

# CALIFORNIA HIGH-SPEED TRAIN

Environmental Impact Report /  
Environmental Impact Statement

## FINAL

### Fresno to Bakersfield

## Supplemental Historic Architectural Survey Report

February 2013





**Supplemental  
Historic Architectural Survey Report**

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February 2013



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## Acronyms and Abbreviations

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effects
APN	assessor parcel number
ASR	Archaeological Survey Report
AT&SF	Atchison, Topeka & Santa Fe
Authority	California High-Speed Rail Authority
BNSF	BNSF Railway
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act of 1969
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CHRS	California Historical Resource Status California Historical Resource Status
CRHR	California Register of Historical Resources
DPR	(California) Department of Parks and Recreation
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
FC&IC	Fresno Canal and Irrigation Company
FRA	Federal Railroad Administration
HASR	Historic Architectural Survey Report
HMF	Heavy Maintenance Facility
HPSR	Historic Property Survey Report
HST	High-speed train
HST project	Fresno to Bakersfield Section of the California High-Speed Train Project
HST Section 106 PA	Programmatic Agreement among the Federal Railroad Administration, the "Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California High-Speed Rail Authority Regarding Compliance with Section 106 of the National Historic Preservation Act as it Pertains to the California High-Speed Train Project"
HST System	California High-Speed Train System

KCL	Kern County Land Company
km	kilometer(s)
km <sup>2</sup>	square kilometer(s)
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
OHP	(California) Office of Historic Preservation
PA	Programmatic Agreement
QI	Qualified Investigator
SF&SV	San Francisco and San Joaquin Valley Railway
SHPO	State Historic Preservation Officer
Southern Pacific	Southern Pacific Railroad
SR	State Route
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey

# **Chapter 1.0**

## **Introduction**



## 1.0 Introduction

This Supplemental Historic Architectural Survey Report (Supplemental HASR) has been prepared as part of the Fresno to Bakersfield Section of the California High-Speed Train Project (HST project). The Fresno to Bakersfield Section would be approximately 114 miles long, crossing through Fresno, Kings, Tulare, and Kern counties. This supplemental study supports the project proponent, the California High-Speed Rail Authority (Authority), and the lead federal agency, the Federal Railroad Administration (FRA), in their ongoing compliance with Section 106 of the National Historic Preservation Act (NHPA), and its implementing regulations issued by the Advisory Council on Historic Preservation (ACHP), as these pertain to federally funded undertakings and their impacts on historic properties.

This Supplemental HASR describes efforts to identify and evaluate historic architectural resources that may be affected by the Fresno to Bakersfield Section of the HST project, for alternatives and project revisions that were introduced after the October 2011 distribution of the previous *California High-Speed Train Fresno to Bakersfield Historic Architectural Survey Report* (Authority and FRA 2011c) to the State Historic Preservation Office (SHPO). This supplement is being prepared in conjunction with the recirculation of the Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS), which also addresses the changes to the Area of Potential Effect (APE) with respect to its potential to affect historic properties.

While the previous HASR (Authority and FRA 2011c) addressed the overall project that consisted of a series of alternative alignment footprints from Fresno to Bakersfield (Figure 1-1), this Supplemental HASR focuses on the addition of the Hanford West Bypass 1 and Hanford West Bypass 2 alternatives, the Bakersfield Hybrid Alternative, and the revised BNSF Railroad (BNSF) Alternative between Fresno and Bakersfield. The revisions to the project along the BNSF are manifold throughout the length of this alternative and were made in response to a requirement to expand the distance between the existing infrastructure of the BNSF and the proposed HST to 102 feet from the previously examined 25-foot separation. Please refer to Chapter 3 for more detailed information on these project modifications. This Supplemental HASR also reflects a change in the northern end of the APE in the City of Fresno. The northern end of the APE was at E. Amador Street, but has been moved southward to Los Angeles Street (see Section 4.0, and Appendix A, Sheets 1-3 for information about the APE revision). This supplemental report only addresses historic architectural resources associated with those aspects of the project that have changed since the October 2011 version of the HASR. As such, this report will refer to the previous HASR as appropriate.

Refer to the previous HASR (Authority and FRA 2011c) for details regarding the project elements related to the heavy maintenance facilities (HMFs), the Corcoran Bypass Alternative, the Allensworth Bypass Alternative, the Wasco-Shafter Bypass Alternative, and the Bakersfield South Alternative.

This Supplemental HASR follows the procedures set forth in the "Programmatic Agreement among the Federal Railroad Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California High-Speed Rail Authority Regarding Compliance with Section 106 of the National Historic Preservation Act as it Pertains to the California High-Speed Train Project" (HST Section 106 Programmatic Agreement [PA]) (Authority and FRA 2011a). A copy of the PA is provided in Appendix D. The Supplemental HASR also assists the Authority and FRA to comply with the California Environmental Quality Act (CEQA) and the CEQA Guidelines, as they pertain to historical resources for this project.

The HST Section 106 PA provides overall guidance regarding compliance with Section 106 of the NHPA. It provides direction for the development of the APE (Appendix A), the identification, documentation, and evaluation of historic properties, and the assessment of adverse effects. The

PA directs that "historic properties shall be identified to the extent possible within the APE," and requires that identified historic properties be evaluated in a manner consistent with the Secretary of the Interior's Standards and Guidelines for Evaluation, and that the evaluations shall be completed by Qualified Investigators (QIs) per the standards of the Secretary of Interior.

This Supplemental HASR follows the HST Section 106 PA methodology for the documentation of historic properties and includes the "documentation for evaluating historic architectural properties that are not eligible for the National Register of Historic Places (NRHP); are non-exempt according to Attachment D of the HST Section 106 PA; and were not reported in the Historic Property Survey Report (HPSR)," or the Supplemental HPSR. These properties are documented in this Supplemental HASR and accompanying California Department of Parks and Recreation (DPR) 523 forms (Appendix B), and "streamlined documentation properties." The properties subject to "streamlined documentation" for "*substantially altered* properties constructed more than 50 years ago" appear in Appendix C. Please refer to Attachment D of the HST Section 106 PA (Appendix D) for a list of properties exempt from or that do not warrant evaluation.

## **Chapter 2.0**

### **Summary of Findings**



## 2.0 Summary of Findings

The purpose of this Supplemental HASR document is (1) to present the APE for the historic architectural resources for the project as revised and refined since the previous HASR was completed in October 2011; (2) to identify properties that are not eligible for listing in the NRHP or California Register of Historical Resources (CRHR); (3) to present historic status and the conclusions of evaluations of potential significance for properties within the revised APE that are not exempt under the HST Section 106 PA, and require evaluation to fulfill Section 106 and CEQA obligations; and (4) to present findings that are not reported in the Supplemental HPSR.<sup>1</sup>

For reference, the findings of the Supplemental HPSR are summarized here, followed by the findings of this Supplemental HASR. The Supplemental HPSR addressed a survey population of 12 properties containing buildings, structures, or objects that are either known historic properties (identified by previous studies), or required inventory and evaluation because they had not been previously evaluated. Of those 12 historic architectural resources:

- Two properties were previously determined eligible for listing in the NRHP.
- One property is a contributor to a previously determined eligible property.
- Nine properties are eligible for listing in the NRHP and CRHR and were identified for the first time as part of the current survey.

In addition to the historic properties described above, this Supplemental HASR presents findings that are not reported in the Supplemental HPSR. The Supplemental HASR will also be submitted to the California State Historic Preservation Officer (SHPO) for review. The SHPO will review and evaluate the adequacy of the accompanying revised APE, as well as the identification and evaluation findings of the study. Upon SHPO concurrence with the eligibility determinations, future documents will present the Findings of Effect analysis, and propose appropriate mitigation for any adverse effects to historic properties that are identified in a Findings of Effect report. The conclusions of these technical studies will be used as the basis for the Revised Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) prepared for the Fresno to Bakersfield Section of the HST System.

The project vicinity and revised APE are shown on Index Sheets A and B, and associated map sheets in Appendix A of this Supplemental HASR. The APE maps showing historic architectural resources include the Assessor's parcel numbers (APNs), and map reference numbers for historic architectural resources inventoried and evaluated by this study. The properties studied are presented on DPR 523 forms in Appendix B. Many historic architectural resources within the revised APE were more than 50 years old, but had been substantially altered, and as such were considered "streamlined documentation properties" under the HST Section 106 PA. The streamlined documentation report for the 407 historic architectural resources not subject to intensive survey is presented in Appendix C.

The remainder of this summary outlines the conclusions of the intensive inventory and evaluation of historic architectural resources in the revised APE for the project presented in this Supplemental HASR. The revised historic architectural APE contains a total survey population of 161 historic architectural resources, 13 of which are addressed in the Supplemental HPSR. This Supplemental HASR addresses the other 149 resources. (A complete list of the 149 resources is provided in Table 7-1 of this document.) The evaluations of the 149 resources presented on DPR 523 forms in Appendix B concluded that none appear eligible for listing in the NRHP or the CRHR, none were exempt from study under the HST Section 106 PA, and none were reported in the

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<sup>1</sup> Please refer to the original HPSR for a summary of the findings as of October 2011 (Authority and FRA 2011b). A copy of SHPO concurrence in that study is provided in Appendix E of this Supplemental HASR.

Supplemental HPSR. This Supplemental HASR assists in continued project compliance with Section 106 by soliciting SHPO concurrence with the findings of the inventory, and by evaluating these resources. The survey population resources are in Fresno, Kings, and Kern counties, and were constructed in or before 1961.

## **Chapter 3.0**

### **Description of the Undertaking**



## 3.0 Description of the Undertaking

### 3.1 Project Introduction

The Fresno to Bakersfield Section of the HST project would be approximately 114 miles long, varying in length by only a few miles based on the route alternatives selected. To comply with the California High Speed Rail Authority's (Authority's) guidance to use existing transportation corridors when feasible, the Fresno to Bakersfield HST Section would primarily be located adjacent to the existing BNSF Railway right-of-way. The following three alternative alignments were introduced to avoid environmental, land use, or community impacts identified for portions of the BNSF Alternative: revised BNSF Alternative, Hanford West Bypass 1 and Bypass 2, and the Bakersfield Hybrid Alternative.

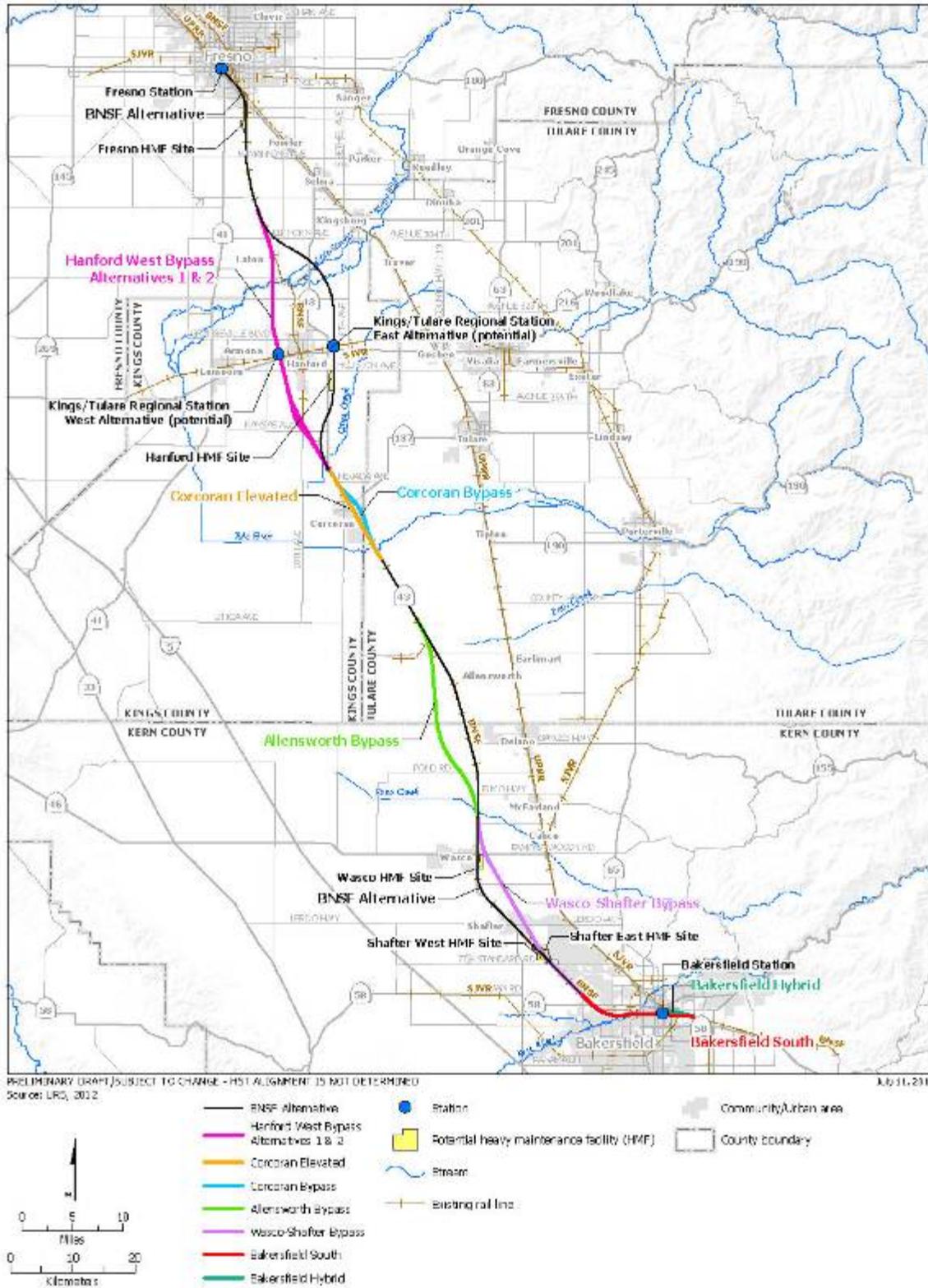
The additional alternatives reported herein for the Fresno to Bakersfield HST Section would cross both urban and rural lands, and include a station in both Fresno and Bakersfield, a potential Kings/Tulare Regional Station in the vicinity of Hanford, a potential heavy maintenance facility (HMF), and power substations along the alignment. The HST alignment would be entirely grade-separated, meaning that crossings with roads, railroads, and other transport facilities would be located at different heights (overpasses or underpasses) so that the HST would not interrupt or interface with other modes of transport. The HST right-of-way would also be fenced to prohibit public or automobile access. The project footprint would consist primarily of the train right-of-way, which would include both a northbound and southbound track in an area typically 100 feet wide. Additional right-of-way would be required to accommodate stations, multiple track at stations, maintenance facilities, and power substations.

These alternatives for the Fresno to Bakersfield Section would include at-grade, below-grade, and elevated track segments. The at-grade track would be laid on an earthen rail bed topped with rock ballast approximately 6 feet off the ground. Fill and ballast for the rail bed would be obtained from permitted borrow sites and quarries. Below-grade track would be laid in an open or covered trench at a depth that would allow roadway and other grade-level uses above the track. Elevated track segments would span long sections of urban development or aerial roadway structures, and consist of steel truss aerial structures or guideway structures with cast-in-place reinforced-concrete columns to support the guideway box girders and platforms. The height of elevated track sections would depend on the height of existing structures below, and would range from 40 to 80 feet. Columns would be spaced 60 feet to 120 feet apart.

Refer to the *California High-Speed Train Fresno to Bakersfield Historic Architectural Survey Report (HASR)* (Authority and FRA 2011c) for details regarding the project elements related to the Heavy Maintenance Facilities, Corcoran Bypass Alignment, Allensworth Bypass Alignment, Wasco-Shafter Bypass Alignment, and the Bakersfield South Alignment.

#### 3.1.1 Alignment Alternatives

This section describes the additional alternative alignments of the Fresno to Bakersfield HST Section. The project EIR/EIS for the Fresno to Bakersfield HST Section examines alternative alignments, stations, and HMF sites within the general BNSF Railway corridor. Discussion of the HST project alternatives begins with a single continuous alignment (the BNSF Alternative) from Fresno to Bakersfield, which has been revised. Descriptions of the additional alternative alignments that deviate from the revised BNSF Alternative for portions of the route then follow. The alternative alignments that deviate from the revised BNSF Alternative were selected to avoid environmental, land use, or community issues identified for portions of the revised BNSF Alternative (see Figure 3-1).



**Figure 3-1**  
 Fresno to Bakersfield HST alignments

### 3.1.1.1 Revised BNSF Alternative

An important objective of the project is to align HST tracks adjacent to existing transportation corridors. The BNSF Alternative is designed to follow the existing BNSF Railway corridor adjacent to the BNSF mainline right-of-way as closely as practicable. Minor deviations from the BNSF Railway route are necessary to accommodate design requirements; namely, wider curves are necessary to accommodate the speed of the HST compared to the existing lower-speed freight line track alignment. Where there would not be a shared right-of-way, the BNSF Alternative now includes a provision for a 102-foot separation of the HST track centerline from the BNSF Railway track centerline.

A 102-foot separation between the centerlines of BNSF Railway and HST tracks is provided wherever feasible and appropriate. In urban areas where a 102-foot separation could result in substantial displacement of businesses, homes, and infrastructure, the separation between the BNSF Railway and HST was reduced. The areas with reduced separation require protection to prevent encroachment on the HST right-of-way, in the event of a freight rail derailment. Protection consists of a swale, berm, or wall, depending on the separation.

### 3.1.1.2 Hanford West Bypass 1 and Bypass 2 Alternative

The Hanford West Bypass 1 Alternative Alignment would parallel the BNSF Alternative from East Kamm Avenue to approximately East Elkhorn Avenue in Fresno County. At East Conejo Avenue where the BNSF Alternative crosses to the eastern side of the BNSF Railway tracks to pass the city of Hanford to the east, the Hanford West Bypass 1 Alternative would continue south on the western side of the BNSF Railway tracks. The Hanford West Bypass 1 would diverge from the BNSF Railway corridor just south of East Elkhorn Avenue and ascend onto an elevated structure just south of East Harlan Avenue, crossing over the Kings River complex and Murphy Slough, and passing the community of Laton to the west. The elevated structure would be approximately 0.8 mile in length and reach a maximum height of approximately 40 feet to the top of the rail. The Hanford West Bypass 1 Alternative would return to grade just north of Dover Avenue. The alignment would continue at-grade, curve gently to the east, and travel between the community of Armona to the west and the city of Hanford to the east. The Hanford West Bypass 1 Alternative would rejoin the BNSF Railway corridor on its western side at about Lansing Avenue. The alignment would then ascend onto another elevated structure, traveling over Cross Creek and special aquatic features that exist north of Corcoran. The elevated structure would span approximately 3 miles and reach a maximum height of approximately 20 feet to the top of the rail. This alignment would return to grade just north of Nevada Avenue and would connect to the BNSF Alternative traveling through Corcoran at-grade, on the western side of the BNSF Railway corridor. The total length of the Hanford West Bypass 1 Alternative would be approximately 28 miles.

The Hanford West Bypass 1 Alternative includes a design option where the alignment would be below-grade between Grangeville Boulevard and Houston Avenue. The alignment would travel below-grade in an open cut with side slopes as it transitions to a retained-cut profile, approximately 40 feet below ground level. As the alignment transitions back to grade just north of Houston Avenue, the open-cut profile would be used once more. The alignment would cross State Route (SR) 198 and several local roads. South Peach Avenue, East Clarkson Avenue, East Barrett Avenue, Elder Avenue, and South Tenth Avenue would be closed at the HST right-of-way, while the other roads would be realigned and/or grade-separated from the HST with overcrossings/undercrossings. Grade separations at Grangeville Boulevard, 13th Avenue, and West Lacey Boulevard would be determined based on the alignment design option selected (at-grade or below-grade).

The potential Kings/Tulare Regional Station–West Alternative would be located along this alignment, east of Thirteenth Avenue between Lacey Boulevard and the SJVR railroad spur. This potential station includes an at-grade and below-grade design option as well.

The Hanford West Bypass 2 Alternative Alignment would be the same as the Hanford West Bypass 1 Alternative from East Kamm Avenue to just north of Jackson Avenue where the Hanford West Bypass 2 would curve away from the Hanford West Bypass 1 to the east. The Hanford West Bypass 2 Alternative would then travel over Kent Avenue, the BNSF Railway right-of-way, and Kansas Avenue on an elevated structure approximately 1.5 miles in length. The structure would reach a maximum height of 55 feet to the top of the rail before returning to grade north of Lansing Avenue and continuing along the BNSF Railway corridor. Similar to the Hanford West Bypass 1 Alternative, the Hanford West Bypass 2 Alternative would travel over Cross Creek and the special aquatic features located north of Corcoran and return to grade north of Nevada Avenue; however, the Hanford West Bypass 2 would be located on the eastern side of the BNSF Railway tracks in order to connect to either the Corcoran Elevated Alternative or the Corcoran Bypass Alternative, described below. Like the Hanford West Bypass 1 Alternative, the total length of the Hanford West Bypass 2 Alternative would be approximately 28 miles.

The Hanford West Bypass 2 Alternative includes the same below-grade design option between Grangeville Boulevard and Houston Avenue as the Hanford West Bypass 1 Alternative, as well as the either at-grade or below-grade potential Kings/Tulare Regional Station–West Alternative. Similar to the Hanford West Bypass 1 Alternative, Hanford West Bypass 2 would cross SR 198 and several local roads. Road closures would be the same as those for the Hanford West Bypass 1, and roadway modifications at Grangeville Boulevard, 13th Avenue, and West Lacey Boulevard would depend on the alignment design option selected.

### 3.1.1.3 Bakersfield Hybrid Alternative

From Rosedale Highway (SR 58) in Bakersfield, the Bakersfield Hybrid Alternative would follow the Bakersfield South Alternative and parallel the BNSF Alternative at varying distances to its north. At approximately A Street, the Bakersfield Hybrid Alternative would diverge from the Bakersfield South Alternative, cross over Chester Avenue and the BNSF right-of-way in a southeasterly direction, then curve back to the northeast to parallel the BNSF Railway tracks towards Kern Junction. After crossing Truxtun Avenue, the alignment would curve to the southeast to parallel the Union Pacific Railroad tracks to its terminus at Oswell Street. As with the BNSF and Bakersfield South alternatives, the Bakersfield Hybrid Alternative would begin at-grade and become elevated starting at Country Breeze Place through Bakersfield to Oswell Street. Dedicated wildlife crossing structures would not be required because this alternative would be elevated to the north and south of the Kern River.

The Bakersfield Hybrid Alternative would be approximately 12 miles long and would cross many of the same roads as the BNSF and Bakersfield South alternatives. This alternative includes the Bakersfield Station–Hybrid Alternative.

### 3.1.2 Station Alternatives

The additional alternatives to the Fresno to Bakersfield HST Section would include a new station in Hanford and a new station in Bakersfield.

Stations would be designed to address the purpose of the HST, particularly to allow for intercity travel and connection to local transit, airports, and highways. Stations would include the station platforms, a station building, and an associated access structure, as well as lengths of bypass tracks to accommodate local and express service at the stations. All stations would contain the following elements:

- Passenger boarding and alighting platforms.
- Station head house with ticketing, waiting areas, passenger amenities, vertical circulation, administration and employee areas, and baggage and freight-handling service.
- Vehicle parking (short-term and long-term) and “kiss and ride.”<sup>2</sup>
- Motorcycle/scooter parking.
- Bicycle parking.
- Waiting areas and queuing space for taxis and shuttle buses.
- Pedestrian walkway connections.

### 3.1.2.1 Kings/Tulare Regional Station Alternative

The potential Kings/Tulare Regional Station–West Alternative would be located east of 13th Avenue and north of the San Joaquin Valley Railroad on the Hanford West Bypass 1 and 2 alternatives. The station would be located either at-grade or below-grade depending on which Hanford West Bypass alignment design option is chosen.

The at-grade Kings/Tulare Regional Station–West Alternative would include a station building of approximately 100,000 square feet with a maximum height of approximately 36 feet. The entire site would be approximately 48 acres, including 6 acres designated for the station, bus bays, short-term parking, and kiss-and-ride areas. Approximately 5 acres would support a surface parking lot with approximately 700 spaces. An additional 3.5 acres would support two parking structures with a combined parking capacity of 2,100 spaces.

The below-grade Kings/Tulare Regional Station–West Alternative would include a station building of approximately the same size and height. The below-grade station site would include the same components as the at-grade station option on the same number of acres; however, the station platform would be located below-grade instead of at ground level. Approximately 4 acres would support a surface parking lot with approximately 600 spaces and an additional 4 acres would support two parking structures with a combined parking capacity of 2,200 spaces.

### 3.1.2.2 Bakersfield Hybrid Station Alternative

The Bakersfield Station–Hybrid Alternative would be in the same area as the North and South Station alternatives, and located at the corner of Truxtun and Union Avenue/SR 204 on the Bakersfield Hybrid Alternative. The station design includes an approximately 57,000 square-foot main station building and an approximately 5,500 square-foot entry concourse located north of the BNSF Railway right-of-way. The station building would have two levels with a maximum height of approximately 95 feet. The first floor would house the concourse, and the platforms and guideway would be on the second floor. Additionally, a pedestrian overcrossing would connect the main station building to the north entry concourse across the BNSF right-of-way.

The entire site would be approximately 24 acres, with 15 acres designated for the station, bus transit center, short-term parking, and kiss-and-ride areas. Approximately 4.5 of the 24 acres would support three parking structures with a total capacity of approximately 4,500 cars. Each parking structure would be seven levels; one with a planned capacity of 1,750 cars, another with a capacity of 1,315 cars, and the third with a planned capacity of 1,435 cars. An additional 460 parking spaces would be provided in surface lots covering a total of approximately 4.5 acres of the station site. Access to the station site would be from Truxtun and Union avenues, as well as from Hayden Court. Under this alternative, the BNSF Railway track runs through the station site, and the main station building and majority of station facilities would be sited south of the BNSF Railway right-of-way.

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<sup>2</sup> “Kiss-and-ride” refers to the station area where riders may be dropped off or picked up before or after riding the HST.

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# **Chapter 4.0**

## **Description of the APE**



## 4.0 Description of the APE

The revised APE for historic architectural resources for this Supplemental HASR was established in consultation with project engineers (Arup) and the Authority to ensure all historic architectural resources, potentially directly or indirectly affected, were included.<sup>3</sup> The APE will be revised as planning proceeds to reflect refinements to the proposed rail alignment alternatives as engineering revisions become available. Maps showing the revised APE are provided in Appendix A.

One of the refinements addressed in this Supplemental HASR is a change in the APE in downtown Fresno. The original HPSR, ASR, and HASR for the Fresno to Bakersfield HST section reported on an area between E Amador Street (at the north) and Los Angeles Street (at the south). To facilitate the first phase of construction for the overall HST project, the APE for Fresno to Bakersfield was revised to exclude this area and the northern end of the Fresno to Bakersfield APE is now Los Angeles Street. The revised APE is shown on sheets 1-3 of Appendix A. Section 106 compliance documents for the Merced to Fresno HST, including an amended FOE, MOA, and associated treatment plans, are being revised concurrent with this change and will address cultural resources contained within the area between Amador and Los Angeles streets. Please refer to *California High-Speed Train Fresno to Bakersfield Historic Property Survey Report* (Authority and FRA 2011) and *California High-Speed Train Fresno to Bakersfield Historic Architectural Survey Report* (Authority and FRA 2011) for the inventory and evaluation of cultural resources in this area. Refer to Appendix E of this Supplemental HASR for SHPO concurrence in the findings of the 2011 reports.

The revised APE for historic architectural resources was defined according to Attachment B of the HST Section 106 PA (see Appendix D of this Supplemental HASR for a copy of the PA). All parcels within the revised APE that contain buildings, structures, or objects more than 50 years of age at the time of the survey were subject to intensive-level study, or were subject to streamlined documentation as defined in the HST Section 106 PA (this latter group of properties are referred to as "streamlined documentation properties"). The revised historic architectural resources APE for the Fresno to Bakersfield HST Section includes all legal parcels intersected by the proposed right-of-way, construction of proposed ancillary features (such as grade separations or maintenance facilities), and construction staging areas. If historic architectural resources existed on a large rural parcel within 150 feet (46 meters) of the proposed HST right-of-way, or if it was determined that the resources on that parcel were otherwise potentially affected by the project, the entire parcel was included in the revised APE. If historic architectural resources on a large rural parcel were more than 150 feet (46 meters) away from the proposed HST at-grade right-of-way, and were otherwise not potentially affected by the project, the APE boundary was set at 150 feet (46 meters) from the right-of-way. In these cases, resources outside the APE on that parcel did not require further survey. This methodology for establishing the Historic Architectural APE follows both standard practices for the discipline, and Attachment B of the Section 106 PA.

The revised APE also includes parcels adjacent to those intersected by the proposed HST project if the historic architectural resources on those parcels may be indirectly affected. For the HST project, a key phrase in the APE definition in the Section 106 regulations is "may cause alterations in the character or use of historic properties" because some sections of the undertaking may introduce rail service where none existed during the historic era, for example, along a highway or through agricultural fields. For such sections, the undertaking is more likely to change the character or use of a historic property, and the revised APE was drawn to include legal parcels or historic architectural resources that might be affected by changes to their setting

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<sup>3</sup> Please refer to the original HPSR for APE as of October 2011 (Authority and FRA 2011b). A copy of SHPO concurrence in that APE is provided in Appendix E of this Supplemental HASR.

and the introduction of visual or audible elements. Other potential effects that were considered when delineating the revised APE included, but were not limited to, physical damage or destruction of all or part of a property; physical alterations; moving or realigning property; isolating a property from its setting; visual, audible, or atmospheric intrusions; shadow effects; damage from vibrations; and change in access or use.

# **Chapter 5.0**

## **Summary of Identification Effort**



## 5.0 Summary of Identification Effort

Historic architectural resources consist of buildings, structures, and/or objects. These resources can exist singly or as part of a larger district, system, or historic cultural landscape. In addition to buildings, these resources include engineering features (e.g., dams, canals, railroads), or objects, such as statues, gateposts, or fountains. When historic architectural resources appear to be eligible for listing in the NRHP, or are determined eligible or have been listed, they are called *historic properties*. CEQA and the CEQA guidelines use the term *historical resources* for these properties. For the purposes of this report, which will be summarized in the EIR/EIS for the project, the term *historic properties* will be used to refer to resources that are listed, determined eligible for, or that appear eligible for listing in the NRHP; and *historical resources* will refer to those eligible for listing in the CRHR only. Those not eligible for listing in the NRHP and CRHR will be referred to as *historic architectural resources*.

### 5.1 Identification Effort

Architectural historians, meeting the professional qualifications under the Secretary of the Interior's Standards for Architectural History, and meeting the definition of Qualified Investigator (QI) according to the HST Section 106 PA, conducted the identification and evaluation of historic architectural resources for the Fresno to Bakersfield HST Section.

