedimentation control plan and a SW3P would be developed for the project and adhered to during construction. The project would require a NOI to be filed with the TCEQ.
- The USFWS stipulates avoiding vegetation disturbances during the nesting season of February 15<sup>th</sup> through October 1<sup>st</sup>, or surveying the area for nesting birds during that time, and landscaping with native species as needed. Although no direct impacts to migratory bird species, or their habitat, are expected with the implementation of the

proposed project, measures to minimize impacts to migratory bird habitat would be implemented to avoid any harm to migratory birds.

- Measures to control dust would be considered and incorporated in the final design and construction specifications.
- Provisions would be included in the plans and specifications that require the contractor to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls and proper muffler system maintenance.
- In the event that any previously unknown historical or archaeological resources are discovered to be located within the project limits, either prior to or during construction, work in the immediate area would cease, and TxDOT archaeological staff would be contacted. At that time, TxDOT archaeological staff would initiate accidental discovery procedures under the provisions of (1) the PA-TU between TxDOT, the THC, FHWA, and the ACHP and (2) the MOU between TxDOT and the THC.
- Contractors would be advised of potential occurrence of threatened or endangered species in the project area, and to avoid harming the species if encountered. State listed species that may potentially utilize habitat features include: Texas Botteri's Sparrow (*Aimophila botterii texana*), Southern Yellow Bat (*Lasiurus ega*), Western Burrowing Owl (*Athene cunicularia hypugaea*), Plains Spotted Skunk (*Spilogale putorius interrupta*), Black-Striped Snake (*Coniophanes imperialis*), Texas Indigo Snake (*Drymarchon melanurus erebennus*), Texas Horned Lizard (*Phrynosoma cornutum*), Spot-Tailed Earless Lizard (*Holbrookia lacerate*), South Texas Siren (large form) (*Siren sp.1*), Black-Spotted Newt (*Notophthalmus meridionalis*), Mexican Treefrog (*Smilisca baudinii*), Sheep Frog (*Hypopachus variolosus*), White-Lipped Frog (*Leptodactylus fragilis*), and Mexican Mud-Plantain (*Heteranthera mexicana*).
- The following TxDOT-TPWD BMPs would be implemented:
  - Bird BMPs:* do not disturb, destroy, or remove active nests, including ground-nesting birds, during the nesting season; avoid the removal of unoccupied, inactive nests, as practicable; prevent the establishment of active nests during the nesting season on TxDOT owned and operated facilities and structures proposed for replacement or repair; no collecting, capturing, relocating, or transporting birds, eggs, young, or active nests without a permit.

*Tree Bat BMPs:* avoid unnecessary removal of dead fronds on native and ornamental palm trees in south Texas (Cameron, Hidalgo, Willacy, Kenedy, Brooks, Kleberg, Nueces, and San Patricio counties). Large hollow trees should be surveyed for maternity colonies and, if found, should not be disturbed until after the pups fledge.

*Reptile BMPs:* due to increased activity (mating) of reptiles during the spring, construction activities like clearing or grading should attempt to be scheduled outside

of the spring (April-May) season. Timing ground disturbing activities before October when reptiles become less active and may be using burrows in the project area is also encouraged. If the Texas Horned Lizard is present in the project area, contractors should avoid harvester ant mounds in the selection of project-specific locations.

*Vegetation BMPs:* vegetation clearance has been minimized through the design process, removal of native vegetation, particularly mature native trees and shrubs should be avoided to the greatest extent practicable. Impacted vegetation should be replaced with in-kind, on-site replacement/restoration of native vegetation, wherever practicable. To minimize adverse effects, activities should be planned to preserve mature trees, particularly nut or berry producing varieties. It is strongly recommended that trees greater than 12 inches in Diameter at Breast Height (dbh) that are removed be replaced. TPWD experience indicates that for ecologically effective replacement, a ratio of 3:1 lost should be provided to the extent practicable either on-site or off-site. Trees less than 12 inches dbh should be replaced at a 1:1 ratio. Replacement trees should be equal or better wildlife quality than those removed and be regionally adapted native species. When trees are planted, a maintenance plan that ensures at least an 85 percent survival rate after three years should be developed for the replacement trees. Use only locally adapted native species and seed mixes for landscaping and revegetation. Avoid vegetation clearing activities during the general bird nesting season to minimize adverse impacts to birds.

*Plains Spotted Skunk BMP:* Contractors would be advised of potential occurrence in the project area, and to avoid harming the species if encountered, and to avoid unnecessary impacts to dens.

*Amphibian BMPs:* Contractors would be advised of potential occurrence in the project area (i.e. irrigation ditches) and that the species are not necessarily exclusively found near water. If encountered, contractors should avoid harming them. Once construction is complete and disturbed areas have been revegetated, remove silt fence and accumulated sediment to reduce wildlife barriers and hazards.

## **IX. Coordination**

Agency and local coordination has occurred throughout the environmental process. All coordination has been summarized in **Table 8** and the letters are included in **Appendix D**.

Table 8: Coordination

Agency	Date	Reason for Coordination	Response Received	Comments
THC	March 10, 2016	Historical property within the project area.	Yes	No adverse effect on historic properties, pending review of 60 percent plan set when available.
THC	November 9, 2015	PA-TU archeological consultation	Yes	Concurrence of no affect on archeological properties
NRCS	January 23, 2015	Farmland in the project area	Yes	Proposed project is "prior converted" and exempt
TPWD	May 15, 2015	Coordination Trigger Met: Potential impacts to state-listed species	Yes	Acceptance of BMPs to be implemented; coordination complete
TCEQ	June 24, 2015	Within five miles of Section 303(d) listed stream; however, not within the watershed	Yes	No comments received.
Floodplain Administrator	January 13, 2015	Approximately 1.9 acres of the project is within the 100- year floodplain	No	No comments received.
• City of McAllen	April 29, 2015	Notification of action within floodplains	Yes	Confirmation of receipt
• City of Palmhurst	April 24, 2015	Notification of action within floodplains	No	No comments received.
• City of Alton	April 24, 2015	Notification of action within floodplains	No	No comments received.

## X. Public Involvement

A public meeting was held on November 20, 2014 at Sharyland Pioneer High School at 10001 North Shary Road in Mission, Texas. Advertisements were published in the *Monitor* in English and Spanish on October 26 and November 9, 2014. Advertisements were also published in Spanish in *El Periodico* on October 29 and November 2, 2014. Bilingual notices were mailed to city, county, state elected officials, adjacent business owners, and property owners, along with a location map of the project. Translation

services were provided at the meeting. A total of 67 persons were in attendance; of which, 39 persons were property owners, residents, and business owners, four were public/elected officials, and 24 were TxDOT and consultant staff. A total of six verbal comments were received; of which, one was against ROW taking at his home, and the remaining five comments were general questions about the project. No written comments were received. A MAPO was held on June 16, 2015 to discuss changes at the John Shary properties. The *Public Meeting Summary and Analysis* and *MAPO Summary* are on file with the TxDOT Pharr District and on the project website.

An opportunity for a public hearing would be afforded and bilingual advertisements would be published in the local newspaper and mailed to adjacent property owners.

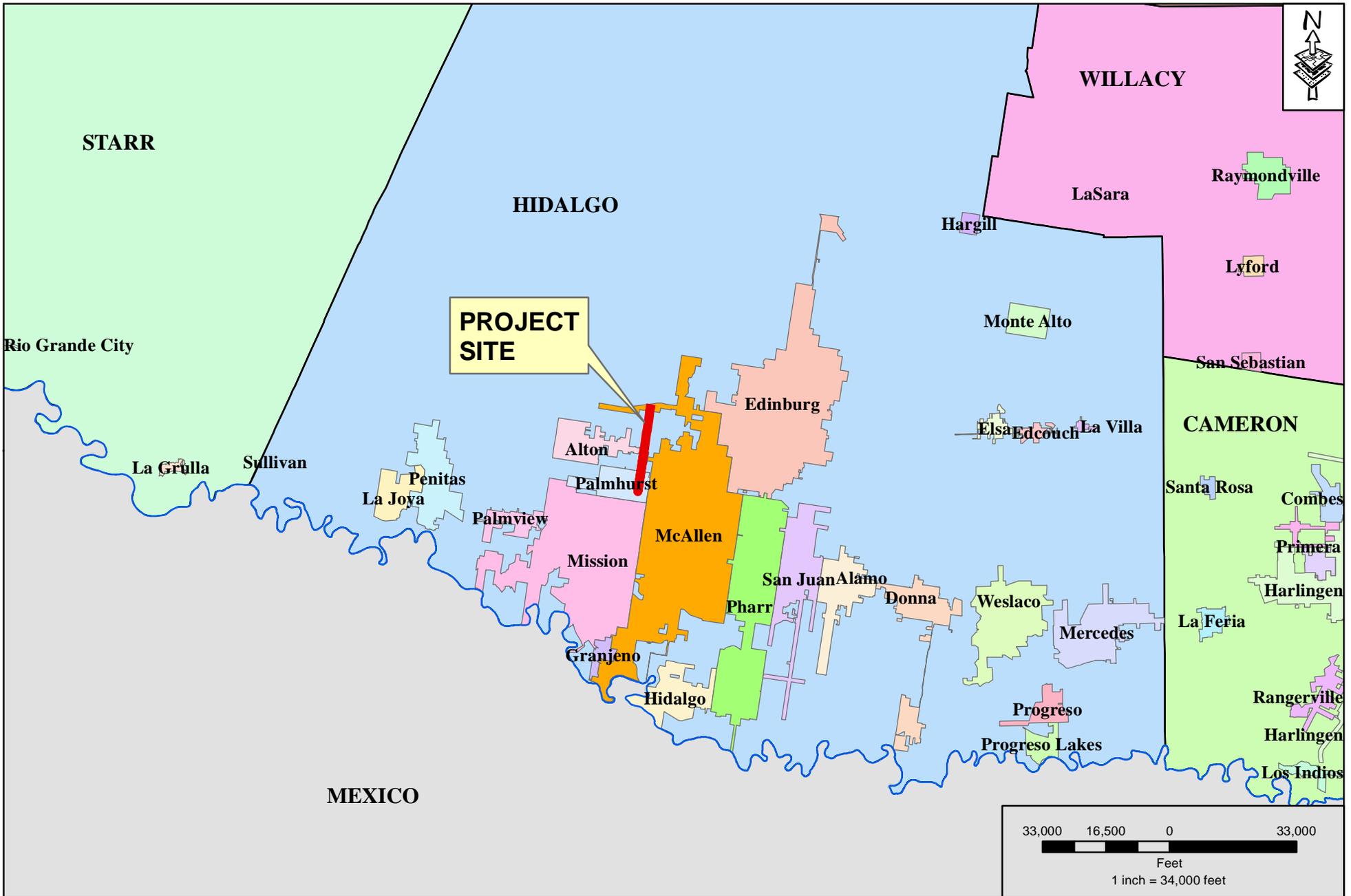
## **XI. Conclusion**

The engineering, social, economic, and environmental investigations conducted thus far indicate that this project would result in no significant impacts on the quality of the human environment. A FONSI is anticipated.

## References

1. Ama Terra Environmental, Inc. 2015a. Historical Project Coordination Request  
2015b. Historic Resources Survey  
2015c. Archeological Project Coordination Request and Background Study  
2015d. Antiquities Permit Application Form  
2015e. Archeological Survey
  
2. Texas Department of Transportation & Hidalgo County. 2014. Public Meeting Summary and Analysis. November 2014.  
2015a. MAPO Summary Report  
2015b. Hazardous Materials Initial Site Assessment  
2015c. Traffic Noise Analysis Technical Report  
2015d. Biological Technical Report  
2015e. Biological Evaluation Form  
2015f. Water Resources Technical Report  
2015g. Community Impacts Analysis Technical Report  
2015h. Air Quality Technical Report

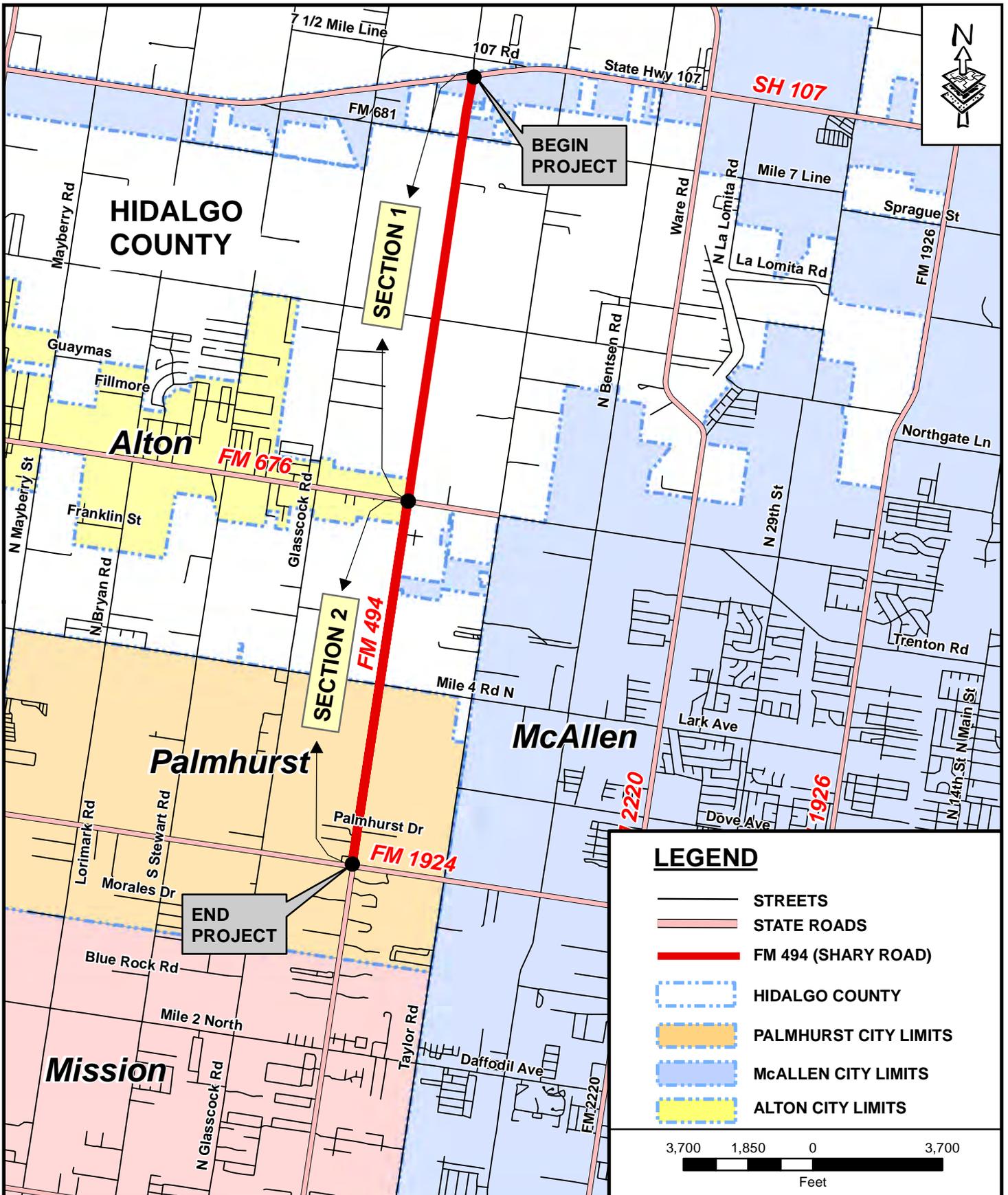
# Figures



**FM 494 (SHARY ROAD)  
VICINITY MAP**  
FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
APPROX. PROJECT LENGTH 4.4 MILES

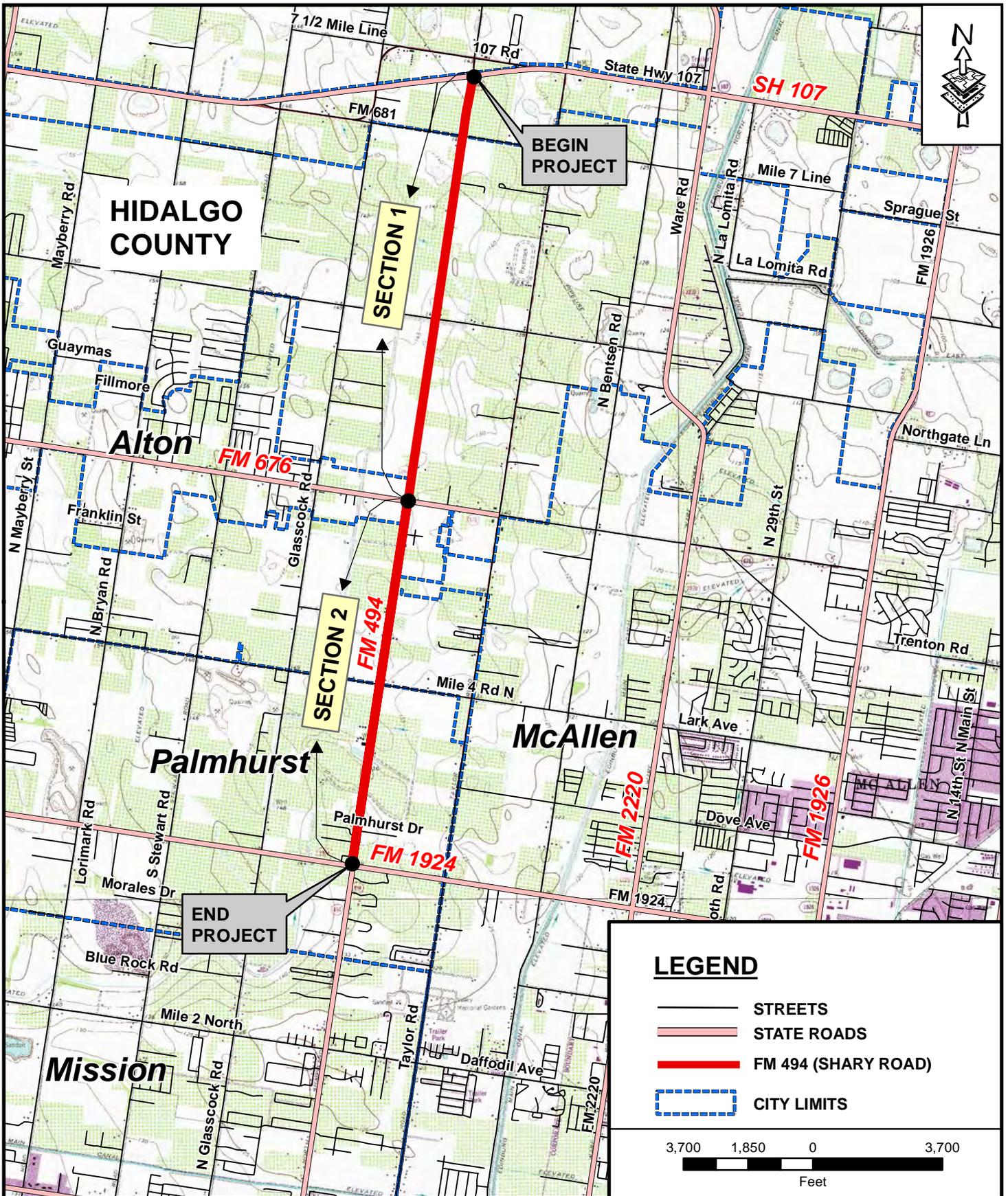
**FIGURE 1**





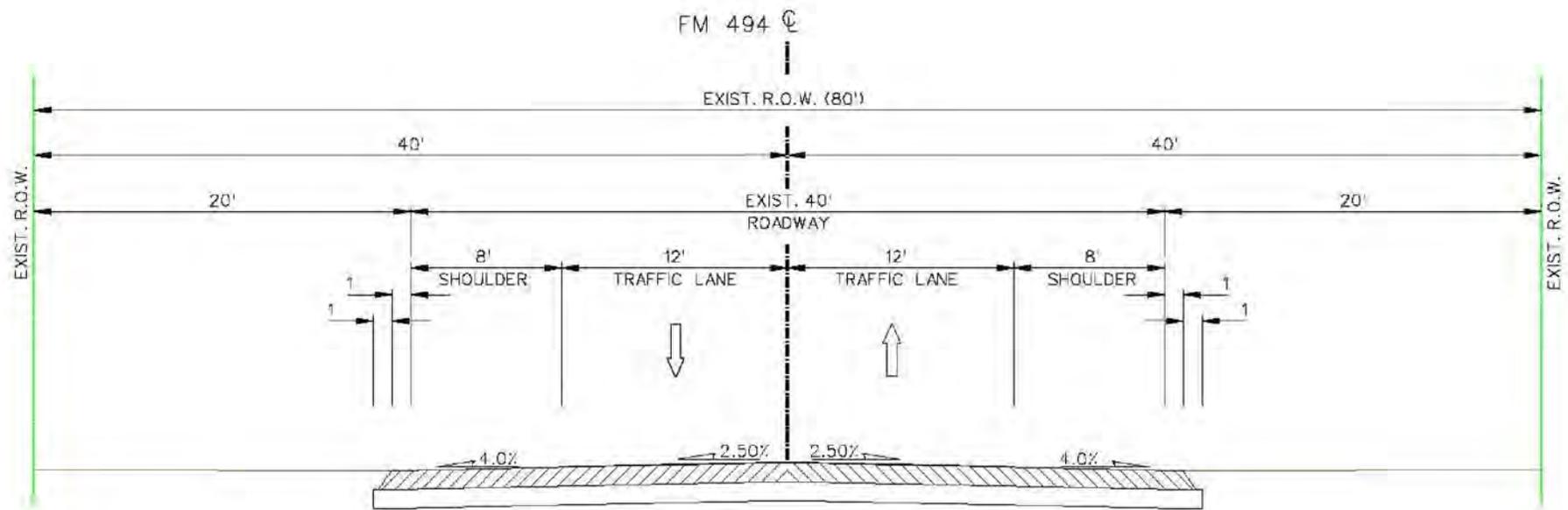
**FM 494 (SHARY ROAD)  
LOCATION MAP**  
FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 2**



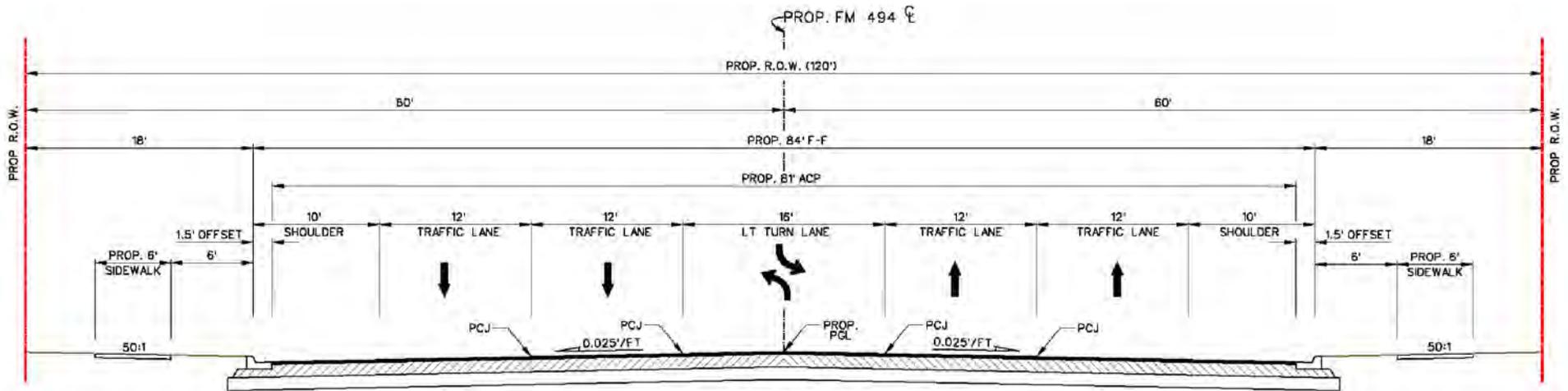
**FM 494 (SHARY ROAD)  
TOPOGRAPHIC MAP  
FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
APPROX. PROJECT LENGTH 4.4 MILES**

**FIGURE 3**



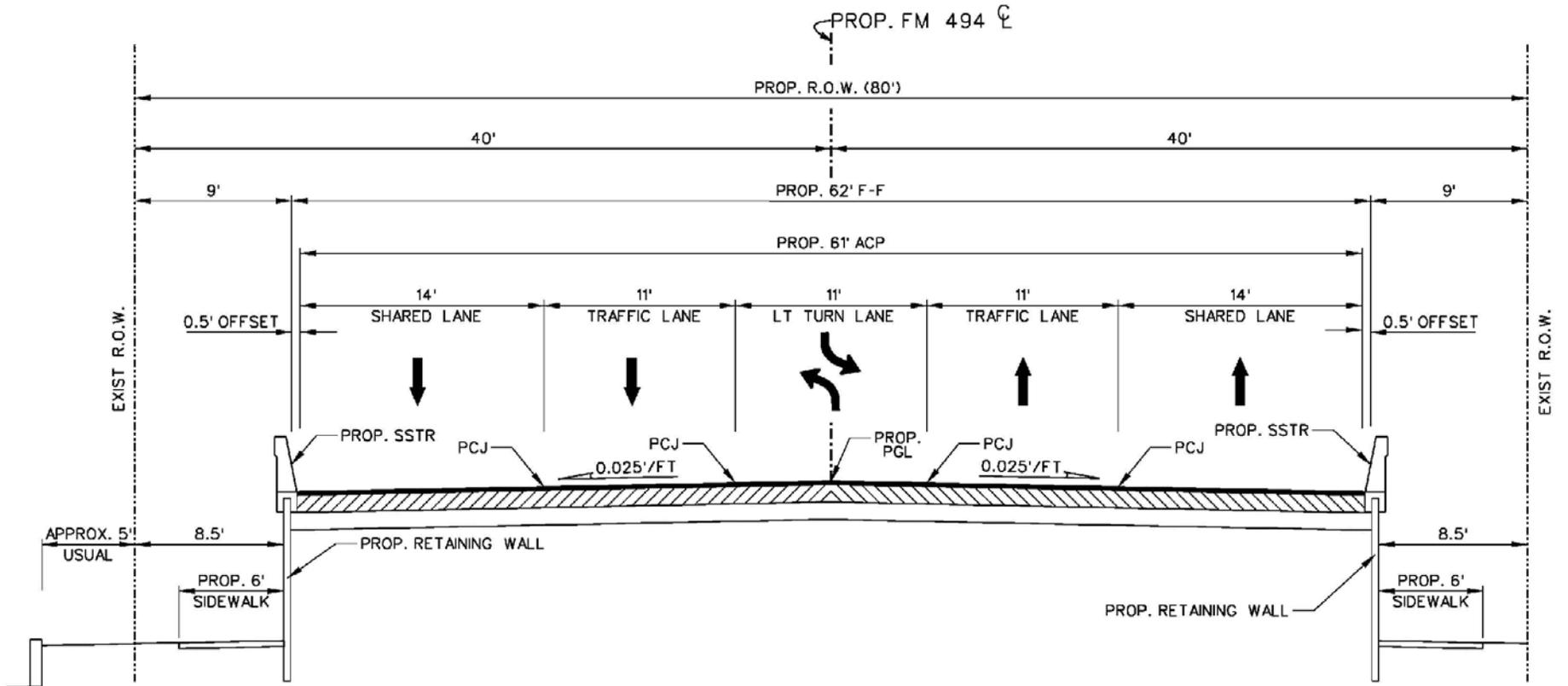
**FM 494 (SHARY ROAD)**  
**EXISTING TYPICAL SECTION**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 4**



