Guide to Assessment of Historic Roads in Texas

Research and Fieldwork Methodology

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Intersection of Barton Springs Road, Riverside Dr., and South Congress Ave (Meridian Highway), view east, c. 1950

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SECTION 1

Introduction

Since the Texas Legislature passed House Bill 2642 in 2009, the Texas Department of Transportation (TxDOT) and the Texas Historical Commission (THC) worked together to establish a program for the identification, designation, interpretation, and marketing of Texas' historic roads and highways. Since that time, TxDOT developed the Multiple Property Submission (MPS) Historic Road Infrastructure of Texas, 1866-1965.

MPS is a National Register of Historic Places (NRHP) nomination designed to help historians in listing components of infrastructure of Texas including road segments and bridges. The MPS serves as a high-level guidance document providing the context for historic roadways in Texas. TxDOT staff developed this document to provide detailed research and survey guidance for consultants and historians evaluating roads in Texas for TxDOT's cultural resources management (CRM) compliance.

This document provides guidelines for identification, documentation, and evaluation of road segments for NRHP eligibility for TxDOT projects. TxDOT's focus is on what it owns and maintains- i.e. resources within the right-of-way (ROW) only- defined as a roadway. TxDOT defines a roadway as the physical structures directly associated with the conduct of vehicular travel on the road facility, including all engineered improvements such as the roadbed, surface treatment, bridges, culverts, drainage elements, landscaping, and improved and unimproved ROW. Historic maps and construction plan sheets are the most important tools to research TxDOT roads.

This is not a guide to road corridor related resources such as gas stations or motels, as there is extensive guidance on these resources, including TxDOT's recently updated *Field Guide to Gas Stations in Texas.* A road corridor is comprised of the roadway and its contextually significant adjunct developmental patterns outside of TxDOT's jurisdiction, particularly associated property types such as gas stations, motels or tourist courts, restaurants, and tourist attractions. Guides for these types of resources in Texas also include the Bankhead and Meridian Highways in Texas produced by the THC.

Subtypes of roads include city, county, and state-owned roads as well as federally owned roads (U.S. and Interstate Highways). This guide includes information on how to research all types of roads, as many city and county roads were once owned by the state and vice versa.

This guide will not address research and evaluation of Interstate Highways or their components (such as frontage roads and bridges). Interstates are exempt from Section 106 review as Interstate resources unless their components are on the Final List of Nationally and Exceptionally Significant Features of the Federal Interstate Highway System, published in the Federal Register on December 19, 2006. Consult TxDOT's Historic Resources Toolkit on TxDOT.gov to see a list of Interstate bridges in Texas that are not exempt.

TxDOT developed this guide as a supplement to the afore-mentioned MPS. The MPS primarily concerns itself with bridges but, also includes an extensive context on historic roads in Texas. The MPS divides the history of roads in Texas into the following eras:

- County and Local Roads in the late 19th and early 20th centuries
- Named Auto Trails/Private Road Associations
- Early Development of the Texas Highway Department and U.S. Highway system
- Texas Roads in the Great Depression and World War II
- Post-World War II Road Networks

As presented in the case study (see Section 7), it is appropriate to survey and evaluate a road segment within all eras that apply to the road segment. For example, a road may have been built by county or local road forces, then taken over by the state and improved, then widened, then bypassed by a larger freeway. All bypasses and alignments could be researched and surveyed, representing all eras of the MPS. It will be rare to find road segments that fit into only one era of the MPS. Therefore, a road survey may need to research and describe what the road was like in each era, and how integrity has changed (or not) since that time.

This guide primarily addresses roads in the twentieth century, as roads built earlier than the late 1800s either function currently as county roads or no longer contain integrity to rise to NRHP standards. This guide does not address trails such as the Chisholm Trail or the El Camino Real, as there are extensive studies for

these resources. Trails are studied under the category of archaeological assessment for TxDOT projects.

Section 2: Context

The text of this section is primarily taken from the MPS and was mostly written by Mead & Hunt for TxDOT. It is not as extensive as the MPS and it is strongly recommended that the researcher become well familiar with the roads sections (E, F and H) of the MPS.

Section 3: Research Guide and Methodology

This section shows researchers where information about roads in Texas may be found including major repositories and online resources. Often the most useful research may be conducted at TxDOT Historical Studies offices themselves and it is recommended that anyone researching a road that is under state control start there. Please note many county or city streets were once under state control, which will be discovered through map research. For those roads, TxDOT still holds historic records about the road.

An example is South Congress Avenue in Austin, which was once a state highway and is now primarily owned by the City of Austin. TxDOT has the historic records for this road; the city will not. For county and city owned roads, the most useful repository includes the county clerk's office or city records office. Research at state libraries is often the least useful for roads research, as information is only available on a macro level, and this information has been gathered into the MPS or is available online in map format. Some useful information may be found at local libraries or archives vertical files or in local historic newspapers.

Section 4: Research at TxDOT

This section presents the detailed methods for conducting Control Section (CS) research at the TxDOT historical studies offices. It is useful to let a TxDOT historian know well in advance what roads are of interest for research, as a request to scan the historic plan sets into electronic format may be required. This request can take up to several weeks.

All state roads are divided into numbered Control Sections, with an end number indicating the job number performed on that road. Job 1 is the first job performed by the state on that road (this does not mean the state was necessarily creating a new location roadway, in most cases it was updating the county road to state specifications).

CSJ Number Format

A Control (four digits) Section (two digits) Job (three digits) number looks like this: XXXX-XX-XXX. Often there are leading zeros on these numbers, so a control section job of 0015-06-002 may show up in records as 15-6-2. The sequence of four, two and three digits with the dashes is consistent through TxDOT history.

Section 5: Survey Methodology

This section provides step by step instructions for completing road surveys in Texas. It includes tasks in pre-fieldwork such as desktop research. Roads are unique from other CRM surveys in that right-of-entry (ROE) is a given except in the case of abandoned road alignments now in private use or roads on or through military property.

Section 6: Evaluation Methodology

This section provides information on how to apply the National Register guidelines for evaluation to all eras of roadways. Registration requirements are also included for each era. Parts of this information are also found in the MPS.

Section 7: Case Study

This section provides a case study for a road that was constructed by a county, converted to state use, and reverted to county or city (local) control.

Section 8: Bibliography

Portions of the bibliography have been annotated.

SECTION 2

Context

As mentioned previously, the most extensive context for historic roads in Texas can be found in the MPS (Section E) and the Historic Context for Historic Texas Highways document produced by the THC.

County and Local Roads of the late 19th and early 20th centuries

This road subtype comprised early connections between properties such as farmsteads with roads linking them to cities. Nineteenth century roads through Texas most often consisted of unimproved earthen trails for use by animal drawn wagons under the jurisdiction of the counties. It was not until the turn of the twentieth century (and the advent of the automobile) that citizen involvement to "get the farmer out of the mud" provided statewide and national impetus to improve roadway networks.

Post routes (determined by the federal government to provide delivery of mail) and stage routes (commercially determined routes to deliver goods and people) are included in this type of road. Topography and property lines determined alignments of the roadways, as well as good drainage or good crossings of waterways.

Roads of this subtype displaying potential significance on a local level under *Criterion A: Transportation* must be justified as demonstrating programs conducted by county engineers, such as experimental pavement methods. The period of significance (POS) for these routes is limited to pre-1916 (passage of the Federal Highway Act). The Federal Highway Act required states to establish road or highway departments with which to implement federal funding on state and local roadways.