The focus of this Supplemental HASR is to report on historic architectural resources identified within the APE (as revised after October 2011) that are more than 50 years old and that do not appear to be eligible for listing in the NRHP or CRHR. Known historic properties and properties that appear eligible for listing in the NRHP or CRHR are reported separately in the HPSR and Supplemental HPSR document in accordance with the HST Section 106 PA. URS Corporation archaeologists conducted Information Center records searches for this project and shared the results regarding historic architectural resources with the QIs studying those resources. The results regarding resources evaluated in previous surveys and found not eligible for listing in either the NRHP or CRHR were incorporated in this Supplemental HASR document, in accordance with the HST Section 106 PA. Any additional information about historic properties identified within the APE will be included in subsequent amendments to the technical documents, as appropriate.

In addition to the relevant records search results regarding historic architectural resources, QIs reviewed following references for historic architectural resources:

- National Register of Historic Places—Listed Properties and Determined Eligible Properties (NPS March 2012).
- Directory of Properties in the Historic Property Data Files for Fresno, Kings, Tulare, and Kern Counties (California Office of Historic Preservation [OHP] 2011).
- California Inventory of Historic Resources (OHP 1976).
- California Points of Historical Interest (OHP 1992).
- California Historical Landmarks (OHP 1996).
- Sanborn Maps in urban areas (see list of maps under Sanborn Map and Publishing Company in Chapter 9).
- Historic U.S. Geological Survey (USGS) quadrangles.

The records searches performed at the South San Joaquin Valley Information Center between February 2010 and December 2011 revealed only 15 recorded architectural resources within the search area. The search area for this project was a 500-foot radius of the alignment centerline adopted for record searches prior to the field surveys. These searches revealed only 15 architectural resources, because most of the area within the APE has not been previously surveyed for historic architectural resources. Of the resources identified in the search results,

only one was listed in the NRHP: the Shafter Railroad Depot in Kern County. The searches identified three canals found locally eligible, and one State Historic Landmark marker. The other ten resources identified in the search results had been found “not eligible” for listing in the NRHP, had been destroyed, or had not been fully evaluated. The resources reported in the search results that were not fully evaluated were added to the Supplemental HASR survey population.

In addition to the Information Center results, QIs also reviewed the California Historical Resources Information System (CHRIS) lists for Fresno, Kings, Tulare, and Kern counties, as well as previous cultural resources reports found in local planning offices and libraries. This effort identified eight resources that were previously found ineligible for the NRHP and/or CRHR, and that do not require further study. (These properties are listed in Table 7-2, below.) Lastly, review of the California Department of Transportation (Caltrans) Structure Maintenance and Investigations (Caltrans 2012a, 2012b) identified two local and state highway bridges built in 1961, or before, within the APE. None of these structures are eligible for listing in the NRHP or the CRHR (Category 5). These bridges are listed in Table 7-3, below.

Because of the scope and magnitude of the proposed project, the historical context of the project corridor vicinity, and the limited results of the Information Center records search, extensive field surveys and background research was undertaken to thoroughly identify historic architectural resources within the APE. The project QIs noted any additional potential historic architectural resources during fieldwork, reviewed local registers and lists of historic properties while conducting research in local repositories, and consulted with local government planning staff to thoroughly account for previously identified historic properties. All previously identified eligible properties are reported separately in the Supplemental HPSR.

Please refer to the original HASR (Authority and FRA 2011c) for copies of the letters informing parties interested in the historic architectural resources of this project, and responses received as of October 2011. The recipients of the letters include such interested parties as area planning agencies, local government planning departments and/or historic preservation programs, historical societies, and museums, in compliance with the consultation requirements of NHPA and its implementing regulations (36 Code of Federal Regulations [CFR] Part 800). Any future correspondence submitted or received regarding historic architectural resources will be included with subsequent technical documents, as appropriate. Continued consultation with the cities of Fresno and Bakersfield regarding historic properties will be included with the Fresno to Bakersfield Section Memorandum of Agreement.

## 5.2 Field and Research Methods

Historians and architectural historians (also QIs) conducted all intensive-level field surveys and field research for preparation of the evaluation of the 149 resources presented in this Supplemental HASR during the periods between March and May 2010, and October 2011 and May 2012.

For this Supplemental HASR, and consistent with the HST Section 106 PA, QIs conducted an intensive-level survey of historic architectural resources within the revised APE that were 50 years of age or older at the time of survey, and that were not exempt from study under the HST Section 106 PA. All surveys were conducted from public thoroughfares. Property owners were contacted to provide entry if the property was not adequately visible from a public road. All access to private property was arranged following the project protocol for such contact. Of the hundreds of historic architectural resources subject to survey, only two parcels were not accessible or visible for field survey photography. In these cases, detailed property histories were prepared following standard practices, and the inaccessibility was noted on the recordation forms.

Once the architectural APE was revised (see Chapter 4), QIs conducted an intensive-level survey of the area to account in the field for all buildings, structures, and objects found within the APE. This survey took into account known resources (addressed in the Supplemental HPSR), and identified those historic architectural resources that would require survey for the Supplemental HASR; specifically, those buildings, structures, or objects that not only appeared to be more than 50 years old, but also appeared to largely retain historic integrity. These resources were then subject to recordation and evaluation on DPR 523 forms, which are presented in Appendix B. Built-environment resources that met the HST Section 106 definition of “streamlined documentation properties” are those resources that are more than 50 years old that have been substantially altered. Because they do not retain integrity, they were not subject to full evaluation on DPR 523 forms. Documentation for these resources is presented in Appendix C.

QIs conducted field research in conjunction with the field survey for the Supplemental HASR, and refined those research efforts in accordance with the results of the survey. Property-specific research proceeded once identification of the Supplemental HASR survey population was complete. To confirm specific construction dates, and to refine estimated dates of construction, background research was done through the First American Real Estate Solutions commercial database to review current county property data, as well as through review of historic plat maps and current USGS topographic maps, county assessor records, historic aerial photographs, and other documents. This research helped to determine which resources were built in or before 1961.

The historical overview presented in this report and the property-specific research conducted for the significance evaluations were both based on a wide range of primary and secondary material gathered by QIs (JRP historians and architectural historians). Research on the historic themes and survey population reported in this Supplemental HASR was conducted in both archival and published records, including, but not limited to: Beale Memorial Library (Bakersfield); Fresno Historic Preservation Program, Fresno Planning Office; California State University Fresno, Special Collections; Kings County Assessor; Kern County Assessor and Recorder; California State Archives and Library; Bancroft Library (University of California, Berkeley); Shields Library (University of California, Davis); maps and plans obtained from Caltrans District 6 (Fresno); and Caltrans Transportation Library and History Center (Sacramento). Research also included review of CHRIS listings, California Historical Landmarks and Points of Historical Interest publications and updates, and National Register of Historic Places, California Register of Historical Resources, and local register listings, as well as published and digital versions of U.S. Census Bureau information, including population schedules (1850–1940) and agricultural schedules (1850–1880). In addition, research included review of previous cultural resources reports, historic-period maps, aerial photography, local- and state-level historical resource lists, public documents such as deeds and assessment records and city directories, and various newspaper and journal articles.

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# **Chapter 6.0**

## **Historic Context**



## 6.0 Historic Context

The historic context and setting that follow are provided to specifically address the built environment studied as a part of the Supplemental HASR for the Fresno to Bakersfield Section of the HST. Please refer to the original HASR for additional historical context regarding the Fresno to Bakersfield Section (Authority and FRA 2011c).

The Gold Rush initially stimulated economic development and settlement throughout California, but it was the advent of intensive irrigation and the arrival of the first railroad in the 1870s that profoundly re-shaped the existing setting of the San Joaquin Valley and promoted agricultural and municipal growth. This area had advantageous environmental conditions, but was sparsely inhabited prior to California statehood; the two principal factors that drove the development of the valley and the Fresno to Bakersfield corridor were the construction of irrigation, and transportation systems. Subsequent events and trends beginning at the turn of the twentieth century—the rise of oil production in Kern County, federal-state water development projects in the Central Valley, and widespread adoption of the automobile and ensuing highway construction—largely amplified and extended the development initially brought to the vicinity of the Fresno to Bakersfield HST Section in the late nineteenth century. These themes are discussed below to provide the appropriate context within which the resources of the survey population are evaluated for potential historic significance.

### 6.1 Setting

The Fresno to Bakersfield corridor passes through one of the great landform provinces of California: the San Joaquin Valley, which occupies the southern half of the great Central Valley. The San Joaquin Valley lies between the Coastal Ranges on the west and the Sierra Nevada on the east, declining in elevation from south to north. The San Joaquin River runs northward through the valley after descending from the Sierras, although the southernmost portion of the valley forms a closed basin with no outlet to the sea. South of the San Joaquin River, the area is watered primarily by several rivers and smaller streams flowing westward from the Sierra Nevada.

A long, narrow, ancient sea once occupied the valley trough, and until the end of the nineteenth century the Kings, Kaweah, Tule, and Kern rivers emptied into a giant sump lake once measured at 486,400 acres (1,968 square kilometers [km<sup>2</sup>])—reputedly the largest freshwater lake west of the Great Lakes—called Tulare Lake. River sediment and flood deposits gradually filled this sea, resulting in a valley floor of many compound alluvial fans of soft, rich earth that are gently sloped and easily plowed and irrigated. Irrigation diversions from the Kings, Kaweah, Tule, and Kern rivers reduced the lake to a shallow basin of fertile earth by the early twentieth century. The climate in the region is characterized by hot, dry summers with insignificant rainfall, and comparatively mild winters with precipitation ranging from meager to moderately heavy (Durrenberger and Johnson 1976: 17, 29–31, 37; Harding 1960: 4–5; Haslam 1993: 257–258). This combination of irrigable land and temperate climate has greatly influenced land use and development patterns in the region.

### 6.2 The Spanish and Mexican Periods

Despite its rich soils and generally favorable weather, the San Joaquin Valley was little settled prior to the Gold Rush. By the end of the eighteenth century, after more than two centuries of exploring the California coast, the Spanish had established a significant presence in the future state, but that presence was largely confined to settlements on the coast and in nearby valleys. Several Spanish explorers eventually forayed into the San Joaquin Valley in the late eighteenth and early nineteenth centuries to find potential sites for additional missions, but no permanent

settlements resulted from their efforts. Spanish army officer Gabriel Moraga conducted the most extensive of these expeditions to the interior. In 1806, Moraga led a group of 25 soldiers from Mission San Bautista across the San Joaquin River near the present-day boundary between Merced and Fresno counties, and then north to the Mokelumne River (which Moraga named). The expedition's return route skirted the eastern side of the valley, south to Tejon Pass. Two years later, traveling from San Jose, Moraga entered the valley once more. He crossed the San Joaquin River and proceeded as far south as the Merced River (Bean and Rawls 1988: 25, 31–34, 40–41, 53; Beck and Haase 1974: 15–16, 20–22; Clough and Secrest 1984: 12–13; Durrenberger and Johnson 1976: 53; Hayes 2007: 40, 42, 46, 58–59; Jelinek 1982: 11–22; Rice et al. 1988: 46, 87–95).

Little settlement occurred within the San Joaquin Valley during the Mexican period (1820s–1840s) as well, largely because Mexico found itself in the position of defending its California settlements from native raiding following its successful bid for independence from Spain in 1822. A cycle of raids and reprisals across the coastal mountains continued until in the mid-1840s, when non-Mexican, primarily American, settlers took up permanent residence in the San Joaquin Valley and aggressively suppressed native incursions (Beck and Haase 1974: 21–23; Broadbent 1974: 89, 96–97; Cook 1976: 229–232; Fountain 2007: 80–119; Preston 1981: 54–55).

The only Mexican-era land grant intersected by the Fresno to Bakersfield HST Section is Rancho Laguna de Tache, which stretched for miles along the northern bank of the Kings River, southwest of present-day Kingsburg, and westward toward Riverdale. Grantee Manuel Castro ran cattle on the property and established a bunkhouse for his foreman and vaqueros west of Laton (and west of the Fresno to Bakersfield corridor). The patent to the Rancho Laguna de Tache land grant was finally confirmed by the U.S. District Court in 1866, after which it passed through a succession of owners. In the 1890s, the tract was acquired by land development interests, and subdivided and sold. Although the Fresno to Bakersfield HST Section transects former rancho lands, no historic architectural resources from the Mexican period survive within the revised APE (Perez 1996: 71; Preston 1981: 54–55; Roberts 2005: 36–37; U.S. Department of Agriculture (USDA) Experiment Station 1901: 308–310).

Mexican rule in California came to an end in 1847, when forces of the United States military seized the territory during the Mexican-American War. By this time, almost half of the non-Indian inhabitants of California were Americans who had settled in either coastal towns—or more commonly—established farmsteads in the upper Sacramento Valley, away from Mexican control (Bean and Rawls 1988: 76–82).

The absence of settlement in the Central Valley during the Spanish and Mexican periods caused little demand for extensive roads and other infrastructure. Neither the Spanish nor the Mexicans had public systems of road construction and maintenance; most trade was conducted by sea, and inland travelers either made use of native trails or cut their own. Nevertheless, two important routes took shape beginning in the Spanish period: El Camino Real, which ran along the California coast, and El Camino Viejo. Less well-known than the coastal route, El Camino Viejo traversed north-south through the length of the western side of the San Joaquin Valley, and connected what became Los Angeles to the Central Valley and the eastern San Francisco Bay Area. El Camino Viejo became popular as a cattle and sheep trail from southern California to San Francisco from 1849 to the 1880s. The historic route is west of and outside of the revised APE for the Fresno to Bakersfield HST Section (Cleland 1941: 28; Latta 1932; Owens 1990: 8–10).

### 6.3 Initial American Settlement and Transportation

In the wake of the Gold Rush, the trickle of immigration into California that began before the Mexican War became a torrent. Besides the well-known number of mining towns that sprang into

existence—from Humboldt County in the north to Kern County in the south—a number of other communities farther from the gold fields also experienced enormous growth. San Francisco was one of these “instant cities,” but so too were Sacramento and Stockton, which served as supply and shipping centers for the foothill mining districts. These towns and settlements, initially fed by the economic fuel of the Gold Rush, ultimately demonstrated commercial, industrial, and political reasons for surviving the mining boom (Barth 1975: *passim*; Bean and Rawls 1988: 84–96; Hoover et al. 1966: 14–15; Shinn 1885).

The effects of the Gold Rush and emigration to the new State of California (1850) were slower to realize in the upper and lower Central Valley, where development was generally more gradual than in urban and coastal areas, partly because of the absence of efficient transportation systems, but also because of the concentration of vast tracts of land in the hands of a few. Until the arrival of the railroad in the valley in the 1870s, travelers relied on existing trails and roads—El Camino Viejo, in particular—supplemented by a few new ferries, bridges, and wagon and stage roads built during the mid-nineteenth century.

The first wagon road, which became known as the Los Angeles-Stockton Road, followed old Indian trails below the Sierra Foothills along the eastern side of the valley, east of the Fresno to Bakersfield HST Section. The general route was surveyed by Lieutenant George Derby in the spring of 1850, and eventually expanded to include many laterals branching off to the mines in the mountains. In the years following, several important ferries and bridges were established on the principal rivers of the valley to assist wagon and stage travel: Gordon’s Ferry on the Kern River; Payne’s Ferry on the Kaweah River; two crossings on the San Joaquin River, one at Brackman’s on the Lower Detour and the other at Jones’ Ferry on the Upper Detour; Pool’s Ferry and Smith’s Ferry on the upper Kings River; and Whitmore’s Ferry on the lower Kings River near Laton (Conkling 1947a: 35-37; Conkling 1947b: 272-327; Preston 1981: 72–73). No historic architectural resources directly associated with these roads, ferries, or staging operations are located within the Fresno to Bakersfield HST Section study corridor.

Regardless of the means by which travelers moved across the San Joaquin Valley, the valley itself was predominately grazing lands and wheat fields in the mid-nineteenth century—the product of early monopolization of vast tracts of land. Land speculators, stockmen, and ranchers benefited from minimal government oversight and used liberal state and federal land laws to acquire large amounts of public land within the valley. Henry Miller, Charles Lux, and Solomon Jewett, along with speculators and developers such as James B. Haggin, Lloyd Tevis, and William S. Chapman, led this mass acquisition, and in many instances, came to dominate the physical and social structure of the region. Their holdings included acreage in and near the Fresno to Bakersfield HST Section, and had a character of their own: typically, absentee ownership, seasonal labor demands, no crop rotation, employment of dry-farming methods, and speculative returns from an unstable international wheat market (Gates 1975: 158–178; Jelinek 1982: 23–38; Thickens 1946: 18–19; Zonlight 1979: 6–12).

The Gold Rush and subsequent emigration stimulated commerce, agriculture, manufacturing, lumbering, and countless other economic pursuits statewide. During the 1850s and 1860s, a scattered network of small towns, serving both travelers and agriculturalists, began to arise throughout the San Joaquin Valley. The earliest, most substantial community south of Stockton was Visalia, founded in 1852 (east of the Fresno to Bakersfield Section). Within 15 years, Bakersfield was quickly emerging as a thriving town in its own right, and there were isolated examples of smaller communities scattered throughout the valley, typically formed around a ferry site, stage stop, or stock camp (Moehring 2004: 29). Examples of such pre-railroad settlements near the Fresno to Bakersfield HST Section include Kingston, at the site of Whitman’s Ferry on the Lower Kings River, and Grangeville, a rural community in the Mussel Slough area west of Hanford. Most of the permanent town settlements in the region, however, did not occur until after the coming of the railroad.

## 6.4 Arrival of the Railroads

The expansive territory of California, its limited inland navigation and road systems, and its remoteness from the populous East, made railroads vital to the state's early economic development. Nowhere in California was this truer than in the Central Valley, where railroad construction coupled with irrigation development brought settlement, growth, and prosperity. In the years since statehood, some 200 railroads have been constructed and operated in California. The Fresno to Bakersfield HST Section parallels some of these railroads along its route through the San Joaquin Valley, including the Atchison, Topeka and Santa Fe (AT&SF) line (now owned by BNSF Railway), and farther to the east, the first rail line to enter the region, the Southern Pacific Railroad (now owned by Union Pacific Railroad). The Southern Pacific mainline, built southward into the San Joaquin Valley in the 1870s, is largely east of the Fresno to Bakersfield HST Section, except in the cities of Fresno and Bakersfield. The study corridor does, however, intersect the former Southern Pacific's "cross-valley" branch line, built westward from the mainline junction at Goshen through Mussel Slough country in 1877. Much of the Fresno to Bakersfield HST Section closely parallels the AT&SF main line, which did not reach the San Joaquin Valley until the late 1890s. The railroads established stations that spawned some of the communities, such as the Southern Pacific cities of Fresno and Hanford (platted by the railroad), and the AT&SF cities of Corcoran and Shafter (founded by independent land developers). Existing towns that the railroad bypassed struggled to survive, and many dwindled away. Both the AT&SF and the Southern Pacific continued to add branch lines and to acquire competitors well into the twentieth century.

The Southern Pacific Railroad was the first major railroad to build through the Central Valley. The company was the descendant of the Central Pacific Railroad established by Sacramento merchants Charles Crocker, Mark Hopkins, Collis P. Huntington, and Leland Stanford—popularly known as the "Big Four," who had joined forces in 1863 to construct the western portion of the Transcontinental Railroad line (completed in 1869), ultimately connecting the line to the shipping points in the San Francisco Bay Area. After establishing that link, they turned their attention to the south, where a rail line was needed to tap the wheat-producing region of the San Joaquin Valley and open the sparsely settled southern portion to development. Although other investors formed a rail corporation and surveyed the initial line, the Central Pacific ultimately gained majority control of the San Joaquin Valley rail route in 1868. On October 12, 1870, the various competing lines were officially consolidated into a corporation known as the Southern Pacific Railroad of California, with the Big Four in control of the board of directors (Smith 1939: 203–204; Kraus 1969: *passim*).

The company pushed the San Joaquin Valley mainline south from Stockton to the Stanislaus River by May 1870, and the first train entered Modesto on May 5, 1870. During early 1872, the Southern Pacific drove southeast through Merced County, and in May reached Fresno, a railroad town laid out by the Contract and Finance Company—the land-development arm of the Southern Pacific. The Southern Pacific continued down the valley, locating stations on terms favorable to its interests. Visalia, an existing Tulare County town of nearly 1,000 residents, for instance, was bypassed when its citizens voted not to pay the subsidies that the Southern Pacific demanded. The Big Four chose to continue their southern route from Goshen, west of Visalia, to a point midway between the foothills and Tulare Lake, where the railroad founded the town of Tulare City. Tracks were laid east of the Fresno to Bakersfield HST Section over the semi-barren, dusty plains to Tipton, reaching Delano Station, an important shipping point for wool and stock, in July 1873 (Figure 6-1). In April 1874, work on the line resumed south of Delano to the Kern River, but the Southern Pacific did not enter Bakersfield. Instead, the company laid out a new town called Sumner to the east of the valley's most prosperous community, initiating rail service in August of that year. Sumner was later called Kern, or Kern City, and was eventually annexed to the city of Bakersfield. Now, it is generally known as East Bakersfield (Bailey 1984: 72–75;

Burmeister 1969: 21; Carothers 1934: 47–48, 52–54; Hoover and Kyle 1990: 129; Preston 1981: 128–129; Smith 1976: 175–180; Tinkham 1923: 94).



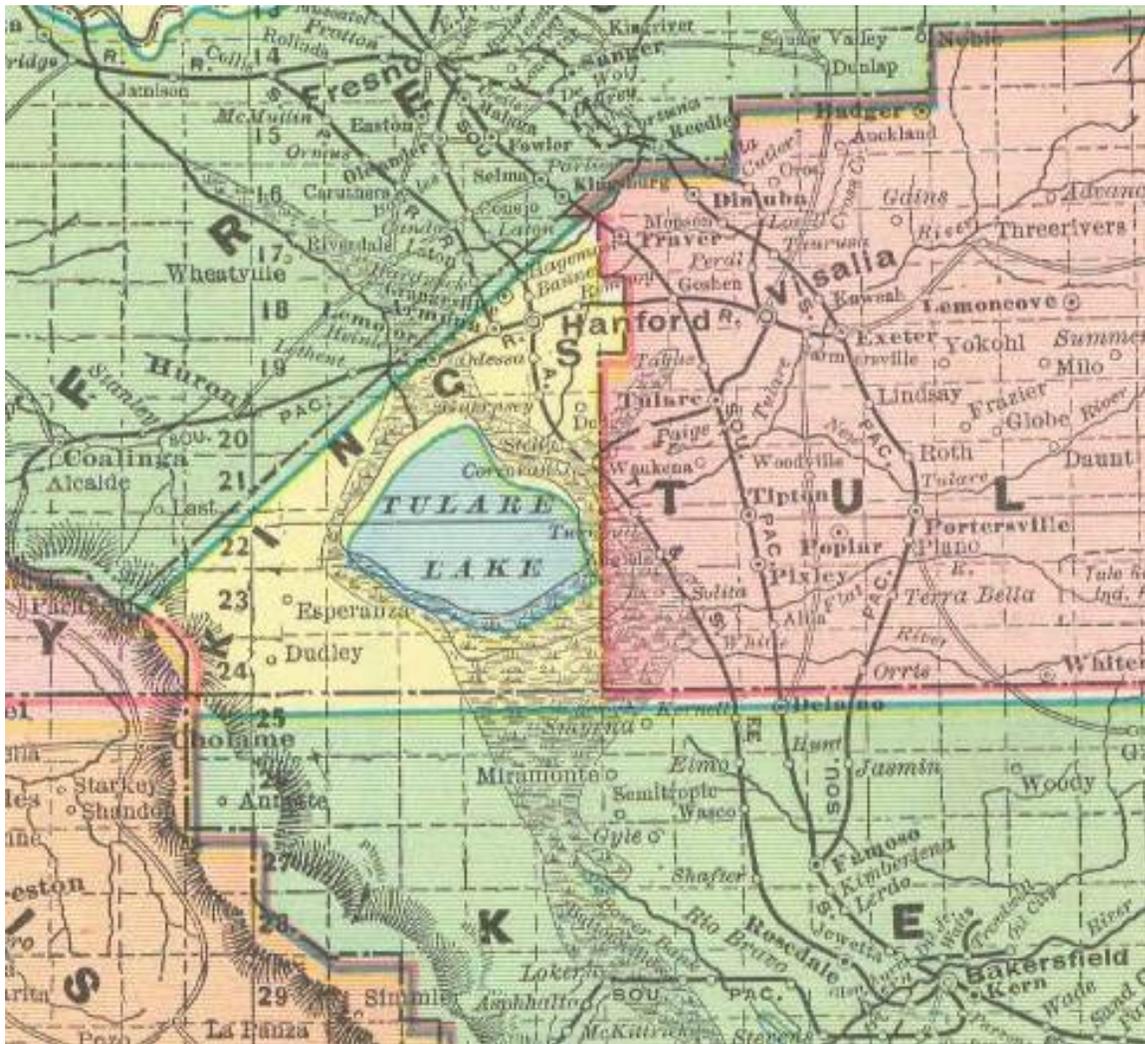
Source: Secretary of War 1873.

**Figure 6-1**

San Joaquin Valley in 1873, showing progress of Southern Pacific Railroad construction

In 1877, Southern Pacific began construction on the Goshen Division “cross-valley” line, an east-west branch extending from the mainline at Goshen into the fertile Mussel Slough region to the west (Figure 6-2). The company laid 40 miles of track passing through its newly founded town of Hanford, and terminating at Huron. By 1893, Southern Pacific had extended the line to the west toward the Diablo Range, making Coalinga its western terminus (Figure 6-2). The Goshen Division provided transportation of goods and passengers to western Kings and Fresno counties. Construction of the line resulted in the establishment of new towns Hanford, Armona, and Lemoore, but older Mussel Slough settlements such as Kingston and Grangeville were bypassed, and substantially drained of their populations (Williams 1878: 279, 285; Brown and Richmond 1940: 179; Smith 1976: 286-287, 309-310). Armona got another boost in 1891 with

the arrival of a new regional railroad line, the San Pablo & Tulare Railroad, which the Southern Pacific quickly bought up. The route ran from its southern terminus in Armona north into Fresno County (Thompson 1891, 1892; Preston 1981: 123, 125).



Source: Cram 1899.

**Figure 6-2**  
 Major rail lines between Fresno and Bakersfield in 1899

Fresno, Hanford, Sumner, and nearly all railroad towns that Southern Pacific founded in the Central Valley shared a common layout: a central depot and a uniform plat set at right angles to the rail line. Individual parcels, or lots, were established in a uniform pattern on a rectangular grid set at a right angle with the tracks, rather than with the surrounding government land survey. Blocks were 400 feet by 320 feet, contained 32 individual lots, and had mid-block alleys 20 feet wide. Commercial arteries were 100 feet wide, and residential streets were 80 feet across. As railroad towns grew, the streets outside the original town plat conformed to the public land surveys and parcel lines of surrounding landowners, rather than to the railroad town plat. The legacy is a special hybrid street pattern characteristic of all the valley railroad towns (Smith 1976; Bergman 2009: 9-10, 51-52, 57-58).

In a brief time, the Big Four and their subsidiaries had created a prodigious railroad empire that transformed California and much of the American West. Nowhere was the transformation more profound than in the San Joaquin Valley, where between 1870 and 1880 the population grew by 45%, and the acreage of improved land increased by more than 70%. During this period Southern Pacific also held patent to more than a million acres of valley land, much of which the railroad company sold to large land developers and speculators. Some land went to small farmers through the efforts of the Southern Pacific Colonization Agency—a business division formed by the railroad to encourage farmers to settle on land that it owned—and some was developed as agricultural colonies, often planned and sponsored by Southern Pacific land agents. Nevertheless, much of the property remained in large tracts, controlled by railroad subsidiaries, or sold to the large private companies that were predecessors to today's "industrial farms" (Orsi 2005: 105-123; Smith 1976: *passim*).

Wheat was the main agricultural product that the Southern Pacific shipped out of its San Joaquin Valley stations in its first decade of service. The introduction of rail shipping in general and refrigerated rail cars in particular, coupled with the influence of irrigated agriculture in the 1870s and 1880s, encouraged the cultivation of more land and a greater diversity of specialty crops. Although wheat remained an important crop in California, farms along the various San Joaquin Valley rail lines produced a remarkable variety of commodities, including table grapes, raisins, stone fruits, almonds, pistachios, tomatoes, and cotton, as well as dairy products and cattle (Jelinek 1982: 57–58, 61–78; Preston 1981: 121–163).

Throughout this period, Southern Pacific and its rail and steamboat affiliates held a virtual transportation monopoly in northern California, where the company had instituted a rate policy of "all the traffic will bear." Anti-railroad sentiment was intense, particularly among the businessmen of San Francisco and farmers of the San Joaquin Valley, who organized into associations to fight control of "The Octopus," as Southern Pacific was derisively dubbed. These groups of merchants, farmers, and other shippers sought lower freight rates and retribution for the Big Four's oppression of the small landowners of Mussel Slough, who had resisted Southern Pacific's uncompromising land acquisition tactics during the 1870s and early 1880s.

One of the most effective responses to the hold of "The Octopus" was the establishment of a new rail company known as the San Francisco and San Joaquin Valley Railway (SF&SVJ). The San Francisco Traffic Association, a group of San Francisco merchants who had promoted several waterborne freight operations, decided in 1893 that the only way to free San Francisco and the Valley from the Southern Pacific's grip was to construct an independent railway from San Francisco Bay down the valley to a connection with the mainline of the AT&SF. The SF&SVJ, nicknamed "the People's Railroad," would run from Stockton to Bakersfield, generally west of, but substantially parallel to, the Southern Pacific line. After many financing delays, the state issued a charter for the SF&SVJ on February 25, 1895 (Bergman 2009: 51–53; Brown 1958: 123–125; Rice et al. 1988: 217–236). The new railroad company opened its mainline between Stockton and Fresno in 1896, and pushed south to Hanford, Corcoran, and Shafter the following year (Bryant 1974: 175–178; Storey 1940: 31–39; Vandor 1919: 271).<sup>4</sup> By the time construction reached its southern terminus in Bakersfield in 1898, the SF&SVJ stretched 278 miles (447.4 kilometers [km]) through the valley, including a branch loop from Fresno to Corcoran by way of Visalia (Figure 6-2). The mainline of the SF&SVJ is now operated by the BNSF Railway, and lies within or closely parallels much of the Fresno to Bakersfield HST Section.