**FM 494 (SHARY ROAD)**  
**PROPOSED TYPICAL SECTION**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 5**  
**SHEET 1 OF 2**



**FM 494 (SHARY ROAD)**  
**PROPOSED TYPICAL SECTION @ HISTORICAL PROPERTY**  
 FROM 0.5 MILES NORTH OF FM 1924 (MILE 3 N ROAD) TO 0.3 MILES SOUTH OF MILE 4 N ROAD  
 APPROXIMATE LENGTH: 1,296 FEET

**FIGURE 5**  
**SHEET 2 OF 2**



**LEGEND**

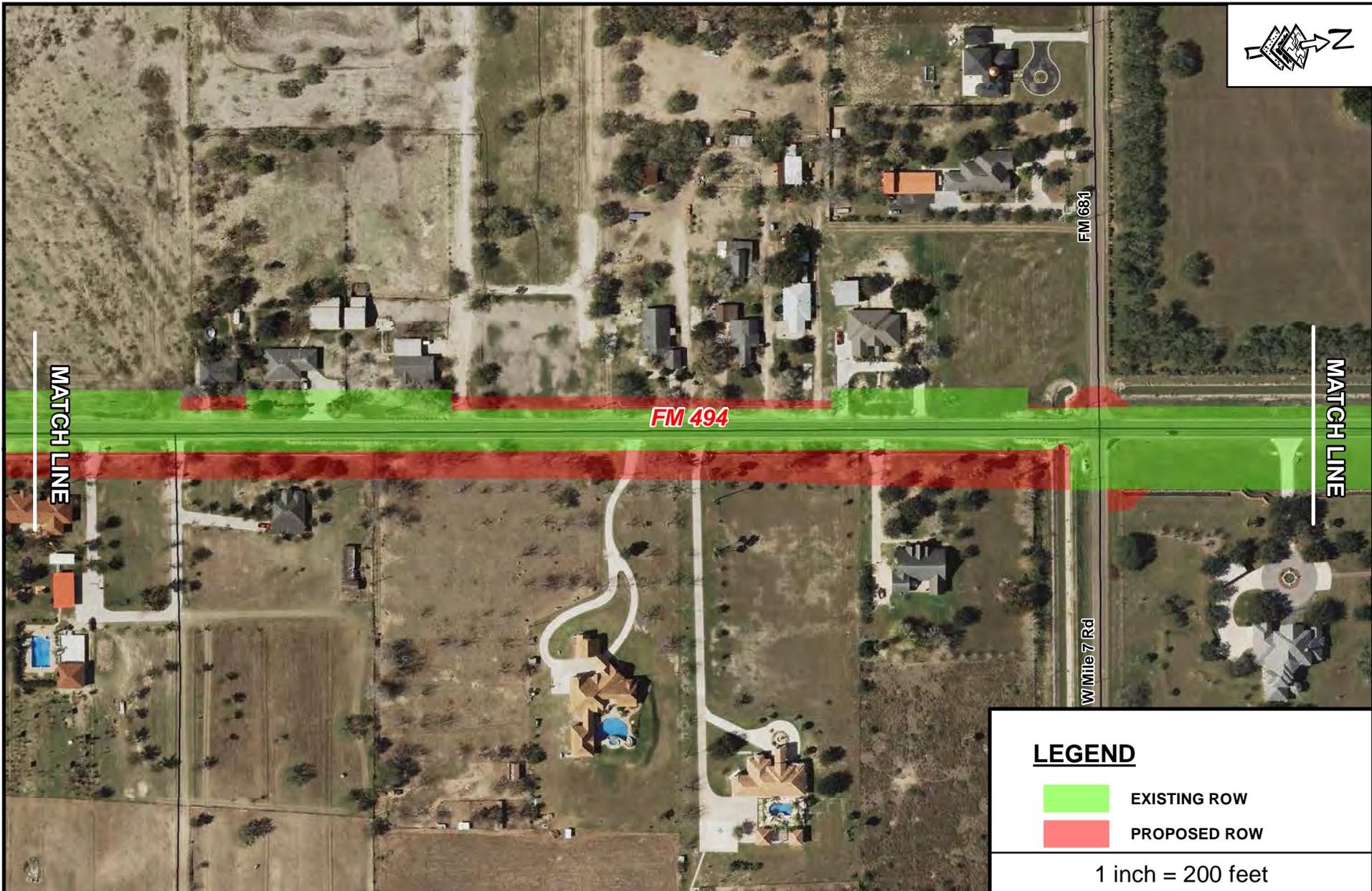
- EXISTING ROW
- PROPOSED ROW

1 inch = 200 feet



**FM 494 (SHARY ROAD)**  
**BUILD ALTERNATIVE**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 6**  
**SHEET 1 OF 13**



**LEGEND**

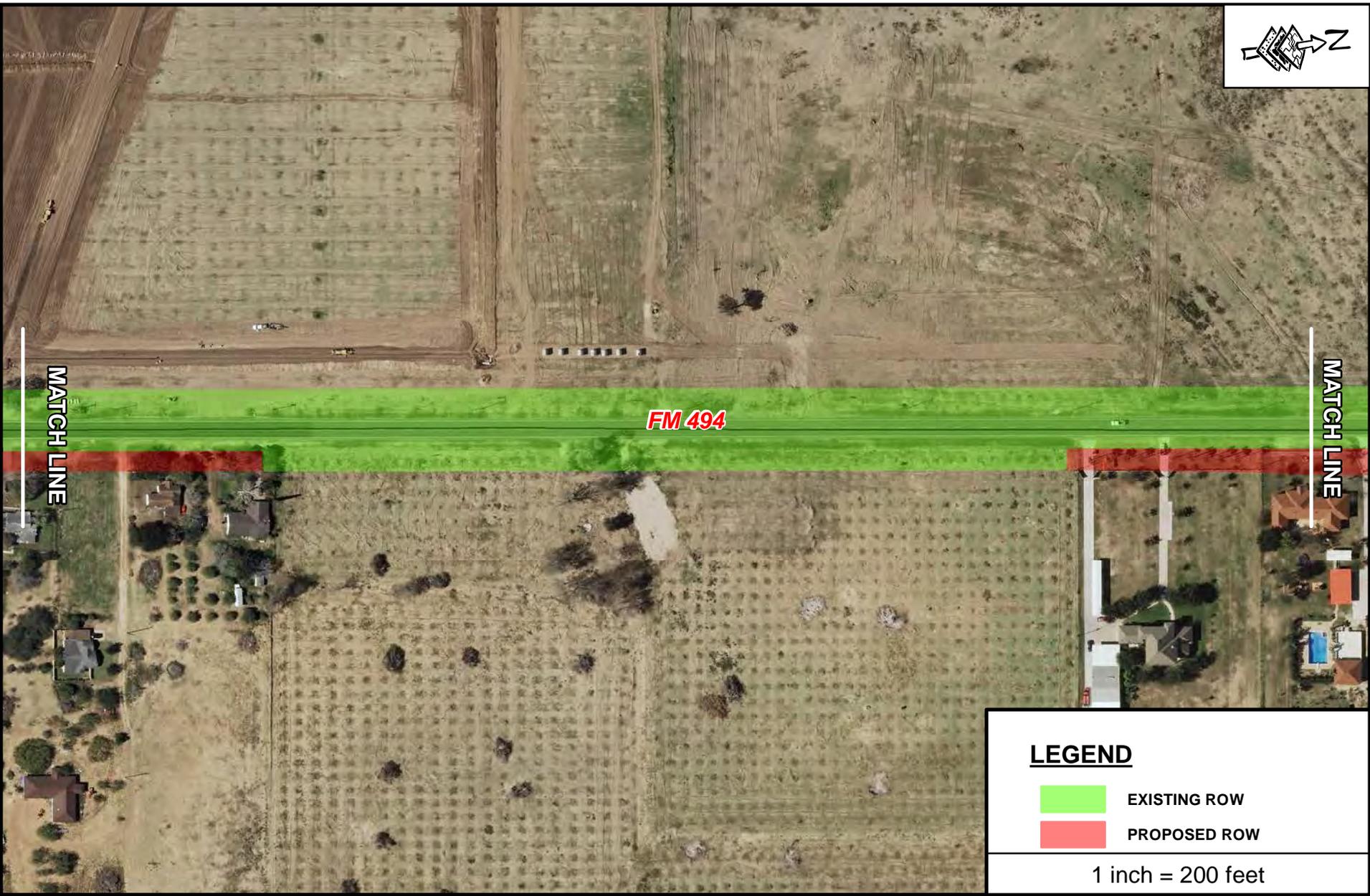
- EXISTING ROW
- PROPOSED ROW

1 inch = 200 feet



**FM 494 (SHARY ROAD)**  
**BUILD ALTERNATIVE**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 6**  
**SHEET 2 OF 13**



**LEGEND**

- EXISTING ROW
- PROPOSED ROW

1 inch = 200 feet



**FM 494 (SHARY ROAD)  
 BUILD ALTERNATIVE  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES**

**FIGURE 6  
 SHEET 3 OF 13**



**LEGEND**

- EXISTING ROW
- PROPOSED ROW

1 inch = 200 feet



**FM 494 (SHARY ROAD)**  
**BUILD ALTERNATIVE**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 6**  
 SHEET 4 OF 13



**LEGEND**

- EXISTING ROW
- PROPOSED ROW

1 inch = 200 feet



**FM 494 (SHARY ROAD)**  
**BUILD ALTERNATIVE**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 6**  
 SHEET 5 OF 13



**FM 494 (SHARY ROAD)  
 BUILD ALTERNATIVE  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES**

**FIGURE 6  
 SHEET 6 OF 13**



**LEGEND**

- EXISTING ROW
- PROPOSED ROW

1 inch = 200 feet



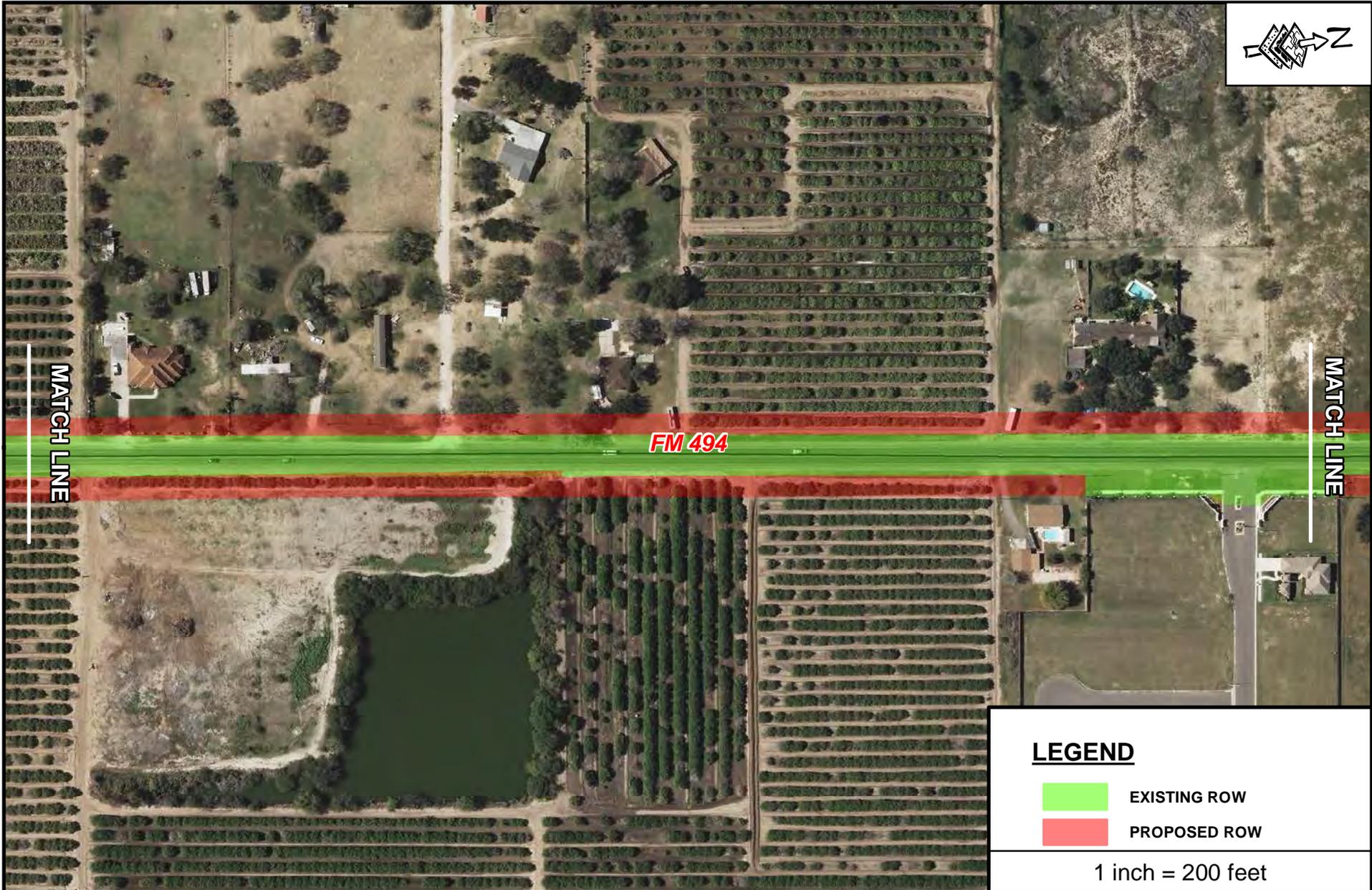
**FM 494 (SHARY ROAD)  
 BUILD ALTERNATIVE  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES**

**FIGURE 6**  
 SHEET 7 OF 13



**FM 494 (SHARY ROAD)**  
**BUILD ALTERNATIVE**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 6**  
**SHEET 8 OF 13**



**LEGEND**

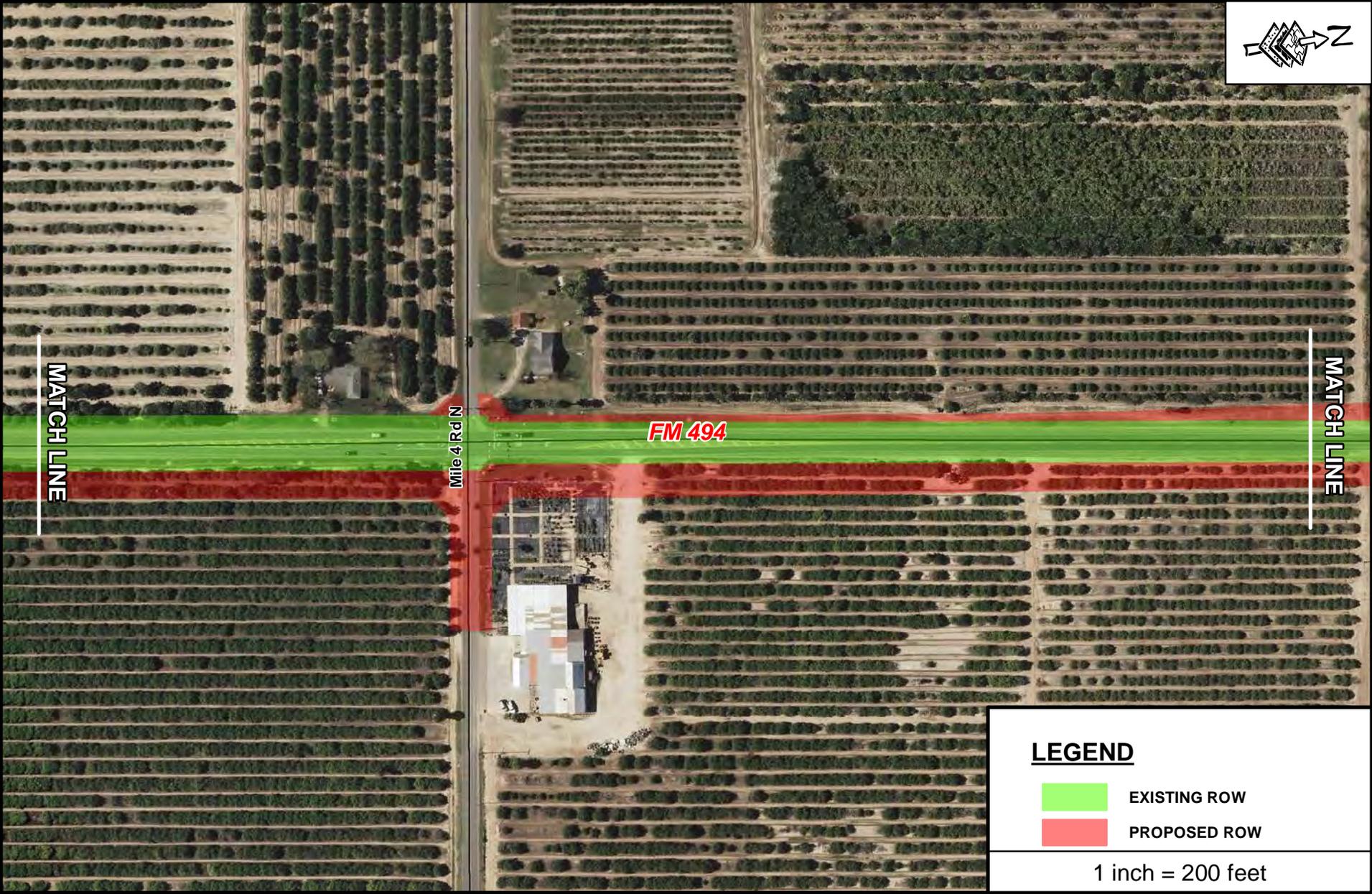
- EXISTING ROW
- PROPOSED ROW

1 inch = 200 feet



**FM 494 (SHARY ROAD)**  
**BUILD ALTERNATIVE**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 6**  
**SHEET 9 OF 13**



**LEGEND**

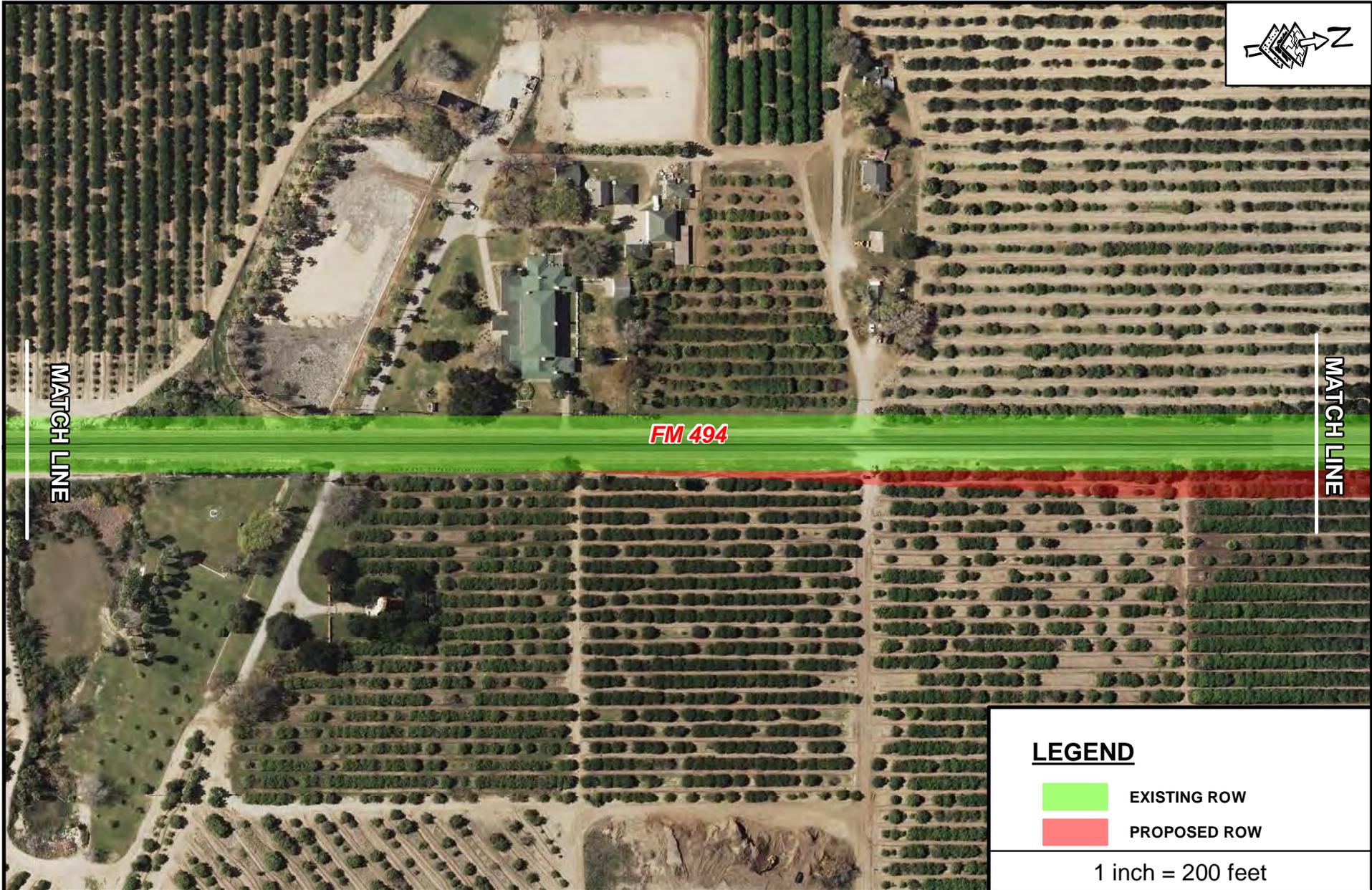
- EXISTING ROW
- PROPOSED ROW

1 inch = 200 feet



**FM 494 (SHARY ROAD)  
BUILD ALTERNATIVE  
FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
APPROX. PROJECT LENGTH 4.4 MILES**

**FIGURE 6  
SHEET 10 OF 13**



MATCH LINE

MATCH LINE

**FM 494**

**LEGEND**

- EXISTING ROW
- PROPOSED ROW

1 inch = 200 feet



**FM 494 (SHARY ROAD)  
 BUILD ALTERNATIVE  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES**

**FIGURE 6  
 SHEET 11 OF 13**



**FM 494**

MATCH LINE

MATCH LINE

Palmhurst Dr

**LEGEND**

- EXISTING ROW
- PROPOSED ROW

1 inch = 200 feet



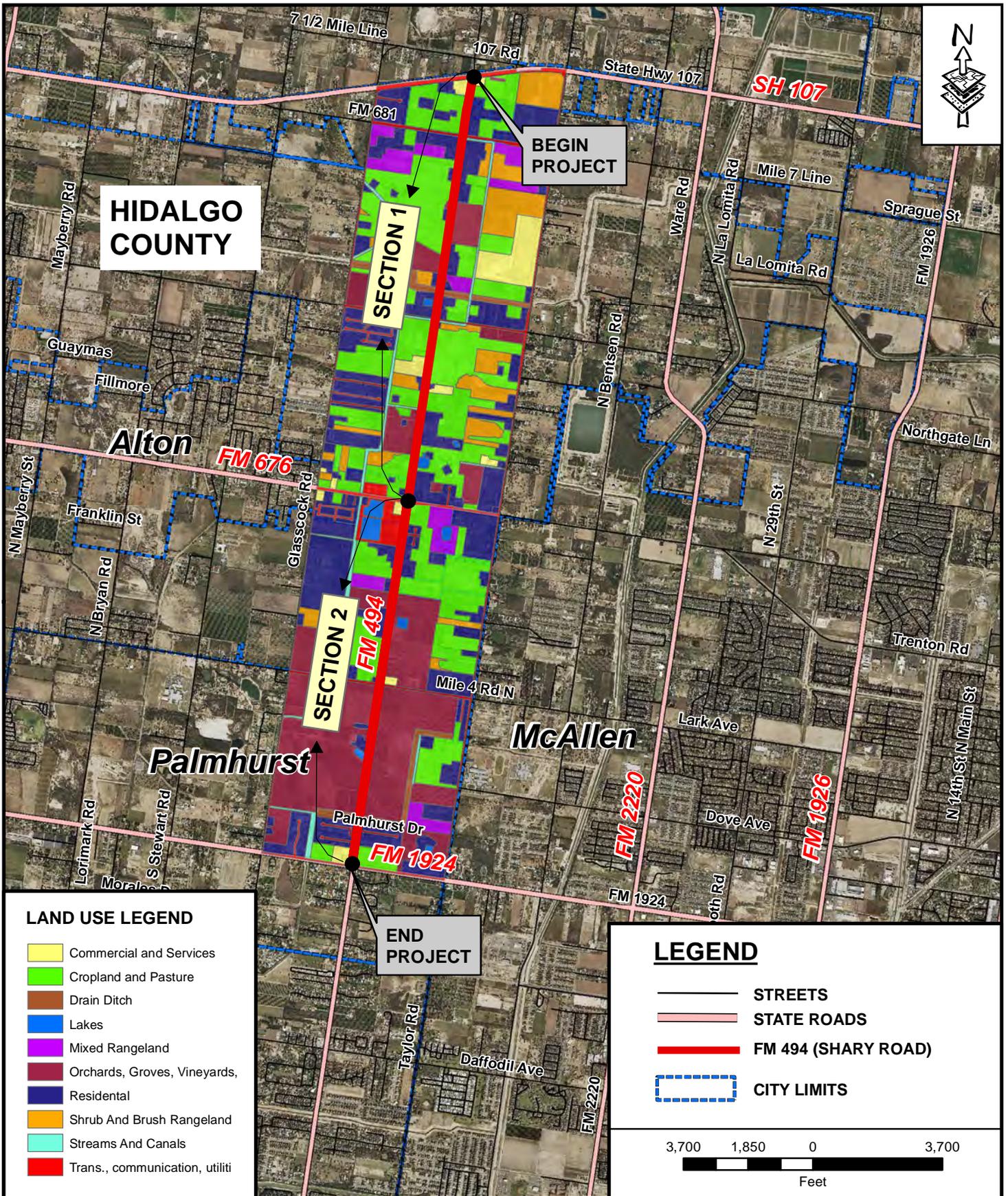
**FM 494 (SHARY ROAD)**  
**BUILD ALTERNATIVE**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 6**  
**SHEET 12 OF 13**