An example of an NRHP-eligible local roadway, Old San Antonio Rd, Travis Co

Named Auto Trails/Private Road Associations

Examples of this subtype were usually formed by adoption of existing roads, with improvements in paving and bridges. Named highways began to connect counties and states, whereas in the prior era county roads did not necessarily go outside county limits (or very few did). Booster groups across the country and in Texas developed, constructed, maintained, and promoted trans-continental and regional named highways, including the Meridian Highway, Old Spanish Trail, and Dixie Overland Highway. Roads of this subtype demonstrate potential significance at the state level under *Criterion A: Transportation* if justified as demonstrating ideals of the programs to build named routes. The POS for these routes is limited to pre-1925.

An example of an NRHP-eligible auto trail, Old Spanish Trail Highway, Medina Co

Early Development of the Texas Highway Department and U.S. Highway system

In compliance with the Federal Aid Road Act of 1916, the Texas Highway Department (THD) formed in 1917 to designate a system of state highways and grant financial aid to counties for highway construction and maintenance. By the mid-1920s, THD assumed responsibility for maintaining and constructing state highways. Contemporaneously, the American Association of State Highway Officials (AASHO) adopted a national system of uniformly designated highways (U.S. Highways) in an effort to tame the

proliferation of named highway routes and provide consistency across the country.

Roads of this subtype continued to follow existing established road alignments and were rarely in a new location. However, as money became available to purchase right-of-way (ROW), new alignments straightened curves or flattened grades. Roads were further widened and paved, and THD standardized bridges from plans that could be applied statewide.

Roads of this subtype could display potential significance at the state level under *Criterion A: Transportation* as demonstrating uses of additional funds or new engineering standards to allow faster and easier travel between cities. The POS for these routes is 1917 (establishment of Texas Highway Department) to 1930.

An example of an NRHP-listed Depression-Era Rd, SH 16, Palo Pinto Co

Texas Roads in the Great Depression and World War II

During the Great Depression and World War II, few improvements were made to existing roads and few new roads were built due to money shortage. However, states built or upgraded park and scenic roads in order to provide for work relief programs. Work relief efforts provided employment through road construction. Road crews worked on straightening routes, eliminating at-grade hazards, providing drainage, and beautifying the roadway landscape. By 1940, the state highway system comprised more than 22,000 miles of roads.

Following the Depression, World War II considerably limited the state's road construction efforts due to the labor and material shortages. Road construction during the war years was focused primarily on defense and military highways designated as part of the Defense Highway Act of 1941. Federal engineering and design standards were common during this era.

Roads of this subtype are demonstrative of nationwide programs to put people to work during the Depression. Additionally, potential significance might occur at the state level under *Criterion A: Transportation* but it must be justified as demonstrating use of hand labor in materials and direct association (through research) that the road was definitely built using federal funds of a work relief program. The POS for these routes is 1930-1945.

Post-World War II Road Networks

The postwar years between 1945 and 1965 were marked by an intense road and bridge building campaign to transform the nation's roads into a sophisticated modern transportation network. The passage of a number of Federal-Aid Highway Acts in the 1940s and 1950s (with the Federal-Aid Highway Act of 1956 being most significant) dramatically increased federal funding for roads. These included not only the interstate highway system, but also secondary roads (including farm-to-market roads in Texas) and urban highways.

Due to extensive planning for future projects and state legislation and funding initiatives during World War II, Texas was one of the first states to begin postwar road and bridge construction. Because of this early commitment to the state's transportation needs, state funds were readily available to match federal funding after the war. The THD began an aggressive rebuilding and expansion effort in response to the state's need for improved transportation facilities.

Between 1945 and 1965, the THD made great strides in improving the state's transportation network by building interstate highways, expressways in major metropolitan areas, and a cohesive network of farm-to-market roads. The interstate system and the urban expressways that were constructed in this period greatly transformed the statewide transportation system. Interstates fall into this era but are not addressed in this guidance.

Roads of this era were designed to help rural citizens more easily access urban markets. Again, they were rarely built on new location, but followed existing alignments and in many cases made

improvements for safety such as widening, straightening curves, and requiring purchase of ROW. Conversion to state system standards is more routinely associated with early experimentation with those standards during early phases. Research would therefore need to establish the specifics of adherence and application and refinement of those standards by looking through contemporaneous reports and character-defining features associated with that particular period of significance.

Roads during this era may demonstrate potential significance at the state level under *Criterion A: Transportation* as demonstrating original components reflective of the program. The POS for these routes is 1945-1970.

An example of a post-war highway, US 90, Jefferson Co

SECTION 3

Research Guide and Methodology

Please consult the Historic Roads Decision Tree before conducting a road survey to determine if a roads survey is necessary (or appropriate). It is very important to conduct the majority of the work in the office, prior to fieldwork. The more work that is done in the office the better equipped one will be to survey.

1. Desktop/in office

1.1. For all surveys, begin with desktop research. Background research must be conducted before fieldwork. Sites for this research will include Google Earth and Google Street view. General Google searches for the city or county may also provide context information, as will the Handbook of Texas online.

1.2. For all surveys, perform historic map research:

1.2.1. Use historic highway maps

1.2.2. Use historic aerial photograph websites, topographic map websites and the Texas Natural Resources Information System (TNRIS). Some useful historic maps are located in the TxDOT historic plan sets, so a visit to TxDOT offices may be essential.

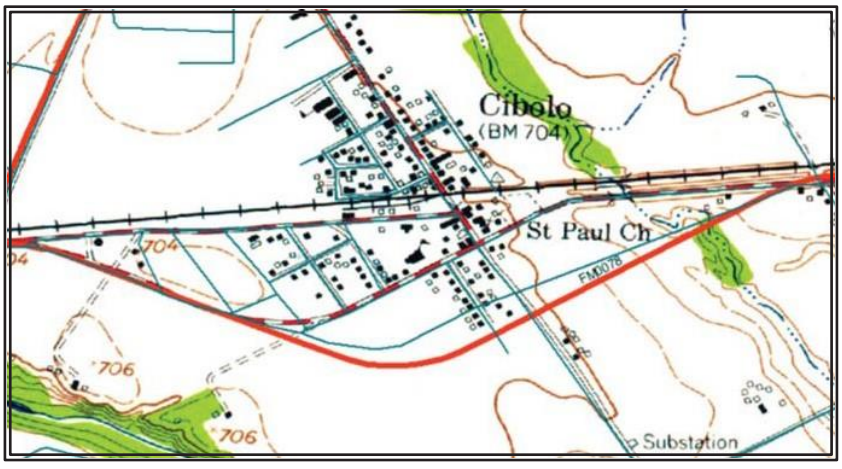
1.2.3. Use the Texas Historic Overlay (THO), which is a series of historic maps for use in GIS software. Using this technology, one can overlay historic maps onto current maps (called geo-referencing) to determine changes through time to road alignments. Copies of the THO are available through TxDOT Historical or Archeological staff. This is one of the most useful technologies for road research. TxDOT georeferenced the 1936/1940 and 1950/1960 highway maps and these are available for use as well.

1.2.4. Sanborn maps are useful for urban areas as they show ROW measurements and sometimes surfacing materials.

1.2.5. For road corridor studies, look for possible road related sources before fieldwork, using Sanborns or old plan sets. Look for possible road related properties to survey where historic use may not be obvious today, such as former restaurants or gas stations. These may or may not be in the ROW but it is useful to know about the possible concentration of road related properties historically, and it may be useful to photograph them, even if not used in the final survey report.