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<sup>4</sup> The SF&SVJ Section House in Shafter has been determined eligible for listing in the NRHP at the local level of significance under Criteria A and C. Please refer to the *California High-Speed Train Fresno to Bakersfield Historic Property Survey Report* (Authority and FRA 2011b), Appendix C (Reference: 027-070-28).

The new railroad offered an important shipping option for the San Francisco Bay Area and San Joaquin Valley markets, but had no outlet to the south. The SF&SVJ knew that success depended on linking with the AT&SF. The AT&SF, also known as the Santa Fe, built a rail line from Kansas to New Mexico in the 1860s, and headed westward to eventually establish a line that would reach southern California in the 1880s. Construction of the AT&SF reached the California-Arizona border in 1883, where it connected to the newly-built Southern Pacific line from San Francisco that terminated in Needles, California. In 1884, the AT&SF leased the Needles-Mojave line from the Southern Pacific; and by 1888, the AT&SF had two coastal terminals in southern California, at San Diego and Los Angeles. The company and its subsidiaries went into receivership during the Panic of 1893, but soon reorganized, and in 1897 managed to obtain trackage rights over the Tehachapi Mountains from the Southern Pacific. In the fall of 1898, AT&SF agreed to purchase the common stock of SF&SVJ; the AT&SF could now seamlessly link the San Joaquin Valley to Southern California and the American Southwest (Clark 1958: 145–150; Marshall 1945: 176–195; Waters 1950: 93–133).

## 6.5 The Advent and Growth of Irrigated Agriculture

While the railroad opened up vast tracts of unoccupied land to settlement, the establishment of irrigation systems was also central to the transformation of the San Joaquin Valley into a remarkably successful agricultural region. That transformation began with the construction of ditch systems that expanded the zone of cultivation beyond nearby river banks to eventually bring vast areas of otherwise arid land into production, and make specialty agriculture possible. Expansion and diversification of agriculture worked in concert with railroad development, particularly after completion of the first rail line through the valley itself in the early 1870s, which provided a mode for San Joaquin Valley produce to access markets in the Midwest and East. The broader demand for the valley's agricultural output and access to rail transportation increased the importance of some existing communities, such as Bakersfield; and with the arrival of additional rail lines, ushered into existence numerous other towns and communities in and along the Fresno to Bakersfield HST Section.

Initially, ranching and dry-farmed wheat cultivation dominated other forms of agriculture in the San Joaquin Valley, and these two land use interests often conflicted. Bonanza wheat production in the 1870s spurred changes in the law; and in 1873, the California state legislature enacted the "No Fence Law," which led to the ascendancy of diversified agriculture over ranching. With this law, farmers were no longer obligated to put up fences to keep roaming livestock out of their fields, and any crop destruction became the responsibility of the rancher who owned the offending livestock. The passage of this legislation also reflected the transition of rural California from a pastoral economy toward a commercial agricultural economy. By the end of the 1880s, the wheat boom had faded; irrigated agriculture emerged in its wake and brought with it cultivation of water-thirsty products such as grapes, deciduous fruits, citrus, and alfalfa (Harding 1960: 90-93; Tinkham 1923: 203–206).

The San Joaquin Valley was among the first areas in California that Americans irrigated (see Figure 6-1, above). The first irrigation ditches in the valley were built in the 1850s by farmers in the Visalia area, and other early diversions were from the Merced River and San Joaquin River, farther to the north. Diversions in and near the Fresno to Bakersfield HST Section date to the early 1870s, and were built by a variety of private and public entities. Private organizations—commercial irrigation companies, land colonies, and mutual water companies—led the water development projects until the early 1880s. Beginning in the late 1880s, public entities, including irrigation districts, county water districts, and later, water storage districts, assumed a greater role in designing, building, and administering irrigation systems in the San Joaquin Valley (Adams 1929: 204; Harding 1960: 83–90; JRP Historical Consulting Services 2000: 19–24).

The first cooperative canal companies within the Fresno to Bakersfield HST Section began organizing in the Mussel Slough area of Kings County in 1872. The Mussel Slough District, later known as the Lucerne District, is located within the fertile bottom lands of the Kings River Delta. The region derives its name from Mussel Slough, a natural waterway that branched off from Kings River and meandered in a generally southwesterly direction, passing to the north of Hanford en route to its drainage at Tulare Lake, south of Lemoore (Figure 6-3). Although there is no single definition of the boundaries of the Mussel Slough region, the land encompassed roughly equates to the service area of several major canal systems developed in the 1870s, primarily the Lower Kings River Ditch, Last Chance Ditch, and People's Ditch (Baker 1876; Small and Smith 1926: 300-301, 567-568; Preston 1981: 135-138, 146-147; Roberts 2008: 7-8).

The first American-born settlers to permanently inhabit the Mussel Slough territory arrived by the mid-1850s, in the wake of the federal survey that opened up public domain lands to private ownership. The region was still a part of western Tulare and southern Fresno counties at the time, nearly half a century prior to the formation of Kings County in 1893. Settlement was sporadic at first, and until the early 1870s, those few who arrived to stake a claim typically ranged cattle or sheep on large, unfenced tracts of grassland. A series of floods and droughts in the 1860s weakened the stock economy statewide and encouraged introduction of dry-farmed grains such as wheat and barley. Mussel Slough towns at this time included Kingston, established in 1856 at Whitman's Ferry on the Kings River across from what is now Laton; and Grangeville, the community center until Hanford's establishment in 1877 (Lapham and Heileman 1901: 477; Brown and Richmond 1940: 95; Preston 1981: 74-76, 85-91, 113-114; Roberts 2008: 101-102).

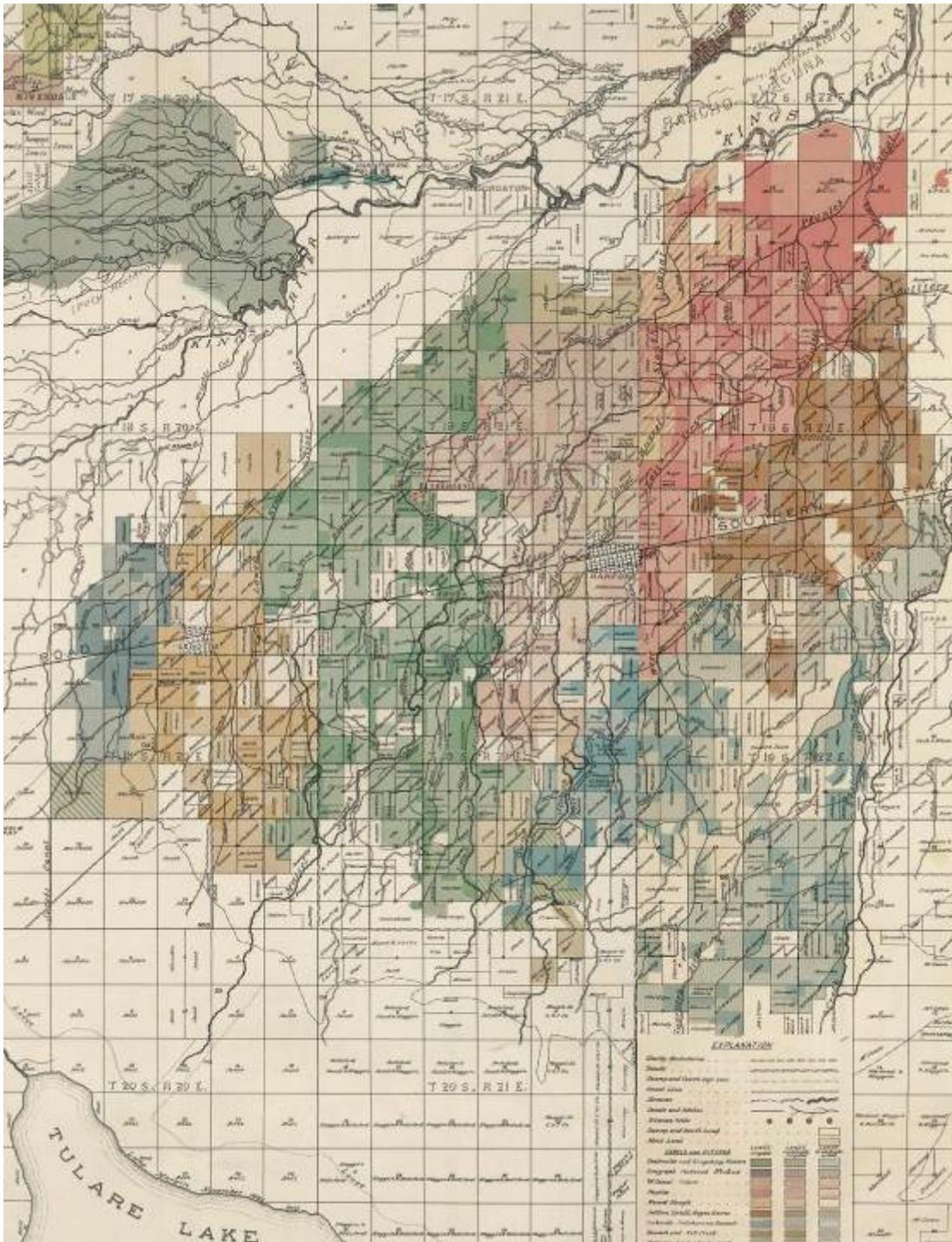
Intensive settlement of Mussel Slough began in earnest after the introduction of irrigation. The first canal to successfully divert water from the Kings River was the Lower Kings River Ditch, built in 1872 by a mutual irrigation company to serve the lands north and east of Lemoore. Other groups of settlers soon followed suit and formed various irrigation companies. Local farmers north of Hanford incorporated the People's Ditch Company in 1873, and completed the first phase of their works by 1879. Other major canal systems developed during the 1870s were the Last Chance Ditch, providing Kings River water to Grangeville farms; and the Settlers Ditch, which drew water from Cross Creek to irrigate lands east and northeast of Hanford (Figure 6-4). Later Mussel Slough ditch systems include the Lone Oak Canal, built about 1890 as an offshoot of the Last Chance Ditch (Grunsky 1898: 62-69; Menefee and Dodge 1913: 192-196).<sup>5</sup>

The network of Mussel Slough irrigation canals was at the center of long-standing contention between local farmers and the principal landowner of the area, the Southern Pacific Railroad. The story of the controversy that ultimately led to the Mussel Slough Tragedy, the deadly conflict that cost the lives of seven men in the spring of 1880, has been well told in many historical accounts, but a brief summary of the incident follows to provide context for the various canals and related historic architectural resources studied for this project (Menefee and Dodge 1913: 110-112; Roberts 2005: 79-90; Rice et al. 1988: 219-226; Hoover and Kyle 1990: 134-135). The event was the tragic culmination of a dispute over land titles that began as early as 1867, when Southern Pacific laid claim to nearly half of the land in Mussel Slough country under provisions of a federal land grant law enacted the previous year. Southern Pacific asserted ownership rights to the odd-numbered 640-acre sections of land extending 10 miles on either side of the proposed "cross-

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<sup>5</sup> A segment of the Lone Oak Canal passes through the revised APE southwest of Hanford. Despite its nineteenth-century construction date, the Lone Oak Canal was developed well after the earliest irrigation works in Mussel Slough, and has undergone several changes that have altered its alignment and length. The segment of the Lone Oak Canal that crosses the APE is not eligible for the NRHP or CRHR (see Appendix B for the evaluation on the DPR 523 form "Lone Oak Canal"). Portions of People's Ditch and Last Chance ditch are eligible for listing in the NRHP and CRHR under Criterion A and 1 at the state level for association with the settlement pattern in Mussel Slough region, and with events that led to the Mussel Slough Tragedy of 1880; see DPR 523 forms "People's Ditch" and "Last Chance Ditch" in Appendix C of *California High-Speed Train Fresno to Bakersfield Supplemental HPSR* (Authority and FRA 2012).

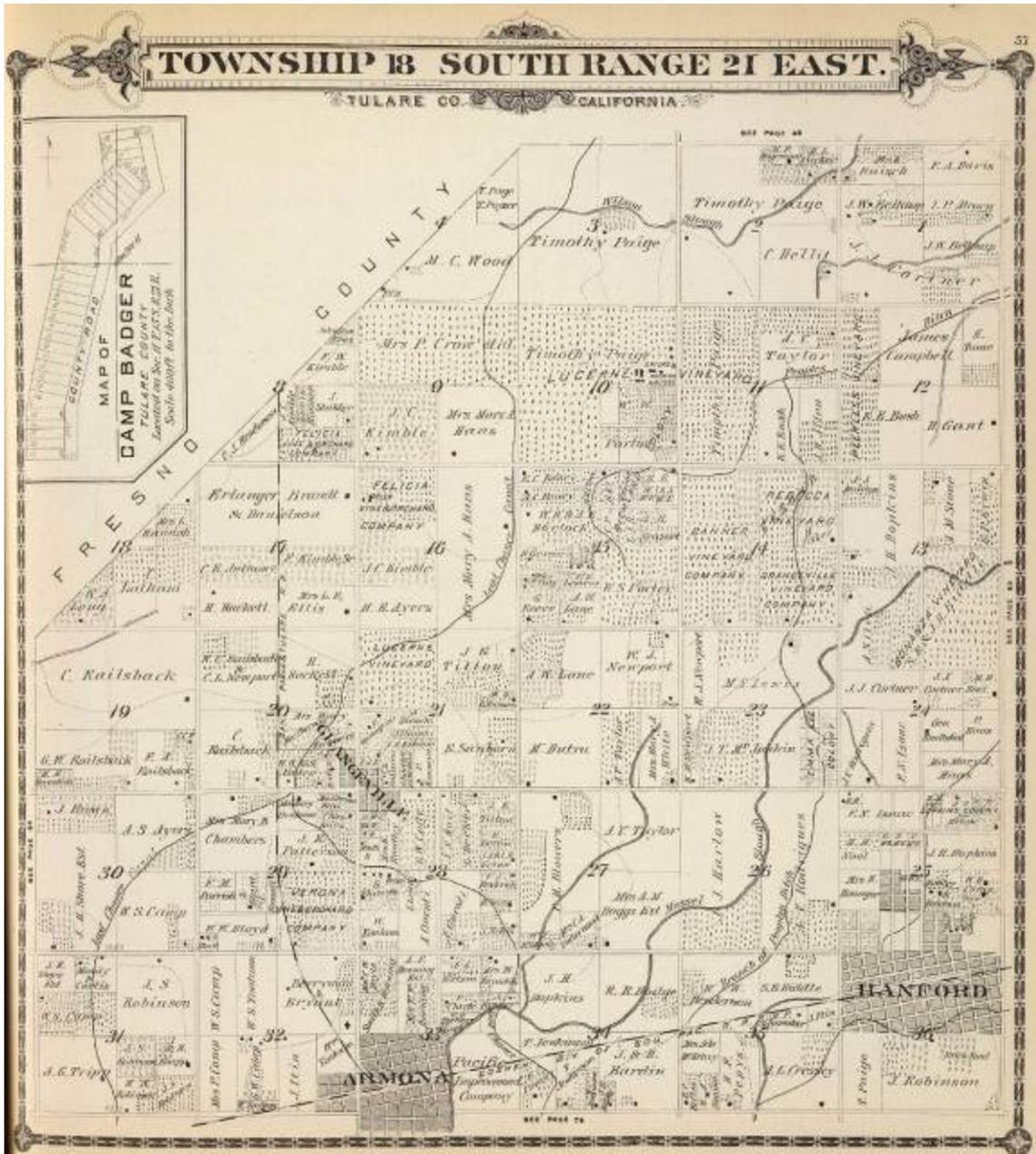
valley" branch line west from Goshen and through Mussel Slough. Even after federal courts confirmed the railroad's land grant claim in 1870, its validity was regularly challenged in court throughout the decade.



Source: California State Engineering Department 1885.

Note: The extent of the Mussel Slough region roughly equates to the large central shaded area on the map.

**Figure 6-3**  
Irrigated lands surrounding Hanford, south of the Kings River



Source: Thompson 1892.

Note: This map shows portions of the Last Chance Ditch near Grangeville and People's Ditch north of Hanford. The area depicted on this map was part of Tulare County until Kings County was formed in 1893.

**Figure 6-4**  
 Mussel Slough country north of the Southern Pacific Railroad, 1892

Settlers poured into the Mussel Slough area throughout the 1870s, many of whom acquired non-railroad land in the public domain (typically on the even-numbered sections), usually through preemption or homestead laws. Others, however, settled or squatted on land set aside for the railroad. Some newcomers took possession of railroad claims unknowingly, but others did so intentionally in the hopes that the courts would find the Southern Pacific grant null and void. During those years, many farmers and ranchers invested heavily in expensive irrigation projects like Peoples Ditch and Last Chance Ditch, as well as other improvements such as houses and

farm buildings, fences, wells, and crops. When Southern Pacific sent their appraiser through the area in 1877 to assess land values, he concluded that Mussel Slough land was much more valuable than it was when assessed 10 years earlier, in part because of a general land boom that accompanied the arrival of the railroad, but largely because of the settlers' improvement work. Southern Pacific set sales prices for the land that reflected these improvements, far exceeding the official government price for public land (\$2.50 an acre) that many of the settlers had expected to pay (Roberts 2005: 79-90; Rice et al. 1988: 219-226).

Tensions escalated steadily over the next several years, with anti-railroad sentiment on the rise and a vigilante group named the Settlers' League organizing to foment intimidation campaigns against those who sided with the Southern Pacific. The dispute culminated on May 11, 1880, when a Southern Pacific agent, accompanied by a federal marshal, arrived to dispossess Henry Brewer and John Storer, farmers who were occupying and claimed ownership of a tract of land that another settler, Walter Crow, had purchased from the railroad in 1878. By the time the two parties confronted one another in Brewer's field, the group had grown to include several members of the Settlers' League; many on both sides were armed. Shots were fired, and after the exchange six men lay dead or dying. Walter Crow, the day's seventh fatality, fled the scene but was tracked down and shot later that afternoon. Arrests and jail sentences followed for members of the Settlers' League. In the end, the Southern Pacific prevailed in the larger Mussel Slough dispute, winning all of the court cases that challenged the legitimacy of its land grant and selling the last of its disputed lands to hold-out settlers in the early 1880s, usually at negotiated prices (Roberts 2005: 79-90; Rice et al. 1988: 219-226).<sup>6</sup>

Most settlers in Mussel Slough resolved their land disputes with the Southern Pacific by the early 1880s. With clear title to their property and encouraged by the fertile character of the soil and ample supply of water, many began experimenting with several new varieties of crops, ushering in an era of agricultural diversification. Traditional farming of grain and alfalfa remained commercially viable into the 1880s and beyond; but increasingly, farmers and ranchers converted acreage to row crops, fruit and nut orchards, vineyards, and dairy farms. The transformation of the landscape was swift. As late as 1885, grain and grazing remained the principal land use in the Mussel Slough district, and lands were still held in relatively large parcels, typically in multiples of 160 acres. Already, though, smaller farms of 20, 40, and 80 acres were prevalent, especially along the lines of the larger irrigation canals (Preston 1981: 124; California State Engineering Department 1885). Within a decade, fruit production had supplanted grain farming as the principal agricultural industry, with grapes, peaches, apricots, prunes, and pears emerging as particularly profitable crops (Lapham and Heileman 1901: 447-449; Preston 1981: 145-147, 158-159). Dairying also emerged as a major industry, thanks in part to improvements in shipping, advancements in refrigeration and production techniques, and availability of alfalfa, an important source of cattle feed (Menefee and Dodge 1913: 136-137). By the turn of the twentieth century, milk production had increased to a level sufficient to support a dairy cooperative, a cheese factory at Hanford, and several area creameries (California 1900: 36; U.S. Census Bureau 1900, 1910a, 1910b; Menefee and Dodge 1913: 196, 207-208).

The division of holdings into smaller, intensively irrigated tracts planted primarily to vines, row crops, and orchards was virtually complete by the early 1890s (Figure 6-4). By this time, Mussel Slough included a mixture of family and corporate farms, and had earned a reputation as one of the most productive growing districts in the San Joaquin Valley. Its prosperity was reflected in the many Victorian-style homes that dotted the countryside (Preston 1981: 159; Thompson 1891, 1892). In fact, Mussel Slough's wealth in large part precipitated the formation of Kings County out of western Tulare County in 1893. In the words of one historian: "Already identified as independent rebels by

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<sup>6</sup> The Mussel Slough Tragedy event is memorialized by California State Historic Landmark No. 245, which is on 14th Avenue, north of Elder Avenue, outside and west of the Fresno to Bakersfield HST Section.

the titular reference to the famous Mussel Slough tragedy, many residents of the future Kings County disliked sending ‘their’ money off to be spent by those in faraway Visalia” (Roberts 2008: 7).<sup>7</sup>

Just south of Mussel Slough country is an agricultural region historically referred to as the “Lakeside District,” so named because of its proximity to now-dry Tulare Lake. The district also shares its name with the Lakeside Ditch and its system of branches and laterals, built to bring water from Cross Creek—a branch of the Kaweah River—to irrigate the area south of Hanford and northeast of the lakebed. Local farmers organized the Lakeside Ditch Company in 1874, and completed the main canal in 1875. Like the People’s Ditch and others to the north, Lakeside Ditch was never acquired by any of the irrigation districts that subsequently formed in Kings County, and has remained a private canal company throughout its history (Grunsky 1898: 18-20; Menefee and Dodge 1913: 196; Preston 1981: 124, 142, 146-147).<sup>8</sup>

After the initial irrigation works were completed, Lakeside opened to sustained settlement, and over the next decade developed into a productive agricultural region devoted primarily to the cultivation of alfalfa and cereal grains. Hanford to the north was the principal shipping point, but the small settlement of Guernsey emerged at a station about 9 miles to the south after completion of the AT&SF through this part of Kings County in 1897. By this time, acreage previously devoted almost exclusively to grain cultivation was being converted to row crops, fruit and nut orchards, alfalfa fields, and a few dairy farms (Menefee and Dodge 1913: 196, 207-208; Brown and Richmond 1940: 176-177; Preston 1981: 147; Durham 1998: 1,043).

North of Mussel Slough country, in southern Fresno County, the irrigation works developed in the second half of the nineteenth century had a less pronounced impact on the land use and patterns of development. This is because the lands belonged to Rancho Laguna de Tache, a Mexican grant that stretched for miles along the northern bank of the Kings River east and west of present-day Laton. Issued to Manuel Castro in 1846, Rancho Laguna de Tache covered an area of more than 48,000 acres, and was one of the few Mexican-era land grants in the San Joaquin Valley. Castro ran cattle on the property and established a bunkhouse for his foreman and vaqueros, outside the study area for this project. Castro sold most of Laguna de Tache to Jeremiah Clarke once the grant was confirmed in 1866. In contrast to other regions along Kings River, which developed as intensively cultivated agricultural lands after irrigation systems were built beginning in the 1870s, the former rancho remained largely intact and dedicated to cattle grazing through the end of the century (Perez 1996: 71; Preston 1981: 54-55; Roberts 2005: 36-37; USDA 1901: 308-310).

Two of the larger canal systems that serviced the rancho lands on the northern side of the Kings River are intersected by the Fresno to Bakersfield HST Section: Grant Canal and the “A” Canal. Grant Canal, the earlier and larger of the two, was built in 1873, probably by the partnership of owners of Rancho Laguna de Tache that ran cattle on the property at the time (Elliott & Co. 1882: 184; Adams 1929: 222; Winchell 1933: 152-154). Construction of Grant Canal was as much about controlling the flow of the Kings River as it was about irrigating the grant land. Delivering water to dry land was not the main problem at Laguna de Tache, which was situated in a low-lying delta area

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<sup>7</sup> There are several Mussel Slough farmsteads in the revised APE that were initially developed in the nineteenth century. Two of these—at 9534 13<sup>th</sup> Avenue (Reference: 009-070-016-000) and at 10282 13<sup>th</sup> Avenue (Reference: 018-101-020-000)—are not eligible because they lack historical significance and/or integrity (see Appendix B of this Supplemental HASR). One nineteenth-century Mussel Slough farmstead, located at 9860 13<sup>th</sup> Avenue, is eligible for listing in the NRHP and CRHR at the local level of significance for associations with early settlement patterns of the Mussel Slough region, and as an example of a farmstead built in the Queen Anne style. Please refer to the Supplemental HPSR for the full evaluation of this property (Map ID #6) (Authority and FRA 2012).

<sup>8</sup> Three segments of the main Lakeside Ditch (one of which is a branch of the main ditch) pass through the APE. Although completed in 1875, the ditch has lost integrity to its potential period of significance (1875-1880) where it passes through the revised APE because of extensive alterations; it is not eligible for the NRHP or CRHR (see Appendix B for the evaluation on the DPR 523 form “Lakeside Ditch”).

that flooded regularly in the spring. Left uncontrolled, however, water dispersed in an inconsistent manner, flooding some areas while providing little water to others. As a solution, the cattle ranchers built Grant Canal and a levee system on the river to improve water distribution over the land and more efficiently raise their stock (Grunsky 1898: 58-62; USDA 1901: 308-310; Barnes 1920: 68-71).<sup>9</sup>

The "A" Canal appears to have been constructed between 1885 and 1891 to serve as a secondary irrigation source for the property north of the Grant Canal. Given this date range, "A" Canal was likely dug by Poly, Heilbron and Company, which also used the property for cattle grazing, and therefore was heavily invested in the canal's use, maintenance, and development (California State Engineering Department 1885; Thompson 1891).<sup>10</sup>

In 1891, the Fresno Canal and Irrigation Company (FC&IC) purchased the Laguna de Tache Grant and its irrigation works. When the economy soured a few years later, FC&IC elected to subdivide and sell the property in order to recoup financial losses. The company hired Llewellyn A. Nares and Charles A. Laton as managers, and soon discovered plans by San Francisco & San Joaquin Valley Railway to construct its main line through the Laguna tract. As Nares and Laton watched laborers lay tracks for what would eventually become the AT&SF main line, they hired Ingvar Teilmann to survey and subdivide the property. Teilmann platted the new town of Laton alongside the tracks in 1899, and Nares and Laton completed sales of their first subdivision totaling 1,200 acres. In 1902, Nares and Laton incorporated Laguna Lands, Limited, to take over the land operation from FC&IC. With access to a railroad and rights to Kings River water, the former grant attracted an abundance of settlers, and the local population rose dramatically from 60 in 1899 to an estimated 3,000 by 1905. Farmers took advantage of the rich soil and grew a variety of crops, including grain, corn, alfalfa, vegetables, and fruit. Hog farming and stock raising were also practiced throughout the region, and dairying in particular rose to become a principal agricultural commodity. Laton secured its place as the shipping center and commercial hub of the surrounding rural district, marking a transformation of Laguna de Tache from a large cattle-grazing operation to a region of diversified farming on smaller irrigated parcels (Lapham and Heileman 1901: 449; Business Directory of Laton, Cal. 1905; Vandor 1919: 269, 692-693, 957-958; Adams 1929: 222; Bryant 1974: 175-178; Willison 1980: 104-107).

Another mechanism for bringing irrigation water to arid or unreclaimed lands was the practice of land colony development, a distinctive institution in the San Joaquin Valley that is considered to have been among the more innovative methods of land development of the period. These colonies were tracts of subdivided irrigable land wherein water delivery canals were often built in advance of settlement to service blocks of small-scale family-farm units suitable for growing fruit orchards, vegetables, and vineyards. Colony developers often marketed to prospective buyers nationwide, selling small, roughly 10- to 20-acre (40,469 to 80,938 square meter) farm plots, each supplied with irrigation. Sometimes colony owners directed their sales effort to specific groups with common theologies, or more often, to residents of a certain geographical area, particularly from the Midwest. Settlers in these land colonies typically aspired to achieve an idyllic, homogeneous, rural culture, but vineyard and orchard agriculture in California differed from the family farms of the Midwest. Historian David Vaught has described this manner of agriculture as "specialized, market-oriented, labor-intensive farming." The principal early crop of

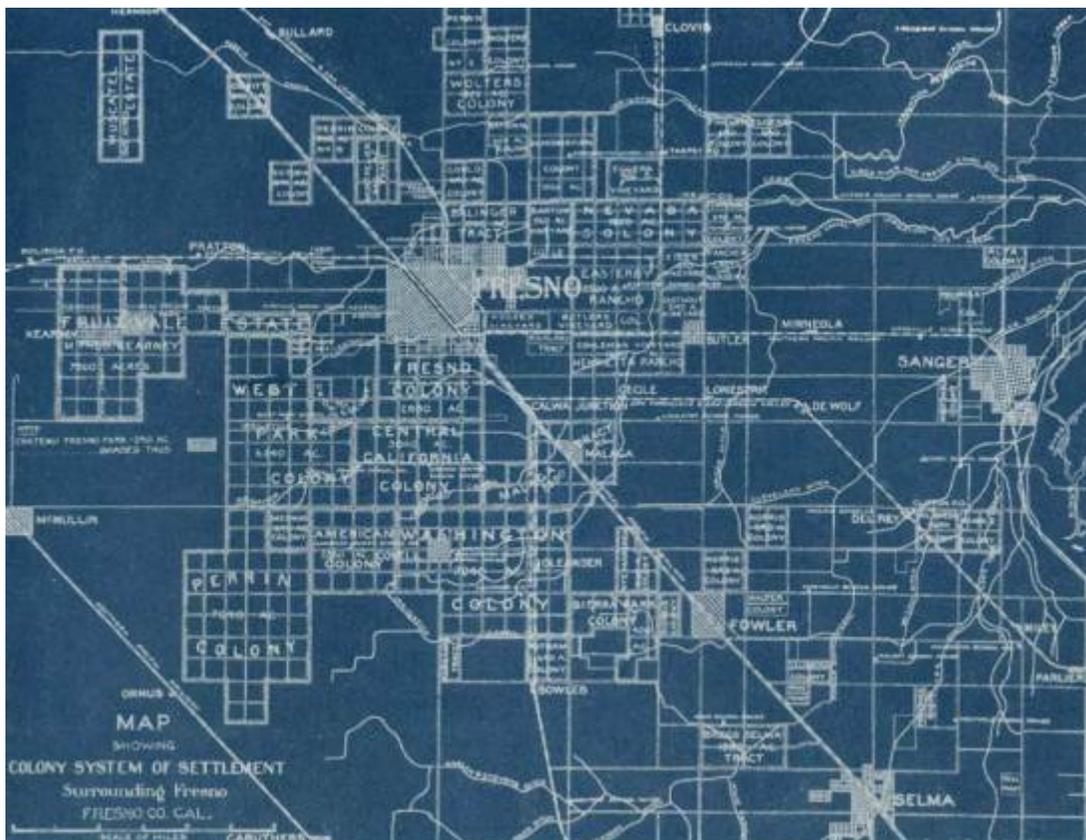
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<sup>9</sup> A segment of the Grant Canal passes through the revised APE west of the town of Laton in southern Fresno County. Built in 1873, the Grant Canal is not important for associations with the development of Laguna de Tache grant land, which was first subdivided at the turn of the twentieth century. The canal lacks historical or architectural significance and is not eligible for listing in the NRHP or CRHR (see Appendix B for the evaluation on DPR 523 form "Grant Canal").