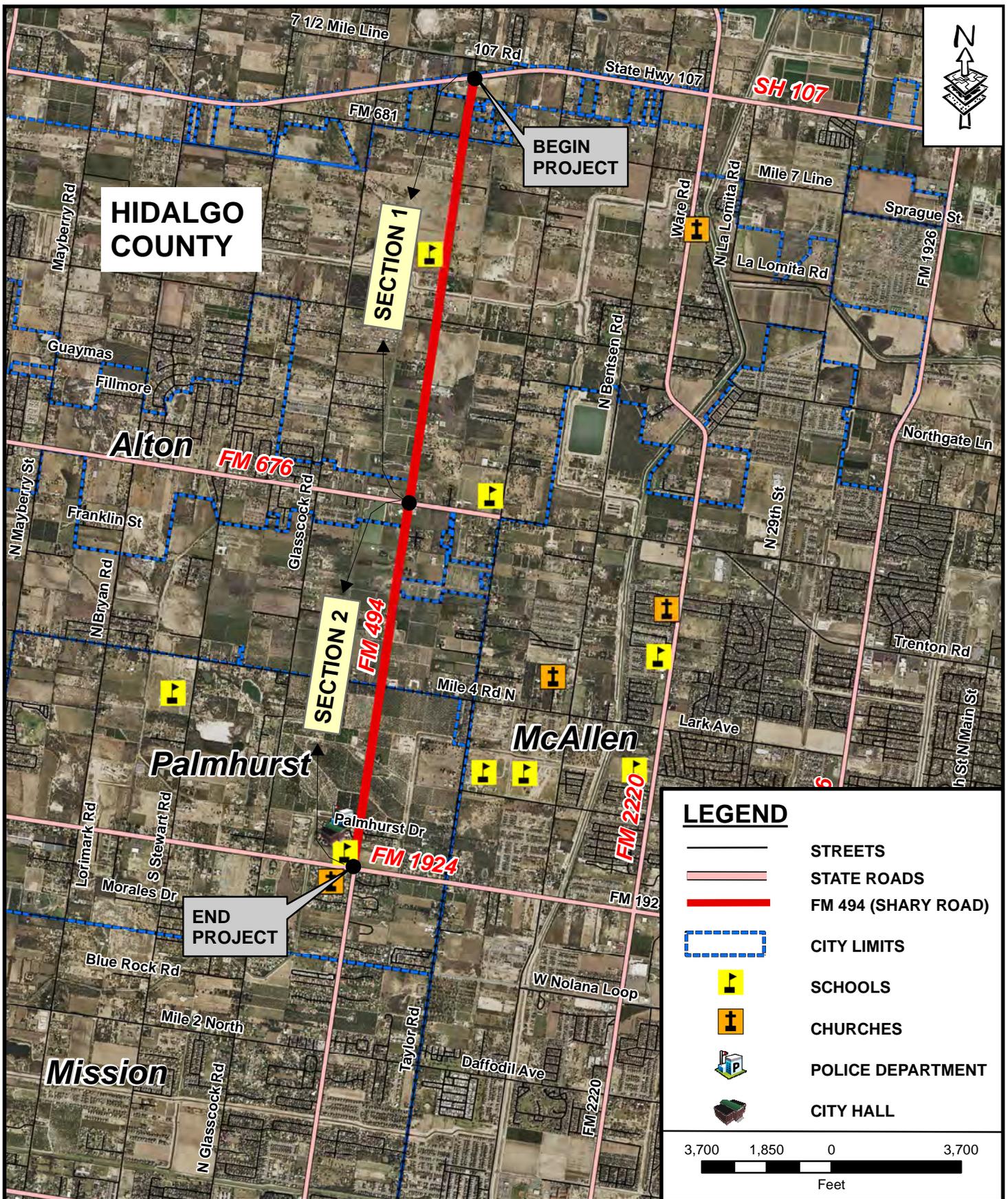
**FM 494 (SHARY ROAD)  
 BUILD ALTERNATIVE  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES**

**FIGURE 6  
 SHEET 13 OF 13**



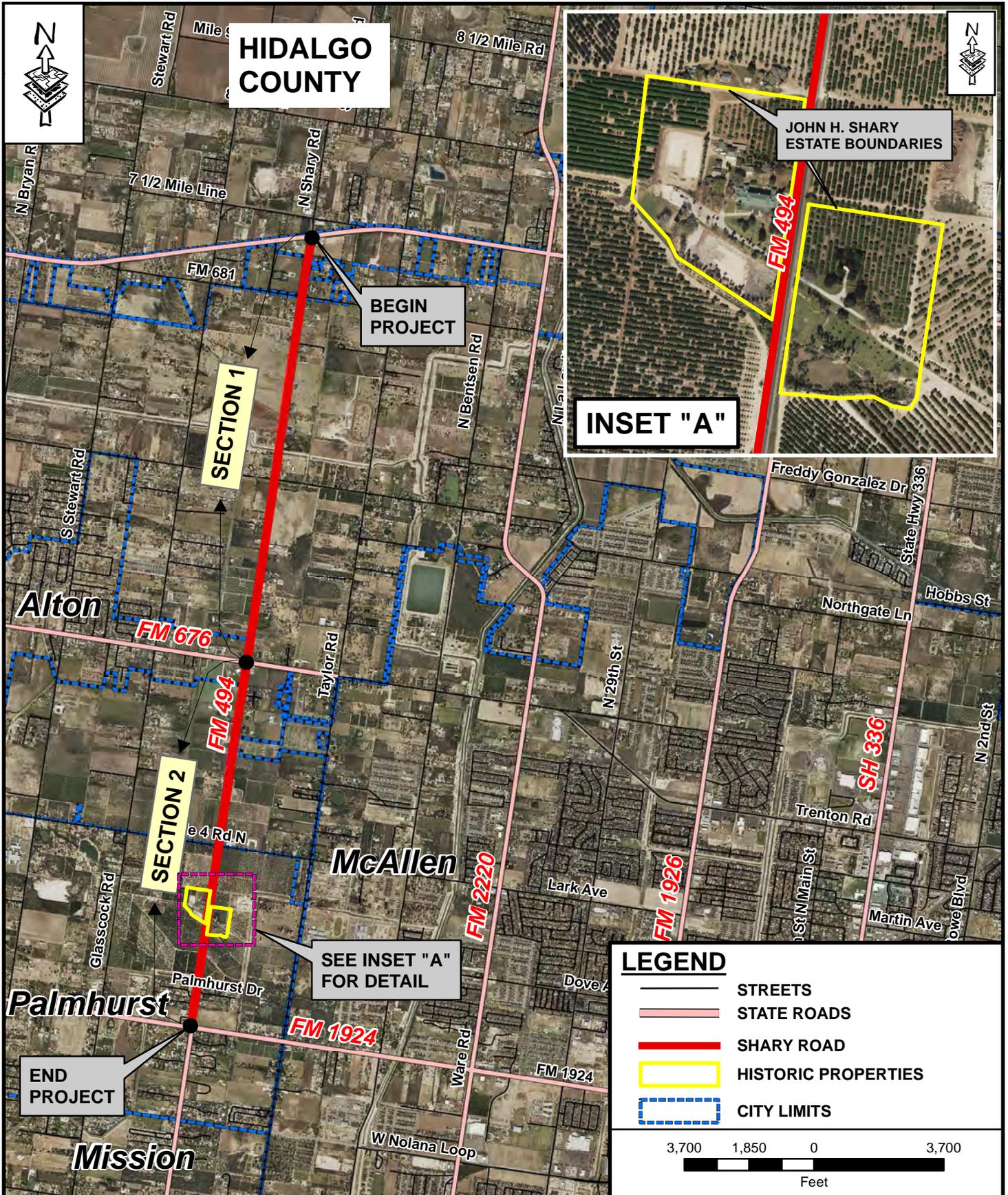
**FM 494 (SHARY ROAD)  
LANDUSE MAP  
FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
APPROX. PROJECT LENGTH 4.4 MILES**

**FIGURE 7**



**FM 494 (SHARY ROAD)  
FACILITIES MAP**  
FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 8**



**FM 494 (SHARY RD)**  
**HISTORICAL PROPERTY MAP**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

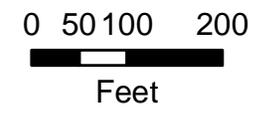
**FIGURE 9**





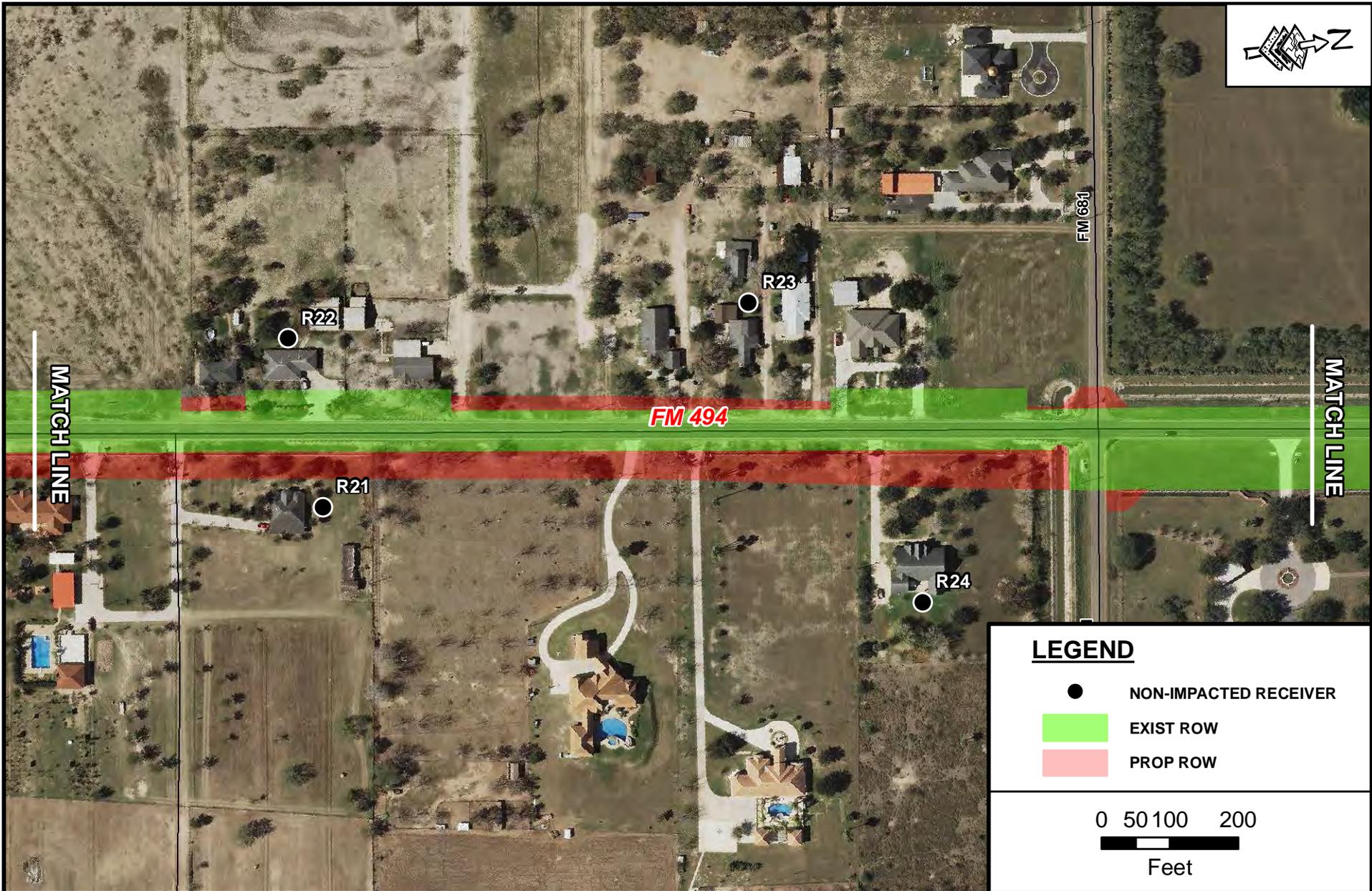
**LEGEND**

- NON-IMPACTED RECEIVER
- █ EXIST ROW
- █ PROP ROW



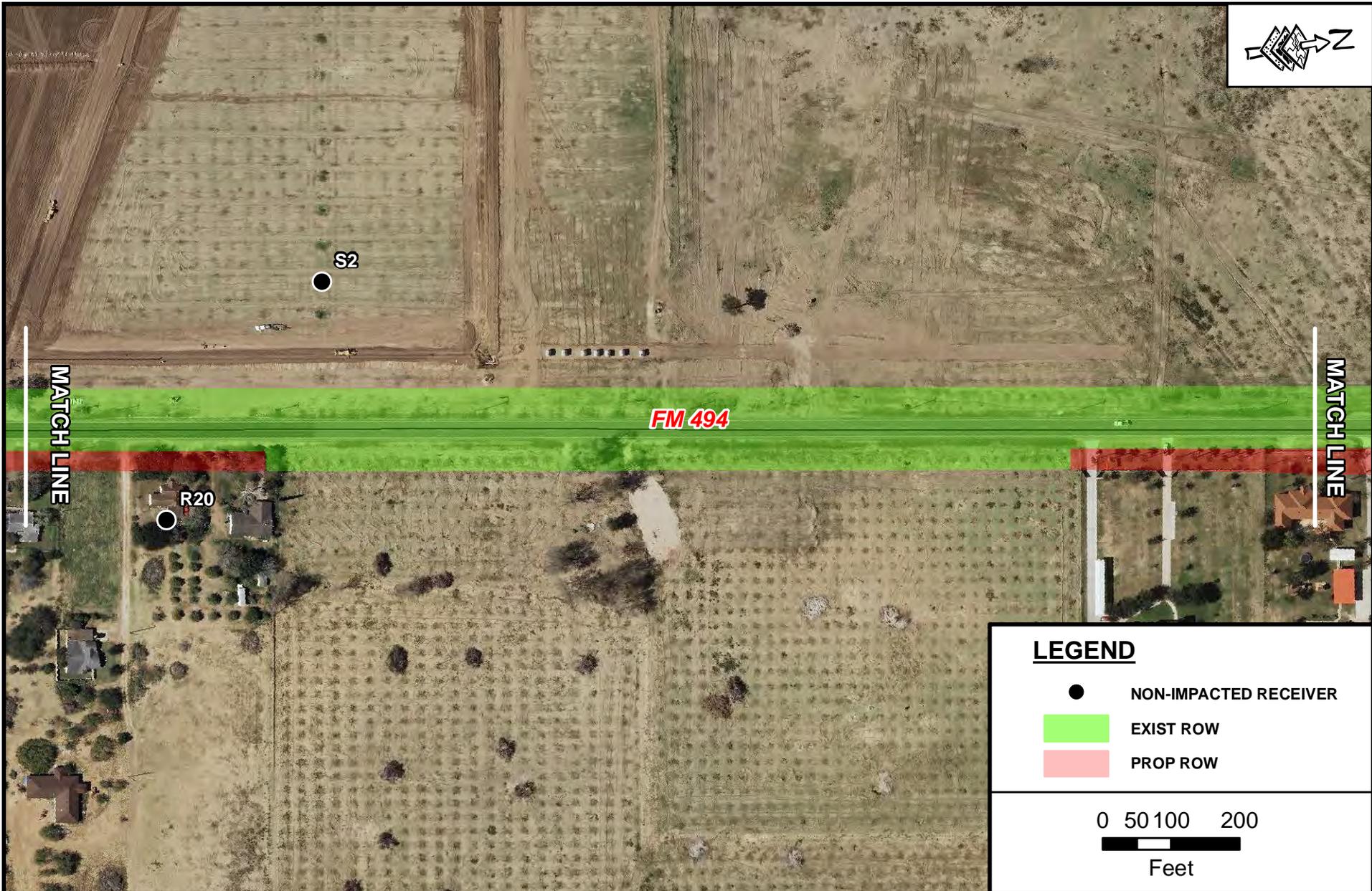
**FM 494 (SHARY ROAD) NOISE RECEIVER MAP  
FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
APPROX. PROJECT LENGTH 4.4 MILES**

**FIGURE 10  
SHEET 1 OF 13**



**FM 494 (SHARY ROAD) NOISE RECEIVER MAP**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 10**  
**SHEET 2 OF 13**



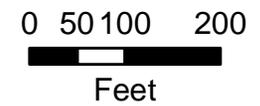
**FM 494 (SHARY ROAD) NOISE RECEIVER MAP**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 10**  
**SHEET 3 OF 13**



**LEGEND**

- NON-IMPACTED RECEIVER
- EXIST ROW
- PROP ROW



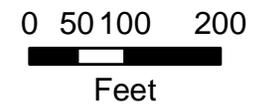
**FM 494 (SHARY ROAD) NOISE RECEIVER MAP**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 10**  
 SHEET 4 OF 13



**LEGEND**

- NON-IMPACTED RECEIVER
- EXIST ROW
- PROP ROW



**FM 494 (SHARY ROAD) NOISE RECEIVER MAP**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 10**  
 SHEET 5 OF 13



MATCH LINE

MATCH LINE

**FM 494**

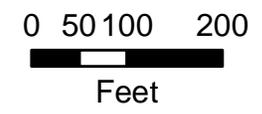
R15

R13

R14

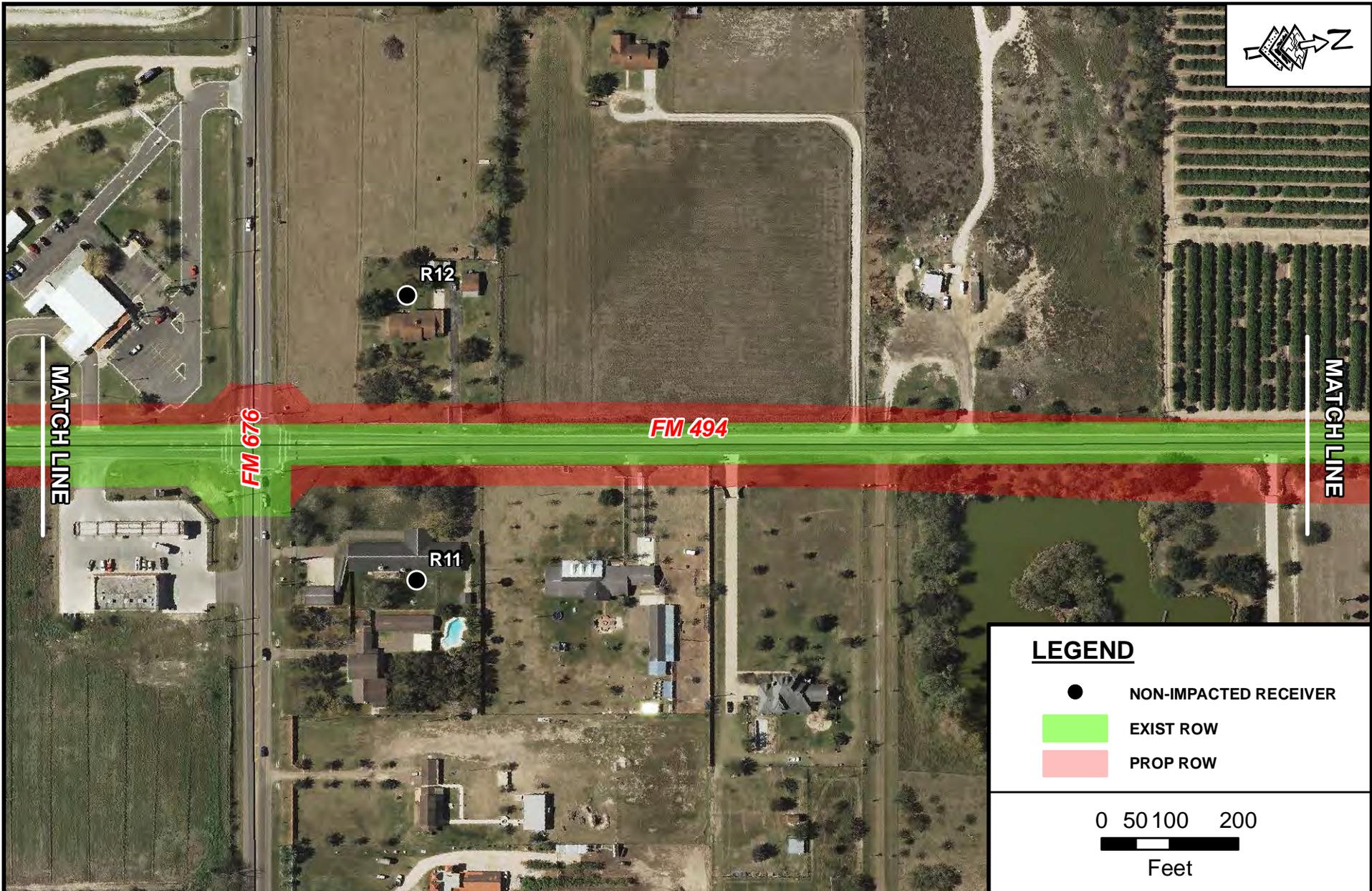
**LEGEND**

- NON-IMPACTED RECEIVER
- EXIST ROW
- PROP ROW



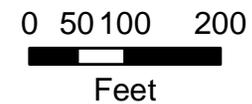
**FM 494 (SHARY ROAD) NOISE RECEIVER MAP**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 10**  
**SHEET 6 OF 13**



**LEGEND**

- NON-IMPACTED RECEIVER
- EXIST ROW
- PROP ROW



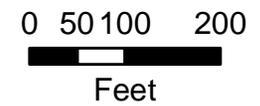
**FM 494 (SHARY ROAD) NOISE RECEIVER MAP**  
**FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)**  
**APPROX. PROJECT LENGTH 4.4 MILES**

**FIGURE 10**  
**SHEET 7 OF 13**



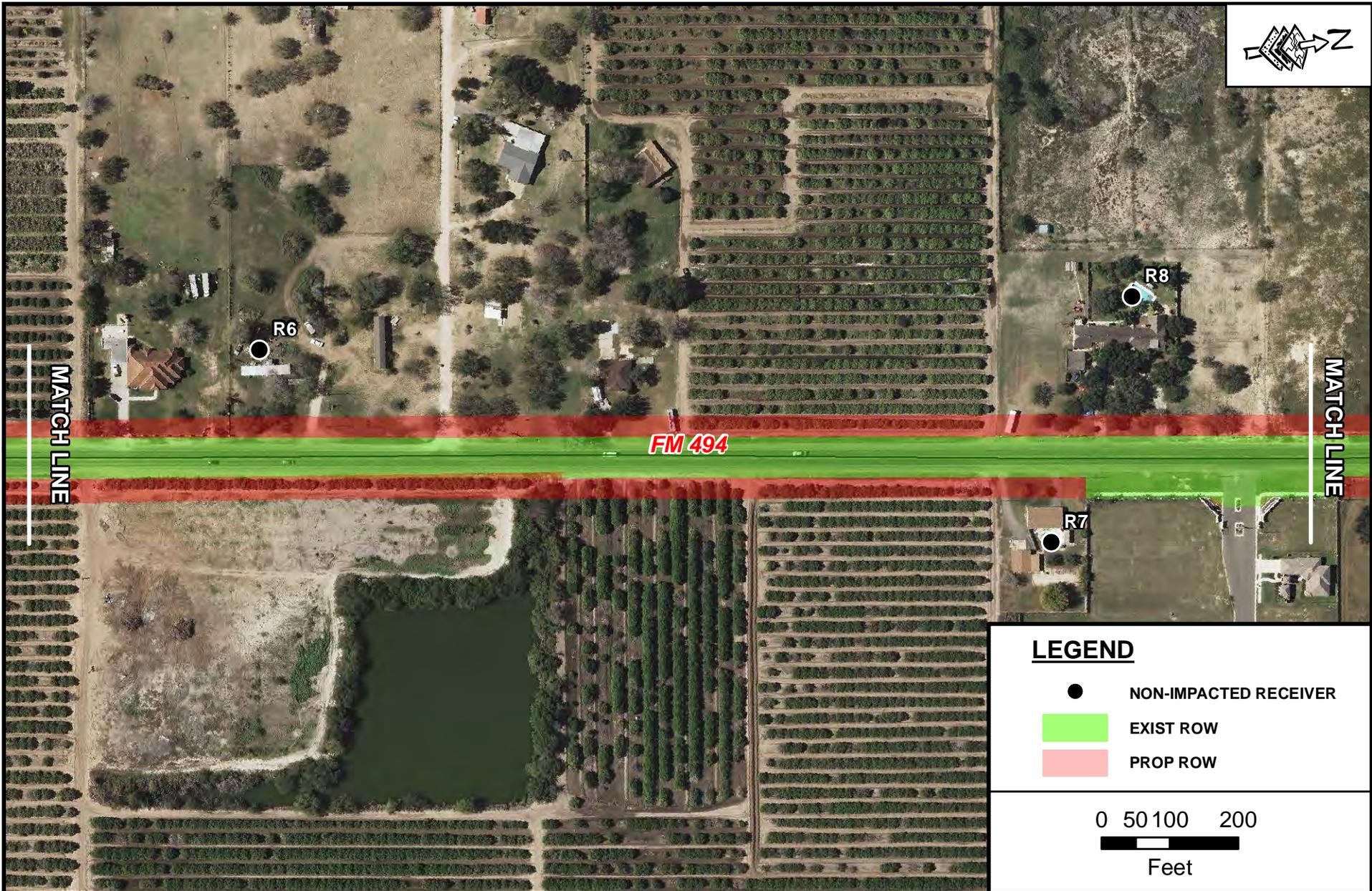
**LEGEND**

- NON-IMPACTED RECEIVER
- EXIST ROW
- PROP ROW



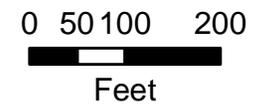
**FM 494 (SHARY ROAD) NOISE RECEIVER MAP**  
**FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)**  
**APPROX. PROJECT LENGTH 4.4 MILES**