1.3. Geo-Referencing is important whether one uses the THO or other maps (see example below). This must be done prior to fieldwork so it is known which alignments or segments to survey.

1.4. For all surveys, determine age and number of bridges on the alignment. All historic-age bridges must be documented to determine if they are contributing to the segment. A bridge may be individually NRHP-eligible or NRHP-listed and yet not contribute to a road segment if built outside the POS. Or a bridge may be contributing to a historic road segment, but not individually NHRP-eligible. Do this research before fieldwork, as determining whether or not a structure is categorized as a "bridge" (longer than 20') may be problematic when in the field. Culverts are not as



This example shows the modern TxDOT roads in red, modern city and county roads in blue, and the historic topographical map underneath. The TxDOT roads were realigned since the historic period and the old highway became a city street.

important to a roadway's significance, but if they date to the POS (either match materials of bridges on the alignment or contain date stamps or medallions) culverts may contribute to the engineering aspects of a roadway under Criterion C. If they are masonry with integrity and date to the POS, they may contribute under Criterion A.

2. State archives
   - 2.1. For all surveys, research at the state archival level is usually unnecessary due to its macro level of information. THC performed this research for many of the named highways. Do a keyword search to see if vertical files exist at the Briscoe Center for American History or Lorenzo de Zavala state archives in Austin.
   - 2.2. The holdings at the University of Texas in Arlington may also prove productive for some research.
   - 2.3. The most important state repository for roads research is TxDOT at their Austin offices and also sometimes in the district headquarters locations—although that tends to be the same information and files held in Austin.
   - 2.4. For all surveys, before fieldwork, check the TxDOT communications division library for old photos and maps of the area. For further information, see "Research at TxDOT" (Section 4 of this guide).
3. Local research
   - 3.1. For all surveys, in order to write the historic context of the road, go to local libraries for histories, newspapers or vertical files.
   - 3.2. For local road surveys (if the road was never on the state system), research must be done in the field. For county roads, check the county commissioners' minutes, usually found in the county clerk's office. Look at the index under "roads" for the era of interest or the POS before reading the actual minutes. Look for actions performed on the subject road, and compare it to other roads in the county - did it seem to be more or less important than other roads based on quantity of work/money spent? In other words, where does it fall in the hierarchy of roads in the county?
   - 3.3. For city street surveys, Sanborn maps may include ROW width and pavement type. Also contact the city planning department, historic preservation office (HPO), right-of-way (ROW) office, streets and bridge office, public works department, or maintenance office (source varies by city) to find where records (if any) might be kept. City directories will help determine use through time to date roadside architecture properties.
4. Research at TxDOT: See section 4 of this guide. Also see the case study for Medina Co. in this guide.
5. Applying research
   - 5.1. Try to establish the age of the road. See how far back it appears on the THO or other old maps. Sometimes the best established date will be "pre-20th century". County commissioner's minutes can also help establish the date of construction of a road.
   - 5.2. Setting changes can be determined through historic map research, plan set research, and historic aerial photos. A place that is rural today might not have been so in the past (ghost town) and vice versa. The same is true of vegetation in the ROW and adjacent land use.
   - 5.3. The POS usually begins with the date the road was constructed (this can be general, such as the earliest dated map you can find showing the road) until the date it was bypassed by a larger road or greatly widened (more than double in width). If it was never bypassed, widened, or otherwise greatly changed, the POS ends at the historic-age cut-off date.

Frio Co.- CR 4425 (lower right of graphic) used to connect westward to Zavala Co (indicated by purple line). It no longer connects that far west, so the POS could end when the roadway connection with the adjacent county was lost.

   - 5.4. The road segment needs to have logical termini, which in most cases will not match the proposed project's logical termini. Sometimes this cannot be established until fieldwork, but is usually between two major roads, a major road and a bridge, a major intersection and a county line, the limits of a bypassed segment, etc. The segment length will also usually be limited to the portion of the road with best integrity to the POS. For example, a bypassed section of US 90 in Medina County is about eight miles long, but the eastern portion contains newer bridges. Therefore, the eligible segment was determined to be the approximate three-mile section with intact bridges from the POS, with a western terminus at the county line (where the pavement materials also changed). A historic road segment must generally be at least a mile long to demonstrate integrity, although THC and TxDOT have not standardized this length.

Bowie area historic Meridian Highway road corridor with contributing tourist court

5.5. Determine the context of the area/county. A general history needs to be known. What are important themes of the area's history?

5.6. Were there any particular places of note along the road? Railroad depots, cotton gins or other agricultural processing facilities, industrial facilities (mills, factories, etc.), oil fields or refineries, schools? For more guidance on this type of research, please consult TxDOT's Guide to the Research and Documentation of Local Texas Bridges.

SECTION 4

Road Research at TxDOT

Please consult the Historic Roads Decision Tree before conducting a road survey. Submit an open records request for as-built plan sets. The plan sets are on TxDOT's intranet site and not available on the internet at this time, although TxDOT is working on a public site.

Procedural Steps

1. If the road was ever on the state system, or is currently, plentiful documentation exists. (For off-system roads, see "sources to be consulted" section below). Sometimes what is now an off- system road was state owned. In this case some information will be available—follow the process below. It is not obvious whether what is now an off-system road was ever state owned. Bypassed or abandoned roads tend to roughly parallel current state alignments.
2. Whether or not a road was ever state owned can also be discovered through historic map research and geo-referencing as mentioned in Section 3.
3. The CSJ logbook index lists when the state took over the road (often a good starting date for the POS), when jobs were completed, what was done (very basic and sometimes cryptic description) and the geographic limits (usually cryptic) and costs. The index will not inform as to when/if the road was realigned and bypassed (a bypass or realignment date can determine the end of the POS).
4. Using the CSJ logbook, determine what specific job numbers may be of interest - for instance, which jobs were completed during the historic-age period.
5. After finding the job numbers that may be of interest, go to the plan sheets on TxDOT's intranet. These are only available internally at TxDOT, but may be downloaded.
6. For further information and visual aids, in using TxDOT's internal as built plans software, see TxDOT's SOP for plan research.

CSJ Number
Any current or former state system road will have a CSJ number. This stands for "Control Section Job". Using the CS (Control Section) number, look at the CSJ logbook index (on file at TxDOT). If the CS is unknown, use the TxDOT statewide planning map to find the CS.

7. Start with the first job the state performed and work forward chronologically.
8. Plan sets will show general maps of limits on the first page, and some contain additional large scale county maps from the era which can be helpful.
9. Plan sets show ROW limits, pavement type and pavement width, and details of bridges and culverts, which can help in evaluating the road segment's historic integrity.
10. Plan sets will show when a road was realigned or bypassed (old road will be labeled as such) which is usually a sound end date for the POS.
11. Plan sets in cities often function like Sanborns with building outlines and names of businesses.
12. Plan sets in rural areas show land use and ownership. Land use can be compared (today vs historic) to determine if the setting retains integrity.
13. Plan sets do not show dates - they are blacked out. This is why the Control Section Job index must be cross referenced when performing this research.

SECTION 5

Survey Methods

Please consult the Historic Roads Decision Tree before conducting a road survey. This section includes step by step instructions for how to survey and document a road for TxDOT compliance purposes. (At the end of each step in parentheses, the aspects of integrity potentially identified in the step are listed).