<sup>10</sup> A segment of the "A" Canal crosses the revised APE at a point west of the town of Laton, in southern Fresno County. Developed as a secondary irrigation canal, "A" Canal supported the primary function of the Grant Canal to irrigate cattle land and prevent flooding of the Kings River. This canal lacks historical and architectural significance and is not eligible for listing in the NRHP or CRHR (see Appendix B for the evaluation on DPR 523 form "'A' Canal").

the colonies in this area was raisin grapes (Thickens 1946: 26–35; Vaught 1999: 1, 20-25, 53–56, 94, 70–75, 78, 98, 184–186; JRP Historical Consulting Services 2000: 12-15).

The Fresno to Bakersfield HST Section passes through the former Washington Colony, a potential rural historic landscape district in southern Fresno County, north of Laguna de Tache (Figure 6-5). Wendell Easton, J.P. Whitney, and A.T. Covell established the colony in 1878 by dividing 7,700 acres (31.2 km<sup>2</sup>) of land 8 miles (12.9 kilometers [km]) south of Fresno into small farm lots. Its organizers invested heavily in advertising across the country, as well as in Europe and Australia. Sale of 20-acre parcels was slow in the first couple of months of the promotion, but increased so rapidly that six sections were added to the colony by April 1879. By 1882, Washington Colony was the largest colony by acreage in Fresno County. The colony's agriculture developed quickly too, and by 1885, over 1,000 acres of the colony had been planted to grapevines for raisins and to supply local wineries. Other principal crops were apricots, nectarines, peaches, Bartlett pears, and plums (*Pacific Rural Press* 1883 Apr 14; Truman 1885: 29). The colony purchased water rights from the Fresno Canal and Irrigation Company and each buyer was guaranteed water, which allowed colony residents to lay out large farms and vineyards (Harvey 1907; Thickens 1946: 32–35; Thompson 1891).<sup>11</sup>



Source: Thickens 1946.

**Figure 6-5**  
 Land colonies in the vicinity of Fresno

<sup>11</sup> The Washington Irrigated Colony Rural Historic Landscape is a determined eligible rural historic landscape district. For information about the district, see *California High-Speed Train Fresno to Bakersfield Supplemental HPSR* (Authority and FRA 2012).

Land development companies and land colonies also played a role in the agricultural development of the Bakersfield area, in the southern portion of the Fresno to Bakersfield HST Section. The efforts of one company in particular, the Kern County Land Company (KCL), were notable. Formed in 1890, KCL aggregated vast swaths of Kern County property that James B. Haggin, Lloyd Tevis, and William Carr had accumulated since the 1870s. With a mission to subdivide and sell tracts of land to small farmers, KCL used the colony concept to market and develop its lands. The company advertised large subdivisions, or colonies, as agricultural communities featuring 20-acre lots primed for settlement. In order to make their land development company more profitable, Haggin, Tevis, and Carr also developed some of region's largest and most important irrigation systems, which were folded into KCL in the early 1890s under a canal and water subsidiary company. KCL owned and operated the canals, selling water to individual farmers who had purchased tracts in its colonies (Baldwin 1916: 41, 88-90; Berg 1971: 43; Morgan 1914: 115-116, 148-152, 175-176).

One of KCL's first subdivisions was the 12,000-acre Rosedale Colony. The Fresno to Bakersfield HST Section passes through a portion of the former Rosedale Colony, now a suburb of western Bakersfield. Under the management of S.W. Fergusson, KCL extensively advertised Rosedale as an agricultural colony, but had to declare the venture a failure after flooding and a subsequent drought in 1893-1894 stifled settlement, and inexperienced farmers improperly managed irrigation water from KCL's canal. Despite these setbacks, development of Rosedale resumed in the early twentieth century, with land owners and speculators further subdividing many of the remaining larger tracts into smaller agricultural plots and residential parcels (Morgan 1914: 115-116, 175-176).

To the southeast of Bakersfield was the Virginia Colony, established in 1889 along East California Avenue between Washington Street and Fairfax Road. The colony and new streets were given names associated with Virginia, the home state of early settlers in the area. The venture quickly attracted buyers, and by March 1893, the same year that the East Side Canal Company completed the East Side Canal through the tract, the local newspaper reported that all land in the approximately 880-acre Virginia Colony had been sold.<sup>12</sup> The colony was resurveyed in 1893, and the map filed with the Kern County recorder indicates that it consisted of 5-acre lots (*Kern County Californian* 1889 Oct 12; *Weekly Californian* 1892 Dec 17; *Sumner Standard* 1893 Jan 19; *Sumner Standard* 1893 Mar 2; Kern County Recorder 1893 and 1910; *Bakersfield Californian* 1944 Sep 12). It appears that most settlers purchased land in excess of the 5-acre lot size, because a 1901 atlas shows few landowners in Virginia Colony, almost all of whom owned multiple lots (Randall & Denne 1901). Like the Rosedale Colony, beginning early in the twentieth century, the predominantly agricultural use of the Virginia Colony increasingly gave way to residential development, as discussed in further detail below.

## 6.6 Development of Cities and Towns

The Gold Rush initiated the first American economic growth and settlement within the San Joaquin Valley, but sustained municipal development did not come to the vicinity of the Fresno to Bakersfield HST Section until irrigation projects and railroad construction combined to make the valley fit for diversified agriculture. The powerful combination of irrigation development and the arrival of railroads (the first in the 1870s and the next in the 1890s) transformed the San Joaquin Valley from an isolated, pastoral, and relatively unpopulated place to a dominant agricultural region that featured the beginnings of two large municipalities. This influence affected town creation and growth throughout the region, but not always in the same way

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<sup>12</sup> Two segments of the East Side Canal pass through the revised APE within the former Virginia Colony lands. Completed in 1893, the East Side Canal is not important for associations with the development of the area. The canal lacks historical or architectural significance and is not eligible for listing in the NRHP or CRHR (see Appendix B for the evaluation on DPR 523 form "East Side Canal").

throughout the corridor. Towns such as Corcoran and Shafter owed their existence—at least indirectly—to the proximity of the railroad. Bakersfield, though, predated the railroad and was founded through the early reclamation and irrigation efforts of its founder, Colonel Thomas Baker. The city succeeded despite the Southern Pacific's efforts to minimize its growing importance to the San Joaquin Valley. While most of the historic architectural resources surveyed for this Supplemental HASR are located in rural areas and outside the boundaries of cities and towns, there are many examples of urban development within the corridor, and most of these are found in the neighborhoods surrounding Bakersfield.

### 6.6.1 Bakersfield and Surroundings

Before the railroad era, Bakersfield was the most important early settlement in the southern San Joaquin Valley. Colonel Thomas Baker founded the town at the head of the valley at a strategic junction of mountain passes, rivers, and historic trails leading to southern California and the Mojave Desert. In 1862, Baker obtained 160 acres (0.65 km<sup>2</sup>) of swamp land known as Kern Island from Christian Bohna. The area became known as Baker's Field, and Baker's reclamation efforts encouraged others to settle along the Kern River. His humble abode rapidly became a gathering center for a small farming and sheep-raising community that developed before the town site was surveyed.

Four years later, when Kern County was created from portions of Los Angeles and Tulare counties, Baker, then county surveyor, mapped and planned the town site. The original boundaries were between present-day 26th Street on the north, California Street on the south, H Street on the west, and T Street on the east. By 1869, Baker had amassed personal landholdings of over 89,000 acres (360 km<sup>2</sup>) and constructed a 27-mile-long (43.5 km) toll road connecting Bakersfield to the mountain community and county seat of Havilah. The town of Bakersfield had a population of 600 by 1870, included a gristmill and two schools, and replaced Havilah as county seat in 1874 (Baker 1937: 17–19; Hoover and Kyle 1990: 121, 132–133; Robinson 1961: 24–28 and 34; Lewis Publishing 1974: 232; Bailey 1984: 37–39, 45).

The study area covered by this Supplemental HASR includes many residential and commercial properties in Rosedale, East Bakersfield, and the former Virginia Colony, communities that were historically separate from Bakersfield, but have since been enveloped by urban expansion of the larger city. The neighborhood of East Bakersfield was originally known as Sumner, and was established by the Southern Pacific Railroad in 1874. In 1873, as construction of the San Joaquin Valley mainline approached the Kern River, Southern Pacific sought a right-of-way and land grant from Bakersfield, but the city balked at subsidizing the company's efforts. In response to this rebuff, the railroad built a bridge over the river a short distance east of Bakersfield and laid out the new town of Sumner. The town had modest beginnings, but by the late 1890s Sumner had incorporated as the City of Kern (it was typically referred to as Kern City) and enjoyed a brief period of rapid expansion in the wake of the Kern River oil boom. The SF&SJV railroad (predecessor to the AT&SF) arrived from the north in 1898, entering Kern City on a line parallel to the Southern Pacific tracks (Figure 6-6). By the turn of the century, the small community had approximately 1,300 residents. Kern City was annexed to Bakersfield in 1909, and was linked to the city center by streetcar the following year (*Bakersfield Panache* 1995a; *Bakersfield Panache* 1995b; Bailey 1984: 72–75; Bryant 1974: 173–176; Smith 1976: 175–180; Brewer 2001: 67-69).



Source: Britton & Rey 1901.

Note: AT&SF rail yard at lower left, with AT&SF main line extending to upper right. Southern Pacific main line enters from upper left and turns to pass through Kern City (previously known as Sumner).

**Figure 6-6**

Detail from bird's-eye view of Bakersfield in 1901

### 6.6.2 Smaller Communities between Fresno and Bakersfield

Fresno and Bakersfield were the largest, most influential cities to develop within the Fresno to Bakersfield HST Section, but between these two communities, additional smaller cities and towns emerged in the early twentieth century. The largest of these communities—Hanford and Corcoran in Kings County and Shafter in Kern County—shared the typical San Joaquin Valley history that included irrigated agriculture, land development, and influences of road and rail transportation. There are also several smaller communities located along the Fresno to Bakersfield HST Section that never grew far beyond their original plat, but included direct ties to the railroad and provided important shipping and community services. These include Conejo in Fresno County, Guernsey in Kings County, and Allensworth in Tulare County.

The Southern Pacific Railroad established Hanford in 1877 on its branch line between Goshen and Coalinga. The small town quickly developed as a regional commercial center for the Mussel Slough vicinity that was still part of Tulare County. Hanford became the county seat of the newly formed Kings County in 1893; and a few years later, the AT&SF main line arrived and amplified the city's role as a shipping point for the surrounding agricultural district. Hanford soon became the principal regional community, serving the surrounding orchardists, alfalfa and grain farms, and dairy ranchers, but also providing a broad base of commercial and civic amenities to its ever-broadening residential population (Bryant 1974: 173–175; Waters 1950: 133–138; Orsi 2005: 102–104; Menefee and Dodge 1913).

Investor Hobart J. Whitley founded the town of Corcoran, located about 20 miles south of Hanford, in 1905. The site had been a junction on the SF&SV since the line was built through the area in the 1890s, and was acquired by the AT&SF by about 1898. Southern California land developers, including Whitley and his business partners, purchased several thousand acres of land in the Corcoran area, laying out a town site and dividing the remainder for sale as farms. Throughout 1905, the press carried many accounts of the new investment and farming opportunities offered in Corcoran, and the town grew rapidly as farmers began settling the surrounding land and raising sugar beets, grain, and dairy cattle. Although sugar beets did not develop into a successful crop, the introduction of cotton in the 1920s quickly became the principal agricultural commodity in the region, and has long dominated the local economy and land use (*Los Angeles Times* 1905 Jun 4; Roberts 2008: 59; Bergman 2009: 51-52, 197; Small and Smith 1926: 585-586, 589; Arax and Wartzman 2003: 81-86, 116-117).

The beginnings of Shafter, located along the former AT&SF line in northern Kern County, were very similar to Corcoran's. In 1913, a major development concern, Kern County Land Company (KCL, discussed above), acquired and subdivided 7,000 acres (28.3 km<sup>2</sup>) of land along the railroad into farming tracts, drilled some demonstration irrigation wells, and platted the town of Shafter. The region around Shafter initially developed as a sugar beet-producing area irrigated by groundwater pumping, and like the other areas along the Fresno to Bakersfield corridor also became known for cotton, and eventually almond, pistachio, and potato cultivation. Agriculture has continued to be the predominant regional land use, and Shafter has remained the principal service center for area farms with numerous warehouses and packing and production facilities along the tracks (Morgan 1914: 151; Comfort 1934: 203, 236-239; *San Joaquin Light and Power Magazine* 1915: 609).

The small, unincorporated communities of Conejo, Guernsey, and Allensworth are all intersected by the HST and were established along the line of the AT&SF in the years surrounding the turn of the twentieth century. The northernmost of the three, Conejo, was established in 1906 in a Fresno County agricultural district previously known as Wildflower. Local settler Margaret Burnett filed a plat map for the new town, which was laid out across the tracks from the AT&SF depot and was only one block deep. The Berry Improvement Company marketed and sold the individual town lots, which gradually infilled with a mixture of a few commercial and residential buildings surrounding the intersection of South Peach Avenue, Conejo Avenue, and the railroad tracks. Conejo was and remains a small rural community built around the local agricultural economy (Fresno County Recorder 1906; Progressive Map Service 1907; Polk Husted 1908-9).

The Kings County town of Guernsey, named after a pioneer landowner, emerged at an AT&SF station about 9 miles south of Hanford. By 1898, a post office had been established at the site, and over the next decade the station grew to include a general store, warehousing facilities, and railroad worker's quarters surrounding the depot and section house. Development of a town site plat consisting of narrow lots on several blocks parallel to the railroad tracks never materialized, and Guernsey remains a small cluster of buildings around the intersection of Kansas Avenue and South 10th Avenue (PUC 1912; Durham 1998: 1,043; Brown and Richmond 1940: 176-177).

In Tulare County, south of Corcoran, retired African-American Colonel Allen Allensworth established the town of Allensworth, which is partially within the Fresno to Bakersfield HST Section. The exclusively African-American-governed community was based on the ideas of industry, thrift, and good citizenship championed by its founder. An ex-slave, Allensworth escaped bondage and joined the Union Army during the Civil War. After the war, he taught in the Freedman's Bureau. He studied theology and was later ordained as a Baptist minister and army chaplain. Together with other African-American investors, he organized the California Colony and Home Promoting Association in 1908, and acquired the Allensworth town site. Over the next 3 years, more than 400 parcels of land were sold to African-American homebuyers and prospective agriculturalists nationwide (McBroome 2001: 149-180; Royal 2008: passim; Wheeler 2006).

The colony soon realized itself as a successful town with a stop and shipping facilities on the AT&SF line; and hotel, stores, businesses, library, and a school, among many social organizations. This success was short-lived, because the community struggled after Allensworth's death in 1914. This loss, coupled with other factors—not the least of which was the racial prejudice of the AT&SF that led to routing most rail trade onto its spur line in the nearby white community of Alpaugh—brought about the demise of Allensworth's town by the late 1920s.

Interest in the history of Allensworth was rekindled in the late 1960s during the Civil Rights movement. The Colonel Allensworth State Historic Advisory Committee, composed of concerned citizens, historians, and historical societies, selected the site as the finest example of African-American contributions to state history. Within a few years, it was listed in the NRHP and became a California state historic park.<sup>13</sup>

## 6.7 Events and Trends of the Twentieth Century

Since the turn of the twentieth century, additional events and trends have influenced the development of the Fresno to Bakersfield HST Section: the discovery and exploitation of Kern County oil fields, federal-state water development projects, and adoption of the automobile as the primary mode of transportation in the United States and the Central Valley. Although these changes were distinct and important, their overall effect on the corridor was to intensify and expand the land settlement patterns already established by the end of the nineteenth century. The agricultural identities of the rural areas of southern Fresno County, Kings County, and northern Kern County remained generally intact, although new crop types such as cotton and potatoes were introduced, and the dairy industry rose to prominence. The twentieth century also ushered in a period of expansion of urban boundaries, which resulted in more densely settled residential areas on the peripheries of Bakersfield in particular, but also around the smaller communities of Hanford, Corcoran, and Shafter.

### 6.7.1 Railroads

The railroad industry faced its share of challenges in the twentieth century, but nevertheless remained a steady presence in the San Joaquin Valley. World War I placed a heavy burden on the major railroad companies in the United States, because the federal government took control of the railroads for more than 2 years in support of the nation's war efforts. After the war, Southern Pacific began a vast, long-range program of rehabilitation and improvements that included extensions, additions, and reconstruction. This program of improvements was interrupted during the Great Depression, when Southern Pacific's revenue dropped to about 50% of its 1929 peak. Retrenchment of services followed. Some branches, such as the former San Pablo & Tulare line out of Armona, were abandoned and torn up, unprofitable services were curtailed, and old equipment was put out of service (Heath 1945: 26; Hofsommer 1986: 71-77).

This trend reversed during World War II, which brought all-time freight records. The magnitude of change was probably greater on the West Coast than anywhere else because of the busy San Francisco Bay ports and the numerous new military facilities established in California. During the war years, the Southern Pacific made great strides in improving its rail system and rolling stock, and also began to address the problem of its single-track mainline in California. The company installed 1,400 miles (2,253 km) of new rail along its main lines—both replacement rail for existing lighter-gauge rail, and newly laid rail for double-tracking—and 115 miles (185 km) of new track at 268 sidings and siding extensions. Also, many track structures, such as bridges and

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<sup>13</sup> The Allensworth State Historic Park is located at 4129 Grant Drive near Earlimart, Tulare County. For further information, please refer to Appendix C (Reference: 331-100-030) in the *California High-Speed Train Fresno to Bakersfield Historic Property Survey Report* (Authority and FRA 2011b).

trestles, were strengthened, new roundhouse and shop facilities were installed, and stations were expanded (Heath 1945: 44-51; Hofsommer 1986: 190–207).

Southern Pacific used its wartime profits to continue to enhance its operating system. By 1951, the company had replaced approximately 2,600 miles (4,185 km) of track with new and heavier rail on the main lines to facilitate larger locomotives and longer freight trains. Rails between San Francisco and Los Angeles through the western side of the San Joaquin Valley were improved to accommodate the overnight streamline train *Lark*, a long, heavy luxury overnight passenger train that was also among the company's first to be converted from steam to diesel locomotive power. Southern Pacific's upgrading program for the main line through the San Joaquin Valley in the 1960s included installation of new welded rails called "ribbon rails," which were manufactured at its Tracy rail-welding plant. Today, these rails are still functioning on hundreds of miles of Southern Pacific track (now owned by the Union Pacific) throughout the Central Valley (Hofsommer 1986: 210-212, 273).

Since its original construction in the 1890s, the AT&SF also expanded and improved its system. In 1911, the Laton and Western Railroad Company constructed a line from Laton westward to the edge of Fresno County. AT&SF purchased the railroad in 1916, augmenting its freight and passenger services for southern Fresno County. The company's mainline improvements through Central California have included replacement and upgrades of its roadbed and related engineering features. The BNSF Railway now owns the former AT&SF line between Fresno and Bakersfield, and all of the rails, ties, and ballast in this part of the system date to the 1970s through 1990s, or more recently (BNSF 2003; Bryant 1974: 314–319, 322–323, 344–346; Chant 2007: 304, 331–339; Bergman 2009: 81).

## 6.7.2 Irrigation and Agriculture

To a large degree, rural regions in the HST corridor that were already served by irrigation continued agricultural land use patterns that were firmly established during the nineteenth century. The mixed land use that characterized the Mussel Slough and Lakeside districts at the end of the 1800s, for example, persisted; and agriculture remained the region's principal industry well into the next century. Area farmers continued to reap the benefits of irrigation, and several of the larger pioneer canal systems, such as the Last Chance, Peoples, and Lakeside ditches, remained privately owned and operated (and still are today). Small family farms and dairy ranches coexisted with larger corporate enterprises, including the Lucerne Vineyard Company, Banner Vineyard Company, and Verona Orchard Company (Thompson 1891, 1892; McIntire 1908; Kings County Abstract Company 1923).

In the Mussel Slough district, principal crops were orchard fruits, raisin grapes, grains, and alfalfa and other types of feed; it was not uncommon for a single 10-, 20-, or 40-acre farm to grow a combination of two or more of these crops. The dairy industry in particular prospered in the Lakeside district in the early decades of twentieth century, and surrounding fields were typically planted to alfalfa, corn, and other crops. Area orchardists, dairy ranchers, and general farmers had numerous outlets for their products. Mussel Slough communities of Hanford, Armona, Grangeville, and Hardwick offered fruit drying and packing houses, wineries, creameries, cheese factories, flour mills, and shipping facilities on two major railroad lines. Although many agricultural products were shipped by rail to San Francisco, Los Angeles, and other distant markets, there was also a strong local market for truck farmers and home dairies (Dewey 1901: passim; Menefee and Dodge 1913: 196, 207-208; Brown and Richmond 1940: 152-154; *Hanford*

*Sentinel* 1973 Feb 24; Preston 1981: 147, 205; Roberts 2007: 38, 54; Roberts 2008: 108-110, 119).<sup>14</sup>

Because subdivision of the 48,000-acre Rancho Laguna de Tache did not occur until the very end of the nineteenth century, the agricultural region surrounding Laton in southern Fresno County was slower to diversify than Mussel Slough. However, the fertility of the soil and the existence of established irrigation works in the form of the Grant Canal, "A" Canal, and their respective branches, the early-twentieth-century transformation of the landscape was swift. The local population rose dramatically from 60 in 1899—when Laton was founded—to an estimated 3,000 by 1905. Farmers on small parcels (typically 10, 20, and 40 acres) took advantage of the rich soil and grew a variety of crops, including grain, corn, alfalfa, vegetables, and fruit. Hog farming and stock-raising were also practiced throughout the region, and dairying in particular rose to become a principal agricultural commodity. By 1910, there were scores of dairy farmers operating on the former rancho lands north of the Kings River (U.S. Census Bureau 1910c). Laton secured its place as the shipping center and commercial hub of the surrounding rural district, marking a transformation of Laguna de Tache from a large cattle-grazing operation to a region of diversified farming on smaller irrigated parcels—a mixed agricultural heritage that continues to the present (Lapham and Heileman 1901: 449; Business Directory of Laton, Cal. 1905; Vandor 1919: 269; McIntire 1956: 102).<sup>15</sup>

Like the railroad, throughout the twentieth century, various irrigation concerns throughout the Fresno to Bakersfield HST corridor improved and expanded existing water delivery systems. Independent and municipal irrigation companies systematically upgraded their aging water works through replacement of original engineering features, reshaping and lining canal walls, and realigning entire ditch segments. Increasingly, however, these responsibilities were assumed by irrigation districts, quasi-governmental entities that functioned much like municipalities, with the power to issue bonds, condemn property, levy and collect taxes, and maintain and operate water diversion and distribution works. Initially authorized by the Wright Act of 1887, most early irrigation districts failed, and the legislature amended the act several times in the years that followed. These revisions spawned formation of successful districts throughout the Central Valley and elsewhere in the state, particularly during the late 1910s and 1920s (Hundley 2001: 93–103; Jelinek 1982: 47-60; JRP Historical Consulting Services 2000: 14–15; Preston 1981: 136–137). In the former Rancho Laguna de Tache, local land owners organized in 1921 to form the Laguna Irrigation District to acquire water rights and purchase and maintain a system of ditches (including the Grant Canal and "A" Canal) to provide a reliable water supply to farmers and ranchers west of Laton. In the early 1920s, the Lemoore Irrigation District and Lucerne Irrigation District formed and acquired many of the pioneer irrigation canals west of Hanford (Vandor 1919: 269; Adams 1929: 222, 238-244).

The effect of the formation of a new irrigation district was more keenly felt surrounding the town of Corcoran in Kings County, where far less acreage had been put to productive agricultural use. In 1919, landowners east of Tulare Lake established Corcoran Irrigation District in an effort—as state irrigation economist Frank Adams described it in 1929—"to gather up such scattered waters as are available and apply them to a fertile belt of land that thus far has not been very highly developed" (Adams 1929: 257). As elsewhere within the Kings County and Kern County portions

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<sup>14</sup> Several properties were developed in Mussel Slough during the early twentieth century. Examples located in the revised APE include 13422 Elder Avenue (Reference: 006-020-095-000), 13942 Flint Avenue (Reference: 006-050-005-000), and 11301 13<sup>th</sup> Avenue (Reference: 018-172-063-000). See Appendix B.

<sup>15</sup> Properties developed on former Laguna de Tache grant land and located in the revised APE include those with residences and some agricultural resources, such as 5325 E. Mt. Whitney Avenue (Reference: 057-080-30), 20047 South Sunnyside Avenue (Reference: 057-030-02S), and properties containing only agricultural buildings, like two Mt. Whitney Avenue parcels without street addresses (Reference: 057-030-53 and Reference: 057-080-19). See Appendix B.

of the Fresno to Bakersfield HST Section, crops in the district historically included alfalfa and cotton, and now also include pistachios, almonds, melons, and tomatoes (Adams 1929: 257–261, Plate XXVI; Bonte 1930: 51; Cline 2007; USACE 1975: 189–190).

Farmers beyond the reach of canal systems developed groundwater as a means of irrigation. The first use of groundwater for irrigation in California was from artesian wells, and in the early years of this practice, flows could be secured from wells in the area between the Southern Pacific Railroad line and Tulare Lake Basin. By the 1880s, wells 300 feet deep had been dug or drilled west of Tulare, with flows upwards of 800,000 gallons per day. Steam-powered pumps came into use during the next decade, but remained relatively rare until electric service reached the valley from hydroelectric plants in the river canyons of the Sierra mountain range.<sup>16</sup> Pumping increased rapidly after 1910, when hydroelectric power became readily available. A significant overdraft of groundwater resulted and retarded irrigation in areas without sufficient recharge sources until the Central Valley Project's Friant-Kern Canal was completed and began delivering water in the early 1950s (Davis et al. 1959: 107-111; JRP Historical Consulting Services 2000: 14–15; Mendenhall et al. 1908, 1916; Pisani 1984: 390–392).

Since the mid-1930s, the State of California, under the sponsorship of the Department of Water Resources, and the federal government, under the aegis of the U.S. Army Corps of Engineers and the Bureau of Reclamation, have played a major role in the development and distribution of water resources to agricultural, industrial, and municipal users throughout the state. Both the federal Central Valley Project and California's State Water Project have transferred water from the water-rich northern half of the state southward to water-deficient areas in the San Joaquin Valley. Largely because of these federal-state water projects, even some of the most water-poor areas of the valley have been transformed into fertile agricultural land (Hundley 2001: 234–272; Pincetl 1999: 85-94).

### 6.7.3 Urban Expansion and Community Development

The historic architectural survey population for this Supplemental HASR includes many farmsteads, residences, housing tracts, and commercial and industrial buildings that date to the twentieth century. These complexes and individual buildings are located throughout the Fresno to Bakersfield HST Section corridor—in predominantly rural areas such as the Mussel Slough and Lakeside districts, as well as within the larger urban centers including Fresno, Bakersfield, Corcoran, and Shafter. In Corcoran and Shafter, located at the center of their respective agricultural districts, new building stock along the railroad included warehouses and packing, processing, and shipping facilities for grain, cotton, potatoes, and other crops. In the Bakersfield-area communities of Rosedale, East Bakersfield, and the former Virginia Colony, most new development was residential in nature, with numerous housing tracts developed, often on former agricultural land. Mixed-use development was also evident, especially in mid-century along the Truxtun Avenue and California Avenue corridors of East Bakersfield, where infill growth was typically commercial and light industrial in character.

The areas of southern Fresno County and Kings County that are crossed by the Fresno to Bakersfield HST Section generally retained their agricultural heritage in the twentieth century, but were not immune to the impacts of modernization. The larger population centers mushroomed in the first half of the twentieth century as they transitioned from agricultural towns along the railroad into self-sustaining and economically diverse cities. This trend was most pronounced in Hanford, the seat of Kings County, whose population grew from less than 3,000 in 1900 to nearly

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<sup>16</sup> Two electrical substations are located within the revised APE: the Southern California Edison Grangeville Substation was built circa 1955 on 13<sup>th</sup> Avenue in Kings County (Reference 018-270-039-000); and the Pacific Gas & Electric Guernsey Substation was built in 1930-1931 in Kings County (Reference: Guernsey Substation; 028-150-030-000). See Appendix B.

50,000 by the end of the century. The communities of Armona, Lemoore, and to a lesser extent Grangeville and Laton, also grew in population and expanded beyond their nineteenth-century street grids and into the surrounding countryside.

Twentieth-century development in the Mussel Slough district introduced new elements to the built environment, including industrial and warehouse facilities (especially along the tracks), shopping centers and other retail establishments, sprawling school campuses, and housing tracts. New residential stock in these areas typically reflected popular twentieth-century architectural styles such as Craftsman, Spanish Eclectic, Minimal Traditional, and Ranch. Particularly in the Mussel Slough and Lakeside districts, these homes gradually replaced many nineteenth-century predecessors, which tended to have been built in the Victorian and National Folk styles. Milk barns, feeding sheds, and other dairy-related facilities also became common features on farmsteads and industrial farms, especially around Laton, Hanford, and Guernsey (Roberts 2007: 7, 73, 76, 99, 119; USGS 1926, 1954a; USDA 1961; Preston 1981: 236).

The twentieth-century architectural resources within the Fresno to Bakersfield HST Section in Kern County and the southern half of Kings County are typically related to industrial agricultural, commercial, and residential developments. In the lands surrounding the reclaimed Tulare Lake area of Kings County, local farmers initially grew a variety of crops, but in the 1920s, cotton ascended to become the overwhelmingly dominant agricultural commodity. Corcoran took its place at the center of the county's leading cotton district, where the industry was consolidated by a powerful few, but specifically J. G. Boswell and E. C. Salyer. Boswell dominated the regional industry with a cotton-growing empire that peaked at 200,000 acres. For decades, the Boswell company was headquartered in Corcoran. The Salyer family farming operations, with landholdings peaking at 80,000 acres in the 1980s, were also headquartered in Corcoran, and competed with the Boswell family to acquire farmland. Beginning in the early 1920s, the Salyer Company cultivated cotton, wheat, barley, and oats (Small and Smith 1926: 585-589; Brown and Richmond 1940: 280; *Fresno Bee* 1945 Jul 23; *Fresno Bee* 1983 Feb 27; Arax and Wartzman 2003: 320; *Los Angeles Times* 2009 Apr 7; Bergman 2009: 51-52, 197). Around 1950, the company built a granary and erected silos along the AT&SF tracks in Corcoran to assist in processing increasing grain yields from Salyer-owned farms.<sup>17</sup>

After its formation in 1913, Shafter, in Kern County, developed as a shipping center for the surrounding agricultural region that was known for its sugar beet production. By the 1920s, Shafter also became known for almonds, pistachios, cotton, and particularly potatoes. Potato acreage steadily increased from 2,500 acres in 1926 to a peak of 65,000 acres in 1946. At the time of this peak production, 17 potato warehouses were located along the railroad alignment through Shafter to facilitate the bagging and shipping of the tremendous volume of the crop; among these was the Emanuel H. Mettler & Sons plant, located along the eastern side of the former AT&SF line and within the Fresno to Bakersfield HST Section.<sup>18</sup> Shafter led the county in potato production in the 1940s, and its spuds were shipped throughout the country. The industry employed hundreds of people and made Shafter the busiest station on the AT&SF main line during harvest season. Potato culture in Shafter began to decline in the 1960s, as competition from Idaho potatoes made the crop less profitable (Morgan 1914: 151; *San Joaquin Light and*

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<sup>17</sup> The granary is located on Pickerell Avenue (Reference: 034-230-042-000) in Corcoran and is not eligible for the NRHP or CRHR. See Appendix B.