**FIGURE 10**  
**SHEET 8 OF 13**



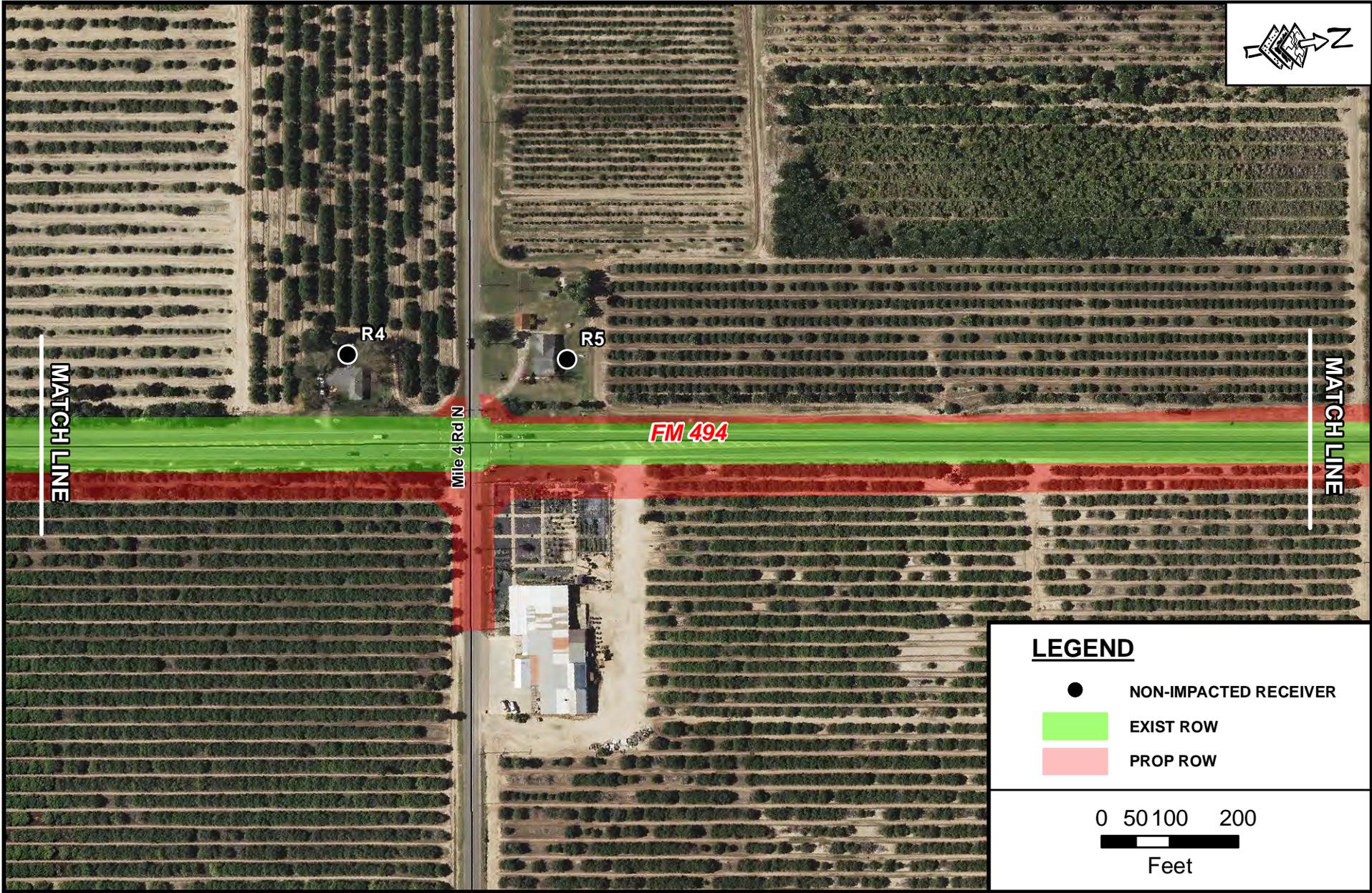
**LEGEND**

- NON-IMPACTED RECEIVER
- EXIST ROW
- PROP ROW



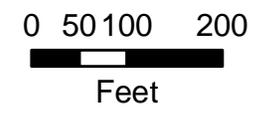
**FM 494 (SHARY ROAD) NOISE RECEIVER MAP**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 10**  
 SHEET 9 OF 13



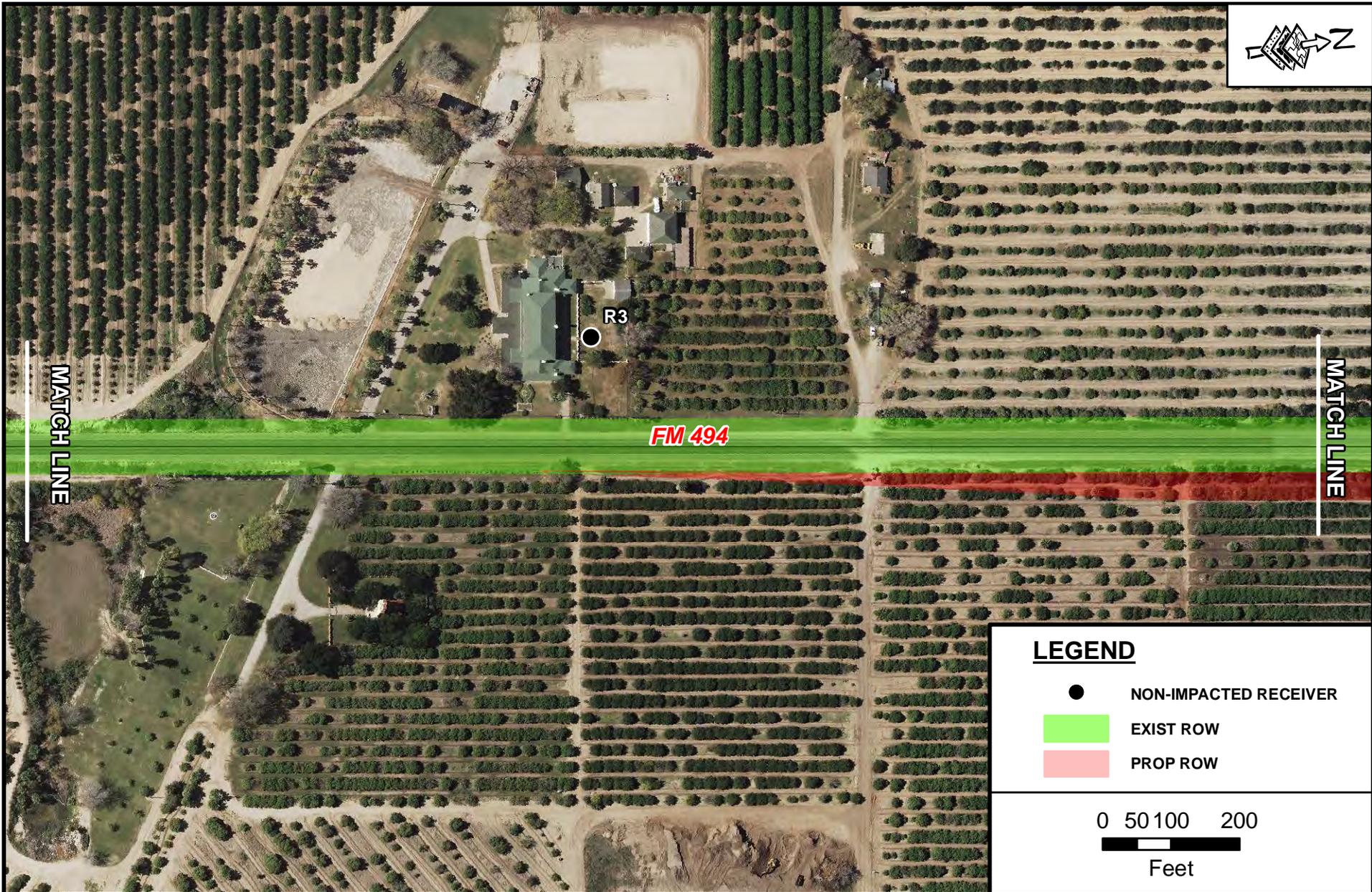
**LEGEND**

- NON-IMPACTED RECEIVER
- EXIST ROW
- PROP ROW



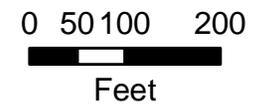
**FM 494 (SHARY ROAD) NOISE RECEIVER MAP**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 10**  
 SHEET 10 OF 13



**LEGEND**

- NON-IMPACTED RECEIVER
- █ EXIST ROW
- █ PROP ROW



**FM 494 (SHARY ROAD) NOISE RECEIVER MAP**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 10**  
 SHEET 11 OF 13



**FM 494 (SHARY ROAD) NOISE RECEIVER MAP**  
 FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)  
 APPROX. PROJECT LENGTH 4.4 MILES

**FIGURE 10**  
 SHEET 12 OF 13



**FM 494 (SHARY ROAD) NOISE RECEIVER MAP**  
**FROM SH 107 TO FM 1924 (MILE 3 NORTH RD)**  
**APPROX. PROJECT LENGTH 4.4 MILES**

**FIGURE 10**  
**SHEET 13 OF 13**

# **Appendix A**



Viewing south on FM 494 (Shary Rd.) from the FM 1924 (Mile 3 North) intersection.



Viewing north on FM 494 (Shary Rd.) from the FM 1924 (Mile 3 North) intersection.



Viewing north on FM 494 (Shary Rd.) from approximately 0.3 mile north of the FM 1924 (Mile 3 North) intersection.



Viewing south on FM 494 (Shary Rd.) at the Mile 4 North intersection.



Viewing north at the intersection of FM 494 (Shary Rd.) and Mile 4 North.



Viewing north near the intersection of FM 494 (Shary Rd.) and FM 676 (Mile 5).



Viewing south near the intersection of FM 494 (Shary Rd.) and FM 676 (Mile 5).



Viewing north near the intersection of FM 494 (Shary Rd.) and FM 676 (Mile 5).



Viewing south near the intersection of FM 494 (Shary Rd.) and Mile 6 Rd.



Viewing north toward the intersection of FM 494 (Shary Rd.) and Mile 7 Rd.



Viewing south at the intersection of FM 494 (Shary Rd.) and SH 107.



Viewing north at the intersection of FM 494 (Shary Rd.) and SH 107.

# **Appendix B**

## FM 494 (Shary Road) Alternative Analysis

From SH 107 to FM 1924 (Mile 3 North Road)

		Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Evaluation Criteria	Units	No-Build	West	Center	East	Preferred Alternative
Addresses Purpose and Need*	Yes/No	No	Yes	Yes	Yes	Yes
<b>Engineering Considerations</b>						
Improved Safety	Yes/No	No	Yes	Yes	Yes	Yes
Improved Route for Traffic	Yes/No	No	Yes	Yes	Yes	Yes
Improved Community and Local Access	Yes/No	No	Yes	Yes	Yes	Yes
Utility and Pipeline Relocations	High/Medium/Low	No	Medium	Medium	Medium	Medium
Irrigation Canal Crossings / Parallels	Each	No	5	5	5	5
Stream/Creek Crossings	Each	No	No	No	No	No
Total Length	Miles	0.0	4.9	4.9	4.9	4.9
<b>RIGHT-OF-WAY (ROW)</b>						
Estimated Number of Parcels	Number	0	68	111	67	108
TOTAL Estimated Existing ROW	AC	0	40.11	40.11	40.11	40.11
TOTAL Estimated Proposed ROW	AC	0	23.76	24.57	23.78	23.83
<b>TOTAL Estimated ROW/Comp. Utility Cost</b>	<b>\$ Million</b>	<b>\$0</b>				
<b>Construction</b>						
<b>TOTAL Estimated Construction Cost</b>	<b>\$ Million</b>	<b>\$0</b>	<b>\$13.65</b>	<b>\$13.65</b>	<b>\$13.65</b>	<b>\$13.65</b>
<b>TOTAL Estimated Cost</b>	<b>\$ Million</b>	<b>\$0</b>	<b>\$13.7</b>	<b>\$13.7</b>	<b>\$13.7</b>	<b>\$13.7</b>
<b>Human Environment</b>						
<b>Potential Relocations</b>						
Residential	Number	0	13	6	11	6
Business	Number	0	2	0	0	0
Schools	Number	0	0	0	0	0
<b>Potential Noise Impacts (receivers)</b>						
Hospitals	Yes/No	0	No	No	No	No
Residences	Yes/No	0	Yes	Yes	Yes	Yes
Schools	Yes/No	0	Yes	Yes	Yes	Yes
Churches	Yes/No	0	No	No	No	No
Cemeteries	Yes/No	0	No	No	No	No
<b>Social and Economic Impacts</b>						
Neighborhood Cohesion	Each	None	Similar	Similar	Similar	Similar
Environmental Justice	Each	None	Similar	Similar	Similar	Similar
<b>Potential Impacts on Sensitive Receptors</b>						
Noise Impacts	Yes/No	No	Yes	Yes	Yes	Yes
Air Quality Impacts	Yes/No	No	None	None	None	None
Impacts to Schools	Yes/No	No	Yes	Yes	Yes	Yes
Potential Hazardous Materials Site Impacts	Yes/No	None	None	None	None	None
Historic Resources	Yes/No	None	Yes	Yes	Yes	Yes
Archaeological Resources	Yes/No	None	None	None	None	None
Section 4(f) and 6(f)	Yes/No	None	None	None	None	None
<b>Potential Impacts to Land Use/Land Cover</b>						
Developed	Acres	None	15.5	19.1	18.0	16.6
Undeveloped/Agricultural	Acres	None	8.3	5.5	5.8	7.2
<b>Natural Environment</b>						
Stream Crossings/Low Area Crossings	Each	None	None	None	None	None
100-Year Floodplains(FEMA)	Acres	0	1.9	1.9	1.9	1.9
Wetlands (NWI)	Yes/No	None	None	None	None	None
<b>Threatened/Endangered Species Potential</b>						
Flora (Based on Potential Habitat)	Acres	N / A	0	0	0.4	0.3
Fauna (Based on Potential Habitat)	Acres	N / A	0	0	0	0
<b>Vegetation</b>						
Scrub Shrub	Acres	None	0.0	0.0	0.4	0.3
Open Range	Acres	None	0.0	0.0	0.0	0.0
Mowed / Maintained	Acres	None	15.5	19.1	18.0	16.6
Agricultural	Acres	None	8.3	5.5	5.4	6.9
Riparian Woodland	Acres	None	0.0	0.0	0.0	0.0

# **Appendix C**

Hidalgo County MPO FY 2015-2018 TIP

Pharr District Projects

FY 2015

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST	
PHARR	HIDALGO	0864-01-068	FM 494	E	COUNTY	COUNTY	\$392,000	
LIMITS FROM:		FM 676 (MILE 5)		REVISION DATE:		2_2016		
LIMITS TO:		SH 107		MPO PROJ NUMBER:		HC-292a		
PROJECT:		WIDEN TO 4 LANE		FUNDING CAT(S):		3 - LOCAL		
DESCRIPTION:				PROJECT HISTORY:				
REMARKS		E = PRELIMINARY ENGINEERING						
P7:								
<b>TOTAL PROJECT COST INFORMATION</b>				<b>AUTHORIZED FUNDING BY CATEGORY/SHARE</b>				
PRELIM ENG:	4.90%	\$392,000	COST OF APPROVED	FEDERAL	STATE	LOCAL	LC	TOTAL
ROW PURCHASE:		\$2,957,145	PHASES:	CAT 3 - LOCAL				
CONST COST:		\$8,000,000					\$392,000	\$392,000
CONST ENG:		\$0						
CONTING:	8.22%	\$657,966						
IND COSTS:	6.20%	\$496,000						
BND FINANCING:		\$0						
<b>TOTAL PROJECT COST:</b>		<b>\$12,503,111</b>	<b>TOTALS</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$392,000</b>	<b>\$392,000</b>
PHARR	HIDALGO	3627-01-001	SH 365 (PHASE I)	E	HCRMA	HCRMA	\$10,860,670	
LIMITS FROM:		US 281 MILITARY HIGHWAY		REVISION DATE:		2_2016		
LIMITS TO:		FM 396 (ANZALDUAS HIGHWAY)		MPO PROJ NUMBER:		RMA-1aa		
PROJECT:		A TOLL IMPROVEMENT BEING A 4 LANE CONTROLLED ACCESS		FUNDING CAT(S):		3 - LOCAL		
DESCRIPTION:		FACILITY		PROJECT HISTORY:				
REMARKS		E = PRELIMINARY ENGINEERING						
P7:								
<b>TOTAL PROJECT COST INFORMATION</b>				<b>AUTHORIZED FUNDING BY CATEGORY/SHARE</b>				
PRELIM ENG:	7.90%	\$10,860,670	COST OF APPROVED	FEDERAL	STATE	LOCAL	LC	TOTAL
ROW PURCHASE:		\$51,596,891	PHASES:	CAT 3 - LOCAL				
CONST COST:		\$158,041,156					\$10,860,670	\$10,860,670
CONST ENG:	4.31%	\$6,807,077						
CONTING:		\$0						
IND COSTS:	5.15%	\$8,135,967						
BND FINANCING:		\$0						
<b>TOTAL PROJECT COST:</b>		<b>\$235,441,761</b>	<b>TOTALS</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$10,860,670</b>	<b>\$10,860,670</b>
PHARR	HIDALGO	3627-01-001	SH 365 (PHASE I)	R	HCRMA	HCRMA	\$51,596,891	
LIMITS FROM:		US 281 MILITARY HIGHWAY		REVISION DATE:		2_2016		
LIMITS TO:		FM 396 (ANZALDUAS HIGHWAY)		MPO PROJ NUMBER:		RMA-1aa		
PROJECT:		A TOLL IMPROVEMENT BEING A 4 LANE CONTROLLED ACCESS		FUNDING CAT(S):		3 - LOCAL		
DESCRIPTION:		FACILITY		PROJECT HISTORY:				
REMARKS								
P7:								
<b>TOTAL PROJECT COST INFORMATION</b>				<b>AUTHORIZED FUNDING BY CATEGORY/SHARE</b>				
PRELIM ENG:	7.90%	\$10,860,670	COST OF APPROVED	FEDERAL	STATE	LOCAL	LC	TOTAL
ROW PURCHASE:		\$51,596,891	PHASES:	CAT 3 - LOCAL				
CONST COST:		\$158,041,156					\$51,596,891	\$51,596,891
CONST ENG:	4.31%	\$6,807,077						
CONTING:		\$0						
IND COSTS:	5.15%	\$8,135,967						
BND FINANCING:		\$0						
<b>TOTAL PROJECT COST:</b>		<b>\$235,441,761</b>	<b>TOTALS</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$51,596,891</b>	<b>\$51,596,891</b>

PHASE: C = CONSTRUCTION, E = ENGINEERING, R = ROW, T = TRANSFER

\* FUNDING NOT FIXED

STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM  
Hidalgo County MPO FY 2015-2018 TIP  
Pharr District Projects  
FY 2017

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST		
PHARR	HIDALGO	0921-02-303	ANZALDUAS INT'L PORT OF ENTRY	C	MISSION	ANZALDUAS INT'L BRIDGE BOARD	\$7,241,012		
<b>LIMITS FROM:</b>		ANZALDUAS INTERNATIONAL PORT OF ENTRY				<b>REVISION DATE:</b>	2_2016		
<b>LIMITS TO:</b>						<b>MPO PROJ NUMBER:</b>	HC-277		
<b>PROJECT</b>		CONSTRUCTION OF SOUTHBOUND INSPECTION STATION				<b>FUNDING CAT(S):</b>	10 - CBI, 3 - LOCAL		
<b>DESCRIPTION:</b>						<b>PROJECT HISTORY:</b>			
<b>REMARKS</b>		CAT 10 - CBI = \$4,300,000, LOCAL = \$2,941,012 FOR CONSTRUCTION							
<b>P7:</b>									
<b>TOTAL PROJECT COST INFORMATION</b>				<b>AUTHORIZED FUNDING BY CATEGORY/SHARE</b>					
PRELIM ENG:		\$0	<b>COST OF</b>		<b>FEDERAL</b>	<b>STATE</b>	<b>LOCAL</b>	<b>LC</b>	<b>TOTAL</b>
ROW PURCHASE:		\$0	<b>APPROVED</b>	CAT 10 - CBI	\$3,440,000		\$860,000		\$4,300,000
CONST COST:	\$7,241,012		<b>PHASES:</b>	CAT 3 - LOCAL				\$2,941,012	\$2,941,012
CONST ENG:		\$0							
CONTING:		\$0							
IND COSTS:		\$0							
BND FINANCING:		\$0							
<b>TOTAL PROJECT COST:</b>	<b>\$7,241,012</b>		<b>TOTALS</b>		<b>\$3,440,000</b>	<b>\$0</b>	<b>\$860,000</b>	<b>\$2,941,012</b>	<b>\$7,241,012</b>
PHARR	HIDALGO	0921-02-352	BICENTENNIAL (HOEHN)	E/R	MCALLEN	MCALLEN	\$1,644,700		
<b>LIMITS FROM:</b>		TRENTON RD				<b>REVISION DATE:</b>	2_2016		
<b>LIMITS TO:</b>		SH 107				<b>MPO PROJ NUMBER:</b>	HC-91		
<b>PROJECT</b>		CONSTRUCT NEW 4 LANE URBAN ROADWAY				<b>FUNDING CAT(S):</b>	3 - LOCAL		
<b>DESCRIPTION:</b>						<b>PROJECT HISTORY:</b>			
<b>REMARKS</b>		E = PRELIMINARY ENGINEERING							
<b>P7:</b>									
<b>TOTAL PROJECT COST INFORMATION</b>				<b>AUTHORIZED FUNDING BY CATEGORY/SHARE</b>					
PRELIM ENG:	9.84%	\$1,444,700	<b>COST OF</b>		<b>FEDERAL</b>	<b>STATE</b>	<b>LOCAL</b>	<b>LC</b>	<b>TOTAL</b>
ROW PURCHASE:		\$200,000	<b>APPROVED</b>	CAT 3 - LOCAL				\$1,644,700	\$1,644,700
CONST COST:		\$14,679,967	<b>PHASES:</b>						
CONST ENG:	4.50%	\$660,599							
CONTING:	9.64%	\$1,415,033							
IND COSTS:	2.50%	\$366,999							
BND FINANCING:		\$0							
<b>TOTAL PROJECT COST:</b>	<b>\$18,767,298</b>		<b>TOTALS</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,644,700</b>	<b>\$1,644,700</b>
PHARR	HIDALGO	0864-01-068	FM 494	C/R	COUNTY	TXDOT	\$11,615,111		
<b>LIMITS FROM:</b>		FM 676 (MILE 5)				<b>REVISION DATE:</b>	2_2016		
<b>LIMITS TO:</b>		SH 107				<b>MPO PROJ NUMBER:</b>	HC-292a		
<b>PROJECT</b>		WIDEN TO 4 LANE				<b>FUNDING CAT(S):</b>	3 - LOCAL, 7, 11		
<b>DESCRIPTION:</b>						<b>PROJECT HISTORY:</b>			
<b>REMARKS</b>									
<b>P7:</b>									
<b>TOTAL PROJECT COST INFORMATION</b>				<b>AUTHORIZED FUNDING BY CATEGORY/SHARE</b>					
PRELIM ENG:	4.90%	\$392,000	<b>COST OF</b>		<b>FEDERAL</b>	<b>STATE</b>	<b>LOCAL</b>	<b>LC</b>	<b>TOTAL</b>
ROW PURCHASE:		\$2,957,145	<b>APPROVED</b>	CAT 3 - LOCAL				\$8,565,111	\$8,565,111
CONST COST:		\$8,000,000	<b>PHASES:</b>	CAT 7	\$74,284	\$18,571			\$92,855
CONST ENG:		\$0		CAT 7 (ROW)	\$725,716	\$181,429			\$907,145
CONTING:	8.22%	\$657,966		CAT 11 (ROW)	\$1,640,000	\$410,000			\$2,050,000
IND COSTS:	6.20%	\$496,000							
BND FINANCING:		\$0							
<b>TOTAL PROJECT COST:</b>	<b>\$12,503,111</b>		<b>TOTALS</b>		<b>\$2,440,000</b>	<b>\$610,000</b>	<b>\$0</b>	<b>\$8,565,111</b>	<b>\$11,615,111</b>