Survey instructions

1. Drive the road segment in both directions first. This helps identify safe pull over spots and get a general feel for the work ahead (good places to take photos, level of traffic as it relates to safe surveying, etc.). The road segment itself is numbered resource #1 for the survey report. (setting, feeling, association, design, materials, workmanship).
2. Measure the ROW (using fence/utility lines) in several places. Use a tape measure, smartphone application, or wheel measuring device. This can also be done with less accuracy via desktop (design, setting).
3. Measure the pavement width or surface width in several places (design, setting).
4. Take photos of setting, showing both good (road related properties alongside with integrity, narrow width) and bad (new development, lots of new pavement) aspects of integrity (setting, feeling, association).
5. Take photos from the middle of the road looking up and down the road to show roadway and setting if it is safe to do so (setting, feeling, association).
6. Try to get up high on overpasses, bridges, buildings, embankments, etc. for some of the photos. (setting, feeling, association).
7. Take photos at the beginning and end of the segment, as well as several in the middle. There is no mathematical set point (every 0.5 mile, for instance) to do this. Pull over where it is safe to do so. Photograph from the middle of the roadway if safe to do so. Since documentation of all the historic-age bridges is required (in order to assess engineering integrity of the roadway for Criterion C), taking road photos at the locations of bridges is recommended to save time, since you have to get out of the vehicle anyway. When driving the segment in step 1, think about good spots that demonstrate aspects of the road to highlight such as a bridge or place where the road is widened from two to four lanes (setting, feeling, association).
8. Photograph and assign letters to all historic-age bridges (1a, 1b, 1c) (design, materials, workmanship). When photographing individual resources, also photograph their relationship to the roadway.

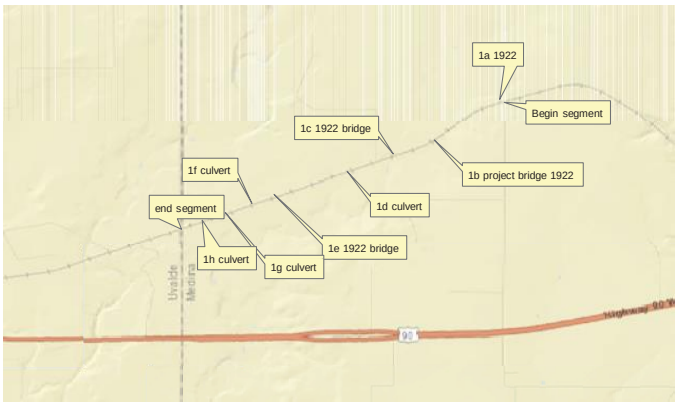


Photo locations for CR 511 survey which coincide with bridges and culverts

9. Photograph example culverts. These can be assigned one resource number as a class of resources (1d) unless they are contributing features of the road, in which case they must be assigned their own letter. If they are contributing features remember to map them accurately. (design, materials, workmanship).
10. If sidewalks are present, look for date stamps or other indicators of their age. Sidewalks can be labeled similar to culverts - they can be assigned one resource number as a class of resources (1e) unless they are contributing features of the road, in which case they must be assigned their own letter. If all sidewalks in a segment contribute, they can have one letter.
11. Document curbs and gutters in urban segments and ditches for drainage in rural segments in a manner similar to culverts and sidewalks -see above.
12. Only survey historic-age resources within the ROW. This includes buildings in urban settings, where the canopy, awning, sign, or wall may be in the ROW because the resource was there prior to the establishment of ROW lines. Buildings in the ROW should be assigned their own survey number. Look for historic-age road signs which should be labeled similarly

to culverts and sidewalks. (design, workmanship, materials, setting, feeling, association).

13. Certain markers should be documented if in the ROW. This is not because they are necessarily contributing to a road, but simply because they are historic-age objects in the ROW. Federal Aid Project (FAP) and Work Aid Project (WAP) markers are examples. FAP and WAP markers are generally considered not eligible as a class of resources, but they may contribute to a historic roadway if that roadway is significant as a public works project. (workmanship, materials, association)
14. Texas Centennial Markers and Official Texas Historic Markers are unlikely to be associated with the road and do not require documentation unless they are historic-age and in the ROW. Please note also that while Texas Centennial Markers are eligible for NRHP listing, it is under separate context. They may contribute to a road that demonstrates significance for the 1930s era but otherwise will not contribute to a historic roadway. (design, materials, workmanship, association) Conversely, certain types of markers are directly associated with historic roadways such as Ozark Trail, Old Spanish Highway, Jefferson Davis Highway, and the like. Presence of these markers may indicate need for a roads survey. Zivley markers indicate the path of an 18th century "roadway" (Camino Real) which is evaluated more appropriately as an archeological resource for TxDOT work. TxDOT and THC have separate guidance for these marker types.

An example of an individually NRHP-eligible state line marker The roadway itself is not NRHP-eligible, due to changes caused by widening and other loss of historic integrity.

Survey results

For urban segments, produce a building inventory and photo sheets of properties in the APE as one would for a regular Historic Resources Survey Report (HRSR). For rural segments with just bridges and culverts, integrate those photos into the text of the report, as well as photos of setting. No separate inventory or photo sheets are needed if bridges and culverts are the only property types documented. Every resource should be mapped, whether or not the segment is determined eligible. Be sure to address all seven aspects of integrity in the report. If you need help defining elements of roads, see TxDOT's online visual dictionary.

SECTION 6

Evaluation Methodology

Review and assess information gathered during research and fieldwork.

Please refer to the MPS section F, pages 195-206 for more information.

Significance vs. Integrity

In all instances, to be NHRP eligible, there should be a case for significance, such as an early important county route, an early named highway alignment, an early Farm to Market (FM) route, or a Depression-era work-relief program funded roadway, or an early controlled access route before researching integrity. Without a case for possible significance, there would be no impetus to survey the roadway. The majority of cases researched so far by TxDOT were early named highway alignments (Old Spanish Trail Highway, Meridian Highway), now bypassed by larger roadways.

The survey may indicate the road segment retains historic integrity. Further research must be done on the specific road. For instance, if it was part of a named highway, are there better regional examples? Primary research must be undertaken at the source. Local Certified Local Government, County Historical Commissions, museum or library staff, city or county employees should be consulted. Histories of counties and newspaper articles from the time the road was under construction may also help.

Period of Significance (POS) is the time when the road best demonstrated significance related to its context and history. POS refers to the span of time during which significant events and activities occurred on the roadway.

POS should *not* be automatically calculated to the 45 or 50-year mark. Events and associations with historic properties are finite; most properties have a clearly definable period of significance. A roadway may have multiple POS. See National Parks Service (NPS) Bulletin 39 and Section 5.3 of this guide for further discussion. Also see "Section 2: Context" of this guide for further information about specific POS timeframes for different road eras.

Evaluations must establish the direct connection between road resources and the POS before weighing their potential contributions as character-defining features of a historic road segment. Evaluations must consider the relevant aspects of setting and feeling necessary for the associated historic theme to remain recognizable. Road-related property types (e.g., gas stations, motels, or tourist-courts, restaurants, inspection stations, tourist attractions) can be essential to understanding a road's significant role in the development of an early-twentieth-century transportation network, though they are located outside of the road structure (roadway) and instead part of the road corridor.

However, such resources should be considered ancillary components of a historic roadway in most evaluations necessitated by transportation undertakings. Unless the road's significance can be tied to the establishment of such resources (significance under A), corridors may be better evaluated as general commercial historic districts with contributing road segments rather than as historic roadways with contributing buildings outside the ROW.

Examples of roadways (top) vs corridors (bottom)

If the road retains integrity and demonstrates significance, identify contributing or non-contributing resources of the roadway. Contributing resources date from the POS and retain integrity. Non-contributing resources are non-historic age components or bridges or culverts that have been widened.