<sup>18</sup> The original 22-acre Mettler potato plant in Shafter was subsequently divided and partially redeveloped. The oldest building on the remaining property dates to 1945, but because of several alterations to the historic-period buildings and modern intrusions on the property, the Mettler plant at 655 N. Shafter Avenue (Reference: 026-010-13) lacks integrity and is not eligible for the NRHP or CRHR. The revised APE for this study also includes a farm implement distribution complex in Shafter that dates to the 1950s. This property lacks architectural and historical significance and is also not eligible for either register (Reference: 072-180-22). See Appendix B.

*Power Magazine* 1915: 609; *Comfort* 1934: 203, 236-239; Sanborn Map and Publishing Company 1945; Wilson 1988: 90-94; Kern County Department of Agriculture 2010).

Further south, in the Bakersfield area of Kern County, the arrival of the AT&SF and the Kern River oil boom of May 1899 initiated a period of rapid urban development that carried into the twentieth century. In an attempt to maintain a competitive edge over larger oil producers rushing to Kern County, more than 150 companies belonged to the Bakersfield-based Independent Oil Producers Agency by 1908. The 1910s proved an oil-rich decade for Kern County, and the economic upswing continued as the United States entered the First World War. Although the war interrupted some physical development and drew people and resources away from the area, it also helped sustain growth because the military effort required raw materials, such as food and oil, which Kern County was in a unique position to deliver (Bailey 1984: 79, 87-89; Boyd 1997: 108-109; Morgan 1914: 160).

Residential and commercial growth in Bakersfield was swift during this period, with individuals and developers adding more buildings between 1905 and 1915 than had been built in the city's first 40 years. In 1910 alone, nearly 500 residences were erected throughout Bakersfield. Amidst this building boom, Bakersfield was also expanding its corporate boundaries. In 1909, Bakersfield annexed Kern City, formerly Sumner, ending the separation of the original Southern Pacific railroad town from Bakersfield proper (BHPC n.d.; Wheeler 1995). The Fresno to Bakersfield HST Section passes through this neighborhood, which is now known as "East Bakersfield."

East Bakersfield itself experienced rapid growth during the 1910s and 1920s, as new buildings infilled the original street grid and new residential tracts were developed on its peripheries. One of these residential subdivisions was the Kruse Tract, established in 1911 and developed by the Colorado-Pacific Land Company. The undeveloped Kruse parcel, located at the intersection of Truxtun and Union avenues, was in a built-up area of the city, surrounded by older subdivisions and established residential neighborhoods. Building construction within the tract progressed gradually, unfolding over a period of several decades. By the time it was finally fully built out in the 1950s, the subdivision was populated with a mix of residential styles, including Tudor Revival, Spanish Eclectic, Craftsman Bungalow, and Minimal Traditional, with construction dates ranging from the 1910s through the 1940s.<sup>19</sup> These architectural trends continued in the surrounding neighborhoods, where similar styles proliferated during the decades leading up to the outbreak of the Second World War.<sup>20</sup> There were also many non-residential buildings in the Kruse Tract and vicinity by this time, such as offices and retail shops along 19th Street and warehouses and mills south of Truxtun Avenue (*Bakersfield Daily Californian* 1905 Mar 20; *Bakersfield Californian* 1907 Jun 11; *Bakersfield Californian* 1911 Apr 27; *Bakersfield Californian* 1911 Jul 4; *Bakersfield Californian* 1929 Jan 11; *Bakersfield Californian* 1940 Jun 1; Sanborn Map and Publishing Company 1912, 1912-1949).

East Bakersfield was largely developed by the early post-World War II period, and new construction tended to be infill development of commercial and light industrial buildings (Sanborn Map and Publishing Company 1912-1949, Sheet 66). Within the HST corridor, much of this post-war development occurred along East Truxtun Avenue and East California Avenue, between Union Avenue on the west and the Southern Pacific tracks on the east. Reflecting the generally light industrial character of East Truxtun—which parallels the northern side of the AT&SF tracks—

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<sup>19</sup> The revised APE includes three Kruse Tract properties: two residences dating from the early period of development – 114 Truxtun Avenue (Reference: 006-132-10) and 208 Truxtun Avenue (Reference: 006-132-12) – and one multi-family residential building dating from the mid-century – 200 Truxtun Avenue (Reference: 006-132-11). See Appendix B.

<sup>20</sup> Examples of East Bakersfield residences include the Craftsman Bungalow at 1420 East 19<sup>th</sup> Street (Reference: 017-080-06), and the Minimal Traditional house at 1220 Dolores Street (Reference: 017-320-19).

the buildings were typically utilitarian in design and construction, and housed a variety of service shops, small factories, warehouses and distribution centers, and retail outlets.<sup>21</sup> One exception was the Caravan Inn, built in 1959 on the northeastern corner of Truxtun Avenue and Union Avenue, the former site of an elementary school (Figure 6-7).<sup>22</sup> The inn was situated along a stretch of State Highway 99 (Union Avenue) that was known as “motel row” because of the prevalence of lodging facilities catering to a growing number of motorists. The Caravan Inn was the latest of a long line of motor lodges built along motel row in the decades following the 1930 opening of Bakersfield Inn, which was widely considered the first establishment to be called a “motel.” East Bakersfield also featured additional residential properties filling in lots left vacant because of the economic slowdown before the war. The properties tended to include a single, relatively small Ranch-style house with garage<sup>23</sup> (*Bakersfield Californian* 1959 Feb 13; *Bakersfield Californian* 1971 Jul 10; Price 2000 Oct 8; Lynch 2009 Mar 23).

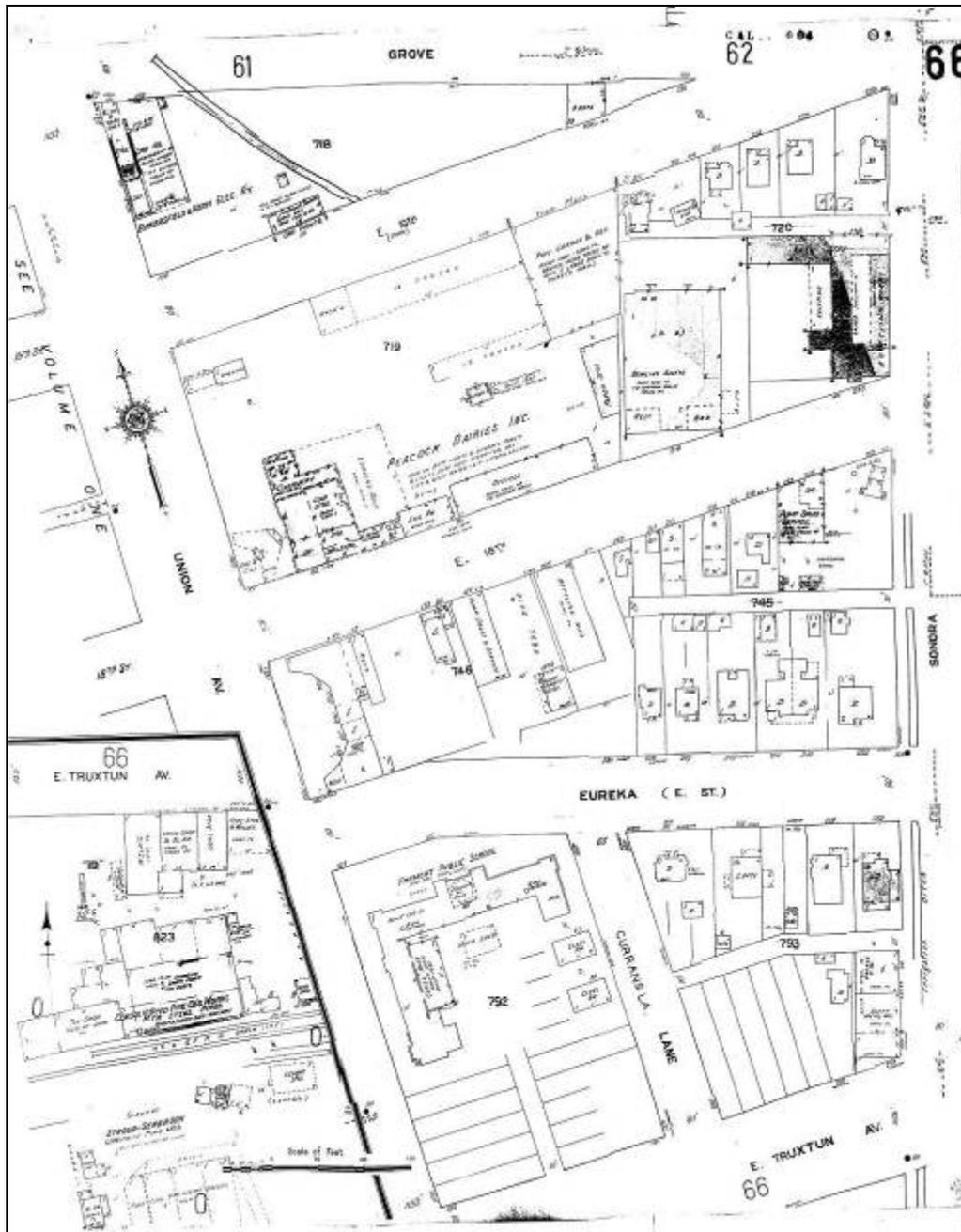
East Bakersfield was home to an ethnically diverse population from its earliest days, including members of the French, Italian, Basque, Mexican, and African-American communities. Since the nineteenth century, Mexican immigrants and Mexican-Americans have been a substantial component of East Bakersfield, where local clubs and social halls were frequently the center of cultural holidays and social events. The presence of French and Basque communities was also often reflected in the built environment by such buildings as hotels, restaurants, and other service-industry businesses in the late-nineteenth and early-twentieth century (*Sumner Standard* 1893 Apr 20: 1; Miller 1995; *Bakersfield Panache* 1995a; *Bakersfield Panache* 1995b; Zubiri 1998: 129-132, 150-169). By the 1930s, East Bakersfield’s Lincoln School (now called Bessie Owens) had the most ethnically diverse population of any school in Bakersfield; and in the 1970s, by which time its student body was heavily African-American, the school found itself at the center of a segregation controversy (*Bakersfield Californian* 1931 Jun 27; *Bakersfield Californian* 1975 Dec 18).

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<sup>21</sup> East Bakersfield properties developed after World War II include the parcels at 1400 Sumner Street (Reference: 017-072-13), 900 East 19<sup>th</sup> Street (Reference: 017-130-10) and 920 East Truxtun Avenue (Reference: 017-160-05). See Appendix B.

<sup>22</sup> The Caravan Inn at 1622 Union Avenue (Reference: 016-270-01) lacks historical and architectural significance and integrity, and is not eligible for listing in the NRHP or CRHR. See Appendix B.

<sup>23</sup> Ranch-style residences in East Bakersfield featured low-pitch roofs and a variety of siding materials, such as stucco, wood, and brick veneer. Examples include 1220 East 18<sup>th</sup> Street (Reference: 017-190-11) and 1319 East 19<sup>th</sup> Street (Reference: 017-200-05). The forms can be found in Appendix B.



Source: Sanborn Map and Publishing Company 1912-1949, Sheet 66.

**Figure 6-7**  
 Mixed-use character around East Truxtun and Union Avenues, East Bakersfield, 1949

On the western side of Bakersfield, northwest of the Kern River, development of the Rosedale area also accelerated in the twentieth century. After the Rosedale Colony venture failed in the 1890s (see discussion above), landowners and speculators began subdividing the remaining large parcels into smaller agricultural and residential lots; and later, laying out housing tracts. Among the early residential subdivisions was the Greenacres tract, created in 1930 out of former ranch land. Greenacres was one of the larger residential tracts along the Rosedale Highway corridor prior to World War II, but its development was slow. Individual buyers built upon its 160 lots

over a 30-year period, and the housing stock represents a variety of architectural styles, including Craftsman, Bungalow, Minimal Traditional, and Ranch. Numerous other residential subdivisions joined Greenacres in the decades following the end of World War II, and completed the transformation of the greater Rosedale area from open agricultural land to a densely populated suburb of Bakersfield (Morgan 1914: 115-116, 175-176; Kern County Recorder 1930; *Bakersfield Californian* 1930 Jan 18; *Bakersfield Californian* 1930 Jul 14; Rosedale Highway Business Association 1987; USGS 1954b, 1968).<sup>24</sup>

The Virginia Colony, southeast of Bakersfield, shared a similar fate to the Rosedale Colony. Following its early development as an agricultural settlement, land use patterns started to change fairly quickly in the twentieth century as landowners sold or converted their parcels into residential subdivisions. In 1910, the Kern Realty Company re-subdivided a portion of the colony into larger—mostly 10-acre—lots and called it Kern Citrus Tract; and in 1925, owners of Virginia Colony lots four and five established the Radio Park tract, consisting of 99 small residential parcels.<sup>25</sup> By the 1930s, residential land use in the former Virginia Colony had come to predominate (Kern Citrus Tract; Kern County Recorder 1925 Apr 7; USDA 1937). Suburbanization of the area accelerated in the immediate post-World War II period, as landowners and developers created several new, modestly sized residential tracts in the vicinity of Virginia and Potomac avenues.<sup>26</sup> After the post-war boom, the pace of growth again slowed in the former colony, only to accelerate once more following construction of the cross-town SR 58 through the area in the 1970s; this spurred yet another period of residential expansion, with many new suburban subdivisions developed on both sides of the freeway in the decades that followed (USDI 1947; USGS 1954c).

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<sup>24</sup> Greenacres Tract properties that are located in the revised APE reflect a range of architectural styles. Examples include the Cottage style residence at 9931 Glenn Street (Reference: 110-062-05), Minimal Traditional style residence at 10015 Glenn Street (Reference: 110-062-02), and the Contemporary style residence at 10005 Glenn Street (Reference: 110-062-03). See Appendix B.

<sup>25</sup> An example of Radio Park property located in the revised APE is the Bungalow with Craftsman elements at 1818 East Bakersfield (Reference: 138-350-13). See Appendix B.

<sup>26</sup> Wynema Gardens (Tract 1291) was subdivided and developed in the period immediately after World War II. The Minimal Traditional residence at 2649 Potomac Avenue (Reference: 141-182-09) is an example of this development. This form and others located in the tract can be found in Appendix B.

**Chapter 7.0**  
**Properties Identified as Not Eligible for the**  
**NRHP**



## 7.0 Properties Identified as Not Eligible for the NRHP

The APE for this Supplemental HASR traverses four counties, stretching from south of downtown Fresno, through rural Kings and Tulare counties, and into the city of Bakersfield, terminating in unincorporated Kern County east of Bakersfield. Most of the 149 historic architectural resources inventoried and evaluated for this supplemental report, known as the survey population, are in Kern County (63%), and most of these are in a neighborhood called East Bakersfield. Nearly a third of the survey population (32%) is located in rural Kings County, and most of these are in an area known as the Mussel Slough district, near the city of Hanford and towns of Armona and Grangeville. The remaining resources (5%) are situated in or near the town of Laton, the small settlement of Conejo in southern Fresno County. None of the resources are in Tulare County. The resources within the survey population reflect the major historical events and trends discussed in the previous section. Many of the resources are single-family residential buildings, many of which have an agricultural component or are related to the development and continued production of irrigated agriculture in rural areas. Still others are industrial, commercial, infrastructural, civic, and educational buildings and structures. None of the historic architectural resources evaluated for this Supplemental HASR appear eligible for listing in the NRHP or CRHR.<sup>27</sup>

The majority of the parcels that comprise of the survey population are located in urban or suburban communities of the APE (65%), and only about 35% of the parcels are located in rural areas. This is reflective of the large number of resources located in the East Bakersfield section of Kern County, which is a largely residential neighborhood with some mixed commercial / industrial and miscellaneous properties. Of the 95 Kern County resources, 93 (or 99%) are urban / suburban. By contrast, 42 of the 46 (or 91%) resources in Kings County are rural, and all eight Fresno County resources are in a rural location.

Nearly all of the survey population dates to the twentieth century. Only eight properties (5%) date to, or include components that date to, the latter half of the nineteenth century, five of which are irrigation canals: the Grant Canal and "A" Canal in southern Fresno County, built in 1873 and the late 1880s, respectively; the Lakeside Ditch and Lone Oak Canal in rural Kings County, built in 1875 and about 1890; and the East Side Canal in Kern County, built in 1893. The three remaining nineteenth-century properties include a farmstead in rural Kings County with a residence built circa 1879-1892, and twentieth century farm buildings (Reference: 018101020000); a farmhouse built circa 1887 with attached tank house and several twentieth century outbuildings, also in rural Kings County (Reference: 009070016000); and a circa 1888 residence and barn in southern Fresno County (Reference: 38520004). These three properties have lost integrity to their nineteenth-century appearance through alterations or severe deterioration. Of the twentieth-century properties, about 21% of the HASR survey population date to the first two decades (1900-1920), and about 20% date between 1921 and 1939. The remainder (about 59%) date to the period between 1940 and 1961.

The survey population includes a variety of property types: irrigation canals, agriculture-related resources, residential buildings, commercial and industrial buildings, civic and municipal facilities, social and educational buildings, and a small group of miscellaneous resources that are not easily categorized. The representatives of these property types recorded as part of this Supplemental HASR are described briefly below (see DPR 523 forms attached as Appendix B for detailed descriptions of each individual resource).

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<sup>27</sup> Please refer to the Supplemental HPSR for documentation of the other 13 historic architectural resources in the APE for the supplemental survey (Authority and FRA 2012), as well as the previous technical studies for built environment: *California High-Speed Train Fresno to Bakersfield Historic Architectural Survey Report (HASR)* (Authority and FRA 2011c), and *California High-Speed Train Fresno to Bakersfield Historic Property Survey Report (HPSR)* (Authority and FRA 2011b).

### **Irrigation Canals**

Five of the 149 historic architectural resources in the revised APE are nineteenth-century irrigation canals, which are generally characterized by unlined, earthen alignments with modern concrete structures such as headgates, check gates, and culverts. Two of these canals—Grant and “A”—are in southern Fresno County, and were developed for use in the Laguna de Tache land grant. These canals meander through and several miles west of Laton, but predate the settlement of the region by more than a decade. Additionally, “A” Canal has been partially piped underground. Two canals—Lakeside Ditch and Lone Oak Canal—irrigate portions of the Mussel Slough district of Kings County. Coursing through largely agrarian regions of their respective counties, these four canals have been partially or substantially realigned and/or lengthened and have undergone regular grading since their construction. The East Side Canal is in Kern County and irrigates land east and southeast of Bakersfield, including the settlements of Sumner (now East Bakersfield) and Weed Patch. The upper reaches of East Side Canal course through urban and suburban Bakersfield and unincorporated Kern County, while its lower reaches pass through largely rural regions of the county. These resources lack historical and architectural significance and/or integrity to their potential periods of significance, and therefore do not appear to be eligible for listing in the NHRP or CRHR.

### **Residential / Agricultural Built Environment**

Of the 149 survey population resources, 124 (or 83%) feature a residence on the property. For the most part, these resources have a single-family residence, although several have a multi-family residence or multiple single-family residences. In addition, many of the resources are located in rural, agrarian Kings and Fresno County, and feature an agricultural component, varying from an outbuilding or barn to a collection of farm buildings and structures. The high percentage of residential / agricultural resources is attributed to the fact that the study corridor for the Supplemental HASR passes through a largely rural, agricultural region in Kings and Fresno counties, and a primarily urban / suburban area of Bakersfield and unincorporated Kern County.

Early examples of these residential resources dating from the late 1870s to early 1900s exhibit National Folk or Queen Anne architectural styles, and were constructed using wood materials including framing, siding, windows, and roofing. These styles gave way in the early twentieth century (1910s-1920s) primarily to Bungalows, often featuring elements of Craftsman style architecture, that were chiefly characterized by less ornate details and single-story massing. Some houses of this period employed National Folk, while others used revival styles, like Tudor, Pueblo, and Colonial Revival architecture. By the 1930s and 1940s, Minimal Traditional houses were popular among study population resources, and in the post-war period, the Ranch style became the overwhelming choice for residences. Although these latter two architectural trends retained wood framing used in earlier styles, they featured a wider variety of materials for siding (stucco, brick, and stone veneer), roofing (asphalt shingles), and windows (steel and aluminum). Agriculture-related buildings and structures located in the survey population feature utilitarian designs with minimal ornamental details, constructed of standard materials such as wood, steel, and concrete. None of the residential / agricultural resources in the Supplemental HASR survey population appear to be eligible for listing in the NRHP or CRHR.

### ***Kings County: Agricultural / Residential***

Forty of the parcels that contain former or current farmsteads are in Kings County. Within the county, the resources can be categorized by whether or not they are located in the Mussel Slough district (see below), where 32 residential / agricultural resources are located; or are the six resources in the Guernsey area, or the two located on the outskirts of Corcoran. Most of the residential / agricultural resources are in a broad region of Kings County historically referred to as the Mussel Slough district, and are characterized by their current or former relationship with

moderately sized (20 to 40 acres) family farms. The Mussel Slough district roughly encompasses the broad, fertile plain south of the Kings River and west of Cole Slough, extending as far south as the Guernsey area (near Kansas Avenue) and as far west as Lemoore, with Hanford at its center. The study corridor crosses through Mussel Slough and includes a few nineteenth-century farmsteads, but most of the built environment resources in the revised APE were developed in the twentieth century and feature a range of architectural styles. There are myriad modern elements that have been added to these parcels, from additional secondary residences and agricultural outbuildings, to replacement primary residences and barns, to entire farms developed during the mid- to late-twentieth century. Many built environment resources have also been substantially altered through the infilling of original openings, construction of additions, installation of modern windows and doors, use of non-historic siding, roofing, and other construction materials.

### ***Kings County: Mussel Slough***

Because the Mussel Slough area was among the earlier regions in the San Joaquin Valley to develop irrigation systems and to transition from dry farming to intensive, diversified agriculture, the inventory and evaluation effort for this Supplemental HASR considered whether or not all or part of the region transected by the revised APE could be eligible as a rural historic landscape district. This consideration is documented here, as well as the DPR 523 forms prepared for the individual built environment resources located in both the revised APE and Mussel Slough.<sup>28</sup>

The Mussel Slough area is located in the fertile bottom lands of the Kings River Delta, and derives its name from a natural waterway that once meandered in a generally southwesterly direction north and west of Hanford. Its land area roughly equates to the service area of several major canal systems developed in the 1870s and 1880s—primarily the Lower Kings River Ditch, Last Chance Canal, People's Ditch, and Settler's Ditch (see Figure 6-3, above). As discussed in the historic context section, the water supplied by these ditches, in combination with the unusually rich soil, arrival of the railroad, and ingenuity of local farmers, were key factors in Mussel Slough's evolution into a productive agricultural district during the nineteenth century.

Central to deciding the issue of whether a rural historic landscape or district exists within an APE is the identification of distinct geographical area or landscape with defined period of significance, followed by an assessment of whether the existing landscape retains sufficient integrity to that period to convey its potential significance. The potential landscape is the area historically known as the Mussel Slough or Lucerne district, described above. Following National Register guidelines, the period of significance should cover the span of time in which the property made significant contributions to the broad patterns of our history (NPS Bulletin 15: 12-13; NPS 1989 revised 1999: 13). The guidelines further state that: "continuous land use, association, or function does not by itself justify continuing the period of significance. The length of time should be based on the years when the property historically made important contributions in the areas of significance"—in other words, the period of significance is based upon the time when the property achieved the character on which significance is based (NPS 1989 revised 1999: 21).

For the Mussel Slough region, its potential for eligibility as a significant rural historic landscape lies within the context of its relatively early transformation from an open and arid plain devoted to stock-raising and dry farming, to an intensively farmed region comprised small farms devoted to cultivation and production of a variety of agricultural crops and commodities. Based on the

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<sup>28</sup> Several individual properties have been identified that represent the significant nineteenth-century settlement and agricultural development patterns of the Mussel Slough region, and that retain sufficient integrity to convey their significance. Please refer to the Supplemental HPSR for further information on these historic properties: Peoples Ditch (Map ID #8); Last Chance Ditch (Map ID #4); and the farmstead at 9860 13<sup>th</sup> Avenue (Map ID #6) (Authority and FRA 2012).

guidance cited above, its period of significance should therefore reflect and be restricted to the time frame during which this change took place. From the research performed for this study and presented in the historic context above, the period of significance would begin about 1872, when construction on the first major irrigation canal through the region (Last Chance Ditch) was initiated, and end in 1900, by which time the pioneer era of Mussel Slough had effectively come to an end. Land use patterns, typified by crop diversity and a mixture of family and corporate farms on relatively small parcels (10 to 160 acres), were firmly established by this time and continued into the twentieth century.<sup>29</sup> These land use characteristics were increasingly evident in any number of similar agricultural landscapes throughout the San Joaquin Valley, including agricultural districts immediately adjacent to Mussel Slough—namely, the Laton area (formerly Rancho Laguna de Tache) to the north and the Lakeside District (surrounding Guernsey) to the south. Both of these growing regions converted from grain and grazing land to irrigated agriculture in the decades surrounding the turn of the twentieth century.

The Mussel Slough area does not meet the criteria for eligibility as a rural historic landscape or district—whether considering it as an entire geographic entity or considering just the portion that is within the APE of this Supplemental HASR. Like any historic property, to be eligible for the National Register, a rural historic landscape must satisfy the criteria for both significance and integrity. National Register Bulletin evaluation guidance defines a rural historic landscape as “a geographic area that historically has been used by people, or shaped or modified by human activity, occupancy, or intervention, and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features.” Although the Mussel Slough region reflects a continuity of land use from the potential period of significance through to the present (i.e., diversified farming on small parcels), following more than a century of continuing development, the built environment as it exists today no longer possesses a concentration and continuity of historic characteristics adequate to convey its significance (NPS 1989, revised 1999: 2-3). Its historic integrity has been compromised through ongoing changes to the landscape, primarily through the encroachment of urban development and the addition of twentieth- and twenty-first-century buildings and structures on parcels throughout the area.

Although there is no single definition of the boundaries of the Mussel Slough region, the general consensus among early observers and historians is that it encompasses the broad plain south of the Kings River and west of Cole Slough, extending as far south as Tulare Lake (now dry) and the Guernsey area (near Kansas Avenue), and as far west as Lemoore (Baker 1876; Small and Smith 1926: 300-301, 567-568; Preston 1981: 135-138, 146-147; Roberts 2008: 7-8) (Figure 6-3). This is an expansive area, encompassing on the order of 50,000 acres (or roughly 72 square miles—the equivalent of two 6-square-mile townships). Although National Register guidelines acknowledge that large historic landscapes (tens of thousands of acres) may be eligible, they also require that “large-scale intrusions [be] concentrated in a relatively few locations, and cover a proportionately small percentage of the overall acreage” (NPS 1989 revised 1999: 24).

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<sup>29</sup> In his in-depth geographical and historical study of Tulare Basin, *Vanishing Landscapes*, William L. Preston closes the pioneer period of the greater Mussel Slough even earlier, concluding: “The agricultural developments and the basic settlement patterns established during the formative years—1857 to 1894—set the mold for subsequent evolution of the Tulare Lake Basin...the general outlines of the prevailing processes had been established” (Preston 1981: 162-163). Indeed, an atlas map of the Hanford area (Figure 6-4) shows that the twentieth-century land use patterns were essentially in place by the early 1890s (Thompson 1892), and a turn-of-the-century rural directory lists scores of farmers and ranchers in the same area living and working on small parcels (often 40 acres or less) and producing a variety of agricultural products (Dewey 1901: passim).