PHASE: C = CONSTRUCTION, E = ENGINEERING, R = ROW, T = TRANSFER

\* FUNDING NOT FIXED



HIDALGO COUNTY METROPOLITAN PLANNING ORGANIZATION METROPOLITAN TRANSPORTATION PLAN PROJECT DATA

Line Numbers	System Sort	Roadway	From	To	MTP#	CSJ #	Project Length (mi)	Proposed Project Data		Total Project Cost										Funding Categories									
								Type of Improvement	Jurisdiction	Current Construction Cost Estimate	Letting Year Construction dollars	ROW cost (12% 2011 const cost)	Preliminary Engineering (4.9% 2011 const cost)	CE Cost (<\$2 M 7.5%, \$2-\$10 M 5%, >\$10 M 4.5% of 2011 const cost)	Contingencies (<\$2M 7%, \$2-\$25M 6.5%, \$25-\$50 M 9%, >\$50M 7% of 2010 const cost)	Total Project Cost	Year of Expenditure Dollars (YOYE)	Cat 1 Funding	Cat 3 - TMF	Cat 7 Funding (CE & Contingencies)	Cat 9 Funding	Cat 11 Funding	Cat 12 Funding	CBI - Eligible	Earmark Funding	Proposition 1	Other Funds (Local, Bond, etc)	TRENDS - Innovative Financing	TOTAL
74b	Off	Mile 6 W Rd - PE & ROW	Mile 11 N	SH 107	HC-148bb	0921-02-286	5.5	ROW & PE for Widen to 4 Lane	County 1	\$ 20,240,241	\$ 33,701,489	\$ 2,430,000	\$ 992,000	\$ 911,000	\$ 1,316,000	\$ 40,605,489	\$ 3,422,000										\$ 1.75	\$ 1.68	\$ 3.42
47	On	FM 2220 (Ware Rd)	FM 1924 (Mile 3 N)	Mile 5 N (Auburn Ave)	HC-19b	2094-01-038	2	Widen to 6 Lane Divided	McAllen	\$ 9,750,000	\$ 9,750,000	\$ 1,145,000	\$ 477,750	\$ 487,500	\$ 633,750	\$ 13,118,023	\$ 11,528,750	\$ 1.00		\$ 4.45				\$ 0.41	\$ 3.53	\$ 2.15	\$ 11.53		
22a	On	SH 336 (10th st)	Trenton Rd	SH 107	HC-249a	0621-01-100	2.8	Medians with landscaping	McAllen	\$ 1,725,000	\$ 1,725,000	\$ -	\$ 84,525	\$ 129,375	\$ 120,750	\$ 2,166,600	\$ 1,845,750			\$ 1.22						\$ 0.63	\$ 1.85		
25	Off	SH 364 (La Homa)	SH 495	FM 1924 (Mile 3 N)	HC-48b	2966-01-009	2	Widen to 4 Lane Urban Divided	County 3	\$ 7,750,000	\$ 7,750,000	\$ 2,930,494	\$ 379,750	\$ 387,500	\$ 503,750	\$ 12,431,994	\$ 8,253,750								\$ 8.25		\$ 8.25		
220	Off	N Alamo Road Extension	FM 1925 0.5m North		HC-289	0921-02-311	0.5	Road Realignment	County 4	\$ 703,040	\$ 703,040	\$ 200,000	\$ 34,449	\$ 52,728	\$ 49,213	\$ 1,083,018	\$ 804,981			\$ 0.80							\$ 0.80		
211	Off	Inspiration Rd	0.13m N of US 83	0.15m N of FM 1924 (Mile 3 N)	HC-282	0921-02-301	3.04	Widen to 4 lane divided - curb & gutter section	Mission	\$ 11,392,852	\$ 11,392,852	\$ 848,718	\$ 518,499	\$ 476,172	\$ 687,805	\$ 14,580,106	\$ 13,405,547			\$ 11.18			\$ 1.23			\$ 1.00	\$ 13.41		
203a	On	SH 365 (Phase I)	US 281 Military Highway	FM 396 (Anzalduas Highway)	RMA-1aa	3627-01-001	12.5	A toll improvement being a 4 lane controlled access facility	HCRMA	\$ 158,041,156	\$ 158,041,156	\$ 51,596,891	\$ 10,860,670	\$ 6,807,077	\$ -	\$ 235,441,761	\$ 172,984,200						\$ 126.44	\$ 1.49	\$ 45.05	\$ 172.98			
229	On	SH 68 ROW	US 83	FM 1925	HC-295b	3629-01-001	10	Construct new 4 lane divided rural highway facility	TxDOT	\$ 55,000,000	\$ 55,000,000	\$ 23,500,000	\$ 6,500,000	\$ 2,475,000	\$ 3,850,000	\$ 94,735,000	\$ 13,500,000									13.50	\$ 13.50		
241	Off	City of Pharr Bicycle Accessible Improvement Project	Owassa Road	Military Highway	HC-307	0921-02-324	22	Bicycle Accessible Improvements	Pharr	\$ 700,150	\$ 700,150	\$ -	\$ -	\$ 105,023	\$ -	\$ 805,173	\$ 805,173			\$ 0.64						\$ 0.16	\$ 0.81		
242	Off	Bentsen Road Hike & Bike Trail	SH 495 (Pecan Blvd)	Nolana Avenue	HC-308	0921-02-325	1.6	Construction of Hike & Bike Trails	McAllen	\$ 1,108,984	\$ 1,108,984	\$ -	\$ -	\$ 166,348	\$ -	\$ 1,275,332	\$ 1,275,332			\$ 1.02						\$ 0.26	\$ 1.28		
173	Off	Taylor Rd - ROW	Bus 83	I-2 (US 83)	HC-256	0921-02-327	1	Widen 4 lanes with left turn lane	Mission / McAllen	\$ 4,103,670	\$ 5,616,155	\$ 1,192,488	\$ 275,192	\$ 617,777	\$ 365,050	\$ 8,414,864	\$ 1,192,488			\$ 1.19							\$ 1.19		
123	Off	Taylor Rd - ROW	Bus 83	Mile 2 N	HC-257	0921-02-328	2	4 Lane Divided Urban Section with 1 Bridge Widening and 1 Bridge Class Irrigation Siphon	Mission / McAllen	\$ 5,795,764	\$ 5,795,764	\$ 2,011,852	\$ 283,992	\$ 716,331	\$ 376,725	\$ 9,544,001	\$ 2,011,852			\$ 2.01							\$ 2.01		
247	On	FM 1926 (23rd st)	FM 1926 (23rd st) & Hackberry Ave		HC-310	1804-01-068	1	Addition of North and South bound center turn lanes	McAllen	\$ 81,000	\$ 81,000	\$ 16,000	\$ 3,969	\$ 4,050	\$ 5,265	\$ 115,306	\$ 86,265			\$ 0.09							\$ 0.09		
248	On	FM 1926 (23rd st)	SH 1926 (23rd st) & Kendlewood Ave		HC-311	1804-01-069	1	Addition of North and South bound center turn lanes	McAllen	\$ 89,000	\$ 89,000	\$ 16,000	\$ 4,361	\$ 4,450	\$ 5,785	\$ 125,114	\$ 94,785			\$ 0.09							\$ 0.09		
249	On	SH 336	Intersection Business US 83	135ft S Intersection US Business 83	HC-312	0621-01-908	0.025	Addition of north bound right turn lane	McAllen	\$ 73,200	\$ 73,200	\$ 31,000	\$ 3,587	\$ 3,660	\$ 4,758	\$ 120,743	\$ 77,958			\$ 0.08							\$ 0.08		
250	On	FM 1926 (23rd st)	FM 1926 (23rd st) & Ebony Ave		HC-313	1804-01-071	2	Addition of east, north and south bound center turn lanes	McAllen	\$ 132,600	\$ 132,600	\$ 21,000	\$ 6,497	\$ 6,630	\$ 8,619	\$ 183,567	\$ 141,219			\$ 0.14							\$ 0.14		
251	On	FM 1926 (23rd st)	FM 1926 (23rd st) & Jackson Ave		HC-314	1804-01-072	1	Addition of North and South bound center turn lanes	McAllen	\$ 109,500	\$ 109,500	\$ 31,000	\$ 5,366	\$ 5,475	\$ 7,118	\$ 165,248	\$ 116,618			\$ 0.12							\$ 0.12		
252	Off	Dove Ave	41st Street	Bentsen Rd	HC-315	0921-02-341	0.25	4 lane divided	McAllen	\$ 1,404,225	\$ 1,404,225	\$ -	\$ 68,807	\$ 70,211	\$ 91,275	\$ 1,721,580	\$ 1,495,500			\$ 1.50							\$ 1.50		
270	Off	McIntyre Railroad Pedestrian Crossing	6th Ave	5th Ave	HC-333	0921-02-904	0.2	McIntyre Railroad Pedestrian Crossing Improvements	Edinburg	\$ 500,000	\$ 500,000	\$ -	\$ 24,500	\$ 37,500	\$ 35,000	\$ 618,000	\$ 500,000			\$ 0.50							\$ 0.50		
221	On	US 281 Military Highway	0.45 Mi E of Spur 600	FM 2557 (Stewart Road)	RMA-1ab	0220-01-023	0.94	Widening to 4 lane divided with overpass at San Juan Rd	HCRMA	\$ 14,594,604	\$ 14,594,604	\$ 2,529,228	\$ 616,079	\$ 774,041	\$ -	\$ 20,600,023	\$ 17,670,000			\$ 5.60			\$ 12.07			\$ 17.67			
269	On	Hidalgo County Illumination Project	Along I-2/US 83 and I-69C/US 281		HC-332	0921-02-903		Upgrading illumination equipment along I-2/US 83 and I-69C/US 281	TxDOT	\$ 2,600,000	\$ 2,600,000	\$ -	\$ -	\$ -	\$ -	\$ 2,600,000	\$ 2,600,000							\$ 2.60		\$ 2.60			
																\$ 290,921,568			\$ 25,002,515										

	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017	FY 2017		
207	Off	Anzalduas Int'l Port of Entry	Anzalduas Int'l Port of Entry		HC-277	0921-02-303		Construction of Southbound Inspection Station	Anzalduas Int'l Bridge Board	\$ 7,241,012	\$ 7,241,012	\$ -	\$ -	\$ -	\$ 7,241,012	\$ 7,241,012									\$ 4.30	\$ 2.94	\$ 7.24		
266	Off	Regional Hike & Bike Trail Project (Precinct 2) - TAP	S San Antonio Ave (San Juan)	S 2nd St (McAllen)	HC-329	0921-02-346	7.74	Proposed location of Hike & Bike Trail Connectivity	County 2 / San Juan / Pharr /	\$ 5,600,000	\$ 5,600,000	\$ -	\$ -	\$ 840,000	\$ -	\$ 6,440,000	\$ 6,440,000			\$ 4.52					\$ 1.92	\$ 6.44			
235	On	FM 676 (Mile 5)	SH 107 east to Taylor Road		HC-301	1064-01-034	3	Drainage improvements	TxDOT	\$ 500,738	\$ 500,738	\$ 150,000	\$ 24,536	\$ 37,555	\$ 32,548	\$ 776,423	\$ 500,738							\$ 0.50		\$ 0.50			
219	Off	Pharr/Reynosa Int'l Bridge (NB Phase II)	At Pharr/Reynosa Int'l Bridge - Northbound Lanes Improvements Phase II		HC-288	0921-02-289		Addition of 2 commercial northbound entrance lanes, booths and canopies	Pharr	\$ 2,645,473	\$ 2,645,473	\$ -	\$ -	\$ 118,770	\$ 154,400	\$ 2,918,643	\$ 2,918,643							\$ 2.92		\$ 2.92			
231	On	Business 83 Outfall (Mercedes)	N of Business 83, near FM 2556 south to Floodway		HC-297	0039-06-041		Improve drainage structures	TXDOT	\$ 1,551,108	\$ 1,551,108	\$ -	\$ 76,004	\$ 116,333	\$ 100,822	\$ 1,940,436	\$ 1,651,930	\$ 0.35		\$ 1.30						\$ 1.65			
21	On	Pharr Intl Bridge	At Pharr/Reynosa Intl bridge		HC-231b	0921-02-253		Improvements (ITS) at Pharr/Reynosa Intl bridge	Pharr	\$ 1,372,462	\$ 1,372,462	\$ -	\$ 67,251	\$ 102,935	\$ 96,072	\$ 1,723,813	\$ 1,372,462							\$ 1.03	\$ 0.34	\$ 1.37			
192	Off	10th st	SH 107	FM 1925 (Monte Cristo)	HC-79	0921-02-300	2.5	Construct new 4 Lane	Edinburg / County 4	\$ 10,075,000	\$ 10,075,000	\$ 750,000	\$ 493,675	\$ 453,375	\$ 654,875	\$ 13,051,575	\$ 11,933,250			\$ 11.53		\$ 0.40				\$ 11.93			
236	Off	Pharr Bridge	Pharr-Reynosa Int'l Bridge		HC-302	0921-02-193		Improvements (Expansion) at Int'l Bridge	Pharr	\$ 18,256,024	\$ 18,256,024	\$ -	\$ 894,545	\$ 821,521	\$ 1,186,642	\$ 22,290,605	\$ 19,442,666							1.57		17.87	\$19.44		
158	On	Veterans SH 495 Extension - ROW	Abram Rd	La Homa (SH 364)	HC-50	0865-01-108	2.3	4 Lanes Divided Urban Section	Palmview / County 3	\$ 10,350,000	\$ 17,233,511	\$ 1,299,360	\$ 844,442	\$ 775,508	\$ 1,120,178	\$ 22,341,477	\$ 1,299,360			\$ 1.30						\$ 1.30			
244	Off	Donna Int'l Bridge	@ Donna Int'l Bridge		HC-309	0921-02-333		Federal commercial vehicles inspection facilities at Donna Int'l	Donna / Pharr	\$ 9,000,000	\$ 9,000,000	\$ -	\$ 441,000	\$ 450,000	\$ 630,000	\$ 11,079,000	\$ 9,000,000							9.00		\$ 9.00			
37	On	FM 907 (Alamo Rd)	Nolana	US 83	HC-119	1586-01-069	2.34	Widen to 4 Lane Divided	Alamo / County 2-4	\$ 6,362,973	\$ 6,362,973	\$ -	\$ 379,335	\$ -	\$ 503,199	\$ 7,725,482	\$ 6,362,973							\$ 6.36		\$ 6.36			
180	Off	Bicentennial Blvd - PE & ROW	Trenton Rd	SH 107	HC-91	0921-02-352	2.3	Construct New 4 Lane Urban Rdwy	McAllen	\$ 7,246,445	\$ 14,679,967	\$ 200,000	\$ 1,444,700	\$ 660,599	\$ 1,415,033	\$ 18,767,298	\$ 1,644,700								\$ 1.64	\$ 1.64			
224	On	FM 494	FM 676 (Mile 5)	SH 107	HC-292a	0864-01-068	2	Widen to 4 lane	County 3	\$ 8,000,000	\$ 8,000,000	\$ 2,957,145	\$ 392,000	\$ -	\$ 657,966	\$ 12,503,111	\$ 11,615,111			\$ 1.00	\$ 2.05				\$ 8.57	\$ 11.62			
																\$ 81,422,845			\$ 14,232,610										

	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
229	On	SH 68	US 83	FM 1925	HC-295c	3629-01-001	10	Construct new 4 lane divided rural highway facility	TxDOT	\$ 55,000,000	\$ 55,000,000	\$ 23,500,000	\$ 6,500,000	\$ 2,475,000	\$ 3,850,000	\$ 94,735,000	\$ 55,000,000							\$ 55.00		\$ 55.00	
27	Off	Owassa	Jackson Rd	US 281	HC-106	0921-02-140	1.21	Widen to 4 Lane Divided	Pharr	\$ 6,136,119	\$ 6,136,119	\$ 377,936	\$ 300,670	\$ 306,806	\$ 398,848	\$ 7,900,818	\$ 6,841,773			\$ 6.44		\$ 0.40				\$ 6.84	
123	Off	Taylor Rd	Bus 83	Mile 2 N	HC-257	0921-02-328	2	4 Lane Divided Urban Section with 1 Bridge Widening and 1 Bridge Class Irrigation Siphon	Mission / McAllen	\$ 5,795,764	\$ 5,795,764																

**HIDALGO COUNTY METROPOLITAN PLANNING ORGANIZATION METROPOLITAN TRANSPORTATION PLAN PROJECT DATA**

Line Numbers	System Sort	Roadway	From	To	MTP#	CSJ #	Project Length (mi)	Proposed Project Data		Total Project Cost										Funding Categories									
								Type of Improvement	Jurisdiction	Current Construction Cost Estimate	Letting Year Construction dollars	ROW cost (12% 2011 const cost)	Preliminary Engineering (4.9% 2011 const cost)	CE Cost (<\$2 M 7.5%, >\$2-\$10 M 5%, >\$10 M 4.5% of 2011 const cost)	Contingencies (<\$2M 7%, \$2-\$25 M 6.5%, \$25-\$50 M 9%, >\$50M 7% of 2011 const cost)	Total Project Cost	Year of Expenditure Dollars (YOE)	Cat 1 Funding	Cat 3 - TMF	Cat 7 Funding (CE & Contingencies)	Cat 9 Funding	Cat 11 Funding	Cat 12 Funding	CBI - Eligible	Earmark Funding	Proposition 1	Other Funds (Local, Bond, etc)	TRENDS - Innovative Financing	TOTAL
										\$ 68,730,593										\$ 13,730,593									
FY 2019																													
214	Off	Liberty Blvd (Phase I)	US 83	Mile 3 Rd	HC-284a	0921-02-194	2.4	Widen to 4 lanes with dedicated left turn lane	Penitas	\$ 8,400,000	\$ 9,448,858	\$ 484,210	\$ 1,200,000	\$ 472,443	\$ 614,176	\$ 12,805,515	\$ 11,019,686			\$ 10.47			\$ 0.40			\$ 0.15	\$ 11.02		
										\$ 10,870,772																			
FY 2020																													
216	Off	Mile 3 N (Phase I)	Tom Gill Road	FM 492 (Goodwin Rd)	HC-286a	0921-02-321	3.8	Widen to 4 Lane Divided - Curb & Gutter Section	County 3	\$ 12,300,302	\$ 14,389,614	\$ 1,186,754	\$ 414,231	\$ 494,481	\$ 642,825	\$ 17,741,061	\$ 16,713,674			\$ 16.31			\$ 0.40				\$ 16.71		
243	On	FM 494	FM 1924 (Mile 3)	FM 676 (Mile 5)	HC-292b	0864-01-069	2	Widen to 4 lane	County 3	\$ 7,397,344	\$ 9,000,000	\$ 500,000	\$ 392,000	\$ 450,000	\$ 585,000	\$ 11,485,000	\$ 9,000,000					\$ 6.50			\$ 2.50	\$ 9.00			
										\$ 16,713,674																			
FY 2022																													
222	On	FM 1925	10th St	McColl Rd	HC-290	1803-01-092	1.28	Widen to 4 lane urban roadway with center turning lane	Edinburg / County 4	\$ 6,115,000	\$ 7,737,426	\$ 632,954	\$ 379,134	\$ -	\$ 502,933	\$ 9,732,167	\$ 8,873,312			\$ 8.87							\$ 8.87		
74a	Off	Mile 6 W Rd	Mile 9 N	Mile 11 N	HC-148ba	0921-02-168	2	Widen to 4 Lane	Weslaco / County 1	\$ 11,414,985	\$ 14,443,598	\$ 1,400,000	\$ 559,400	\$ 514,000	\$ 745,000	\$ 18,369,998	\$ 14,443,598			\$ 11.60			\$ 0.40		\$ 2.44	\$ 14.44			
										\$ 20,873,312																			
FY 2023																													
70aa	On	FM 1925	FM 907 (Alamo Rd)	Sharp Rd	HC-12aa	1803-02-035	1.57	Widen to 4 Lane Divided	County 4	\$ 7,000,000	\$ 9,211,522	\$ 1,250,000	\$ 451,365	\$ 460,576	\$ 549,543	\$ 12,494,121	\$ 11,011,065			\$ 11.01							\$ 11.01		
70ab	On	Sharp Road Realignment	FM 1925	0.46m North	HC-12ab	0921-02-338	0.46	Road Realignment 2 lane rural roadway	County / 4	\$ 830,953	\$ 1,093,477	\$ 650,000	\$ 53,580	\$ 49,206	\$ 76,543	\$ 1,990,603	\$ 1,869,227			\$ 1.87							\$ 1.87		
										\$ 12,880,292																			
FY 2024																													
223	Off	Dicker Road	Spur 115 (23rd St)	FM 2061 (Jackson Rd)	HC-291	0921-02-312	2.56	Widen to 4 lane with continuous left turn	County 2 / McAllen	\$ 12,261,586	\$ 16,780,827	\$ 600,000	\$ 1,270,000	\$ 635,000	\$ 825,500	\$ 20,898,727	\$ 18,841,327			\$ 18.84							\$ 18.84		
										\$ 18,841,327																			
FY 2025																													
217	Off	Mile 3 N (Phase II)	Tom Gill Road	FM 2221	HC-286b	0921-02-332	2.5	New Location 2 Lane Rural Roadway	County 3	\$ 4,100,000	\$ 5,395,320	\$ 996,342	\$ 200,900	\$ 269,766	\$ 350,696	\$ 7,547,534	\$ 6,015,782			\$ 3.99					\$ 2.03	\$ 6.02			
215	Off	Liberty Blvd (Phase II) - ROW	Mile 3 Rd	FM 2221	HC-284b	0921-02-322	3.8	Construct 2 lanes with shoulders	County 3	\$ 8,598,629	\$ 14,317,350	\$ 2,030,000	\$ 372,400	\$ 644,281	\$ 932,474	\$ 19,081,088	\$ 2,030,000			\$ 2.03							\$ 2.03		
82	Off	Mile 1 East	Bus 83	Mile 8 North	HC-269	0921-02-254	1	Reconstruct & widen to urban 2 lanes & shoulders	Mercedes	\$ 6,880,000	\$ 9,053,611	\$ 502,000	\$ 778,050	\$ 756,800	\$ 588,485	\$ 12,240,270	\$ 10,900,896			\$ 6.80					\$ 4.10	\$ 10.90			
43	On	FM 676 (Mile 5 N)	SH 107 (Conway)	Taylor Rd	HC-117c	1064-01-028 1064-01-027	3	Widen to 4 Lane Divided	Alton / County 3	\$ 7,656,456	\$ 10,075,374	\$ 918,775	\$ 493,693	\$ 453,392	\$ 654,899	\$ 13,220,806	\$ 10,075,374			\$ 5.20		\$ 4.88				\$ 10.08			
										\$ 18,020,556																			
FY 2026 - FY 2030																													
23	Off	Nolana Loop	FM 2220 (Ware Rd)	FM 1926 (23rd st)	HC-155a		1	Widen to 6 Lane	McAllen	\$ 2,445,000	\$ 3,346,151	\$ 1,099,198	\$ 163,961	\$ 167,308	\$ 217,500	\$ 5,201,580	\$ 3,730,959			\$ 3.73							\$ 3.73		
41	Off	Bridge Ave	10th St	Pike Blvd	HC-93		1.3	Widen to 4 Lane	Weslaco	\$ 2,905,500	\$ 3,976,377	\$ 580,545	\$ 194,842	\$ 198,819	\$ 258,465	\$ 5,455,584	\$ 4,433,661			\$ 4.43							\$ 4.43		
102	Off	Trenton Rd	US 281	FM 1426 (Raul Longoria)	HC-177a		1.3	Construct 4 Lane	Edinburg / County 4	\$ 2,905,500	\$ 3,976,377	\$ 580,545	\$ 194,842	\$ 198,819	\$ 258,465	\$ 5,455,584	\$ 4,433,661			\$ 4.43							\$ 4.43		
116	Off	E Yuma Ave	Jackson Rd	McColl Rd	HC-248		0.6	Widen to 4 Lane Urban with siphon	McAllen	\$ 1,341,000	\$ 1,835,251	\$ 267,944	\$ 89,927	\$ 137,644	\$ 128,468	\$ 2,573,019	\$ 2,101,363			\$ 2.10							\$ 2.10		
86	Off	Sprague Ave	Sugar Rd	SH 336 (N 10th St)	HC-170		2.13	Widen to 4 Lane	Edinburg	\$ 4,760,550	\$ 6,515,141	\$ 951,200	\$ 319,242	\$ 325,757	\$ 423,484	\$ 8,938,763	\$ 7,264,383			\$ 7.26							\$ 7.26		
72	On	FM 2220 (Ware Rd)	Mile 5 N ( Auburn Ave)	SH 107	HC-19a	2094-01-038 2094-01-039	2.5	6 Lanes Divided Urban Section	McAllen / County 3-4	\$ 11,500,000	\$ 15,738,544	\$ 4,100,000	\$ 771,189	\$ 708,234	\$ 1,023,005	\$ 23,316,762	\$ 17,469,784			\$ 17.47							\$ 17.47		
49c	Off	Nolana Loop	0.25m E of FM 1423	0.25m E of FM 493	HC-152c	0921-02-169	2.8	Widen to 4 Lane Divided	County 1	\$ 3,271,911	\$ 4,477,836	\$ 392,629	\$ 219,414	\$ 223,892	\$ 291,059	\$ 5,882,456	\$ 4,992,787			\$ 4.99							\$ 4.99		
173	Off	Taylor Rd	Bus 83	I-2 (US 83)	HC-256	0921-02-327	1	Widen 4 lanes with left turn lane	Mission / McAllen	\$ 4,103,670	\$ 5,616,155	\$ 1,192,488	\$ 275,192	\$ 617,777	\$ 365,050	\$ 8,414,864	\$ 6,598,982			\$ 6.60							\$ 6.60		
40	On	FM 676 (Mile 5 N)	SH 364 (La Homa Rd)	SH 107 (Conway)	HC-117b	1064-01-028 1064-01-027	2.39	Widen to 4 Lane Divided	Alton / County 3	\$ 8,652,800	\$ 11,841,954	\$ 1,038,336	\$ 423,987	\$ 532,888	\$ 769,727	\$ 15,341,093	\$ 11,841,954			\$ 11.84							\$ 11.84		
22b	On	SH 336 (10th st)	Trenton Rd	SH 107	HC-249b		2.8	Widen to 6 Lanes	Edinburg / McAllen	\$ 7,290,000	\$ 9,976,868	\$ 874,800	\$ 488,867	\$ 498,843	\$ 648,496	\$ 13,106,441	\$ 9,976,868								\$ 9.98	\$ 9.98			
32	Off	Mile 4 1/2 W Rd	US 83	Mile 9 N Rd	HC-244		0.8	Widen to 4 Lane Divided	Weslaco	\$ 1,788,000	\$ 2,447,001	\$ 214,560	\$ 119,903	\$ 122,350	\$ 159,055	\$ 3,214,584	\$ 2,447,001								\$ 2.45	\$ 2.45			
35a	On	FM 493 (La Blanca)	Mile 10 N Rd	Mile 14 N Rd	HC-34a		4	Widen to 4 Lane Divided	County 1-4	\$ 11,356,800	\$ 15,542,565	\$ 1,362,816	\$ 761,586	\$ 699,415	\$ 1,010,267	\$ 20,340,288	\$ 15,542,565								\$ 15.54	\$ 15.54			
13	Off	Mile 5 N	Taylor Rd	FM 2220	HC-144		1	Widen to 4 Lane Divided with siphon and boxes	McAllen	\$ 2,235,000	\$ 3,058,752	\$ 367,050	\$ 149,879	\$ 152,938	\$ 198,819	\$ 4,117,080	\$ 3,058,752								\$ 3.06	\$ 3.06			
28	Off	Trenton Rd	FM 1926 (23rd st)	SH 336 (10th St)	HC-253		1	Widen 6 lanes divided with landscaped median	McAllen	\$ 2,445,000	\$ 3,346,151	\$ 401,538	\$ 163,961	\$ 167,308	\$ 217,500	\$ 4,503,920	\$ 3,346,151								\$ 3.35	\$ 3.35			
49a	Off	Nolana Loop	FM 1426 (Raul Longoria)	0.25m E of FM 907	HC-152a	0921-02-169	2.25	Widen to 4 Lane Divided	County 2 / McAllen	\$ 3,816,526	\$ 5,223,179	\$ 457,983	\$ 255,936	\$ 261,159	\$ 339,507	\$ 6,861,601	\$ 5,223,179								\$ 5.22	\$ 5.22			
19	On	FM 3461 (Nolana)	FM 2061 (McColl Rd)	US 281	HC-113	1802-02-008	1.746	Widen to 6 Lanes	McAllen / Pharr	\$ 7,250,000	\$ 9,922,126	\$ 870,000	\$ 486,184	\$ 496,106	\$ 644,938	\$ 13,034,526	\$ 9,922,126								\$ 9.92	\$ 9.92			
49b	Off	Nolana Loop	0.25m E of FM 907	0.25m E of FM 1423	HC-152b	0921-02-169	2.3	Widen to 4 Lane Divided	County 1-2	\$ 2,903,952	\$ 3,974,259	\$ 348,474	\$ 194,739	\$ 198,713	\$ 258,327	\$ 5,220,916	\$ 3,974,259								\$ 3.97	\$ 3.97			
63	On	US 83	0.5 Mi E of Bus 83	FM 1427 (Abram)	HC-178b		1.6	Widen to 6 lanes	TXDOT	\$ 3,912,000	\$ 5,353,842	\$ 469,440	\$ 262,338	\$ 267,692	\$ 348,000	\$ 7,033,250	\$ 5,353,842								\$ 5.35	\$ 5.35			
85	Off	Hutto Rd	US 83	Bus 83	HC-125		0.7	Widen to 4 Lane	Donna	\$ 1,564,500	\$ 2,141,126	\$ 187,740	\$ 104,915	\$ 107,056	\$ 139,173	\$ 2,812,761	\$ 2,141,126								\$ 2.14	\$ 2.14			

# **Appendix D**

**SHPO**

November 9, 2015

Section 106 Consultation/ Antiquities Code of Texas  
Transmittal of Hicks and Company Survey Report; *Archeological Survey of Farm-to-Market Road 494 (N Shary Road) widening Project from State Highway 107 to Farm-to-Market Road 1924, Hidalgo County, Texas*  
Pharr District, CSJ: 0864-01-068 and 0864-01-069  
THC Antiquities Permit No. 7367

Ms. Pat Mercado-Allinger,  
Division of Archeology, Texas Historical Commission  
P.O. Box 12276  
Austin, Texas 78711

Dear Ms. Mercado-Allinger:

The above proposed project will be undertaken with state and federal funds. As required by the First Amended Programmatic Agreement (PA, 2005) and the Memorandum of Understanding with your agency, we are continuing consultation with your office on this project and are enclosing for your review and processing a draft report of an archeological survey recently conducted by Hicks and Company Inc. for the undertaking.