Integrity under Criterion A

Setting and Feeling

Research should determine adjoining historic land use patterns of development. Construction plan sets, historic aerial photos, and age of trees can help guide these analyses. Integrity of setting and feeling may be demonstrated by vegetation in and near the ROW, width of the roadway, and associated property types surrounding the roadway.

Patterns of vegetation present in the ROW during the POS, such as tree canopies, should remain. Consistent patterns of vegetation present outside of the ROW during the POS, such as crops or pasture, also provide good indication that the setting retains its historic integrity.

In some segments, a lack of vegetation may be historically accurate, so the presence of heavy vegetation in such segments would detract from integrity of setting. Comparisons drawn from historic maps and photos (including aerials) are the best sources for this type of information.

As discussed further in the Criterion C section, width of the roadway should generally remain as it was historically. Minimal numbers of minor adjustments such as adding paved shoulders or new drainage features necessary for the safety of modern operations are acceptable changes within the setting if the same proportional ROW width, open spaces and pavement remain discernible.

Minor widening of pavement does not negatively impact the integrity of a roadway, but this definition will vary depending on the roadway. Minor widening for Texas is usually defined as four feet or less added to the original width. This slight widening would generally allow roadways to retain the width necessary to retain integrity. More than doubling the pavement width of a roadway since its POS will most always be considered adverse to its integrity.

An example of a minor widening that does not affect integrity, FM 421, Hardin Co

Adjoining historic land use patterns of development are particularly relevant to analyses of eligibility under Criterion A and highly dependent on the area of significance established for the roadway. Significant associations with transportation, for example, place a higher value on the internal ROW aspects of the roadway, while significant associations with agriculture or community planning and development would require stronger associations with the adjoining land use patterns.

TxDOT does not seek to find association with agriculture or community planning when researching roads, and has found roads eligible under Criterion A for transportation only. Setting and felling are not the most important aspects of integrity in evaluating historic roadways, but they can be an essential tool in conveying a property's significance.

Association

According to NRHP Bulletin #15, association is the direct link between the important historic event or person and a historic property. Integrity of association is retained if the property is the place where the event or activity occurred and is sufficiently intact to convey that relationship to the observer.

Association requires the presence of physical features that convey a property's historic character. Association is demonstrated by retention of a combination of elements such as setting and feeling, established by use of adjacent properties, width, alignment, vegetation in the ROW, and presence of historic features such as bridges, culverts and signage.

Because feeling and association depend on individual perceptions, their retention alone is never sufficient to support eligibility. (See

attached Medina Co case study which demonstrates association with a named highway.)

Integrity under Criterion C

Location

Location is the most commonly retained feature of historic roads in Texas. If any realignment has occurred, it is usually at one or both ends of a roadway segment. Realignment of the road diminishes integrity, particularly if the majority of a roadway segment, the entire segment, or sharp curves that would have historically followed property lines were realigned or abandoned.

The NRHP-listed SH 16 in Palo Pinto County is one example of an adverse effect to a historic roadway caused by the proposed realignment of a character defining curve and retaining wall. The Section 4(f) information is on file at TxDOT offices under CSJ: 0362-02-021.

Meridian Highway, Wichita Co. Note varying alignments which historically followed parcel lines (90 degree turns), with later alignments straightening curves.

Part of the design of historic roads examined thus far rests with how the road was aligned according to property boundaries, usually creating a road with curves and angles instead of a straight line. These roadway segments often form isolated, interrupted sections distinctly separated from other sections by long straight intervals. In some cases, a long alignment may be bisected once

or twice by interstates or another intrusive road. The 71-mile Austin to San Antonio Post Road is interrupted throughout its length by IH 35. When a long alignment is so bisected, it can still meet the registration requirements if there is strong historical and physical association of the subdivided segments.

Segment of Post Road (in pink) and Meridian Highway (orange and yellow) interrupted by IH 35, Hays Co

Design

Historic pavement width, striping (or lack of), alignment, and ROW width would generally need to be intact, though there are allowances for minor widening of pavement width.

ROW width was generally less than 50' for historic roadways in Texas. Notable exceptions are roads in West Texas that historically contained ROW widths of up to 100'. ROW width can be determined using plan sets or visual cues such as fencing or utility lines, and can be measured using Google Earth technology or GIS. Widening the ROW beyond the original 50' width adversely affects integrity in most cases. Local standards must be used to determine what the threshold is for ROW width as it relates to the historic roadway.

The proportional relationship between pavement width and ROW width should remain as it did during the POS for the roadway. For instance, the ROW may have been widened but the pavement was likely widened as well, so the percentage of pavement within the ROW remains the same as it might have been historically. Thus far TxDOT does not have cases of historic roadways in widened ROW.

Minor widening of pavement does not negatively impact the integrity of a roadway, but this definition will vary depending on the roadway. Minor widening for Texas is usually defined as four feet or less added to the original width. This slight widening would generally allow roadways to retain the width necessary to retain integrity. More than doubling the pavement width of a roadway since its POS will most always be considered adverse to its integrity.

Requiring a standard length of a segment necessary for NRHP-listing is not an appropriate approach to evaluation as all segments and corridors vary and possess different character-defining features depending on the original design and aesthetic of the road. Instead, the segment must be long enough to convey the experience of driving a historic road. A segment "should be of sufficient length to preserve the feeling and setting of a continuous road… an ideal would be an uninterrupted view down the road to the horizon." (MPS page 200) This should be specifically defined when writing about a historic roadway using feet or miles for distance instead of stating "view to the horizon" or "everything in sight distance" as this is ambiguous and subject to change over time.

The discussion must include statements such as "all adjacent parcels to the roadway" or "all properties within 500 feet of the limits of the current ROW" to avoid ambiguity. If boundaries and contributing resources are not specifically described in the documentation, it becomes problematic in future federal projects due to Section 106 requirements.

Many historic roadways were not striped when constructed as they were either composed of gravel, not wide enough, or did not have a high enough travel density to necessitate striping. Striping becomes necessary as roadways are widened or become more heavily used. Center line and edge striping do not preclude eligibility of a segment.

Materials

Pavement is transient in nature and maintenance and upkeep is expected. Therefore, the pavement itself need not be character-defining. If a road was historically paved with bricks that are still in good condition, then brick pavement could be a character-defining

feature of a roadway. Brick pavement alone does not automatically comprise a historic roadway. It is more likely that brick pavement would contribute to a historic commercial district rather than represent or comprise a historic roadway.

An exception to this is a brick paved NRHP-eligible segment of the Bankhead Highway in a rural area near Cisco. While not in a commercial area, the roadway demonstrates significance as a former named highway, retaining all aspects of integrity.

Due to retention of integrity and rarity of type, this road segment would likely be eligible under C even without its additional association under A with the Bankhead Highway.

NRHP-eligible Bankhead Highway segment, Eastland Co

Absence of road signage and markers from the POS does not preclude eligibility of the segment; their presence only enhances the historic feeling of the roadway.

Electronic traffic and railroad signals were not developed until the 1930s, but the presence of these along a roadway today do not necessarily detract from a historic roadway's integrity if they are minor in scale and/or number.

Workmanship

Integrity of workmanship is not easily applied to the entire road due to expected changes such as re-paving and minor widening. However, if bridges and culverts are significant for the artisans' labor or skill (e.g. masonry), then they should retain the original design and materials. If research shows that current sidewalks were present during the POS, they should be retained. If sidewalks were built after the POS, these detract from integrity of workmanship (as well as design, feeling, and setting) of the road.