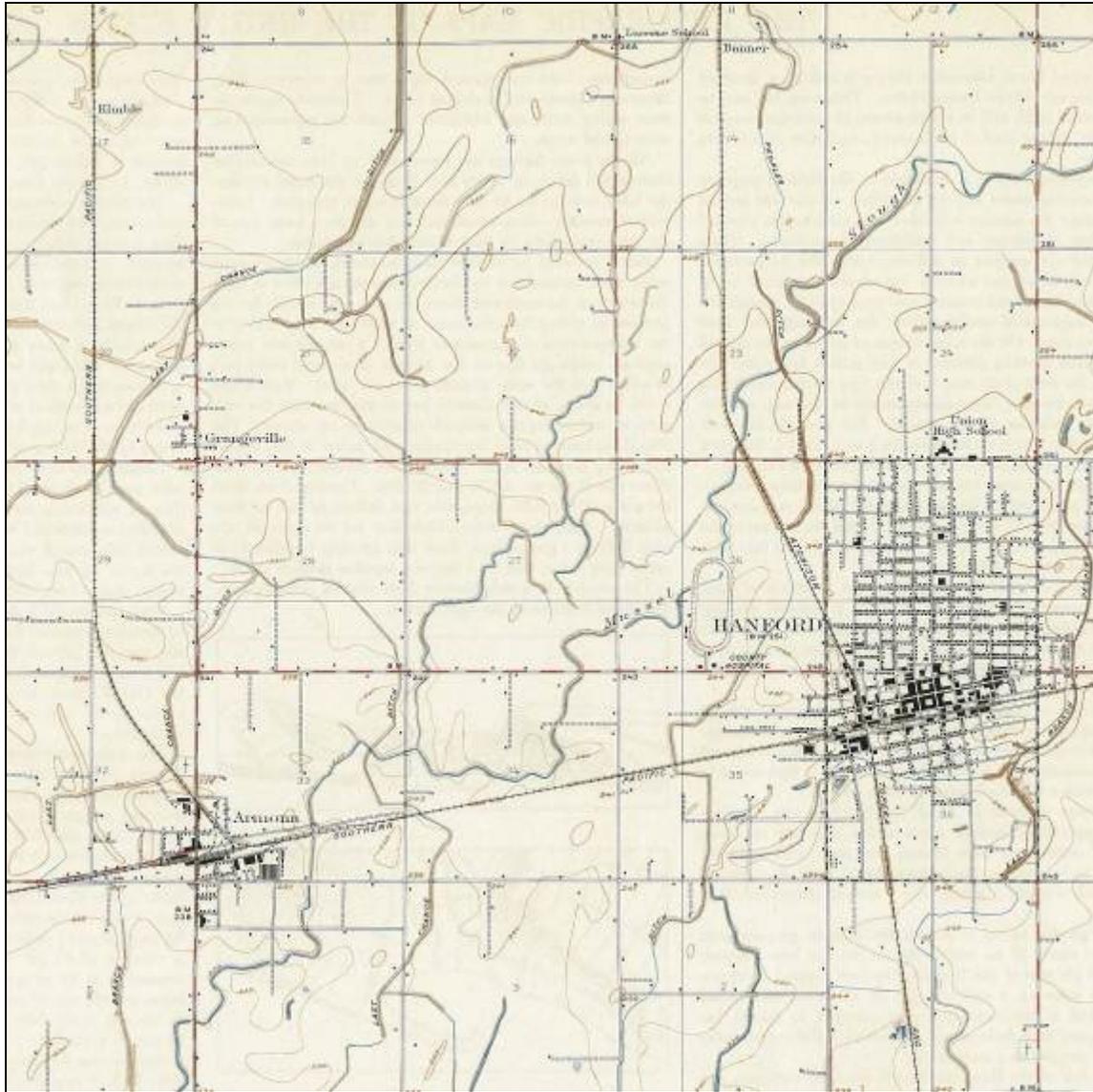
Within the Mussel Slough region are several population centers, each of which has expanded beyond its nineteenth-century street grid. At present, the urban edges of Hanford, Armona, and Grangeville have crept outward from their historic core to such an extent that the triangle of land between the three communities is nearly completely infilled with post-nineteenth-century development (Figures 7-1 and 7-2). These large-scale changes, taken together with other alterations to the historic landscape characteristics, such as introduction of new buildings and structures to the rural areas, development of modern roadways, and modifications to irrigation systems and structures (discussed further below), have cumulatively transformed the area so that it does not “cogently reflect the period of time in which the important events took place” (NPS 1989, revised 1999: 13).

The same rationale extends to the assessment of the more focused portion of the Mussel Slough region transected by the study corridor covered by this Supplemental HASR (Figure 7-2). The twentieth-century intrusions are most pronounced in the Hanford-Armona area where new construction proliferated, expanding the urban peripheries and adding industrial and warehouse facilities, shopping centers, sprawling school campuses, and housing tracts. Another modern element in this area is SR 198, a highway paralleling the Southern Pacific tracks, built in 1963 to supplant Lacey Boulevard as the main east-west route through Mussel Slough country. Although the major county roads more or less adhere to the road patterns of the nineteenth century (they usually follow along section lines), all have since been paved to modern standards. Other infrastructural elements within the study corridor have also evolved throughout the twentieth century, particularly the irrigation canals, which were systematically upgraded through replacement of original engineering features, reshaping and lining canal walls, and realigning entire ditch segments. The segments of the Lone Oak Canal that pass through or near the revised APE, for example, were moved and straightened after 1920 (see DPR 523 Form, “Lone Oak Canal,” Appendix B), as were long stretches of the People’s Ditch and its branches (see DPR 523 Form, “People’s Ditch,” in the Supplemental HPSR: Authority and FRA 2012).

The building stock in the rural areas also reflects the continuing evolution of the landscape that occurred throughout the twentieth century. Out of the more than 200 parcels in or partially within the revised APE, only three contain farmsteads or residences that have components dating to the 1800s;<sup>30</sup> the vast majority contain buildings dating to all decades of the twentieth century. Residences on these parcels reflect distinctly twentieth century architectural styles such as Craftsman, Spanish Eclectic, Minimal Traditional, and Ranch; many of these homes replaced nineteenth-century predecessors, which were typically designed in the Victorian or National Folk styles.

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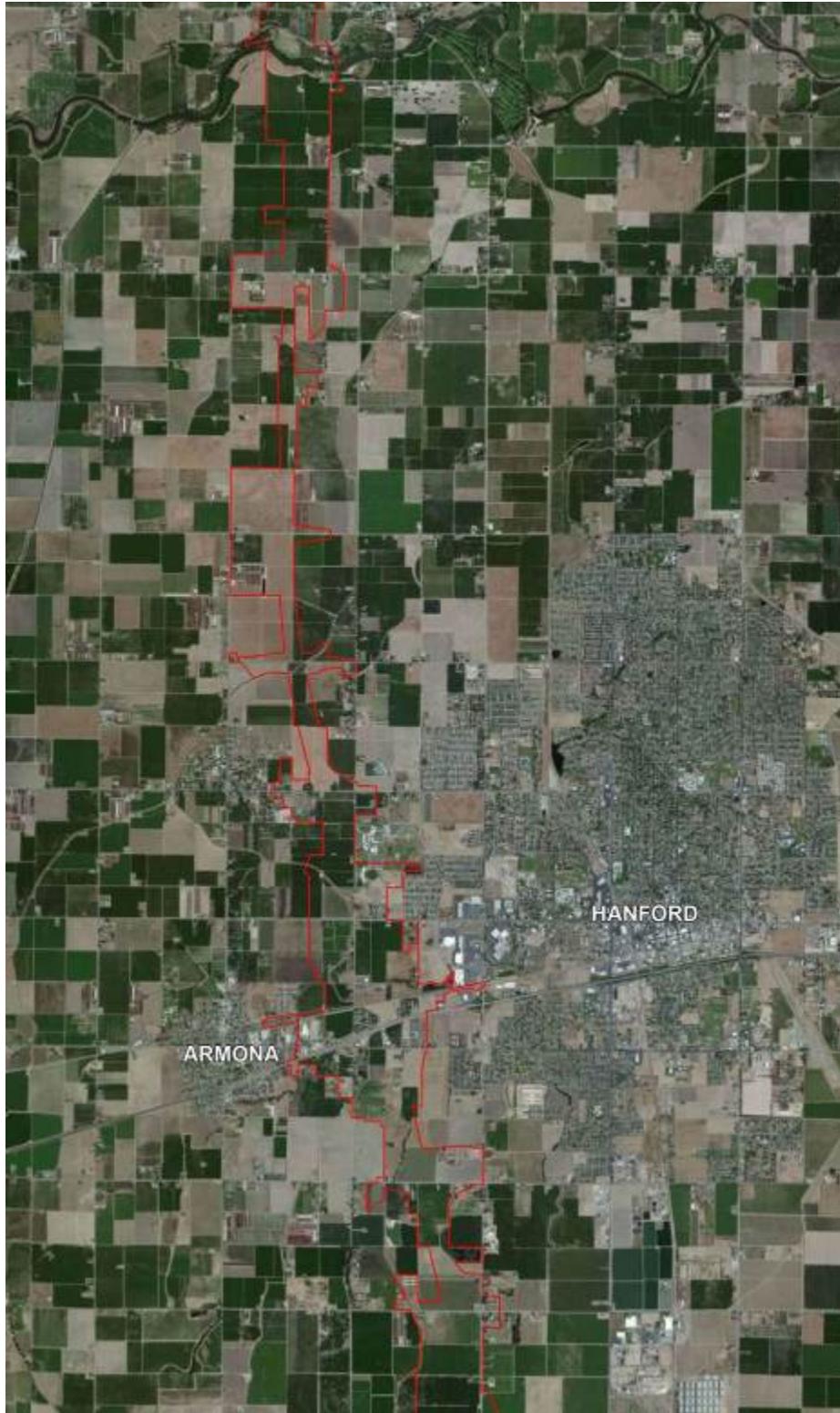
<sup>30</sup> See DPR 523 forms for various properties located in Mussel Slough (Kings County), in Appendix B of this Supplemental HASR. Please refer to the Supplemental HPSR for further information on: Peoples Ditch (Map ID #8); Last Chance Ditch (Map ID #4); and the farmstead at 9860 13<sup>th</sup> Avenue (Map ID #6) (Authority and FRA 2012).



Source: USGS *Hanford* (1926).

The study area for the Supplemental HASR runs north-south east of Grangeville and Armona (see Figure 7-2).

**Figure 7-1**  
Hanford, Armona, and Grangeville in 1926



Source: Bing Maps Aerial (2010).

Note: The red lines denote the approximate APE boundary for the Supplemental HASR.

**Figure 7-2**  
Modern urbanization of Hanford, Armona, and Grangeville

In summary, the loss of historic landscape characteristics, coupled with the introduction of incompatible (i.e., post-1900) land uses and construction, has cumulatively compromised the integrity of the Mussel Slough region to its potential period of significance. Continuing modifications to the landscape throughout the twentieth century (and to the present) have diluted the concentration of nineteenth-century characteristics and interrupted the visual continuity of the historic scene that National Register guidelines require for a rural landscape to be eligible.

This conclusion does not preclude the possible existence of a historic district or rural historic landscape elsewhere in Mussel Slough country outside of the revised APE surveyed for the Fresno to Bakersfield HST Section. Project constraints required that the survey and identification effort be focused upon those parcels within the APE delineated for the Fresno to Bakersfield HST Section. It is possible that future cultural resources studies in the Mussel Slough region could identify a smaller geographic area (a portion of the former Mussel Slough area) that contains a significant concentration, linkage, or continuity of historical landscape characteristics that would merit eligibility as a rural landscape or district.

### ***Kern County: Residential / Agricultural***

Seventy-eight residential / agricultural resources in the revised APE are located in Kern County. Most of these resources are in East Bakersfield, a largely residential community comprising the former city of Kern (also known as Sumner) and the Virginia Colony, a tract of land subdivided, sold, and developed for residential and agricultural purposes. All of the residential survey population properties recorded in East Bakersfield in this Supplemental HASR date to the twentieth century, and were largely developed during widespread periods of residential construction, including in the early twentieth century, and especially following World War II. Most consist of single-family wood-frame residences with architectural styles fitting their historical periods. Several residences featuring agricultural components are within the Rosedale area, located just beyond the western edge of the city of Bakersfield. These resources are characterized by their historical relationship to early twentieth century small family farms on lots no larger than 2 acres, and consist of a primary residence dating from the 1920s to the 1940s that is usually accompanied by a handful of outbuildings of various construction dates. One residential resource on a farm is located near the Kern County city of Shafter; and, although the parcel has been separated from its surrounding farmland, it features a variety of residential and agricultural buildings dating from 1946. Finally, a mixed-use property in East Bakersfield contains a 1935 residence with several post-war commercial / industrial buildings.

### ***Fresno County: Residential / Agricultural***

Six additional residential / agricultural resources are located in southern Fresno County, four of which are historically associated with the early- to mid-twentieth-century development of the former Laguna de Tache grant. One of these Fresno County properties retains an agricultural resource—a milk barn—but no longer includes residential or additional agricultural resources. Two Fresno County properties in the survey population are near the small settlement of Conejo, one of which features a dilapidated nineteenth-century residence with associated barn, mentioned above. The other property includes a large industrial building (1950) that predates the residence (1973-1977) on the parcel.

### **Commercial and Industrial Built Environment**

The 11 commercial and industrial properties comprise about 8% of the study population, and were developed between 1945 and 1959. Eight of these properties are located in or near the city of Bakersfield in Kern County; two are located in the Kern County city of Shafter; and one is located near the city of Corcoran in Kings County. Most of the commercial buildings feature a

light-industrial component, or were at one time used for manufacturing or distribution. For that reason, and because all of the buildings were constructed during the same period, the commercial and industrial buildings in the survey population share several characteristics. Construction materials include pre-cast concrete, prefabricated metal, corrugated steel, and wood, with minimal use of brick and stone. Freight docks, freight doors, metal industrial sash, aluminum-frame windows, and truss or flat roofs with parapet walls are typical attributes of this type. Most of the properties exhibit few elaborate or discernible architectural elements, and can be classified as strictly utilitarian in terms of their style. This was typical of industrial, light-industrial and some commercial buildings of the post-war period. One property contains a Ranch-style building that was converted from its original function as a residence. Another is a motel, featuring a central, open courtyard with landscaping surrounded by the lodging building. The courtyard once included a pool, but this has been filled with concrete, and the building itself has undergone extensive alterations to siding, windows, and doors. None of the buildings representing this property type is eligible for listing in the NRHP or CRHR.

### **Social / Civic / Educational Built Environment**

The Supplemental HASR survey population includes five properties that can be categorized as social, civic, or educational in function. These properties are all located in Bakersfield or East Bakersfield in Kern County, and date from the 1910s to the 1950s. These are a mixture of properties, including a school, social hall, government building, a police training facility, and veteran's memorial facility. The school, Bessie Owens Intermediate School, is a complex of eight buildings originally constructed in 1954 from the designs of local architect Robert N. Eddy. During the 1970s and 1980s, the school—which served a student body consisting almost entirely of minority groups—became the site of a legal dispute over alleged systematic segregation. A resolution was reached in 1984 between the school district and the federal government in which the district agreed to voluntarily employ desegregation programs. Because this was a new approach to school desegregation that eschewed compulsory methods favored during the previous decades, it made headlines in newspapers across the country. Although the school has potential significance under NRHP Criterion A and CRHR Criterion 1 for its association with a new approach to school desegregation, with a potential period of significance of 1979 to 1984, that period is less than 50 years old, requiring the property to meet the standards of Criterion Consideration G as well. Not enough time has passed to determine if the events associated with this school during the potential period of significance are of exceptional historical significance as required under Criterion Consideration G. Therefore, the property does not appear eligible for listing in the NRHP or CRHR.

The remaining social, civic, and educational buildings include: a Quonset hut and wood-frame former hall for Sociedad Juárez Mutalista Mexicana, a local mutual aid society for the Mexican-American community; a Kern County government building used to regulate weights and measures of commercial industrial products that features a Ranch-style office building, tank tower, and utilitarian structures; the Bakersfield Police Department Firearms Training Facility, consisting of two firing ranges and several outbuildings; and a veterans memorial complex that includes an office building and youth activity center constructed of brick and concrete-block masonry materials. These resources lack historical and architectural significance and/or integrity to their potential periods of significance, and therefore do not appear to be eligible for listing in the NHRP or CRHR.

### **Miscellaneous Built Environment**

A small population of resources in the study corridor does not easily fit into the previous three property types. These properties include two electrical substations in rural Kings County, a utility building of unidentified use, and an ornamental row of trees. The Pacific Gas & Electric Guernsey Substation was developed in 1930-1931, and includes a 2-acre graveled switching yard and a

small concrete-brick control building with Mission-style parapets, coping, and vents. The circa-1955 Southern California Edison Grangeville Substation features a similar graveled switching yard with a small, prefabricated metal control building lacking distinct elements of a specific architectural style. A third miscellaneous resource is a small wood-frame shed with corrugated metal siding built circa 1950s in Bakersfield, but the function of this resource remains unknown. Finally, the survey population includes a row of 50 fan palms planted on both sides of Otis Avenue in Corcoran during the establishment and initial promotion of the newly platted town. This modest aesthetic improvement to the town is not important within the context of the initial settlement of Corcoran. None of this group of miscellaneous resources is eligible for listing in the NHRP or CRHR.

Table 7-1 presents the 149 historic architectural resources that were subject to intensive survey for this Supplemental HASR. The DPR 523 forms for these resources are provided in Appendix B.

The revised APE contains eight properties that were previously determined ineligible for the NRHP (California Historical Resource Status [CHRS] codes 6Y and/or 6Z), and therefore do not require further study. These properties are listed in Table 7-2. Review of the Caltrans “Historical Significance–State Agency Bridges” (Caltrans Structure Maintenance and Investigations 2012a, 2012b) identified two state-owned highway and local agency bridges built in or before 1961 within the project limits. All of these bridges are listed as Category 5 and are therefore not eligible for listing in the NRHP or CRHR, as shown in Table 7-3. In addition to these resources, the streamlined documentation properties (per the HST Section 106 PA) are presented in Appendix C.

**Table 7-1**  
 Survey Population (Intensive) for the Historic Architectural Survey Report  
 (arranged north to south by county)

Map ID #	APN/Ref #	Address		City <sup>a</sup>	County	Year Built	CHRS Code	Map Sheet
1	38511058	14905	S	Peach Avenue	—	Fresno	1950, 1973-77	6Z 39
2	38520004			Conejo Avenue	—	Fresno	ca. 1888	6Z 40
3	05703002s	20047	S	Sunnyside Avenue	—	Fresno	1931, 1950-57	6Z 90
4	5703053		E	Mount Whitney Avenue	—	Fresno	ca. 1912	6Z 91
6	5708030	5325	E	Mount Whitney Avenue	—	Fresno	1930	6Z 92
5	5708019			Mount Whitney Avenue	—	Fresno	ca. 1930	6Z 92
7	'A' Canal	NA		—	Fresno	late 1880s	6Z	
8	Grant Canal	NA		—	Fresno	1873	6Z	
9	2230004000	13250		Douglas Avenue	—	Kings	1957	6Z 92
10	2230003000	3500		13 1/4 Avenue	—	Kings	1952	6Z 93
11	2230046000	3567		13 1/4 Avenue	—	Kings	1950-57	6Z 93
12	2230007000	3948		13 1/4 Avenue	—	Kings	ca. 1930, 1940s, 1952	6Z 93
13	2220067000	4620		13 1/4 Avenue	—	Kings	ca. 1954	6Z 95
14	2220007000	13380		Excelsior Avenue	—	Kings	ca. 1910s	6Z 95

**Table 7-1**  
 Survey Population (Intensive) for the Historic Architectural Survey Report  
 (arranged north to south by county)

Map ID #	APN/Ref #	Address		City <sup>a</sup>	County	Year Built	CHRS Code	Map Sheet
15	6020003000	13301	Excelsior Avenue	—	Kings	ca. 1920	6Z	95
16	6020004000	13235	Excelsior Avenue	—	Kings	ca. 1910s	6Z	95
17	6020095000	13422	Elder Avenue	—	Kings	1908	6Z	97
18	6050020000	13510	Elder Avenue	—	Kings	ca. 1910-20s	6Z	98
19	6050005000	13942	Flint Avenue	—	Kings	ca. 1913	6Z	99
20	9010033000	7955	14th Avenue	—	Kings	ca. 1910s-30, 1952	6Z	101
21	9010031000	13940	Fargo Avenue	—	Kings	ca. 1910s-30	6Z	101
22	9100022000	13360	Grangeville Boulevard	—	Kings	1952	6Z	103
23	9070008000	13285	Grangeville Boulevard	—	Kings	1937	6Z	103
24	9070016000	9534	13th Avenue	—	Kings	ca. 1887	6Z	104
25	9070047000	9700	13th Avenue	—	Kings	1954	6Z	104
26	9050041000	9783	13th Avenue	—	Kings	1960	6Z	104
27	9050038000	9885	13th Avenue	—	Kings	ca. 1960	6Z	104
28	9050035000	12846	Lacey Boulevard	—	Kings	ca. 1961	6Z	104
29	9050032000	12782	Lacey Boulevard	—	Kings	1952	6Z	104
30	18102002000	12773	Lacey Boulevard	—	Kings	1952	6Z	104
31	18102054000	10041	13th Avenue	—	Kings	ca. 1905	6Z	106
32	18101020000	10282	13th Avenue	—	Kings	ca. 1879-92	6Z	105
33	18270039000	NA	13th Avenue	—	Kings	ca. 1955	6Z	107
34	Lakeside Ditch	NA		—	Kings	1875	6Z	69, 76, 77, 78, 80, 82, 126, 127, 128, 129
35	18102023000	12458	Hanford- Armona Road	—	Kings	1922	6Z	111
36	18490060000	13101	13th Road West	NA	Kings	1940	6Z	110
37	18490014000	13170	Hood Avenue	—	Kings	1926-37, 1961	6Z	112
38	18172063000	11301	13th Avenue	—	Kings	1920	6Z	113
39	18172049000	12633	Hanford- Armona Road	—	Kings	1958	6Z	114

**Table 7-1**  
 Survey Population (Intensive) for the Historic Architectural Survey Report  
 (arranged north to south by county)

Map ID #	APN/Ref #	Address		City <sup>a</sup>	County	Year Built	CHRS Code	Map Sheet
40	Lone Oak Canal	NA		—	Kings	ca. 1890	6Z	114, 115, 116, 117, 118
41	18172052000	12758	Houston	Avenue	—	Kings	1920	6Z 115
42	18222023000	12135	Houston	Avenue	—	Kings	1952	6Z 115
43	18231013000	12903	12th	Avenue	—	Kings	1952	6Z 117
44	Guernsey Substation; 028150003000	NA	11th	Avenue	—	Kings	1930-31	6Z 124
45	28201012000	17459	10th	Avenue	—	Kings	1938	6Z 126
46	28210005000	17656	10th	Avenue	—	Kings	1957	6Z 127
47	28220085000	10370	Kansas	Avenue	—	Kings	1961	6Z 127
48	28220027000	18026	10th	Avenue	—	Kings	ca. 1925, ca. 1930s	6Z 127
49	28220028000	18470-18488	10th	Avenue	—	Kings	ca. 1913, 1950	6Z 128
50	28206005000	9846	Lansing	Avenue	—	Kings	ca. 1910-20s	6Z 129
51	28260029000	20910	Central Valley	Highway	—	Kings	1937	6Z 133
52	28290023000	21512	8th	Avenue	—	Kings	1952	6Z 135
53	34230042000	NA	Pickerell	Avenue	—	Kings	ca. 1950	6Z 153
54	7218022	17045	Central Valley	Highway	—	Kern	1956	6Z 281
55	Otis Avenue Palm Trees	NA	Otis	Avenue	Corcoran	Kings	ca. 1905	6Z 149
56	7221035	30718	Merced	Avenue	—	Kern	1946	6Z 264
57	02601013 02601014	535, 655	N Shafter	Avenue	Shafter	Kern	1945, 1952-56, 1988, 2002	6Z 287
58	46305082	4801	Renfro	Road	Bakersfield	Kern	1959	6Z 315
59	11018109	2125	Verdugo	Lane	—	Kern	1961	6Z 320
60	11015004	10220-10222	Shellabarger	Road	—	Kern	1926, 1938	6Z 323
61	11006202	10015	Glenn	Street	—	Kern	1942	6Z 323
62	11006203	10005	Glenn	Street	—	Kern	1939, 1965	6Z 323
63	11006205	9931	Glenn	Street	—	Kern	1926	6Z 323
64	11006207	9915	Glenn	Street	—	Kern	1944	6Z 323
65	11006208	9817	Glenn	Street	—	Kern	1931	6Z 323

**Table 7-1**  
 Survey Population (Intensive) for the Historic Architectural Survey Report  
 (arranged north to south by county)

Map ID #	APN/Ref #	Address		City <sup>a</sup>	County	Year Built	CHRS Code	Map Sheet
66	36819045	1430	Calloway Drive	—	Kern	1951	6Z	324
67	33250014	3419	Truxtun Avenue	Bakersfield	Kern	1949-56	6Z	330
68	613212	208	Truxtun Avenue	Bakersfield	Kern	1922	6Z	334
69	613211	200	Truxtun Avenue	Bakersfield	Kern	1953	6Z	334
70	613210	114	Truxtun Avenue	Bakersfield	Kern	1915	6Z	334
71	1627001	1622	Union Avenue	Bakersfield	Kern	1959	6Z	334
72	1627010	NA	Truxtun Avenue	Bakersfield	Kern	ca. 1950s	6Z	336
73	1621210	716	Eureka Street	Bakersfield	Kern	1911	6Z	336
74	1621209	720	Eureka Street	Bakersfield	Kern	1925	6Z	336
75	1630005	725	Eureka Street	Bakersfield	Kern	ca. 1910	6Z	336
76	1630007	404	King Street	Bakersfield	Kern	1956	6Z	336
77	1630009	720	Dolores Street	Bakersfield	Kern	1956	6Z	336
78	1630008	400	King Street	Bakersfield	Kern	1956	6Z	336
79	1742014	810	Butte Street	Bakersfield	Kern	1950	6Z	337
80	1801004	999 E	California Avenue	Bakersfield	Kern	1950-52	6Z	337
81	1742009	830	Butte Street	Bakersfield	Kern	1954	6Z	337
82	1742007	827	Chico Street	Bakersfield	Kern	1948	6Z	337
83	1741001	815	Eureka Street	Bakersfield	Kern	1954	6Z	336
84	1728004	815 E	18th Street	Bakersfield	Kern	1912-18, 1947-48	6Z	336
85	1740010	926	Chico Street	Bakersfield	Kern	1954	6Z	337
86	1729002	921	Eureka Street	Bakersfield	Kern	1961	6Z	336
87	1727011	920	Eureka Street	Bakersfield	Kern	1949	6Z	336
88	1727009	926	Eureka Street	Bakersfield	Kern	1953	6Z	336
89	1727008	930	Eureka Street	Bakersfield	Kern	1953	6Z	336
90	1713010	900 E	19th Street	Bakersfield	Kern	ca. 1946	6Z	336
91	1716005	920 E	Truxtun Avenue	Bakersfield	Kern	ca. 1946	6Z	336
92	1739013	1010	Chico Street	Bakersfield	Kern	1946	6Z	337
93	1739016	1022	Chico Street	Bakersfield	Kern	1955	6Z	339
94	1739009	1026	Chico Street	Bakersfield	Kern	1954	6Z	339
95	1745001	1116 E	California Avenue	Bakersfield	Kern	1947, 1952	6Z	339
96	1717006	1019 E	Truxtun Avenue	Bakersfield	Kern	1917	6Z	338
97	1717007	1020-1022 E	18th Street	Bakersfield	Kern	1920-40s, moved 1956-65	6Z	338

**Table 7-1**  
 Survey Population (Intensive) for the Historic Architectural Survey Report  
 (arranged north to south by county)

Map ID #	APN/Ref #	Address		City <sup>a</sup>	County	Year Built	CHRS Code	Map Sheet
98	1726006	1027	E 18th Street	Bakersfield	Kern	1957	6Z	338
99	1725001	1101	E 18th Street	Bakersfield	Kern	1910	6Z	338
100	1718017	1100	E 18th Street	Bakersfield	Kern	1956	6Z	338
102	1718003	1107	E 19th Street	Bakersfield	Kern	1919	6Z	338
101	1718013	1118	E 18th Street	Bakersfield	Kern	1915	6Z	338
103	1711011	1104	E Truxtun Avenue	Bakersfield	Kern	1915	6Z	338
104	1718009	610	Robinson Street	Bakersfield	Kern	1938, 1955	6Z	338
105	1732018	1200	Dolores Street	Bakersfield	Kern	1921	6Z	339
106	1732019	1220	Dolores Street	Bakersfield	Kern	1941	6Z	339
107	1719011	1220	E 18th Street	Bakersfield	Kern	1952	6Z	338
108	1710003	1201	E Truxtun Avenue	Bakersfield	Kern	ca. 1925-60	6Z	338
109	1709010	1314	E 19th Street	Bakersfield	Kern	1920	6Z	338
110	1720004	1315	E 19th Street	Bakersfield	Kern	1955	6Z	338
111	1720005	1319	E 19th Street	Bakersfield	Kern	1954	6Z	338
112	1721002	1405	E 19th Street	Bakersfield	Kern	1953	6Z	338
113	1721006	1423	E 19th Street	Bakersfield	Kern	1954	6Z	338
114	1708007	1414	E 19th Street	Bakersfield	Kern	1954	6Z	338
115	1708006	1420	E 19th Street	Bakersfield	Kern	1922	6Z	338
116	1708005	1424	E 19th Street	Bakersfield	Kern	1924	6Z	338
117	1708012	1428	E 19th Street	Bakersfield	Kern	1961-62	6Z	338
118	1747011	1500	E 19th Street	Bakersfield	Kern	1949-51	6Z	338
119	1707212 1707213	1400- 1404	Sumner Street	Bakersfield	Kern	ca. 1949-53	6Z	338
120	1748008	600	Williams Street	Bakersfield	Kern	1952	6Z	339
121	13832010	1325	Ogden Avenue	—	Kern	1950	6Z	340
122	13835013	1818	E California Avenue	—	Kern	1930	6Z	341
123	14012104	1104	Bates Avenue	—	Kern	1961	6Z	341
124	14012203	1109	Bates Avenue	—	Kern	1961	6Z	341
125	14013004	1903	E California Avenue	—	Kern	ca. 1905, moved 1931	6Z	341
126	13836030	1916- 1918	E California Avenue	—	Kern	1938-40	6Z	341
127	13837014	1205- 1207½	Chamberlain Avenue	—	Kern	1940-1955	6Z	341
128	14030007	2115	E California Avenue	—	Kern	1938, post 1975	6Z	341

**Table 7-1**  
 Survey Population (Intensive) for the Historic Architectural Survey Report  
 (arranged north to south by county)

Map ID #	APN/Ref #	Address		City <sup>a</sup>	County	Year Built	CHRS Code	Map Sheet
129	14029110	943		Mt. Vernon Avenue	—	Kern	1950	6Z 341
130	13734016	2222	E	California Avenue	—	Kern	ca. 1930	6Z 341
131	13732006	2301		Edison Highway	—	Kern	1952-54	6Z 340
132	14102007 14102008 14102009 14102010 14102011 14102012	2231-2301	E	California Avenue	—	Kern	ca. 1937- 47	6Z 341
133	14113001	2501	E	California Avenue	—	Kern	ca. 1957	6Z 342
134	14113003	2503	E	California Avenue	—	Kern	1910	6Z 342
135	13725020	2610		Trust Avenue	—	Kern	1946	6Z 342
136	14112002	2552		Potomac Avenue	—	Kern	1956	6Z 343
137	14112003	2556		Potomac Avenue	—	Kern	1920	6Z 343
138	14118203	2613		Potomac Avenue	—	Kern	1947	6Z 343
139	14118208	2643		Potomac Avenue	—	Kern	1947, 1951	6Z 343
140	14118209	2649		Potomac Avenue	—	Kern	1947	6Z 343
141	14118211	2661		Potomac Avenue	—	Kern	1947	6Z 343
142	14118212	2665		Potomac Avenue	—	Kern	1947	6Z 343
143	14116005	1000		Quantico Avenue	—	Kern	1952	6Z 343
144	14116002	1008		Quantico Avenue	—	Kern	ca. 1926-37	6Z 343
145	14116010	1020		Quantico Avenue	—	Kern	1905	6Z 343
146	14202007	2800		Citrus Drive	—	Kern	1960	6Z 343
147	14216012 14216013 14216014	3003		Edison Highway	—	Kern	1935, ca. 1950s	6Z 344
148	14217008	3032		Potomac Avenue	—	Kern	1947	6Z 344
149	East Side Canal			NA	—	Kern	1893, 1928, 1936, 1957, 1962, 1977	6Z 342, 343, 344

<sup>a</sup> "—" in a cell indicates that the resource is in an unincorporated area.