AmaTerra Inc. conducted the Intensive Archeological Survey on behalf of TxDOT and examined proposed Area of Potential Effects (APE) totaling approximately 63.9 acres including 23.8 acres of new ROW. No previously recorded archeological sites are located within the project area, and no new archeological sites were recorded. Based on the results of the survey, such, Ama Terra. concludes the proposed undertaking will NOT affect Texas Antiquities Landmarks or Archeological Historic Properties and recommends no further archeological investigations in the 63.9 project area. A report of investigation is enclosed.

A TxDOT archeologist has reviewed the report by Hicks and Company Inc. and concurs with the results. **TxDOT seeks THC concurrence that:**

1. Per our MOU, no archeological historic properties (36 CFR Part 800.16(1) or State Antiquities Landmarks (13 TAC 26.12) are present within the 63.9 acre APE examined by the survey and none will be affected by the proposed undertaking. There is little likelihood of significant or intact prehistoric or historical archeological sites within the APE surveyed and no further archeological investigations are warranted in those areas.
2. Since the survey was conducted under an individual THC Antiquities Permit, we are forwarding the draft for your review and processing in partial fulfillment of THC Antiquities Permit No. 7367. TxDOT finds the report acceptable as a draft and pending

Section 106 Consultation/ Antiquities Code of Texas  
Transmittal of Hicks and Company Survey Report; *Archeological Survey of  
Farm-to-Market Road 494 (N Shary Road) widening Project from State Highway 107  
to Farm-to-Market Road 1924, Hidalgo County, Texas*  
Pharr District, CSJ: 0864-01-068 and 0864-01-069  
THC Antiquities Permit No. 7367

any final report review comments from your office, we request your concurrence that the report may proceed toward production and that it provides sufficient documentation that the proposed undertaking will have no affect on an archeological historic properties or State Antiquities Landmarks.

In the event that unanticipated archeological deposits are encountered during construction, work in the immediate area will cease and TxDOT archeological staff will be contacted to initiate post-review discovery procedures under the provisions of the PA (2005) and the Memorandum of Understanding between TxDOT and the THC.

Thank you for your consideration of this matter. If you have any questions regarding the survey report, please contact Julian Sitters (512) 329-0031. If you have any other questions or have need of further information, please contact me at 416-2647. Thank you for your consideration in this matter.

Sincerely,



Christopher Ringstaff, Archeological Studies Program  
Environmental Affairs Division

Cc w/attachment: Robin Gelston, TxDOT Pharr District Environmental Coordinator; Mike Chavez, ENV-PD; Christopher Ringstaff ENV-Arch TxDOT; ENV Arch Project File

cc w/o attachments: ECOS Scan

Concurrence By:	
	11-12-15
for: Mark Wolfe, Executive Director and SHPO Texas Historical Commission	Date

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.

**ARCHEOLOGICAL SURVEY  
OF THE FARM-TO-MARKET 494 (N SHARY ROAD)  
WIDENING PROJECT, FROM STATE HIGHWAY 107 TO  
FARM-TO-MARKET 1924, HIDALGO COUNTY, TEXAS**

by  
**Julian A. Sitters**

Principal Investigator:  
Julian A. Sitters

CSJ: 0864-01-068; 0864-01-069

Antiquities Permit No. 7367

Prepared for  
**Texas Department of Transportation,  
Pharr District**

Prepared by  
***AmaTerra Environmental, Inc.***  
Austin, Texas



*Draft Report*  
October 2015

<b>DRAFT REPORT ACCEPTABLE</b>
by <u><i>Mark Wolfe</i></u>
for Mark Wolfe Executive Director, THC
Date <u>11-12-15</u>
Track# _____



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rcvd 2/19/16

February 17, 2016

SECTION 106: Determination of Effects

Hidalgo County, Pharr District  
CSJ# 0864-01-068

**FM 494 (Shary Rd) from FM 107 to FM 1924 (Mile 3 Road)**

Ms. Linda Henderson  
Division of Architecture  
Texas Historical Commission  
Austin, Texas 78711

Dear Ms. Henderson:

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. In accordance with 36 CFR 800.5 and the Section 106 Programmatic Agreement, we are continuing Section 106 consultation for the above referenced project, which will be carried out with federal funding. We request agency review regarding effects posed by the project. As a consequence of these agreements, TxDOT's regulatory role for this project is that of the Federal action agency.

**Introduction**

TxDOT initially coordinated this project with your office in 2007 (see attached correspondence) At that time, one property (the John Shary Estate, aka Sharyland, at 4915 N Shary Rd) was determined **eligible** for NRHP listing under Criterion C for its significant landscape design.

Currently, FM 494 is a four-lane roadway with two 12 foot travel lanes (one in each direction) in an approximate right-of-way (ROW) width of 80 feet. The proposed project would reconstruct and widen the existing roadway to an 84 foot urban facility consisting of four 12 foot-travel lanes, a 16 foot continuous center turn lane, and 10 foot shoulders within a 120 foot ROW. A six foot wide sidewalk would be included on both sides of the roadway throughout the length of the project in compliance with FHWA guidelines.

OUR GOALS

MAINTAIN A SAFE SYSTEM • ADDRESS CONGESTION • CONNECT TEXAS COMMUNITIES • BEST IN CLASS STATE AGENCY

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To minimize potential effects on the Sharyland historic property, a short segment of the facility from 0.5 mile north of FM 1924 (Mile 3 North Road) to 0.3 miles south of Mile 4 North Road, would be built within the existing 80 foot wide ROW. This area would include two 11 foot wide travel lanes, two 14 foot wide shared use lanes, and one 11 foot wide continuous left turn lane, with six-foot wide sidewalks matching the existing profile on both sides of the roadway (see Figure 2 attached). A retaining wall is proposed to address drainage issues in the area and eliminate the need for new ROW in this section.

## **Determination of Effects**

### *John Shary Estate (Sharyland)*

TxDOT sought to minimize adverse effects to the Sharyland property by narrowing the scope of the project at the location and avoid taking right-of-way (ROW). There are no direct effects to the property as a result. As the roadway approaches the Shary property, the project ROW would taper from the proposed typical 120-foot width to the current 80-foot width. The roadway, likewise, narrows from the proposed typical 84 feet to 61 feet.

Retaining walls would be constructed on both sides of the roadway in this area rather than a sloped embankment. This would allow the proposed roadway to be constructed within the existing ROW and eliminate takings from the Sharyland property (see Figure 2 attached). A mockup demonstrating the resultant smaller footprint was staked out in the field to provide visual clarification of this impact (see attached photos).

TxDOT simplified design of the retaining walls to be finished in brushed concrete with no decorative stone work. This approach eliminates incompatible design elements abutting the Sharyland property. The wall on the east side would be similar in height to the current earthen embankment (approximately 5.5' tall), thereby minimizing any visual disruption of the current historic landscape. The retaining wall on the west side would be installed below the current grade of the roadway, alongside the manmade lake and also be approximately 5.5' tall near the historic property.

The closest contributing element of the property to the ROW line on the east side is a concrete retaining wall (10X) encircling a contributing sunken garden (10W). Protection notes would be inserted into the plan set to guard against accidental impacts to the historic wall on the east side of the roadway. A new sidewalk would be installed above the historic retaining wall, between the proposed new retaining wall and the existing historic retaining wall. A row of non-historic palm trees demarcating the current ROW line on the east side of FM 494 would be removed. The palm trees were planted ca. 2000 and are classified as non-contributing to the historic property. They currently impede on the integrity of setting by disrupting the

view between the east side of the historic property and the main house on the west side of the highway.

The closest contributing element of the property to the ROW line on the west side is the lake (10L) which is bounded by a non-contributing metal fence. Neither of these elements would be disturbed or removed by the proposed construction. See attached photos, schematics, and typical sections for clarification.

The historic property represents a “significant and intact example of regionally-influenced and vernacularly implemented Neoclassical landscape design from the first half of the twentieth century in Texas.” Because the proposed construction would be confined to the existing ROW, the aspects of the historic property’s integrity of location, design, materials and workmanship would not be affected. The remaining three aspects of integrity—setting, feeling, and association—are discussed below in greater detail for potential indirect effects. There is a potential indirect effect but it was avoided through design aspects such as:

- keeping the new elements within the current ROW
- sinking the new elements below the current pavement surface, so that the viewshed from the house to the gardens and from the chapel across the road to the house remains essentially the same
- using simple elements such as brushed concrete in the new retaining walls and sidewalks

The Sharyland property retains all of the features that it possessed in the historic period. Because the construction is proposed for current ROW at this location, the setting will be impacted only at the ROW line with the introduction of retaining walls and sidewalks. The roadway will continue to have its historic relationship with the property, bisecting the property from north to south. The sidewalks and retaining walls would be non-intrusive in scope and design. The roadway is currently at grade on the west side of the property and at or below grade on the east side of the property. This gradient would remain after construction.

As with setting, the Shary property will maintain the features that make it eligible for NRHP listing. Because the right-of-way will retain the current 80’ width which has been present since 1960 (CSJ: 0864-01-004), and the property itself will retain its contributing features, the property would remain recognizable to the POS and retain its feeling.

Association- The Sharyland property retains the character-defining physical features it possessed in the historic period and will continue to post construction.

### **Indirect Effects**

Staff determined that the project poses no adverse effect to the Sharyland property, given the following factors:

- There is no direct effect as all construction activity will take place within existing ROW.
- There is no indirect effect as the property derives its significance under Criterion C, landscape design. No contributing elements of that landscape are affected by the proposed project.

### Consultation

TxDOT historians and district staff met with the current property owners in May 2015 to discuss the project. The property owners have no objection to the project. The owner of the Sharyland house on the west side of FM 494 is working to convert the property to a public events space. The City of Palmhurst owns the property on the east side of FM 494 and is a proponent of the project. The CHC was contacted in October 2015 and approved the project.

### Conclusion

Therefore, Pursuant to Stipulation IX, Appendix 6 "Undertakings with potential to cause effect" of the Section 106 PA referenced above and the Memorandum of Understanding (MOU), TxDOT Historians determined that there is one **historic property present** in the project APE, the Shary Estate, and proposed project poses **no adverse effect**. In accordance with 36 CFR 800 and the PA-TU, I hereby request your signed concurrence with these findings of eligibility and effect. TxDOT does not currently have plans available for this project, but will notify your office for comment at the 60% stage of completion (see attached email regarding this commitment).

We look forward to further consultation with your staff and hope to maintain a partnership that will foster effective and responsible solutions for improving transportation, safety and mobility in the state of Texas. Thank you for your cooperation in this federal review process. If you have any questions or comments concerning these evaluations, please call me at (512) 416-2611.

Sincerely,



Renee Benn  
Historic Preservation Specialist,  
Environmental Affairs Division  
Texas Department of Transportation

### Attachments

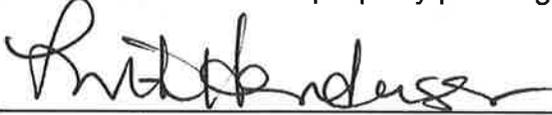
cc: Bruce Jensen, Supervisor, Historic Studies, initial:



PHR, FM 494 Hidalgo Co  
February 2016  
CSJ: 0864-01-068

**CONCUR:**

- One historic property in the APE (John Shary Estate)
- No adverse effect to historic property pending review of 60% plan set when available

NAME:   
for Mark Wolfe, State Historic Preservation Officer

DATE: 10 March 2016

**TPWD**

## Corina Argullin

---

**From:** Maria Cottagoma [Maria.Cottagoma@txdot.gov]  
**Sent:** Friday, May 15, 2015 2:16 PM  
**To:** Corina Argullin  
**Cc:** Robin Gelston; Julia Ragsdale; Eduardo Saenz; Maria Cottagoma  
**Subject:** FW: FM 494 CSJ 0864-01-068 TPWD coordination

Corina,

The project has TPWD clearance!

In the final EA biological section and EPIC sheets we need to add all the bmps that appeared in the Biological Form and those recommended by TPWD. See email below.

Maria

---

**From:** Russell Hooten [mailto:Russell.Hooten@tpwd.texas.gov]  
**Sent:** Friday, May 15, 2015 2:11 PM  
**To:** Maria Cottagoma  
**Cc:** Laura Zebehazy; Russell Hooten  
**Subject:** RE: FM 494 CSJ 0864-01-068 TPWD coordination

Thanks for the prompt reply , Maria.

TPWD appreciates TxDOT's commitment to implement the Best Management Practices (BMPs) described in the project's Biological Evaluation Form and include the additional BMPs recommended in the email below. Based on a review of the documentation, the proposed BMPs to be implemented, and provided that the project plans do not change, TPWD considers coordination for the **FM 494 project (CSJ: 0864-01-068; -069) to be complete**. However, please note it is the responsibility of the project proponent to comply with all federal, state, and local laws that protect fish and wildlife.

Thanks,  
Russell

---

**From:** Maria Cottagoma [mailto:Maria.Cottagoma@txdot.gov]  
**Sent:** Friday, May 15, 2015 1:52 PM  
**To:** Russell Hooten  
**Cc:** Laura Zebehazy; Maria Cottagoma  
**Subject:** RE: FM 494 CSJ 0864-01-068 TPWD coordination

Hi Russell,

Thank you for your comments!

TxDOT commitments are correctly identified bellow and TxDOT also commits to implement the additional recommendations provided in this email.

Thanks  
Maria

---

**From:** Russell Hooten [<mailto:Russell.Hooten@tpwd.texas.gov>]  
**Sent:** Friday, May 15, 2015 12:50 PM  
**To:** Maria Cottagama  
**Cc:** Russell Hooten; Laura Zebehazy  
**Subject:** RE: FM 494 CSJ 0864-01-068 TPWD coordination

Hi Maria,

Thank you for coordinating the FM 494 (Shary Road) project (CSJ 0864-01-068; -069) with TPWD. For this project, TxDOT has committed to the following BMPs:

1. Bird BMPs as found in the April 17, 2014 BMP Programmatic Agreement.
2. Tree Bat BMPs as found in the April 17, 2014 BMP Programmatic Agreement.
3. Reptile BMPs as found in the April 17, 2014 BMP Programmatic Agreement Section 2: Standard Recommendations for the Texas Horned Lizard
4. Reptile BMPs as found in the April 17, 2014 BMP Programmatic Agreement Section 1: Species BMPs for SGCN species (Spot-tailed earless lizard) and State-listed species (Black-striped snake, Texas indigo snake)
5. Tree bat BMPs as found in the April 17, 2014 BMP Programmatic Agreement Section 1: Species BMPs
6. Vegetation BMPs as found in the April 17, 2014 BMP Programmatic Agreement Section 2: Standard Recommendations.

In addition to these measures, TPWD has the following recommendations:

1. The Biological Evaluation Form prepared for the project states that potential suitable habitat for the Plains spotted skunk occurs in the project area. Therefore, TPWD recommends the Plains spotted skunk BMP as found in the April 17, 2014 BMP Programmatic Agreement be implemented.
2. The Biological Evaluation Form prepared for the project states that potential habitat for several state-listed amphibians occurs in the project area. As indicated in the information provided to TPWD, currently no amphibian BMPs are in the Programmatic Agreement. However, a combination of Water Quality BMPs and fish BMPs can be used to create BMPs to avoid potential impacts to black-spotted newts and South Texas sirens. Additionally, contractors should be advised of the potential for these two species to occur in the irrigation ditches in the project area. Contractors should also be advised that amphibian species that are not necessarily exclusively found near water (i.e., Mexican treefrog, sheep frog) could occur in the project area and if encountered, contractors should avoid harming them.

Please confirm that TxDOT's commitments are correctly identified above and respond to indicate whether TxDOT can commit to implementing the additional recommendations provided.

Thanks,  
Russell

Russell Hooten  
Wildlife Habitat Assessment Program  
TPWD-Wildlife Division  
6300 Ocean Drive, NRC 2501  
Unit 5846  
Corpus Christi, TX 78412  
361-825-3240 Office  
[russell.hooten@tpwd.texas.gov](mailto:russell.hooten@tpwd.texas.gov) (Note new email address)

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---

**From:** WHAB\_TxDOT  
**Sent:** Monday, April 20, 2015 2:50 PM  
**To:** Maria Cottagoma; WHAB\_TxDOT  
**Cc:** Russell Hooten  
**Subject:** RE: FM 494 CSJ 0864-01-068 TPWD coordination

Good afternoon,

The TPWD Wildlife Habitat Assessment Program has received your request for Early Coordination and has assigned it project ID #34548. The Habitat Assessment Biologist who will complete your project review is copied on this email.

*Thank you,*  
**Gloria Garza**  
*Administrative Assistant*  
*Texas Parks and Wildlife Dept*  
*Wildlife Division - [Habitat Assessment Program](#)*  
*4200 Smith School Rd*  
*Austin, TX 78744*

*Office: (512) 389-4571*  
*Fax: (512) 389-4599*

[gloria.garza@tpwd.texas.gov](mailto:gloria.garza@tpwd.texas.gov)

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---

**From:** Maria Cottagoma [<mailto:Maria.Cottagoma@txdot.gov>]  
**Sent:** Monday, April 20, 2015 10:45 AM  
**To:** WHAB\_TxDOT  
**Cc:** Maria Cottagoma  
**Subject:** FM 494 CSJ 0864-01-068 TPWD coordination

To whom it may concern,

The project mentioned above is ready for your review to be early coordinated.

Please let me know if you have any questions.

Maria



**NRCS**



Natural Resources  
Conservation Service

State Office

101 S. Main Street  
Temple, TX 76501  
Voice 254.742.9800  
Fax 254.742.9819

January 23, 2015

L&G Engineering  
2100 W. Expressway 83  
Mercedes, Texas 78570

Attention: Corina Argullin

Subject: LNU-Farmland Protection  
Proposed FM494 Widening Project  
Hidalgo County, Texas

We have reviewed the information provided in your correspondence dated December 30, 2014 concerning the widening project in Hidalgo County, Texas. This review is part of the National Environmental Policy Act (NEPA) evaluation for Federal Highway Administrations (FHWA). We have evaluated the proposed site as required by the Farmland Protection Policy Act (FPPA).

The proposed project is considered to be "prior converted" and is exempt. The Farmland Conversion Impact Rating (Form AD-1006) indicating the exemption is enclosed. We encourage the use of accepted erosion control methods during the construction of this project.

If you have any questions, please contact me at (254) 742-9826, Fax (254) 742-9859 or by email at [micki.yoder@tx.usda.gov](mailto:micki.yoder@tx.usda.gov).

Sincerely,

for Micki Yoder  
NRCS Soil Conservationist

Attachment

U.S. Department of Agriculture

# FARMLAND CONVERSION IMPACT RATING

<b>PART I</b> (To be completed by Federal Agency)	Date Of Land Evaluation Request 12/30/14
---	--

Name Of Project FM 494 (Shary Rd.)	Federal Agency Involved FHWA
------------------------------------	------------------------------

Proposed Land Use Transportation	County And State Hidalgo County, Texas
----------------------------------	--

<b>PART II</b> (To be completed by NRCS)	Date Request Received By NRCS 1-13-15
--	---------------------------------------

Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply -- do not complete additional parts of this form).	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Acres Irrigated	Average Farm Size
---	------------------------------	--	-----------------	-------------------

Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount Of Farmland As Defined in FPPA Acres: %
---------------	---	---

Name Of Land Evaluation System Used	Name Of Local Site Assessment System	Date Land Evaluation Returned By NRCS 1-23-15
-------------------------------------	--------------------------------------	--

PART III (To be completed by Federal Agency)	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	23.9			
B. Total Acres To Be Converted Indirectly	0.0			
C. Total Acres In Site	23.9	0.0	0.0	0.0

PART IV (To be completed by NRCS) Land Evaluation Information	Site A	Site B	Site C	Site D
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value				

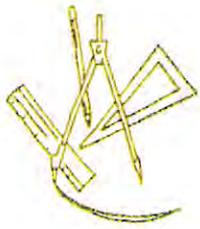
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)	0	0	0	0
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PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))	Maximum Points	Site A	Site B	Site C	Site D
1. Area In Nonurban Use	6				
2. Perimeter In Nonurban Use	3				
3. Percent Of Site Being Farmed	3				
4. Protection Provided By State And Local Government	0				
5. Distance From Urban Builtup Area	0				
6. Distance To Urban Support Services	0				
7. Size Of Present Farm Unit Compared To Average	5				
8. Creation Of Nonfarmable Farmland	1				
9. Availability Of Farm Support Services	0				
10. On-Farm Investments	12				
11. Effects Of Conversion On Farm Support Services	0				
12. Compatibility With Existing Agricultural Use	3				
<b>TOTAL SITE ASSESSMENT POINTS</b>	160	33	0	0	0

PART VII (To be completed by Federal Agency)	Site A	Site B	Site C	Site D
Relative Value Of Farmland (From Part V)	100	0	0	0
Total Site Assessment (From Part VI above or a local site assessment)	160	33	0	0
<b>TOTAL POINTS (Total of above 2 lines)</b>	260	33	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/>
----------------	-------------------	---

Reason For Selection:



December 30, 2014

Laurie Kiniry  
USDA-NRCS  
101 S. Main Street  
Temple, Texas 76501-7602

REF: AD 1006 Form for FM 494 (Shary Road) Project

Dear Ms. Kiniry:

The Texas Department of Transportation (TxDOT), in coordination with Hidalgo County, is proposing to widen and reconstruct FM 494 (Shary Road) partially located in the city limits of Palmhurst, McAllen, and Alton, within Hidalgo County, Texas. The limits of the project extend from State Highway (SH) 107 to FM 1924 (Mile 3 North Road); a length of approximately 4.4 miles. The project limits are depicted on the attached map. The proposed project would be constructed in two sections. Section I would occur from SH 107 to FM 676 (Mile 5 Road). Section II would occur from FM 676 (Mile 5 Road) to FM 1924. The proposed project would provide an urban four lane roadway with a continuous left turn lane.

In accordance with the Farmland Protection Policy Act (FPPA) because farmland is being converted, the land has to be scored using Form AD 1006 (Farmland Conversion Impact Rating). We believe that an evaluation of this project is necessary because plans are to convert a total of 23.8 acres of non-transportation use land to transportation use. Of the 23.8 acres of proposed Right-of-Way, approximately 6.9 acres is currently agricultural use. The USDA Prime Farmlands Report is enclosed for your review.

L&G Engineering is currently preparing an Environmental Assessment for this project. In reference to your expertise as a Soil Scientist, L&G Engineering respectfully requests an evaluation of the proposed project. Thank you in advance for your expeditious response to this request. Should you have any questions please call me or Renee Gonzales at (956) 565-9813.