Curbs in urban areas are utilized for both drainage and safety purposes as they guide water to drainage outlets and prevent vehicles from leaving the street. As such, they are integrated into the construction of the road itself. Curbs are not individual features and are not individually NRHP-eligible. Curbing at corners is rarely intact due to damage from vehicles, street widening, or ADA ramp improvements.

Addition of ADA ramps to concrete curbs or locations where curbs are non-existent is a safety concern and as such does not affect the integrity of design. Colored tile curbing in cities such as Fort Worth may be character defining to road segments in those communities. Limestone curbing built by a city or county may be character-defining but generally TxDOT-constructed curbs will not be character-defining, since they are utilitarian concrete. Earlier curbing will be much more likely to be character-defining than newer curbing.

A quick note on setting and feeling under Criterion C: disruptive land use changes adjacent to the roadway (i.e. the introduction of large modern-age subdivisions or commercial strip malls) can dramatically compromise the integrity of setting and feeling, but are of less consequence for analysis of the engineering significance of a roadway under Criterion C if the road remains un-widened, which is likely rare (i.e. development necessitates wider roads for more traffic).

The following registration requirements come from MPS (for further information, see MPS section F- pages 200-207):

County and local roads in the 19th and early 20th centuries

A road of this subtype may be significant at the state level under *Criterion A: Transportation* if it is associated with experimental programs conducted by county engineers, sometimes under direction of federal entities such as the Office of Public Roads (OPR), which operated under the Department of Agriculture, or the Post Office Department.

A road of this subtype may be significant at the state level under *Criterion C: Engineering* if it contains engineering features reflective of the time period that may include truss bridges or improved drainage. The period of significance for these routes is limited to pre-1916, representing the period prior to the passage of the Federal-Aid Road Act of 1916. See MPS Section F, pages 195-196, 198 for more information.

Named auto trails

A road of this subtype may be significant at the state level under *Criterion A: Transportation* if justified as demonstrating ideals of the initiative or efforts to get named routes constructed and promoted. A road of this subtype may be significant at the state level under *Criterion C: Engineering* if it contains features demonstrating the time period, which may include signage or improved road surfaces.

The period of significance for these routes is limited to pre-1925, after which time a national highway numbering system was adopted. See MPS Section F, page 195, 198.

Early development of the THD and US Highway system

A road of this subtype may be significant at the state level under *Criterion A: Transportation* if there is demonstrated use of additional state and federal matching funding mechanisms for road development. A road of this subtype may be significant at the state level under *Criterion C: Engineering* if it contains features reflective of the time period, which may demonstrate first use of standard bridge plans and/or the adoption of road standards.

Examples may include any of the 38 designated state highways from 1919 reflective of this era's significance. The POS for these routes begins with the establishment of the THD in 1917. The POS ends with the passage of the State Assumption Highway Bond Act in 1932, which completed the centralization of highway design and funding with the THD. See MPS Section F, page 195, 198 for more information.

Texas roads in the Great Depression and WWII

Eligibility as a road associated with a work-relief program might occur at the state level under *Criterion A: Transportation* but it must be justified with a direct association that the road was definitely built using federal funds of a work relief program. A road of this subtype may be significant at the state level under *Criterion C: Engineering* if it contained materials, workmanship and design aspects that were influential for the time period or demonstrated use of manmade components (1930s) or bridges and pavement sufficient to support military routes (1940s). See MPS Section F, page 196, 199 for more information.

Post-World War II and network developments

A road of this subtype may possess significance at the state level under *Criterion A: Transportation* if justified as demonstrating components reflective of the program they were built or improved under. A road of this subtype may be significant at the state level under *Criterion C: Engineering* if it contained materials, workmanship and design aspects that were influential for the time period such as restricted access or multi-level overpasses. See MPS Section F, pages 196-197, 199 for more information.

SECTION 7

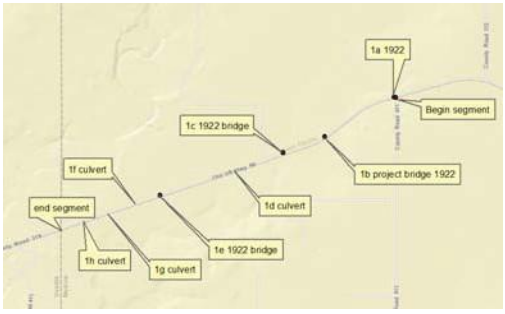
Case Study: Medina Co

Map of project area, note CR 511/Old U.S. 90 labels

Photo of project bridge, provided by district through PCR process.

Through the Project Coordination Request (PCR) process, the district provided details and a map of a bridge replacement project in Medina County. Although now signed CR 511, the historian noted that other maps labeled it Old US 90. The historian reviewed the TxDOT MPS and the THC website on historic highways and learned this area is in the vicinity of the Old Spanish Trail (OST) highway. It helps to be familiar with general locations of historic named highways. Other triggers that may indicate historic highways: the road is labeled "old XX road" on map (in the above example "Old U.S. 90"), or a County Historical Commission (CHC) or Certified Local Government (CLG) may know of local historic roads. For more information on this project, including a Historic Resources Survey Report (HRSR), see CSJ: 0915-45-051.

1. From the PCR, the historian learned the bridge proposed for replacement was constructed in 1922 and unaltered, and contained railing that looked to be a THD standard rail. While the bridge itself was not much to look at, the roadway may have some significance as an early former THD route, as well as a route of the OST. Since an alignment of the Old Spanish Trail named highway was in the area, the historian continued map research. The historian used TxDOT's Statewide Planning Map available online to ascertain construction dates of other bridges on the road.



1.1. Each dot on this map represents a bridge. All bridges on CR 511 date to 1922 without alterations (widening). The historian then used Google Street View to review the county road. Google Street View may not exist

for all county roads. Google Street View showed all of the bridges on CR 511 contain the same type of railing and consist of concrete slab or box structures. This indicated the road may have intact engineered features along the roadway, demonstrating integrity of design and materials. Setting and feeling are also important components of integrity. To learn more about setting and feeling, the historian chose to review historic aerials and the as-built plans. These sources showed that little in the setting changed since the POS of the roadway (see below).

1.2. The historian then consulted other historic maps from the Texas Historic Overlay (THO). These resources indicated that for the most part, the rural agricultural landscape remains. The historian also found a railroad siding with settlement along the project alignment called Seco, but any remains of this and the few homes around it have disappeared. Sanborn Map research is not relevant in a rural area, so it was not used.

1.3. Geo-referencing - The historian did not need to geo-reference multiple maps for this study. Page 9 of this guide shows an example of geo-referencing - taking the old map and laying new highway layers overtop to ascertain what current roadways may have been old alignments of highways.

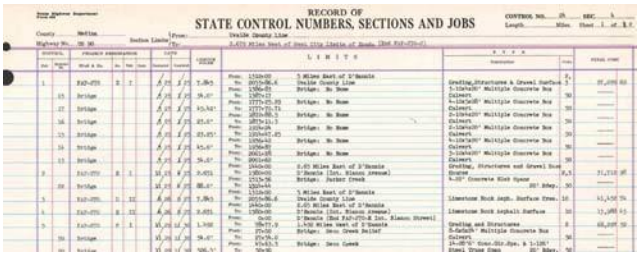
State archival research was not needed for this project. The historian referenced the TxDOT as-built plans. The TxDOT photo library contained no photos of the area.

2. Local archival research – Since the roadway demonstrated good integrity under Criterion C, the historian chose not to perform local research for this project, but additional information could be found at local libraries or the Old Spanish Trail Highway archives at St. Mary's University in San Antonio.