APN = Assessor's parcel number

CHRS = California Historical Resource Status

CRHR = California Register of Historical Resources

NA = not applicable or not available

6Z = found ineligible for NRHP, CRHR, or local designation through survey evaluation

**Table 7-2**  
 Previously Evaluated Properties (CHRS Codes 6Y, and/or 6Z)  
 (sorted by county)

APN / Resource Name	Address	City <sup>a</sup>	County	Year Built	Previous Status (CHRS Code)
BNSF culverts and bridge	NA	Hanford and vicinity	Kings	1918, 1924	6Z
San Joaquin Valley Railroad culverts and bridges	NA	—	Kings	1904-1955	6Y
Stine Canal	NA	Bakersfield	Kern	1873	6Y
01630003	719 Eureka St	Bakersfield	Kern	1937	6Y
01719002	1207 E. 19 <sup>th</sup> Street	Bakersfield	Kern	1945	6Y
01719013	1212 E. 18 <sup>th</sup> Street	Bakersfield	Kern	1959	6Y
01719015	1200 E. 18 <sup>th</sup> Street	Bakersfield	Kern	1916	6Y
14113012	1111 Vansite Street	Bakersfield	Kern	1939	6Y

<sup>a</sup> An "—" in a cell indicates that the resource is in an unincorporated area.  
 CHRS = California Historical Resource Status  
 NA = not applicable or not available  
 6Y = determined ineligible for NRHP by consensus through Section 106 process; not evaluated for CRHR or local listing  
 6Z = found ineligible for NRHP, CRHR, or local designation through survey evaluation

**Table 7-3**  
 Bridges Built in or before 1961 That Are Not  
 Eligible for the NRHP (Caltrans Category 5)

Bridge No.	City <sup>a</sup>	County	Year Built	Comments	Previous Status (CHRS Code)
45C0102	—	Kings	1955	Fargo Avenue over Last Chance Ditch	6Z
50C0297	Bakersfield	Kern	1955	Edison Highway over East Side Canal	6Z

<sup>a</sup> An "—" in a cell indicates that the resource is in an unincorporated area.  
 CHRS = California Historical Resource Status  
 NA = not applicable or not available  
 NRHP = National Register of Historic Places  
 6Z = found ineligible for NRHP, CRHR, or local designation through survey evaluation

# **Chapter 8.0**

## **Findings**



## 8.0 Findings

This section summarizes the inventory and evaluation of historic architectural resources presented in this Supplemental HASR. The historic architectural resources inventoried and evaluated were built in or before 1961 and reflect the major historical themes discussed in the historical context. The context explores the major historic events and trends that occurred within the study corridor, which extends from south of downtown Fresno, traverses rural Fresno, Kings, and Tulare counties, and terminates in unincorporated Kern County, east of the city of Bakersfield. Approximately two-thirds of the resources surveyed are in urban or suburban areas, while the remaining one-third are scattered throughout rural Kern, Kings, and Fresno counties.

The historic status of the 149 historic architectural resources surveyed for this Supplemental HASR is shown in Table 7-1, and the DPR 523 form for each is included in Appendix B. The evaluations of the 149 resources concluded that none appear eligible for listing in the NRHP or the CRHR. QIs evaluated all of these resources by applying NRHP and CRHR criteria and in accordance with the California OHP *Instructions for Recording Historical Resources* (March 1995). None of the historic architectural resources in the revised APE that were built after 1961 (i.e., were less than 50 years old at the time of survey) appeared to have potential for exceptional significance (NRHP Criteria Consideration G). Resources less than 50 years old were exempt from both intensive survey and the streamlined documentation requirements. No historic architectural resources addressed in this Supplemental HASR required further study to resolve the question of eligibility.

Historic architectural resources built in 1961 or before, and that met the HST Section 106 PA definition of streamlined documentation properties because they had been substantially altered, did not require full evaluation on DPR 523 forms. The HST Section 106 PA documentation for these 407 streamlined documentation properties is presented in Appendix C.

This Supplemental HASR was prepared as part of project compliance with applicable sections of NHPA (36 CFR Part 800), and its implementing regulations issued by the ACHP as these pertain to federally funded undertakings and their impacts on historic properties. This Supplemental HASR will be submitted to the SHPO for its concurrence in the adequacy of the revised APE, and the identification and evaluation findings.

All historic-period architectural resources (built in 1961 or before) that did not meet the HST Section 106 definition for streamlined documentation properties were also evaluated in accordance with Section 15064.5(a)(2)–(3) of the CEQA Guidelines, using criteria outlined in Section 5024.1 of the California Public Resources Code. None of the historic architectural resources surveyed and presented in this Supplemental HASR are considered a historical resource for the purposes of CEQA. CEQA historical resources are those listed in the CRHR, eligible for listing in the CRHR, or those that meet other local government standards as historical resources, as per CEQA Guidelines Section 15064.5(a)(4).

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# **Chapter 9.0**

## **References**



## 9.0 References

*Note: this section includes references cited in the text of this HASR; for the citations in the DPR 523 forms, refer to the individual forms that are attached to the report in Appendix B.*

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## **Section 10.0**

### **Preparer Qualifications**



## 10.0 Preparer Qualifications

The cultural resources study presented in this HASR was conducted by or under the supervision of persons who qualify as historians and/or architectural historians under the Professional Qualification Standards of the U.S. Secretary of the Interior (as defined in 36 CFR Part 61). The following preparers meet the standards for "Qualified Investigator" as defined in the HST Section 106 PA.

Rebecca Meta Bunse (M.A., History–Public History, California State University, Sacramento) prepared this HASR and meets the Secretary of the Interior's standards for both Historian and Architectural Historian. Ms. Bunse, who is a partner at JRP Historical Consulting, LLC, has more than 22 years of experience as a consulting historian on a wide variety of historical research and cultural resource management projects. She has conducted research and field evaluation for historic architectural surveys throughout California. For this project, she served as the task manager for the built environment surveys; directed QI staff; conducted research, reconnaissance, documentation for streamlined documentation properties, intensive-level fieldwork; and delineated the historic architectural APE. She directed the preparation of all built environment technical reports, as well as authoring sections of the reports and DPR 523 forms.

Christopher McMorris (M.S. in Historic Preservation, Columbia University) reviewed and edited the HASR and property evaluations. Mr. McMorris is a partner at JRP Historical Consulting, LLC, and has more than 14 years of experience conducting a wide variety of historical research, public history, and historic preservation projects. Based on his education and experience, he qualifies as a historian/architectural historian under the Secretary of the Interior's Professional Qualification Standards (as defined in 36 CFR Part 61).

Toni Webb (B.F.A., Historic Preservation, Savannah College of Art & Design) was the lead historian/ architectural historian for this project. Ms. Webb conducted research and field surveys, data management and graphics production, as well as contributing to the HASR and HPSR. Ms. Webb has more than 12 years of experience in public history and historic preservation with JRP. Based on her level of experience and education, Ms. Webb qualifies as an architectural historian under the Secretary of the Interior's Professional Qualification Standards (as defined in 36 CFR Part 61).

Bryan Larson (M.A. in Public History, California State University, Sacramento) contributed to and edited the HASR and HPSR and their respective DPR 523 forms. Mr. Larson has been with JRP since 1998 conducting historic surveys and evaluation studies. Based on his education and experience, he qualifies as a historian/architectural historian under the Secretary of the Interior's Professional Qualification Standards (as defined in 36 CFR Part 61).

Cheryl Brookshear (M.S., Historic Preservation, University of Pennsylvania) conducted field surveys, field research, and prepared DPR forms for this project, as well as contributed to the HASR and HPSR. She meets the Secretary of the Interior's standards for both Historian and Architectural Historian. Ms. Brookshear is an Architectural Historian with JRP Historical Consulting, LLC, and has conducted research and field evaluation for historic architectural surveys throughout California.

Joseph Freeman (M.A., History, University of California, Riverside) has 5 years of experience in cultural resource management and historical research projects and is a historian at JRP Historical Consulting, LLC. Mr. Freeman has performed field surveys throughout California, and conducted research on primary and secondary source material. Additionally, he has helped produce various historic architectural survey and evaluation reports. Mr. Freeman qualifies as a Historian under the Secretary of the Interior's standards. His tasks for this project included primary and secondary research, DPR 523 form preparation, and contributions to the HASR and HPSR.

Heather Norby (M.A., History, University of California, Berkeley) meets the Secretary of the Interior's standards for Historian. Ms. Norby, a staff historian at JRP Historical Consulting, LLC, has 4 years of experience as a consulting historian on a variety of historical research and cultural resource management projects, and has conducted research and field evaluation for historic architectural surveys throughout California. Her experience prior to joining JRP includes 4 years of teaching U.S. history at community colleges in the San Francisco Bay and Sacramento areas. For this project, she conducted field research, prepared DPR 523 forms, and contributed to the HASR and HPSR.

Steven Melvin (M.A., History–Public History, California State University, Sacramento) has 7 years of experience in cultural resource management and historical research projects and is a historian at JRP Historical Consulting, LLC. Mr. Melvin has performed field surveys at locations throughout California and conducted research in primary and secondary source material. He qualifies as a Historian under the Secretary of the Interior's standards. Mr. Melvin's tasks for this project included research, DPR 523 form preparation, and contributions to the HASR.

Additional JRP technical staff and research assistants who assisted in the preparation of the DPR 523 forms, illustrations, data management, and production of this HASR include Rebecca Flores, Heather Miller, Chandra Miller, David Riggs, Leslie Trew, and Garret Root.

**Appendix A**  
**Area of Potential Effects Mapping**  
**(Bound Separately)**



# CALIFORNIA HIGH-SPEED TRAIN

# FINAL

## Fresno to Bakersfield

# Supplemental Historic Architecture Survey Report

## Appendix A - Area of Potential Effects Mapping

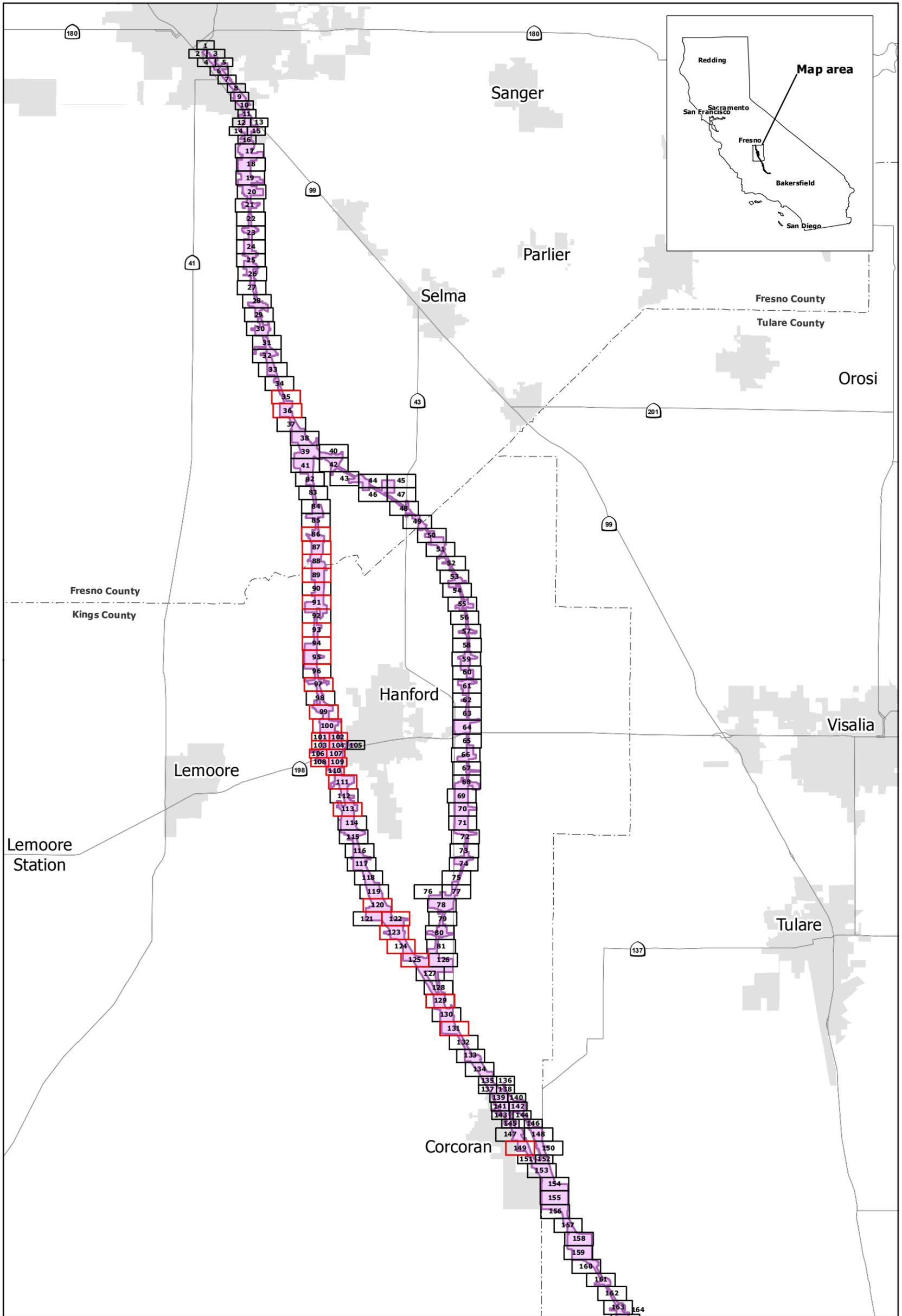
February 2013



**CALIFORNIA**  
High-Speed Rail Authority



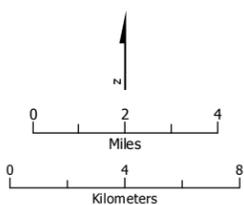
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Federal Railroad Administration

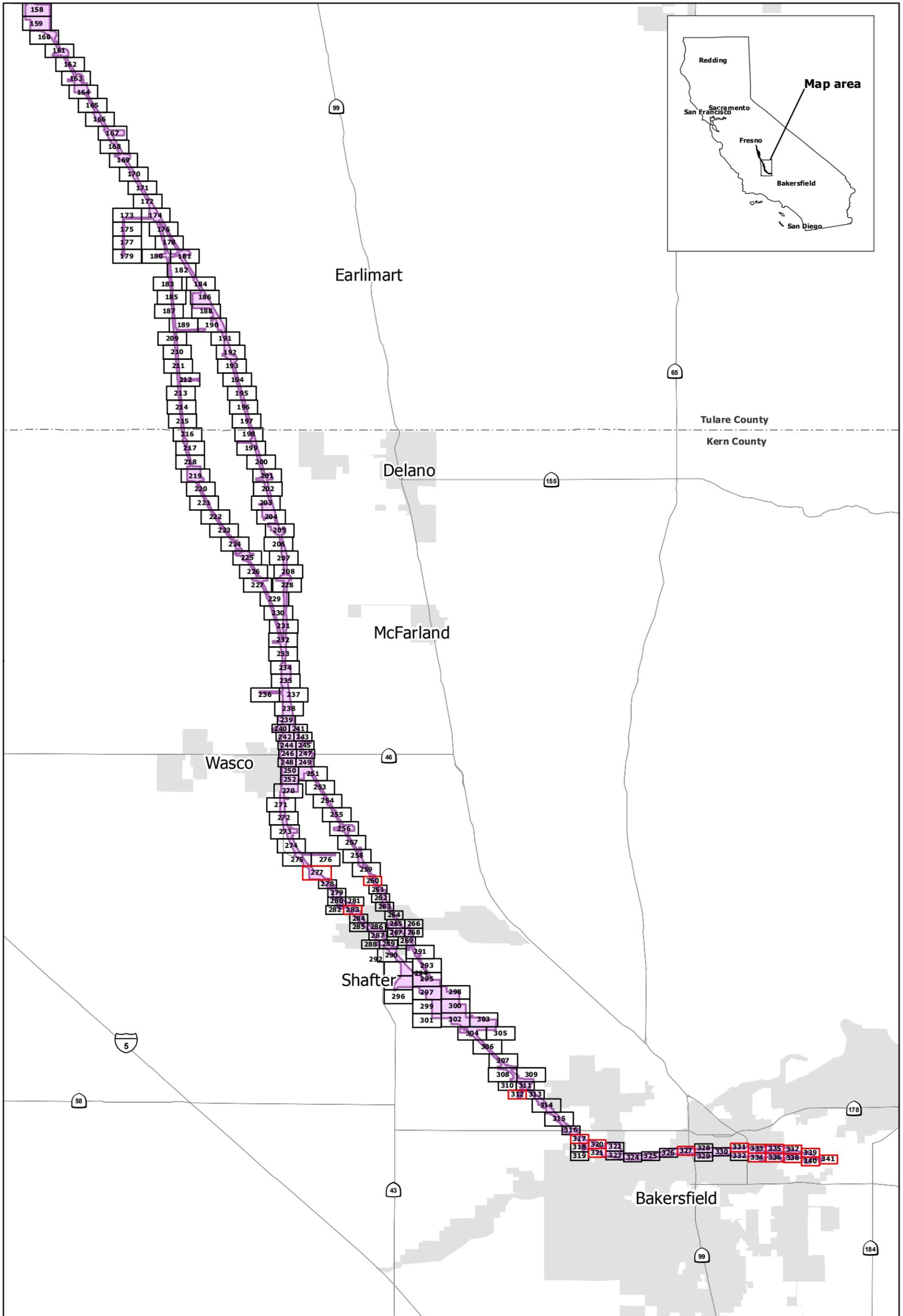


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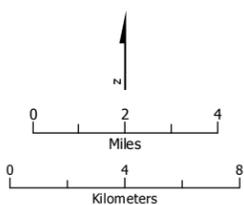
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- Map sheet without HASR property location
- County boundary
- Architectural APE



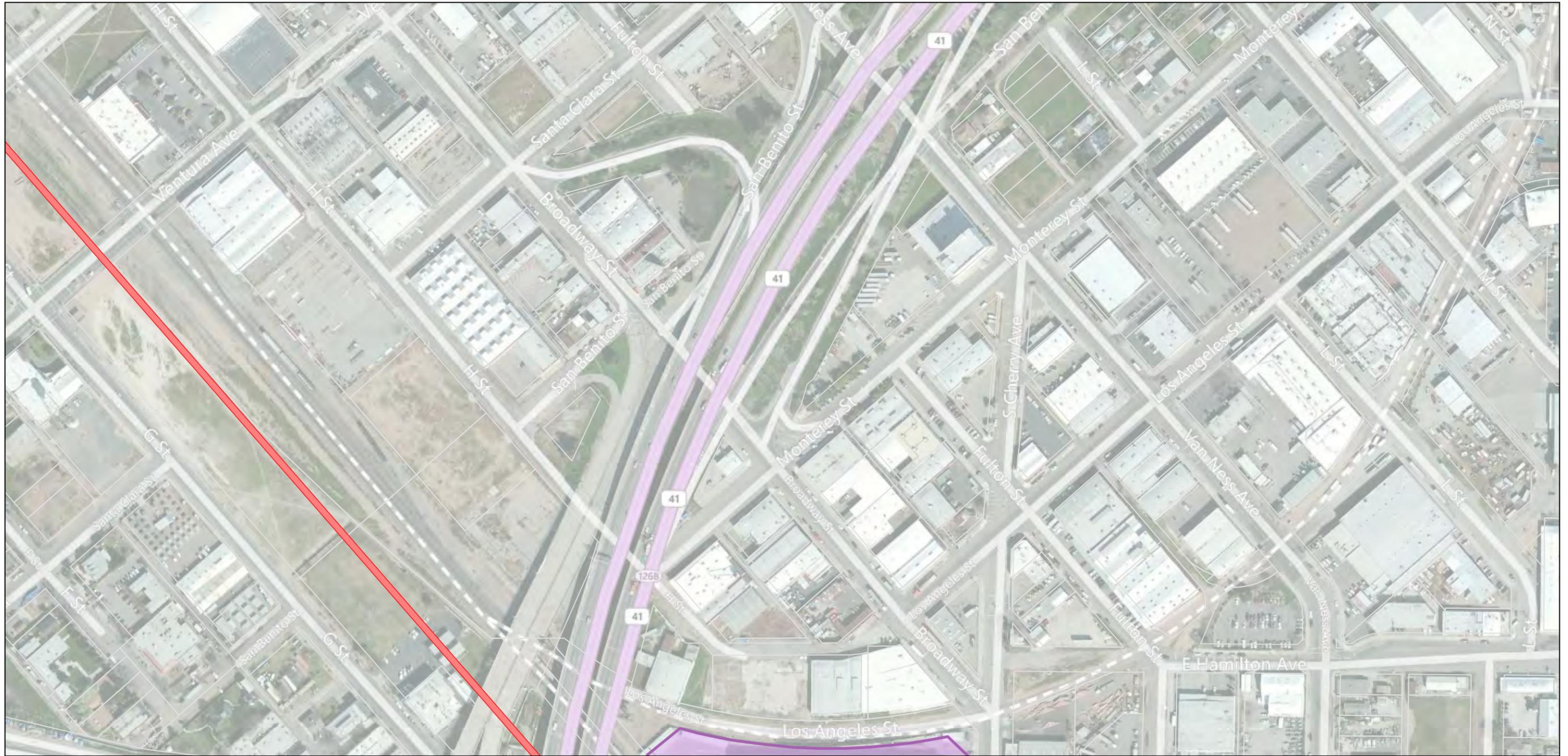


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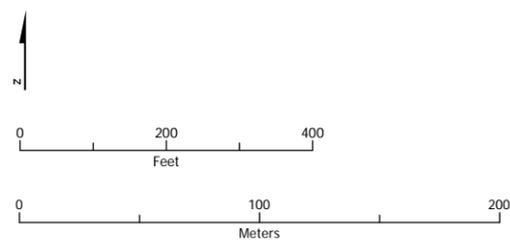


- Map sheet with HASR property location
- Map sheet without HASR property location
- County boundary
- Architectural APE

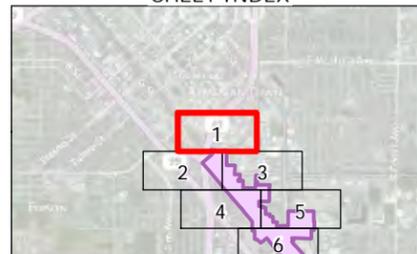


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December 20, 2012



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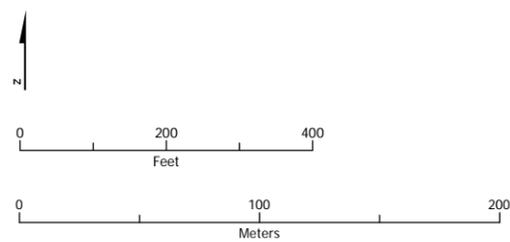


- At-grade alignment
- Elevated alignment
- Below-grade alignment
- Architectural APE (December 2012)
- HASR property location
- HASR canal
- Parcel boundary

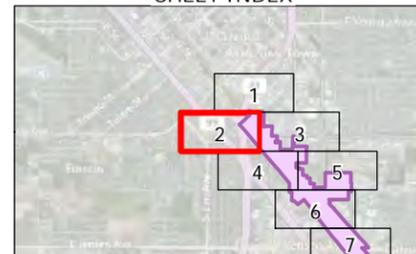


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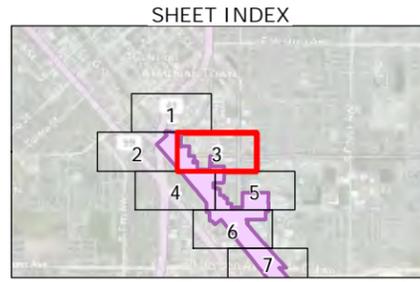
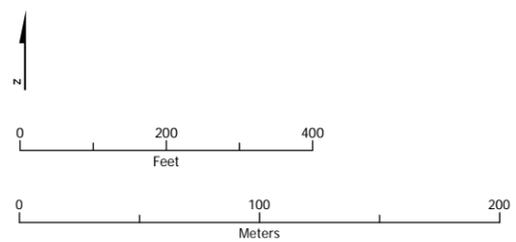


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- HASR canal
- Parcel boundary

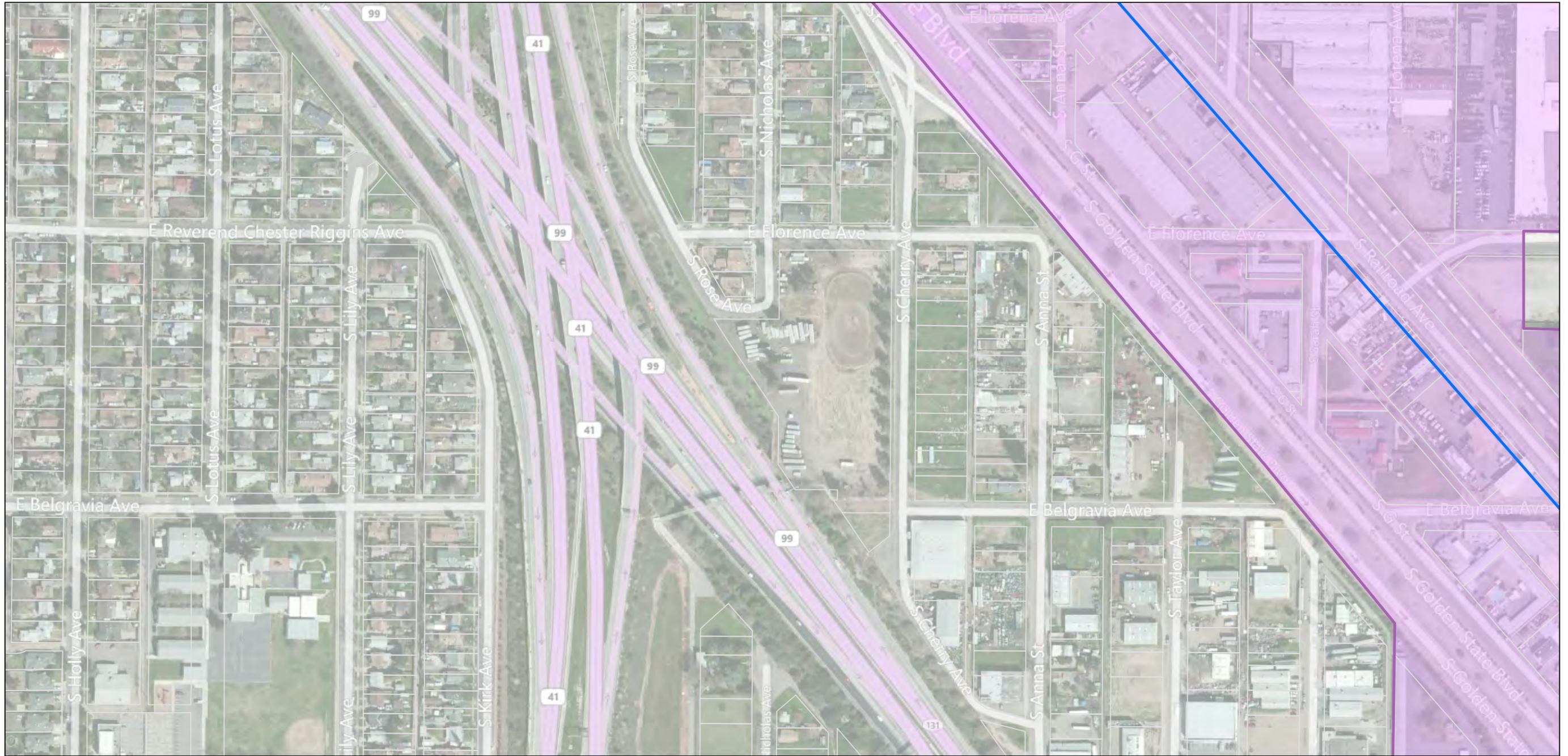


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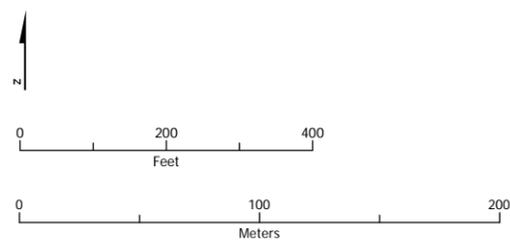


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- HASR canal
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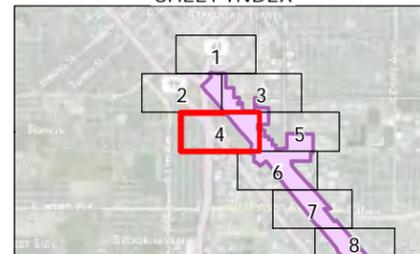


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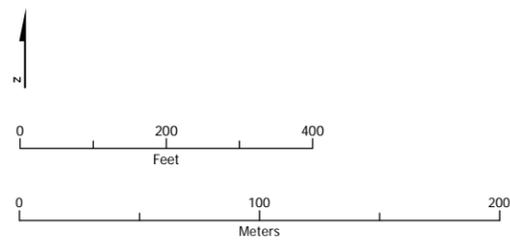


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- HASR property location
- HASR canal
- Parcel boundary