Sincerely,

L&G Engineering

Corina Argullin  
Environmental Specialist

Attachments



# FARMLAND CONVERSION IMPACT RATING

<b>PART I</b> <i>(To be completed by Federal Agency)</i>	Date Of Land Evaluation Request
Name Of Project	Federal Agency Involved
Proposed Land Use	County And State

<b>PART II</b> <i>(To be completed by NRCS)</i>		Date Request Received By NRCS	
Does the site contain prime, unique, statewide or local important farmland? <i>(If no, the FPPA does not apply -- do not complete additional parts of this form).</i>	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount Of Farmland As Defined in FPPA Acres: %	
Name Of Land Evaluation System Used	Name Of Local Site Assessment System	Date Land Evaluation Returned By NRCS	

<b>PART III</b> <i>(To be completed by Federal Agency)</i>	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly				
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site				

<b>PART IV</b> <i>(To be completed by NRCS)</i> Land Evaluation Information				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value				

<b>PART V</b> <i>(To be completed by NRCS)</i> Land Evaluation Criterion Relative Value Of Farmland To Be Converted <i>(Scale of 0 to 100 Points)</i>				
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<b>PART VI</b> <i>(To be completed by Federal Agency)</i> Site Assessment Criteria <i>(These criteria are explained in 7 CFR 658.5(b))</i>	Maximum Points				
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
<b>TOTAL SITE ASSESSMENT POINTS</b>	<b>160</b>				

<b>PART VII</b> <i>(To be completed by Federal Agency)</i>					
Relative Value Of Farmland <i>(From Part V)</i>	100				
Total Site Assessment <i>(From Part VI above or a local site assessment)</i>	160				
<b>TOTAL POINTS</b> <i>(Total of above 2 lines)</i>	<b>260</b>				

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/>
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Reason For Selection:



United States  
Department of  
Agriculture

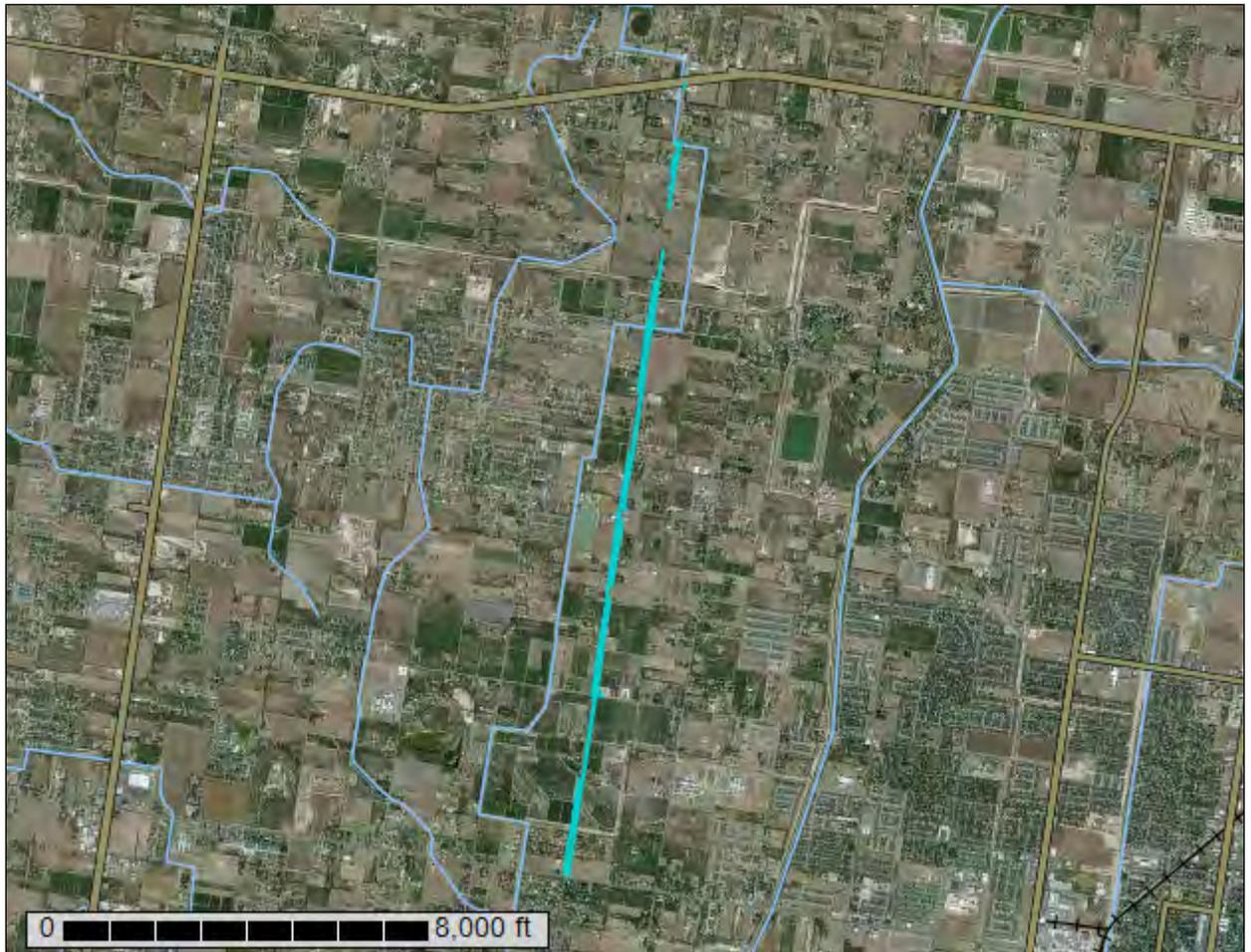
**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for Hidalgo County, Texas

FM 494 (Shary Road)



# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# **How Soil Surveys Are Made**

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

## Custom Soil Resource Report

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

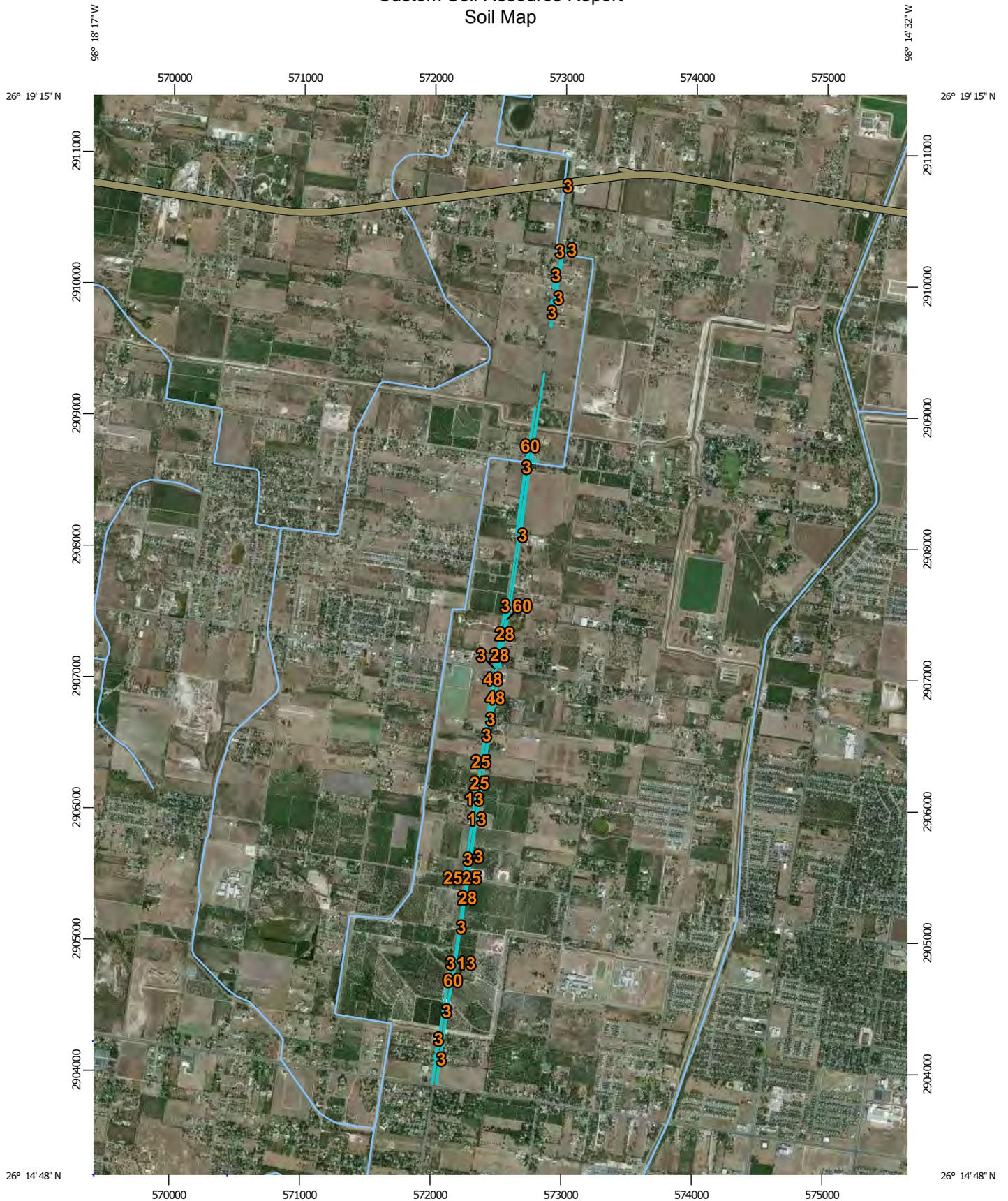
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report Soil Map



Map Scale: 1:40,200 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

# Custom Soil Resource Report

## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

### Water Features

 Streams and Canals

### Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hidalgo County, Texas  
 Survey Area Data: Version 11, Sep 30, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 10, 2010—Jan 25, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Hidalgo County, Texas (TX215)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Brennan fine sandy loam, 0 to 1 percent slopes	16.5	69.2%
13	Delmita-Randado complex, 0 to 1 percent slopes	2.0	8.3%
25	Hidalgo fine sandy loam, 0 to 1 percent slopes	1.6	6.7%
28	Hidalgo sandy clay loam, 0 to 1 percent slopes	2.3	9.7%
48	Racombes sandy clay loam	0.9	3.9%
60	Rio clay loam	0.5	2.3%
<b>Totals for Area of Interest</b>		<b>23.8</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

## Custom Soil Resource Report

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Hidalgo County, Texas

### 3—Brennan fine sandy loam, 0 to 1 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2t8bl  
*Elevation:* 70 to 600 feet  
*Mean annual precipitation:* 19 to 24 inches  
*Mean annual air temperature:* 72 to 74 degrees F  
*Frost-free period:* 295 to 330 days  
*Farmland classification:* Prime farmland if irrigated

#### Map Unit Composition

*Brennan and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Brennan

##### Setting

*Landform:* Sand sheets  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Eolian sands and/or calcareous loamy alluvium

##### Typical profile

*A - 0 to 12 inches:* fine sandy loam  
*Bt - 12 to 26 inches:* sandy clay loam  
*Bk - 26 to 40 inches:* sandy clay loam  
*BCK - 40 to 80 inches:* sandy clay loam

##### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 30 percent  
*Gypsum, maximum in profile:* 2 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (1.0 to 4.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 2.0  
*Available water storage in profile:* Moderate (about 8.5 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 1  
*Land capability classification (nonirrigated):* 3c  
*Hydrologic Soil Group:* B  
*Ecological site:* Sandy loam 20-30" pz (R083EY702TX)

### Minor Components

#### Delmita

*Percent of map unit: 5 percent*

#### Mcallen

*Percent of map unit: 5 percent*

#### Ramadero

*Percent of map unit: 3 percent*

#### Zapata

*Percent of map unit: 2 percent*

## 13—Delmita-Randado complex, 0 to 1 percent slopes

### Map Unit Setting

*National map unit symbol: dbkn*

*Elevation: 80 to 800 feet*

*Mean annual precipitation: 18 to 28 inches*

*Mean annual air temperature: 70 to 73 degrees F*

*Frost-free period: 250 to 340 days*

*Farmland classification: Not prime farmland*

### Map Unit Composition

*Delmita and similar soils: 50 percent*

*Randado and similar soils: 30 percent*

*Minor components: 20 percent*

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Delmita

#### Setting

*Landform: Interfluves, ridges*

*Landform position (two-dimensional): Shoulder, summit*

*Down-slope shape: Linear*

*Across-slope shape: Linear*

*Parent material: Loamy alluvium*

#### Typical profile

*H1 - 0 to 13 inches: fine sandy loam*

*H2 - 13 to 34 inches: sandy clay loam*

*H3 - 34 to 60 inches: cemented material*

#### Properties and qualities

*Slope: 0 to 1 percent*

*Depth to restrictive feature: 20 to 40 inches to petrocalcic*

*Natural drainage class: Well drained*

*Runoff class: Negligible*

*Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)*

## Custom Soil Resource Report

*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 10 percent  
*Available water storage in profile:* Low (about 4.5 inches)

### Interpretive groups

*Land capability classification (irrigated):* 2s  
*Land capability classification (nonirrigated):* 3c  
*Hydrologic Soil Group:* C  
*Ecological site:* Shallow sandy loam 20-30" pz (R083CY487TX)

### Description of Randado

#### Setting

*Landform:* Interfluves, ridges  
*Landform position (two-dimensional):* Summit, shoulder  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Parent material:* Loamy alluvium

#### Typical profile

*H1 - 0 to 9 inches:* fine sandy loam  
*H2 - 9 to 16 inches:* sandy clay loam  
*H3 - 16 to 20 inches:* cemented material  
*H4 - 20 to 60 inches:* clay loam

#### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* 8 to 20 inches to petrocalcic  
*Natural drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.57 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 35 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (2.0 to 4.0 mmhos/cm)  
*Available water storage in profile:* Very low (about 2.1 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 4s  
*Land capability classification (nonirrigated):* 6s  
*Hydrologic Soil Group:* D  
*Ecological site:* Shallow sandy loam 20-30" pz (R083CY487TX)

### Minor Components

#### Unnamed

*Percent of map unit:* 20 percent

## 25—Hidalgo fine sandy loam, 0 to 1 percent slopes

### Map Unit Setting

*National map unit symbol:* 2sxvn  
*Elevation:* 20 to 500 feet  
*Mean annual precipitation:* 20 to 27 inches  
*Mean annual air temperature:* 72 to 74 degrees F  
*Frost-free period:* 300 to 365 days  
*Farmland classification:* Prime farmland if irrigated

### Map Unit Composition

*Hidalgo and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Hidalgo

#### Setting

*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Calcareous loamy alluvium

#### Typical profile

*Ap - 0 to 17 inches:* fine sandy loam  
*Bk1 - 17 to 28 inches:* sandy clay loam  
*Bk2 - 28 to 38 inches:* clay loam  
*Ck - 38 to 80 inches:* clay loam

#### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 35 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 4.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 10.0  
*Available water storage in profile:* Moderate (about 7.8 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 2s  
*Land capability classification (nonirrigated):* 2s  
*Hydrologic Soil Group:* B

## Custom Soil Resource Report

*Ecological site:* Gray sandy loam 20-25" pz (R083DY501TX)

### Minor Components

#### Willacy

*Percent of map unit:* 10 percent

*Landform:* Terraces

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* Sandy loam 25-35" pz (R083DY519TX)

#### Brennan

*Percent of map unit:* 5 percent

*Landform:* Terraces

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* Sandy loam 20-30" pz (R083EY702TX)

## 28—Hidalgo sandy clay loam, 0 to 1 percent slopes

### Map Unit Setting

*National map unit symbol:* 2sxvl

*Elevation:* 20 to 500 feet

*Mean annual precipitation:* 20 to 27 inches

*Mean annual air temperature:* 72 to 74 degrees F

*Frost-free period:* 300 to 365 days

*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Hidalgo and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Hidalgo

#### Setting

*Landform:* Terraces

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Calcareous loamy alluvium

#### Typical profile

*Ap - 0 to 17 inches:* sandy clay loam

*Bk1 - 17 to 28 inches:* sandy clay loam

*Bk2 - 28 to 38 inches:* clay loam

*Ck - 38 to 80 inches:* clay loam

## Custom Soil Resource Report

### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 35 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 4.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 10.0  
*Available water storage in profile:* Moderate (about 7.8 inches)

### Interpretive groups

*Land capability classification (irrigated):* 1  
*Land capability classification (nonirrigated):* 2c  
*Hydrologic Soil Group:* B  
*Ecological site:* Gray sandy loam 20-25" pz (R083DY501TX)

### Minor Components

#### Raymondville

*Percent of map unit:* 7 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* Clay loam 20-25" pz (R083DY493TX)

#### Racombes

*Percent of map unit:* 6 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* Clay loam 20-25" pz (R083DY493TX)

#### Willacy

*Percent of map unit:* 2 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* Sandy loam 25-35" pz (R083DY519TX)

## 48—Racombes sandy clay loam

### Map Unit Setting

*National map unit symbol:* dblw  
*Elevation:* 20 to 400 feet  
*Mean annual precipitation:* 23 to 30 inches  
*Mean annual air temperature:* 70 to 73 degrees F  
*Frost-free period:* 280 to 350 days  
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Racombes and similar soils:* 80 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Racombes

#### Setting

*Landform:* Delta plains  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Parent material:* Calcareous loamy alluvium

#### Typical profile

*H1 - 0 to 13 inches:* sandy clay loam  
*H2 - 13 to 49 inches:* sandy clay loam  
*H3 - 49 to 72 inches:* sandy clay loam

#### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Moderately well drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 in/hr)  
*Depth to water table:* About 42 to 72 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 15 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (1.0 to 4.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 6.0  
*Available water storage in profile:* High (about 10.6 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 2w  
*Land capability classification (nonirrigated):* 2w  
*Hydrologic Soil Group:* B  
*Ecological site:* Clay loam 20-25" pz (R083DY493TX)

## Minor Components

### Unnamed

*Percent of map unit:* 15 percent

*Ecological site:* Clay loam 20-25" pz (R083DY493TX)

### Rio

*Percent of map unit:* 5 percent

*Landform:* Depressions

## 60—Rio clay loam

### Map Unit Setting

*National map unit symbol:* dbmb

*Elevation:* 10 to 500 feet

*Mean annual precipitation:* 18 to 34 inches

*Mean annual air temperature:* 72 to 75 degrees F

*Frost-free period:* 310 to 350 days

*Farmland classification:* Prime farmland if drained

### Map Unit Composition

*Rio and similar soils:* 87 percent

*Minor components:* 13 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Rio

#### Setting

*Landform:* Closed depressions

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Parent material:* Clayey alluvium

#### Typical profile

*H1 - 0 to 12 inches:* clay loam

*H2 - 12 to 38 inches:* clay

*H3 - 38 to 63 inches:* clay loam

#### Properties and qualities

*Slope:* 0 to 1 percent

*Depth to restrictive feature:* More than 80 inches

*Natural drainage class:* Somewhat poorly drained

*Runoff class:* Medium

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)

*Depth to water table:* About 0 inches

*Frequency of flooding:* None

*Frequency of ponding:* Occasional

*Calcium carbonate, maximum in profile:* 10 percent

*Salinity, maximum in profile:* Nonsaline to very slightly saline (2.0 to 4.0 mmhos/cm)

## Custom Soil Resource Report

*Available water storage in profile:* High (about 9.4 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* 3w

*Land capability classification (nonirrigated):* 3w

*Hydrologic Soil Group:* C/D

*Ecological site:* Clay loam 20-25" pz (R083DY493TX)

### **Minor Components**

#### **Tiocano**

*Percent of map unit:* 8 percent

*Landform:* Depressions

#### **Unnamed**

*Percent of map unit:* 5 percent

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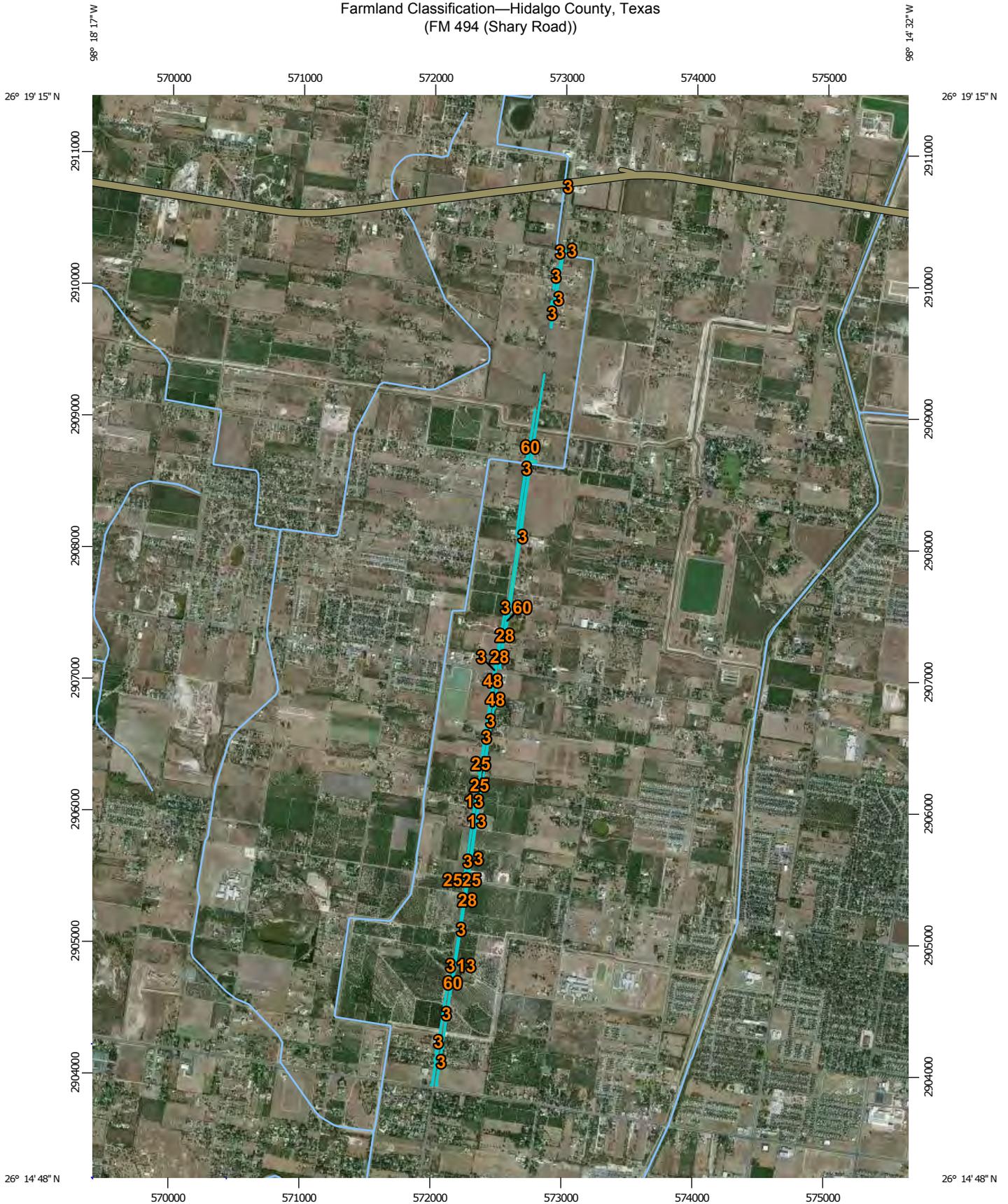
## Custom Soil Resource Report

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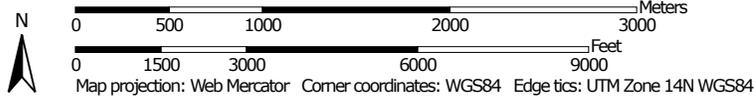
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Farmland Classification—Hidalgo County, Texas  
(FM 494 (Shary Road))



Map Scale: 1:40,200 if printed on A portrait (8.5" x 11") sheet.



Farmland Classification—Hidalgo County, Texas  
(FM 494 (Shary Road))

**MAP LEGEND**

**Area of Interest (AOI)**

 Area of Interest (AOI)

**Soils**

**Soil Rating Polygons**

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available

**Soil Rating Lines**

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained

-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available

**Soil Rating Points**

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available

**Water Features**

## MAP INFORMATION

 Streams and Canals

### Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hidalgo County, Texas  
Survey Area Data: Version 11, Sep 30, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 10, 2010—Jan 25, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Farmland Classification

Farmland Classification— Summary by Map Unit — Hidalgo County, Texas (TX215)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
3	Brennan fine sandy loam, 0 to 1 percent slopes	Prime farmland if irrigated	16.5	69.2%
13	Delmita-Randado complex, 0 to 1 percent slopes	Not prime farmland	2.0	8.3%
25	Hidalgo fine sandy loam, 0 to 1 percent slopes	Prime farmland if irrigated	1.6	6.7%
28	Hidalgo sandy clay loam, 0 to 1 percent slopes	All areas are prime farmland	2.3	9.7%
48	Racombes sandy clay loam	All areas are prime farmland	0.9	3.9%
60	Rio clay loam	Prime farmland if drained	0.5	2.3%
<b>Totals for Area of Interest</b>			<b>23.8</b>	<b>100.0%</b>

### Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

### Rating Options

*Aggregation Method:* No Aggregation Necessary

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The majority of soil attributes are associated with a component of a map unit, and such an attribute has to be aggregated to the map unit level before a thematic map can be rendered. Map units, however, also have their own attributes. An attribute of a map unit does not have to be aggregated in order to render a corresponding thematic map. Therefore, the "aggregation method" for any attribute of a map unit is referred to as "No Aggregation Necessary".

*Tie-break Rule:* Lower

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

**TCEQ**

**From:** [NEPA](#)  
**To:** [Julia Ragsdale](#)  
**Cc:** [Maria Cottagoma](#); [Andrew Blair](#); [NEPA](#)  
**Subject:** RE: PHR FM 494 NEPA 0864-01-068 Hidalgo  
**Date:** Wednesday, June 24, 2015 9:21:24 AM

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The Texas Commission on Environmental Quality (TCEQ) received the Texas Department of Transportation's (TxDOT) request for environmental review of the following project:  
**PHR FM 494 NEPA 0864-01-068 Hidalgo**

In accordance with the Memorandum of Understanding between TxDOT and TCEQ regarding environmental reviews, which is codified in Chapter 43, Subchapter I of the Texas Administrative Code (TAC) and 30 TAC § 7.119, TCEQ is responding to your request for review.

**TCEQ does not have any comments.**

TxDOT will still need to follow all other applicable laws related to this project, including applying for applicable permits.

If you have any questions, please feel free to contact Elizabeth McKeefer, CAPM, NEPA Coordinator, at (512) 239-2997 or [NEPA@tceq.texas.gov](mailto:NEPA@tceq.texas.gov).