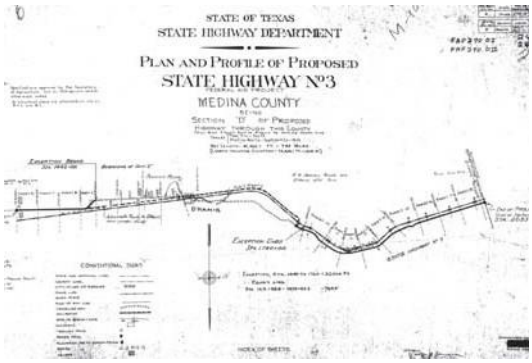
2.1. TxDOT Research - this is usually the most important component of a roads survey. Since this road is no longer an on system TxDOT facility, the historian used TxDOT's Statewide Planning map to find US 90's control-section (CS). It is likely the CS for the bypassed US 90 alignment is the same number. This graphic shows that US 90's CS is 0024-04.

Example from Statewide Planning Map showing CS of current US 90 alignment. Use that CS (0024-04) to research as-built historic plans.

Looking at the 0024-04 index, the historian identified jobs of note to view in the as-built plan sets.

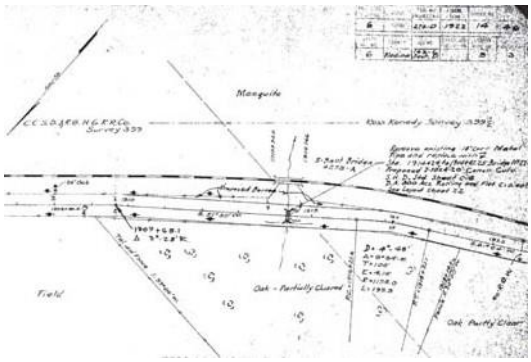

RECORD OF
STATE CONTROL NUMBERS, SECTIONS AND JOBS

For example, Job 1 for all CS generally contains good maps and information. The graphic below from Job 1 revealed that the current alignment of CR 511 was the alignment of the former US 90 highway.


STATE OF TEXAS
STATE HIGHWAY DEPARTMENT
PLAN AND PROFILE OF PROPOSED
STATE HIGHWAY No. 3
MEDINA COUNTY

Map from Job 1 plan sheet, note north is at bottom.

In this case, viewing Job 1 provided additional historic information for the area such as land use and building types, along with the width of the road and bridge and culvert locations.

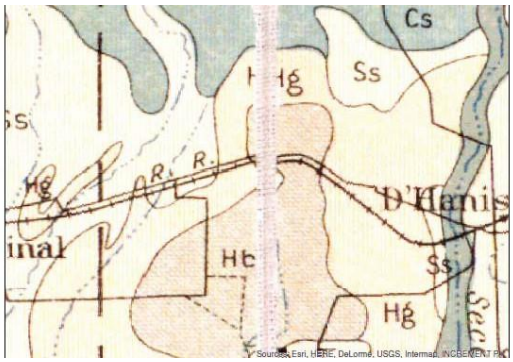


Page from Job 1 plan showing land use, ownership, location of a culvert, railroad alignment.

Applying research

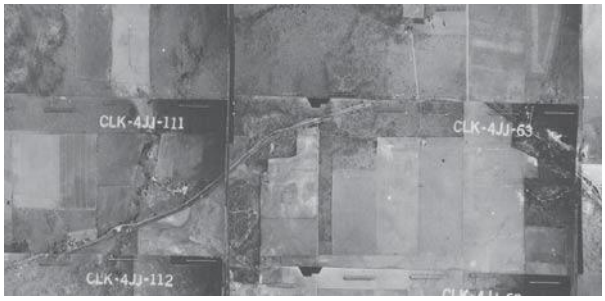
3. Age of road - This is usually determined with historic map research, and finding the original construction date of a roadway may require the historian to perform local research at the County Commissioners Minutes archives. In most cases, the historian must estimate an early 20th century or late 19th century date for the road's initial construction.

   3.1. Setting changes



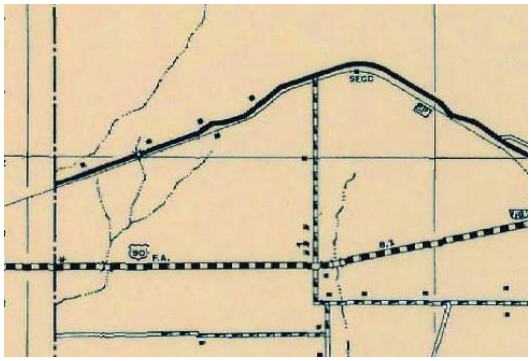
Historic map research- This 1911 map from the THO shows that the roadway paralleled the railroad, as it does today. The historian's plan set research revealed that the area remained rural, although some crop use changed through time. The railroad siding at Seco with the associated buildings and housing no longer exist;

but this does not extensively adversely alter the rural setting of the roadway. Historic aerial photos may also reveal changes to setting: there may be more or fewer trees or different vegetation patterns than present day.



This 1968 aerial reveals little change in setting between the historic period and today.

3.2. POS



This 1940 THD map shows US 90 in its current alignment. Therefore, the POS for CR 511 likely dates from c. 1910 to c. 1940 when CR 511 was bypassed by current US 90. To find a more exact date for the beginning of the POS, the historian consulted the CSJ logs and as built plans to determine when the current US 90 to the south was constructed. Using these sources, the historian established a POS of 1922 (when THD took over the county road and constructed the bridges, including the project bridge) to 1939 (when THD constructed the straighter, current US 90 alignment to the south).

3.3. Establish logical termini of the possible eligible segment. Using Google street-view and site visits, the historian

noted the pavement changes at the Uvalde County line to the west (see photo below).

End of segment, view west, note pavement change at county line

Modified, widened bridges east of the CR 411 intersection precluded extending the termini of the historic roadway to the east. Therefore, the logical eligible segment limits are the Uvalde County line on the west, to CR 411 intersection on the east, forming a segment of about 3.5 miles long.

3.4. Comparative research is usually required for road projects. The historian consulted many of the same sources described above to research other roads in the area. By using these sources, the historian determined where additional bypassed segments of the OST/US 90 alignment exist in Medina Co. The historian used Google Street-view and also drove other alignments of the bypassed US 90 segments in Medina Co. The historian also used sources described above to glean information about bridges, culverts, and other materials of those alignments, as well as changes to other aspects of integrity. None of the other bypassed US 90 segments retained as much integrity as CR 511. CR 511 contained the best integrity of all bypassed segments in the County.

3.5. The historian conducted research to write a context. TxDOT's MPS and THC's historic highways documents established many roads contexts and can be incorporated by reference. CR 511 contained integrity under Criteria A (association with named highways) and C (engineering – early THD standards) to demonstrate significance as both an early THD route and the OST alignment. There was no case for Criterion B significance.

3.6. Because the area is rural, there are no contributing hotels, gas stations, rest areas or other associated roadside property types. The NRHP-eligible segment boundary is limited to the ROW itself.

SECTION 8

Road References

Butler, John L. First Highways of America. Iola, WI, Krause Publications, 1994.

More visual and for the roads enthusiast than scholarly, this book does contain a few definitions (ie macadam) and other useful information for general use in CRM work. Lots of old photographs but very few labels regarding location except for a state, if that.

County Commissioners Court Minutes.

Usually available at county clerk's offices in courthouse or nearby.

Davis, Timothy. Landscape Lines #16, Historic Roads. Published by the National Park Service, no date.

Written primarily to address National Park Services NPS) park roads but includes useful information on how to assess a road's historic integrity and character-defining features.

Delaware Department of Transportation. "Historic Context for the DuPont Highway US Route 113". 2005. Prepared by John Milner Associates, Inc. with Whitman, Requardt, Inc. and Rummel, Klepper and Kahl, LLP.

This road study is a good resource for comparative purposes. While not a very focused study, this study addresses extensive property types, not just road related properties.

FHWA Environmental Review Toolkit website: Historic Preservation

This website is a collection of governmental and non-governmental agency websites and publications that focus on the preservation and management of historic roads. Specific roads include Route 66 and the Lincoln Highway, both of which are listed in part on the NRHP and whose nominations provide registration requirements that can be applied to the A-SAPR. Additional information is also provided about FHWA's Scenic Byways program and the Bureau of Land Management's efforts to preserve historic roads.

Hardy Heck Moore, Inc. Bankhead Highway in Texas*. 2014.*

Historic Roads website

The Historic Roads website is a reference site for professionals and non-professionals interested in the identification and preservation of historic roads. Content includes evaluation guidelines, preservation and management approaches, documentation of historic roads, historic road designations, and research sources.

Ingalls, Marlin R. Iowa's Historic Automobile Roads: A National Register Study of Pre-1948 Arterial Highways. 2009.

The report evaluates cut-off and abandoned segments of US 34 and US 218, two multi-county east-west and north-south arterial highways. The document provides limited background information on highway development in the country and detailed documentation on highway construction in Iowa. The evaluation criteria for examining the segments is consistent with Mead & Hunt's Nebraska context and contains more specific detail about the physical parts of a roadway. The report provides appropriate criteria and integrity discussion applicable to evaluation of Texas roads and is a good reference for road terminology.

Jakle, John A. and Keith A. Sculle. The Gas Station in America. Baltimore: The Johns Hopkins University Press, 1994.

The authors present a comprehensive look at the history of gas stations in the United States and how changes in social and geographical mobility and gasoline distribution are directly reflected in the placement and physical form of gas stations. The book provides insight into roadside architecture and geographical setting.

Jakle, John A. and Keith A. Sculle. The Motel in America. Baltimore: The Johns Hopkins University Press, 1996.

The authors present a comprehensive look at the history of the motel in the United States. Like *The Gas Station in America*, this book outlines how changes in social and geographical mobility and entrepreneurship are directly reflected in the placement and physical form of motels. The book provides insight into roadside architecture and geographical setting, both of which are aspects examined in this evaluation.

Jones, W. Dwayne. Bankhead Highway Historic District National Register of Historic Places Nomination. October 1998.

This nomination outlines the four eligible segments of the Bankhead Highway in Taylor County, Texas. While the nomination lacks a discussion of registration requirements

and character-defining features, it does provide detailed descriptions of the road segments. This NR Nomination is available at the Texas Historic Commission.

Kaszynski, William. The American Highway: The History and Culture of Roads in the United States. McFarland & Company, Inc. Jefferson, NC, 2000.

A good general 20th century history of roadways in the US including definitions of various early pavement materials and their origins. This history is organized by decade and includes many photo examples.

Knight & Associates. Survey Report for the 5000 Block and 5100 Block of Broadway Avenue, Galveston, Galveston County, TX. TxDOT, 2003.

Contains guidance on how to evaluate urban corridors (and how to treat curbing) as eligible roadways.

Marriott, Paul Daniel. From Milestones to Mile-Markers: Understanding Historic Roads. National Trust for Historic Preservation, 2004.

Written in an informal style, for non-professionals or those with little knowledge, discusses integrity components of historic roads, describes management plans and public involvement strategies. Case studies and brief history of roads in the US are included.

Marriott, Paul Daniel. Saving Historic Roads: Design & Policy Guidelines. National Trust for Historic Preservation, Preservation Press, 1998.

This booklet is a guide for transportation professionals (cities, DOT) regarding treatment and identification of historic roadways. It provides definitions of what historic roadways should consist of. It also offers design guidelines to retain integrity of historic roads, with good and bad examples of past efforts. Most helpful is a list of NRHP-listed roadways nationwide.

McCahon, Mary, et al. National Cooperative Highway Research Program. Web-Only Document 189: Design and Management of Historic Roads. Transportation Research Board. January 2012.

http://www.trb.org/Publications/Blurbs/167134.aspx

Document coincides quite well with how TxDOT research and applies NRHP-criteria to historic road assessments. Also provides design guidance for improving (modernizing) historic roads to meet current safety standards.

Mead & Hunt, Inc. and Heritage Research, Ltd. Nebraska Historic Highways Survey. Nebraska State Historical Society & Nebraska Department of Roads, 2002.

The report identifies the history of six major roadways in Nebraska and provides documentation and evaluation of significance of the roadways and road-related resources. This effort formed a statewide historic context for the history of road development within the state. What is not useful is that while POS were developed for different highways, the survey itself had an APE of up to a quarter mile from the roadway, included properties dating up to 1965 (regardless of POS cut off) and didn't assess/consider integrity of such road related properties.

Mead & Hunt, Inc. US Highway 66 in California Multiple Property National Register Nomination, draft. April 2011.

This nomination contains an extensive context – some elements can be applied to historic roads in Texas.

National Cooperative Highway Research Program (NCHRP) Project 5-25 Task 97: Historic Roads – A Synthesis of Identification and Evaluation Practices. New South Associates, Inc. with WPS/ Parsons Brinckerhoff. 2016.

Annotated bibliography for US studies of historic roads that deal with identification, evaluation and treatment.

New Jersey Dept. of Transportation. "New Jersey Historic Roadway Study" 2011. Prepared by KSK Architects Planners Historians, Inc. with Armand Corporation, Inc. and Michael Baker, Jr. Inc.

This state's recent roadway study was consulted to verify evaluation methods used in Texas as a comparative tool. It is useful in discussions of significance and historic highways surveys themselves.

Knoxville: The University of Tennessee Press, 1991.

The author analyzes the good roads movement's impacts to the South and how the initial effects to improve and preserve communities evolved into homogenization and commercialization of the South.

Texas Department of Transportation

Annual Reports.

Austin to San Antonio Post Road Reconnaissance Survey. 2015.

Commissioners Minutes

(Construction plan sheets).

Record of State Control Numbers, Sections, and Jobs (CSJ) files.

Texas Parade Magazine (internal newsletter for employees, became external Texas Highways Magazine in 1974)
Texas General Land Office. The general land office houses historic maps much like those found at the Texas State Archives and in the Texas Historic Overlay Map Collection. Some duplication between these repositories is expected.

Texas Historic Overlay Map Collection. A Geographic Information System of Historic Map Images for Planning Transportation Projects in Texas.
This collection of historic maps from the state archives includes soil, parcel, travel, plat, and other maps.

Texas Roadrunners.
www.txroadrunners.com/roadsideattractions/txroadside.htm
This site is an informal listing of several tourist related properties in the state. Non-scholarly.

United States Department of Agriculture (USDA). Medina USDA Historic Imagery, 1969-10-31. Web. 2020-07-09.

U.S. Department of Transportation, Federal Highway Administration. America's Highways 1776-1976: A History of the Federal-Aid Program. Washington, D.C.: U.S. Government Printing Office, 1976.
Published as a collaborative effort between several state DOTs during the US Sesquicentennial. This document provides a good general history of US federal -aid road building efforts.

All photos in this guide are property of TxDOT and produced by TxDOT staff.

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