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**From:** Julia Ragsdale [<mailto:Julia.Ragsdale@txdot.gov>]  
**Sent:** Monday, June 15, 2015 4:45 PM  
**To:** TxDot  
**Cc:** Maria Cottagoma; Andrew Blair  
**Subject:** PHR FM 494 NEPA 0864-01-068 Hidalgo

To Whom It May Concern:

TxDOT requests the TCEQ evaluate this FM 494 widening project per 43 TAC 2.305. The proposed project would be improvements to FM 494 from SH 107 to FM 1924 (Mile 3). Improvements will be widening to an 84 foot urban four-lane facility consisting of four 12-foot wide travel lanes, one 16 foot wide continuous left turn lane, 10 foot shoulders, and six-foot sidewalks on the east side of the roadway from SH 107 to just south of FM 676 (at the beginning of the orchards) and from FM 1924 north to the outfall within a 120-foot wide ROW.

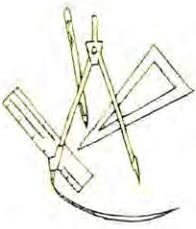
We are requesting this TCEQ review since the project meets MOU trigger for Water Quality - (C) it is located within five miles of an impaired assessment unit.

An electronic version of the is attached. Please let me know if you have any questions.

Thank you,

Julia Ragsdale  
[Environmental Affairs Division](#)  
[Texas Department of Transportation](#)

# **Floodplain Administrator**



# L&G Consulting Engineers, Inc.

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January 13, 2015

Godfrey Garza  
Hidalgo County Drainage District #1  
902 N. Dolittle Rd.  
Edinburg, TX

**RE: FM 494 (Shary Road) Project from SH 107 to FM 1924 (Mile 3)**

Dear Mr. Garza:

The Texas Department of Transportation (TxDOT), in coordination with Hidalgo County and the cities of Alton, McAllen, and Palmhurst, are proposing to widen and reconstruct FM 494 (Shary Road) from SH 107 to FM 1924 (Mile 3); a length of approximately 4.4 miles. A location map is attached for your convenience. The proposed roadway would be constructed in two sections. Section I would occur from SH 107 to FM 676 (Mile 5), a distance of approximately 2.4 miles. Section II would occur from FM 676 (Mile 5) to FM 1924 (Mile 3), a distance of 2.0 miles. The proposed roadway would be 84 feet wide with four 12 foot wide travel lanes, 10 foot wide shoulders, a 16 foot wide continuous left turn lane, and a six foot wide sidewalk would be provided on the east side of the roadway from SH 107 to just south of FM 676 (at the beginning of the orchards) and from FM 1924 north to the outfall within a 120 foot wide Right-Of-Way (ROW). Drainage would be provided by a storm drain system. See attached typical sections.

A drain line is proposed at the northern limits of the project from FM 494 (Shary Rd.) west along SH 107 for approximately 0.5 mile to Glasscock Rd. within existing ROW. The siphon would connect to an existing drainage ditch. See attached map for details. Two existing outfalls, one just north of Mile 6 Rd. and one just north of FM 1924 (Mile 3), would continue to be utilized for drainage.

Hidalgo County and the cities of Alton, McAllen and Palmhurst are mapped and in the regular phase of the national Flood Insurance Program (NFIP) as administered by the Federal Emergency Management Agency (FEMA). According to the Flood Insurance Rate Map (FIRM), the proposed project is located within the 100 year and 500 year flood zones. The project area is subject to inundation by the 1% annual chance flood event. The attached floodplain map depicts the 100 and 500 year FEMA flood zones within the project limits.

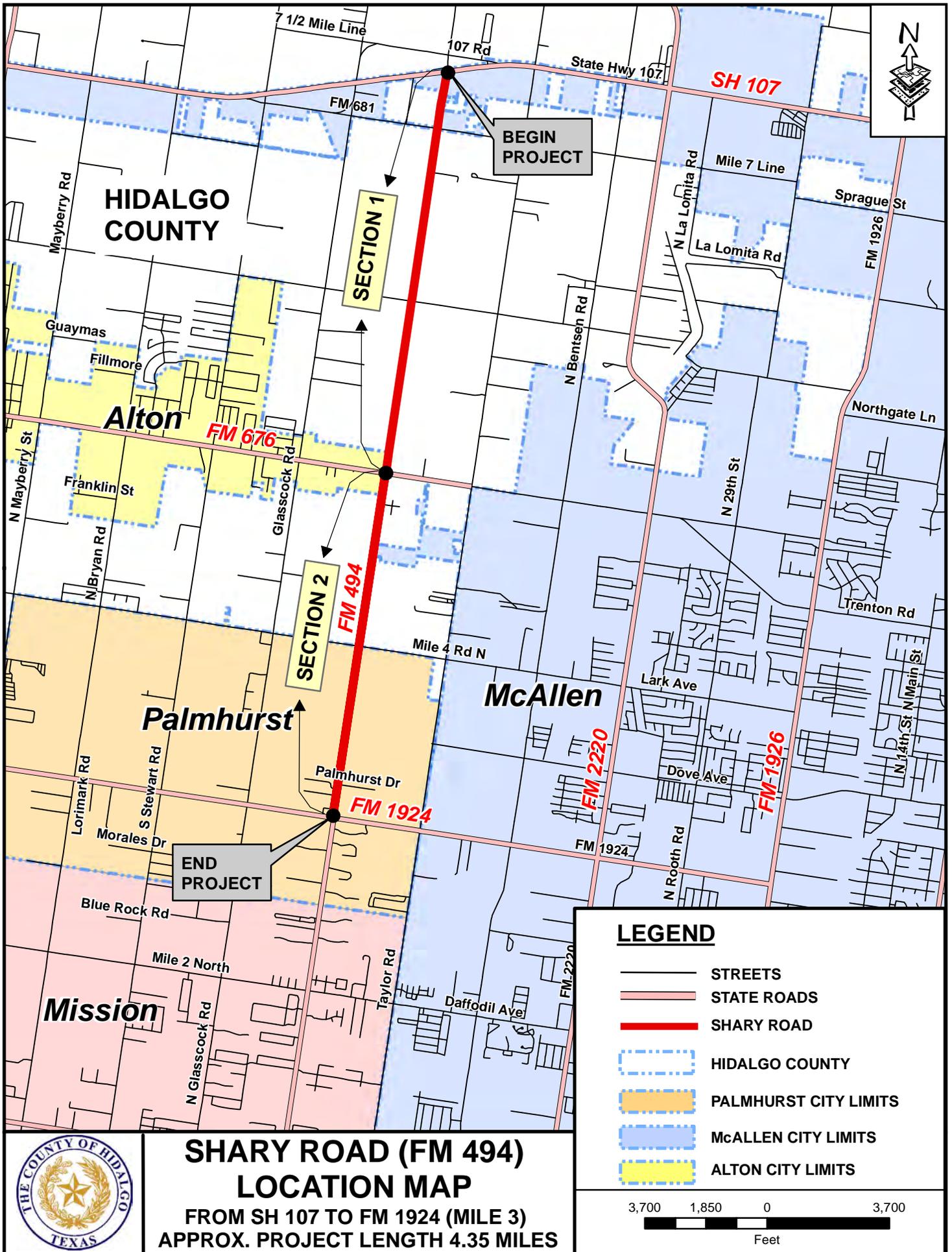
This project would be designed to not increase the base flood elevation to a level that would violate applicable ordinances or regulations. A storm drain system would be constructed on this project, and the hydraulics would be in accordance with current TxDOT and FHWA design policies and standards.

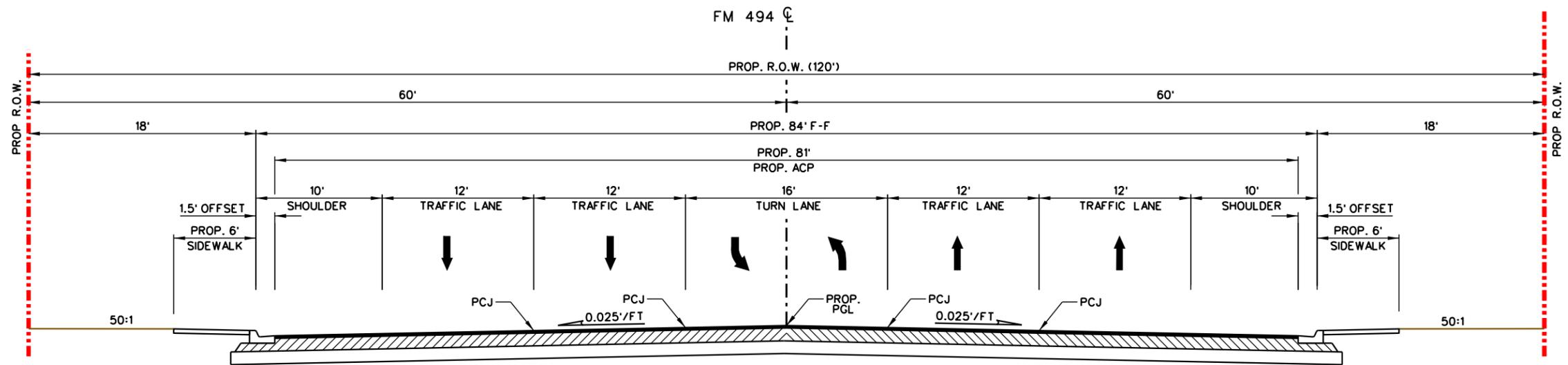
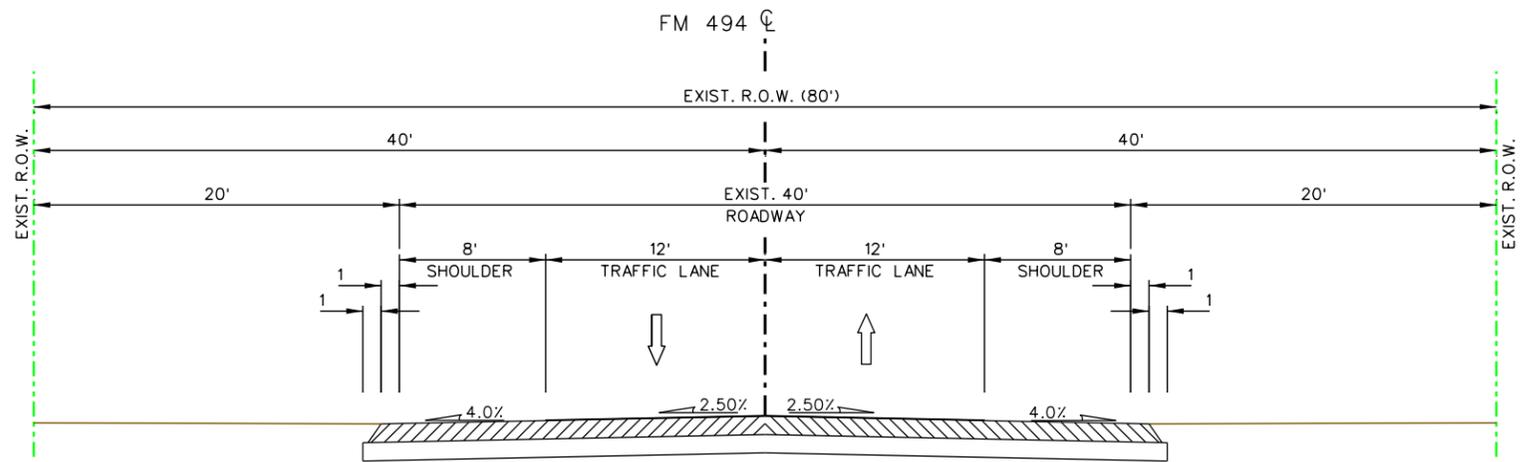
If you have any questions, please feel free to contact me at (956) 585-1909 with any questions, concerns or input you would like to provide.

Sincerely,

Ricardo Gallaga, P.E.  
Project Manager

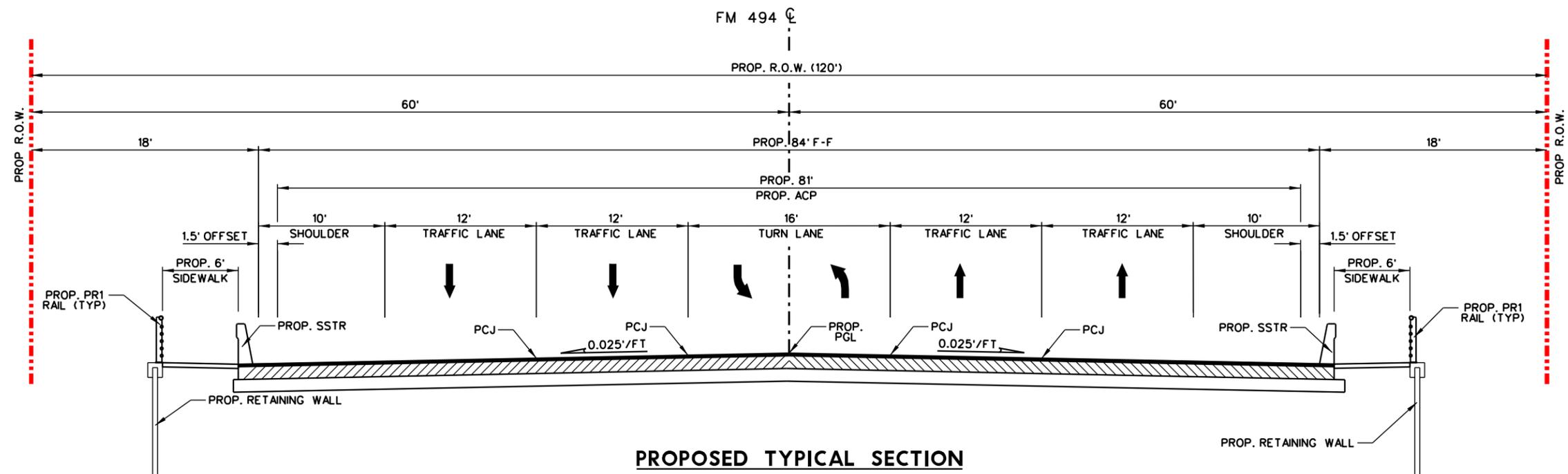
Attachments





**PROPOSED TYPICAL SECTION**

N.T.S.



**PROPOSED TYPICAL SECTION**

N.T.S.



**L & G Engineering**  
 Highway / Civil  
 Structural / Bridge  
 Environmental  
 Firm No. : F-4105

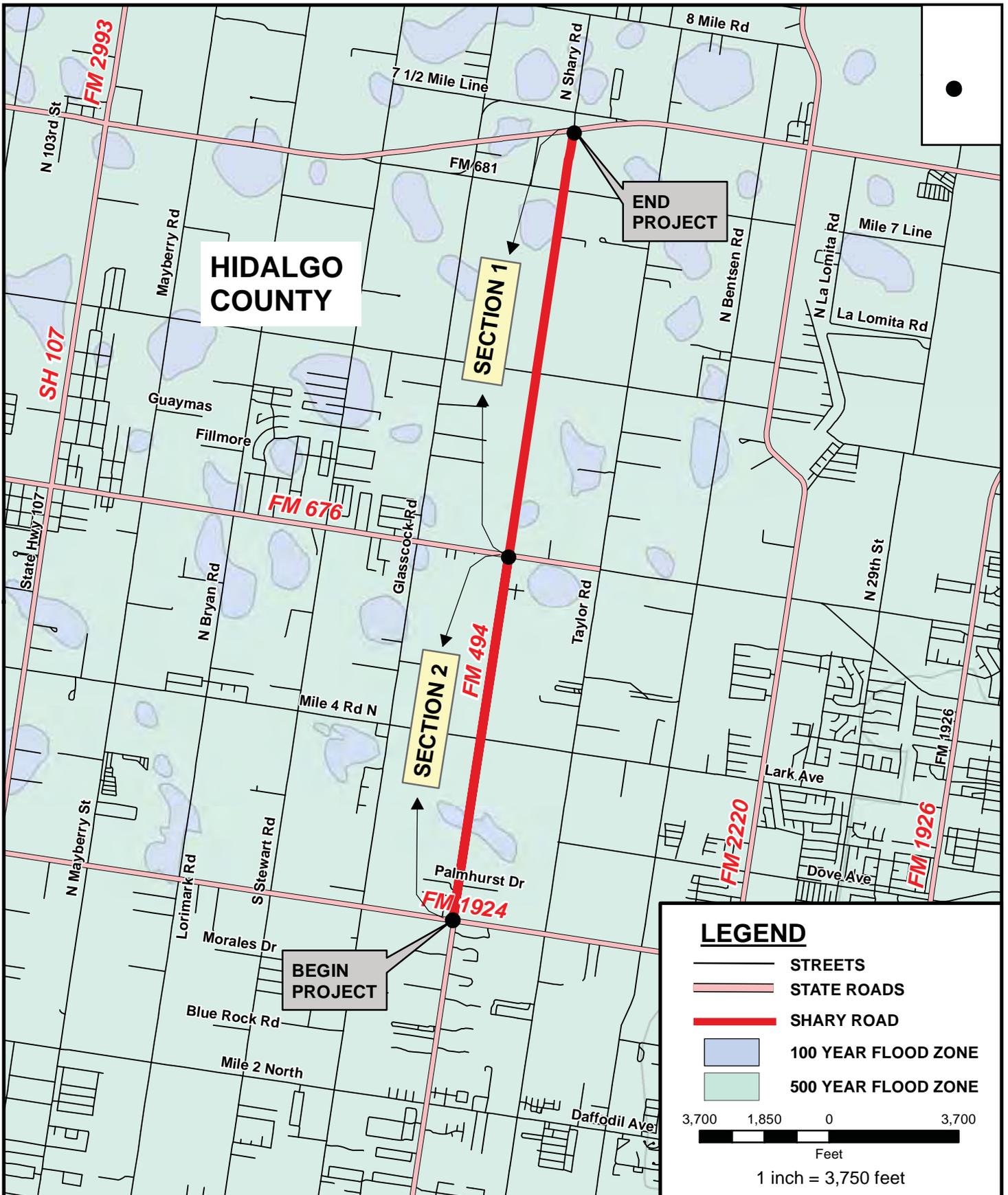
2100 W. Expressway 83  
 Mercedes, TX, 78570  
 Phone : (956) 585-9813  
 Fax : (956) 585-9018

900 S. Stewart Rd., Ste. 10  
 Mission, TX, 78572  
 Phone : (956) 585-1909  
 Fax : (956) 585-1927

**FM 494 (SHARY RD)  
 EXISTING/PROPOSED  
 TYPICAL SECTIONS**

SHEET 1 OF 1

DN:	FED. NO.:	STATE:	PROJECT NO.:	SHEET NO.:
CK DN:	DNV. NO.:			
DW:				
CK DW:	STATE DIST. NO.:	COUNTY:	CONTROL NO.:	JOB NO.:
TR:				HIGHWAY NO.:
CK TR:				FM 494



**SHARY ROAD (FM 494)**  
**FEMA FLOOD ZONE MAP**  
 FROM FM 1924 (MILE 3) TO SH 107  
 APPROX. PROJECT LENGTH 4.35 MILES







JAMES E. DARLING, Mayor  
HILDA SALINAS, Mayor Pro-Tem and Commissioner District 3  
AIDA RAMIREZ, Mayor Pro-Tem and Commissioner District 4  
SCOTT C. CRANE, Commissioner District 1  
TREY PEBLEY, Commissioner District 2  
JOHN J. INGRAM, Commissioner District 5  
VERONICA VELA WHITACRE, Commissioner District 6

ROEL RODRIGUEZ, P.E., City Manager

April 29, 2015

L & G Consulting Engineers, Inc.  
Attn: Ricardo Gallaga, P.E., Project Manager  
2100 W. Expressway 83  
Mercedes, TX 78570

**Re: FM 494 (Shary Road) Project from SH 107 to FM 1924 (Mile 3)**

Dear Mr. Gallaga:

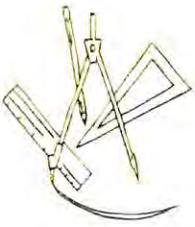
I am in receipt of your letter (dated April 24, 2015) and attachments. As I understand, your letter is for informational purposes, as there is no request for action. The information will be filed with the project data and no further action will be taken.

If there is action required, please advise.

Sincerely,  
City of McAllen

A handwritten signature in blue ink that reads "Yvette Barrera".

Yvette Barrera, PE, CFM  
City Engineer



# L&G Consulting Engineers, Inc.

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April 24, 2015

Yvette Barrera  
City of McAllen  
1300 Houston Ave.  
McAllen, TX 78501

**RE: FM 494 (Shary Road) Project from SH 107 to FM 1924 (Mile 3)**

Dear Ms. Barrera:

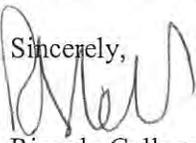
The Texas Department of Transportation (TxDOT), in coordination with Hidalgo County and the cities of Alton, McAllen, and Palmhurst, are proposing to widen and reconstruct FM 494 (Shary Road) from SH 107 to FM 1924 (Mile 3); a length of approximately 4.4 miles. A location map is attached for your convenience. The proposed roadway would be constructed in two sections. Section I would occur from SH 107 to FM 676 (Mile 5), a distance of approximately 2.4 miles. Section II would occur from FM 676 (Mile 5) to FM 1924 (Mile 3), a distance of 2.0 miles. The proposed roadway would be 84 feet wide with four 12 foot wide travel lanes, 10 foot wide shoulders, and a 16 foot wide continuous left turn lane. A six foot wide sidewalk would be provided on both sides of the roadway throughout the length of the project, except on the east side of the roadway for approximately 400 feet south of Toucan Avenue and for approximately 1,750 feet south of Mile 4 Road. The proposed Right-Of-Way (ROW) would be 120 feet wide. Drainage would be provided by a storm drain system. See attached typical sections.

A drain line is proposed at the northern limits of the project from FM 494 (Shary Rd.) west along SH 107 for approximately 0.5 mile to Glasscock Rd. within existing ROW. The siphon would connect to an existing drainage ditch. See attached map for details. Two existing outfalls, one just north of Mile 6 Rd. and one just north of FM 1924 (Mile 3), would continue to be utilized for drainage.

Hidalgo County and the cities of Alton, McAllen and Palmhurst are mapped and in the regular phase of the national Flood Insurance Program (NFIP) as administered by the Federal Emergency Management Agency (FEMA). According to the Flood Insurance Rate Map (FIRM), the proposed project is located within the 100 year and 500 year flood zones. The project area is subject to inundation by the 1% annual chance flood event. The attached floodplain map depicts the 100 and 500 year FEMA flood zones within the project limits.

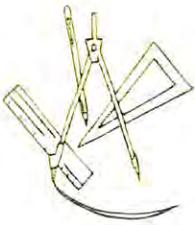
This project would be designed to not increase the base flood elevation to a level that would violate applicable ordinances or regulations. A storm drain system would be constructed on this project, and the hydraulics would be in accordance with current TxDOT and FHWA design policies and standards.

If you have any questions, please feel free to contact me at (956) 585-1909 with any questions, concerns or input you would like to provide.

Sincerely,  


Ricardo Gallaga, P.E.  
Project Manager

Attachments



April 24, 2015

Lori A. Lopez  
City of Palmhurst  
4417 N. Shary Road  
Palmhurst, TX 78573

**RE: FM 494 (Shary Road) Project from SH 107 to FM 1924 (Mile 3)**

Dear Ms. Lopez:

The Texas Department of Transportation (TxDOT), in coordination with Hidalgo County and the cities of Alton, McAllen, and Palmhurst, are proposing to widen and reconstruct FM 494 (Shary Road) from SH 107 to FM 1924 (Mile 3); a length of approximately 4.4 miles. A location map is attached for your convenience. The proposed roadway would be constructed in two sections. Section I would occur from SH 107 to FM 676 (Mile 5), a distance of approximately 2.4 miles. Section II would occur from FM 676 (Mile 5) to FM 1924 (Mile 3), a distance of 2.0 miles. The proposed roadway would be 84 feet wide with four 12 foot wide travel lanes, 10 foot wide shoulders, and a 16 foot wide continuous left turn lane. A six foot wide sidewalk would be provided on both sides of the roadway throughout the length of the project, except on the east side of the roadway for approximately 400 feet south of Toucan Avenue and for approximately 1,750 feet south of Mile 4 Road. The proposed Right-Of-Way (ROW) would be 120 feet wide. Drainage would be provided by a storm drain system. See attached typical sections.

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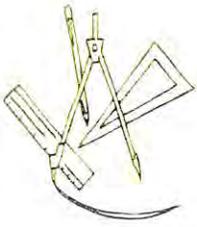
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If you have any questions, please feel free to contact me at (956) 585-1909 with any questions, concerns or input you would like to provide.

Sincerely,

Ricardo Gallaga, P.E.  
Project Manager

Attachments



# L&G Consulting Engineers, Inc.

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April 24, 2015

Jeff Underwood  
City of Alton  
509 S. Alton Blvd.  
Alton, TX 78573

**RE: FM 494 (Shary Road) Project from SH 107 to FM 1924 (Mile 3)**

Dear Mr. Underwood:

The Texas Department of Transportation (TxDOT), in coordination with Hidalgo County and the cities of Alton, McAllen, and Palmhurst, are proposing to widen and reconstruct FM 494 (Shary Road) from SH 107 to FM 1924 (Mile 3); a length of approximately 4.4 miles. A location map is attached for your convenience. The proposed roadway would be constructed in two sections. Section I would occur from SH 107 to FM 676 (Mile 5), a distance of approximately 2.4 miles. Section II would occur from FM 676 (Mile 5) to FM 1924 (Mile 3), a distance of 2.0 miles. The proposed roadway would be 84 feet wide with four 12 foot wide travel lanes, 10 foot wide shoulders, and a 16 foot wide continuous left turn lane. A six foot wide sidewalk would be provided on both sides of the roadway throughout the length of the project, except on the east side of the roadway for approximately 400 feet south of Toucan Avenue and for approximately 1,750 feet south of Mile 4 Road. The proposed Right-Of-Way (ROW) would be 120 feet wide. Drainage would be provided by a storm drain system. See attached typical sections.

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If you have any questions, please feel free to contact me at (956) 585-1909 with any questions, concerns or input you would like to provide.

Sincerely,  


Ricardo Gallaga, P.E.  
Project Manager

Attachments