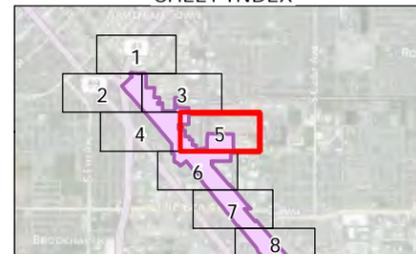


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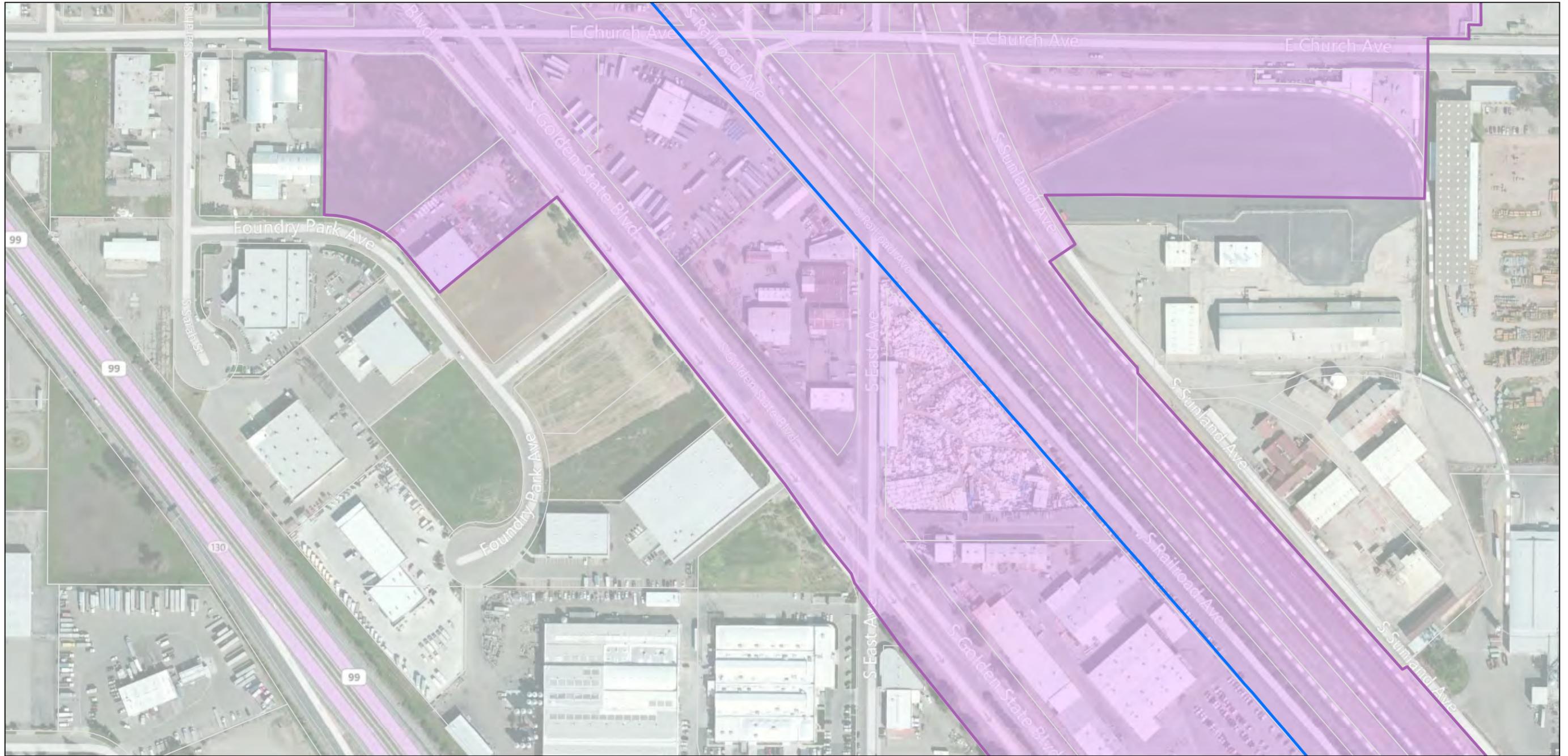
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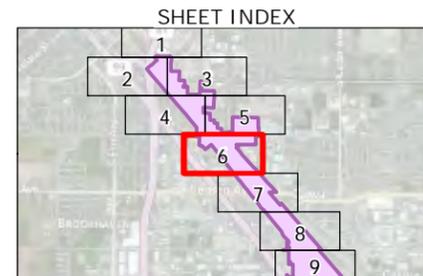
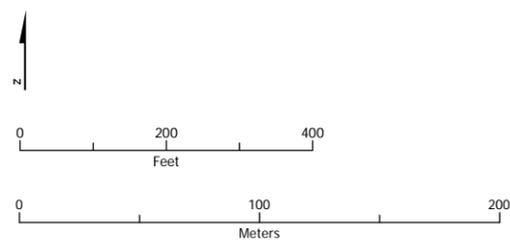


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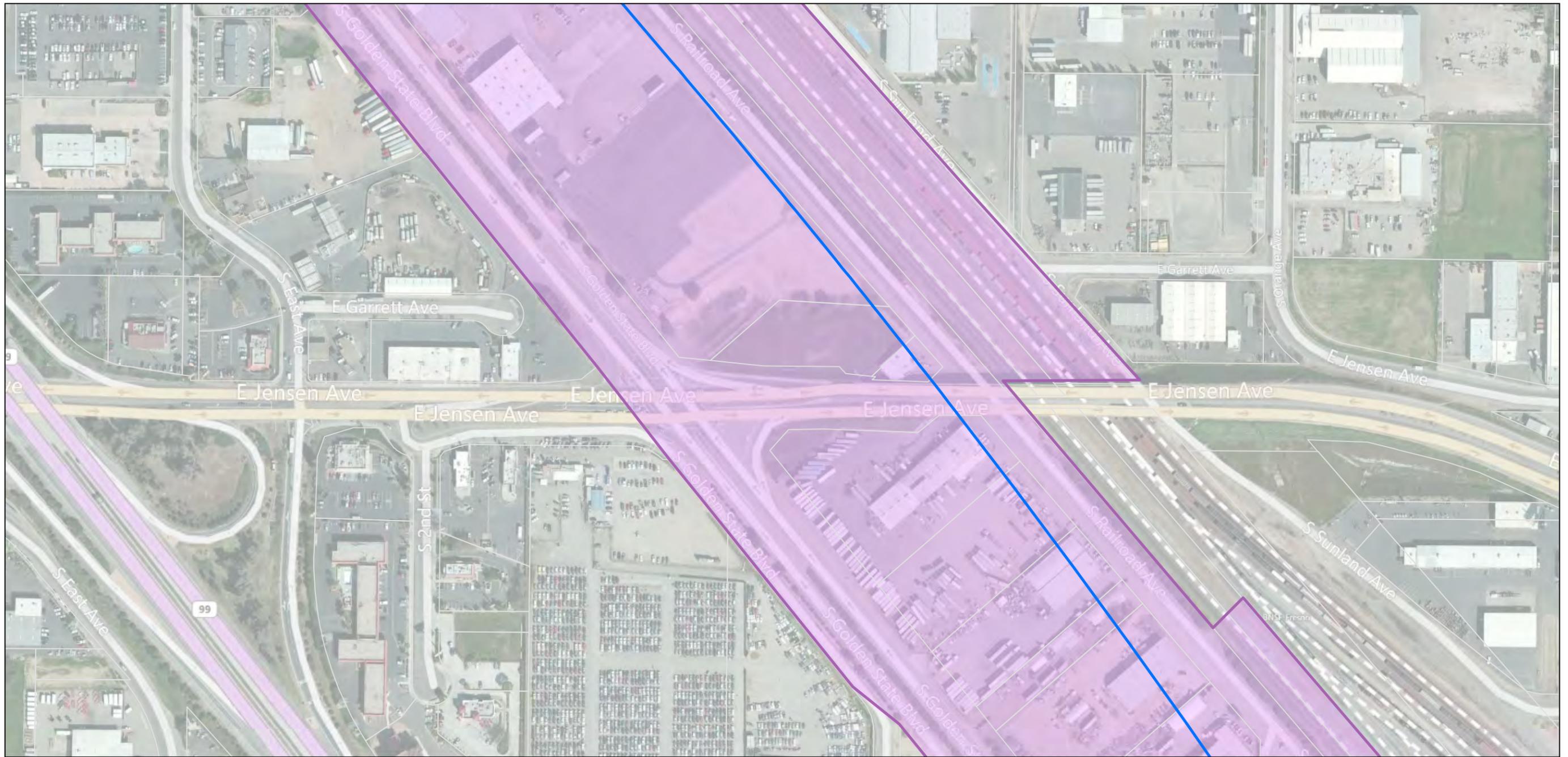


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December 20, 2012

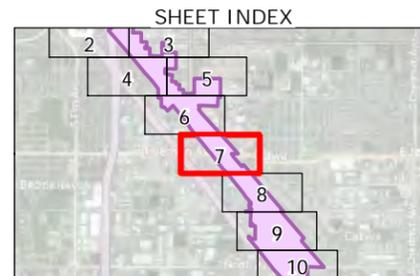
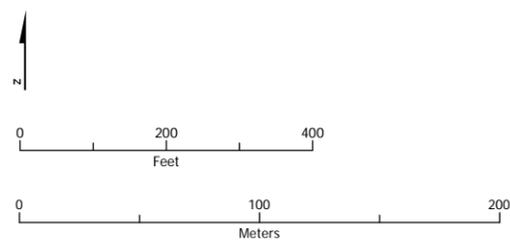


- At-grade alignment
- Elevated alignment
- Below-grade alignment
- Architectural APE (December 2012)
- HASR property location
- HASR canal
- Parcel boundary

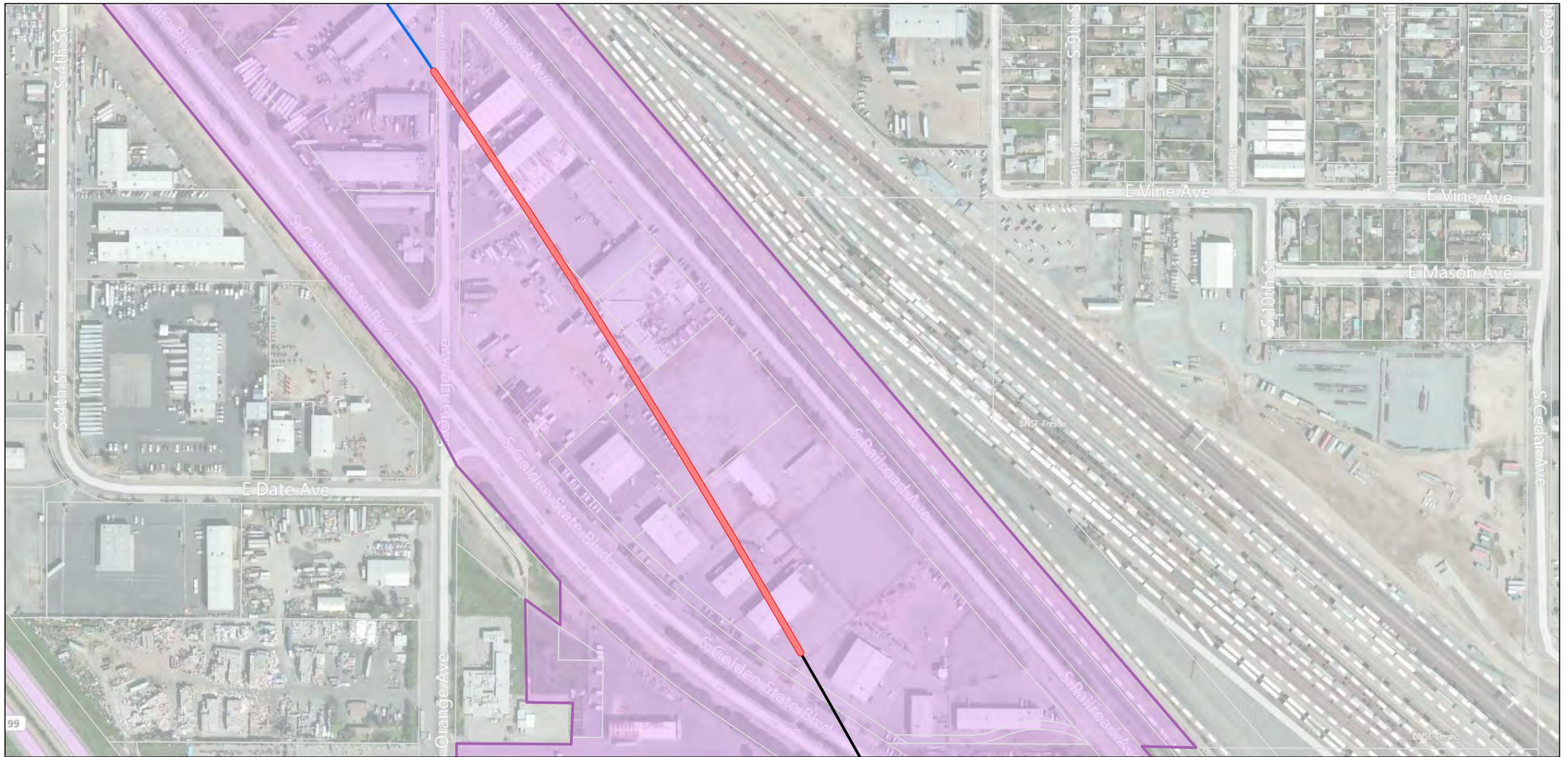


PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED  
 Data source: URS, 2012; JRP, 2012  
 Imagery source: Microsoft Bing Maps

December 20, 2012

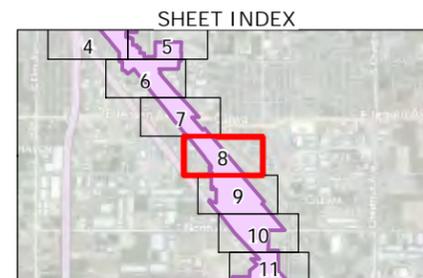
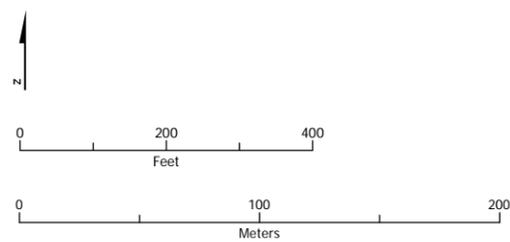


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December 20, 2012

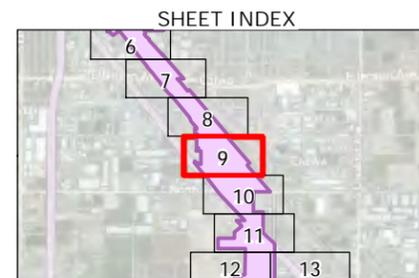
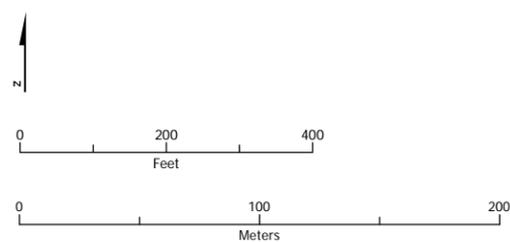


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- HASR property location
- HASR canal
- Parcel boundary

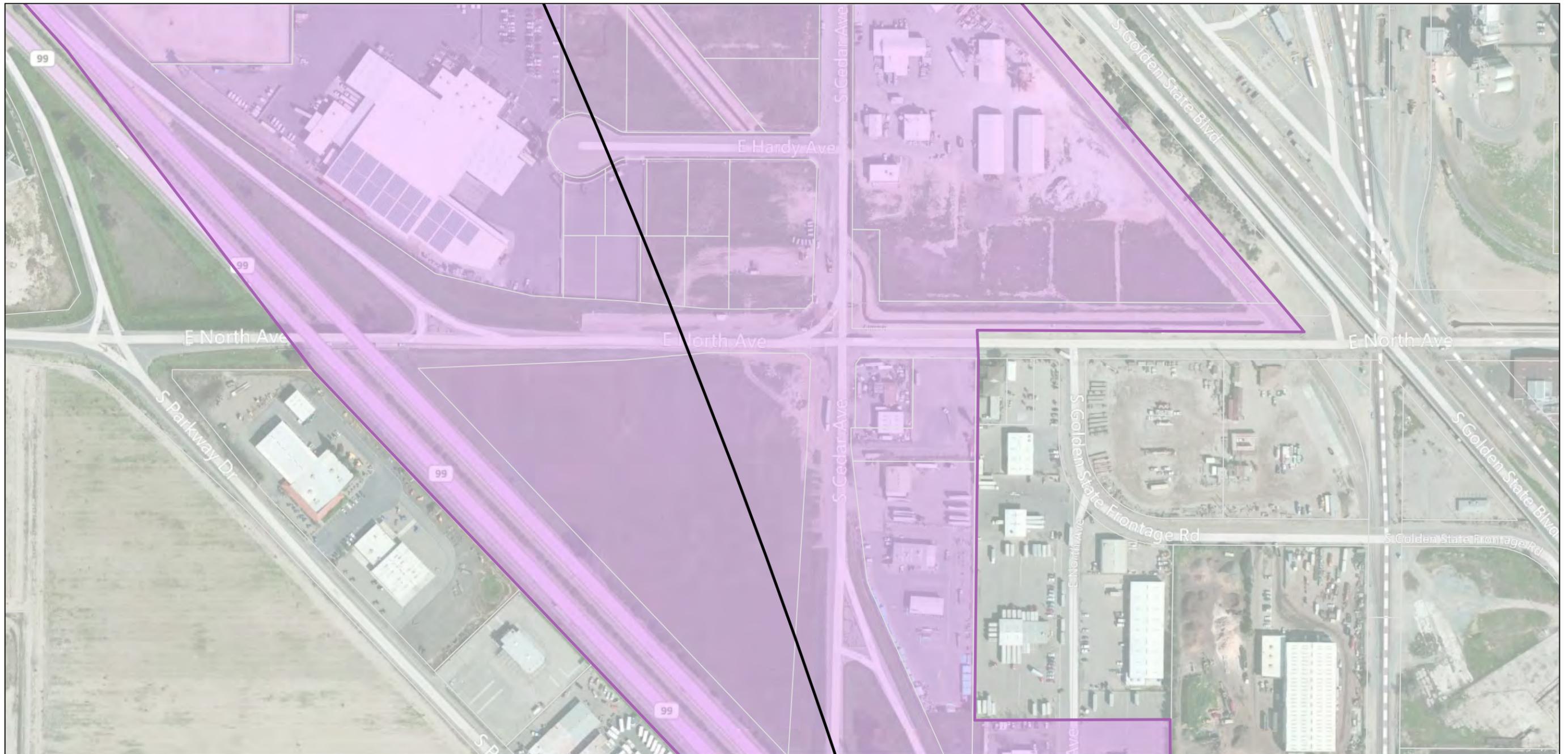


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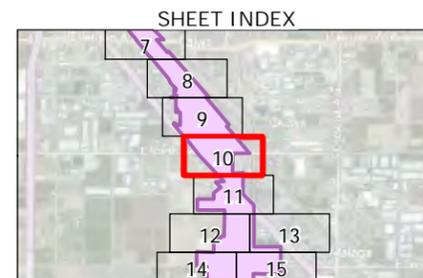
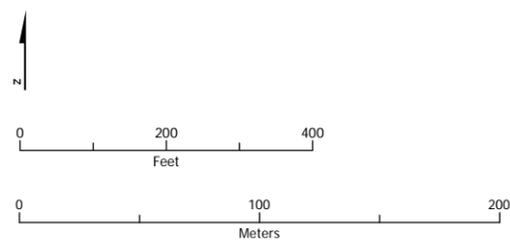


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- HASR canal
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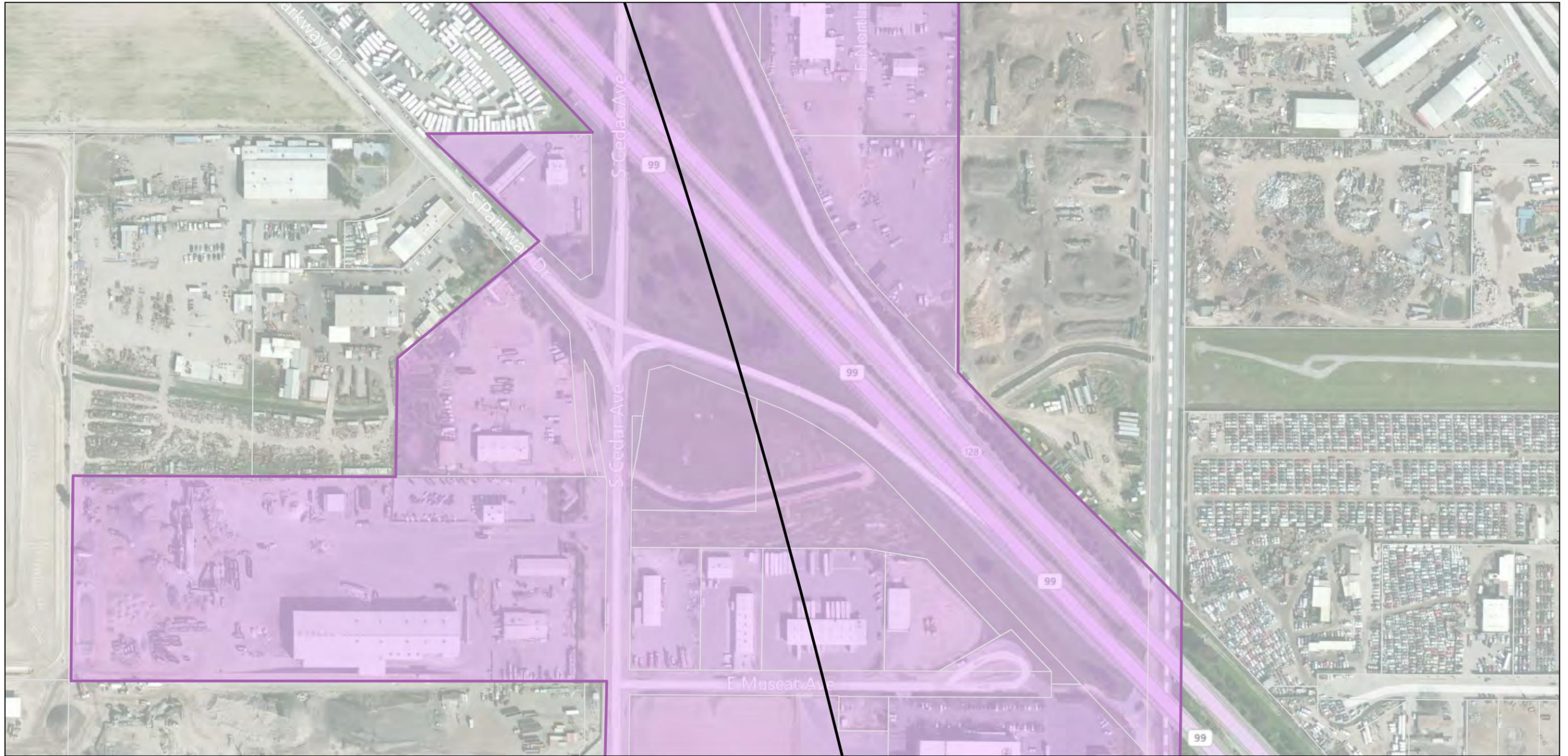


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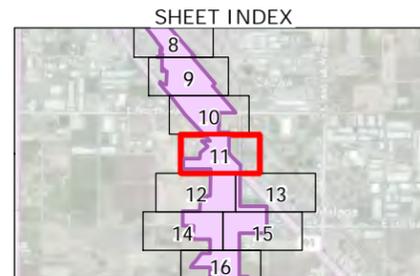
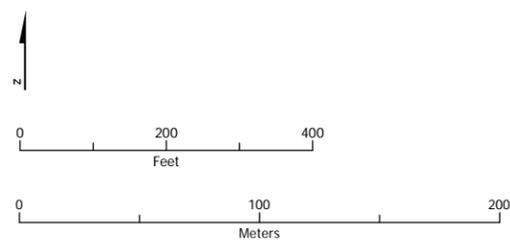


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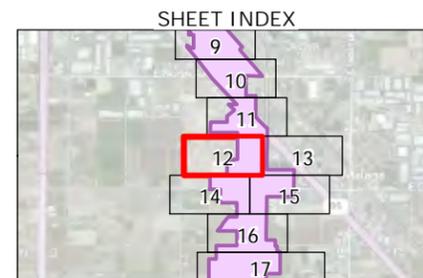
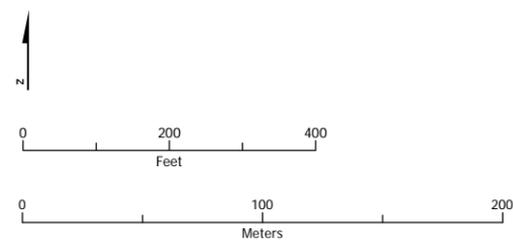


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- HASR canal
- Parcel boundary

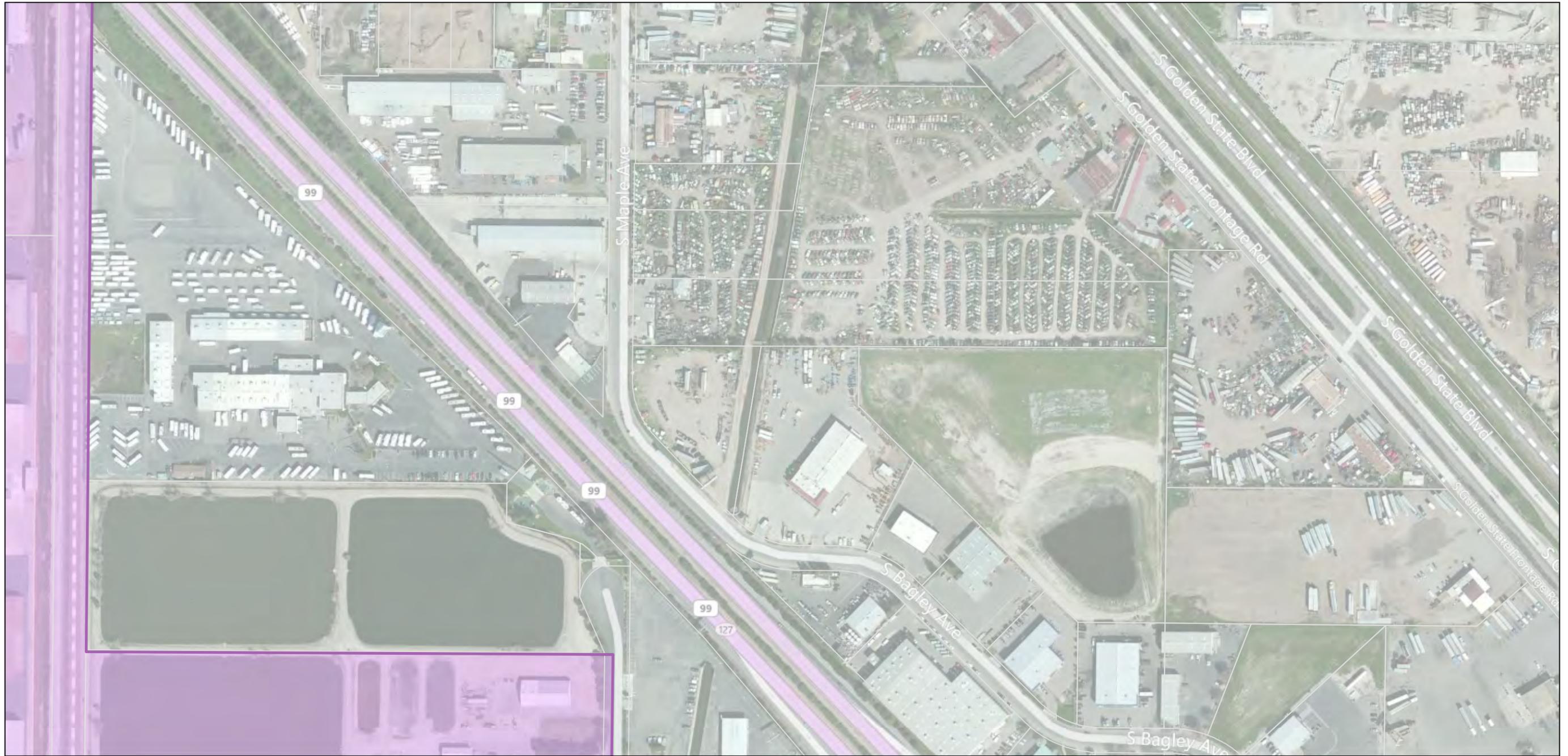


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December 20, 2012

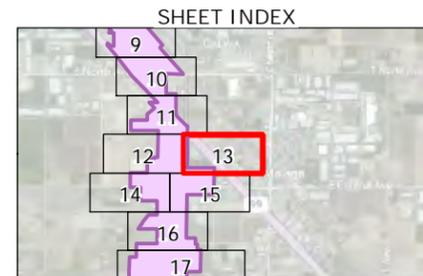
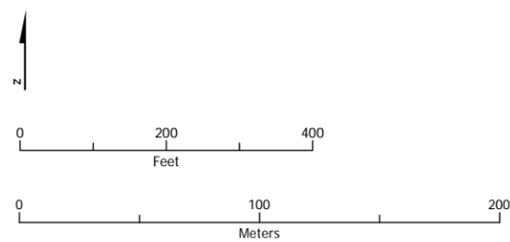


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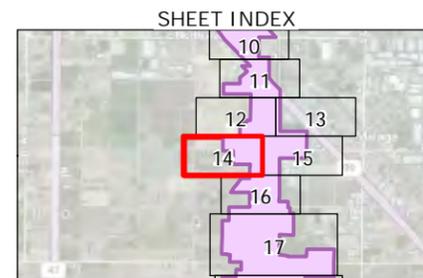
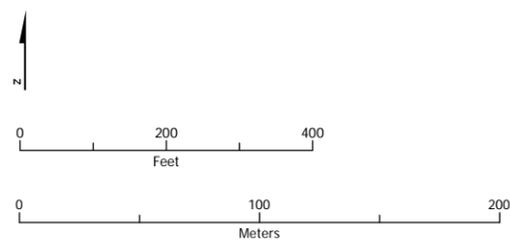


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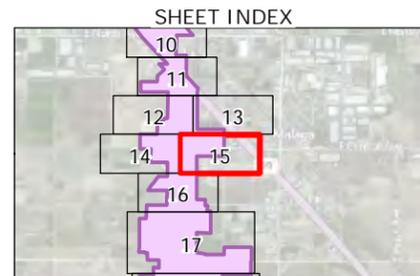
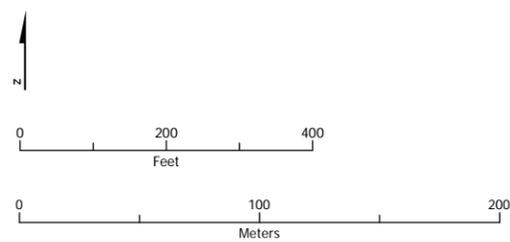


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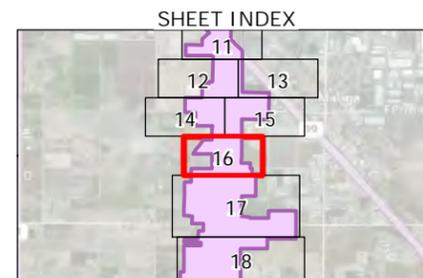
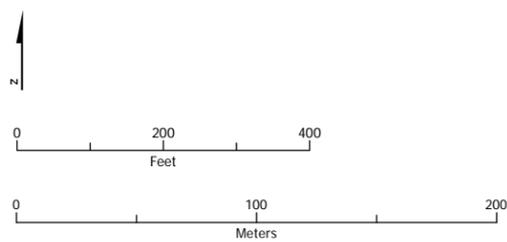


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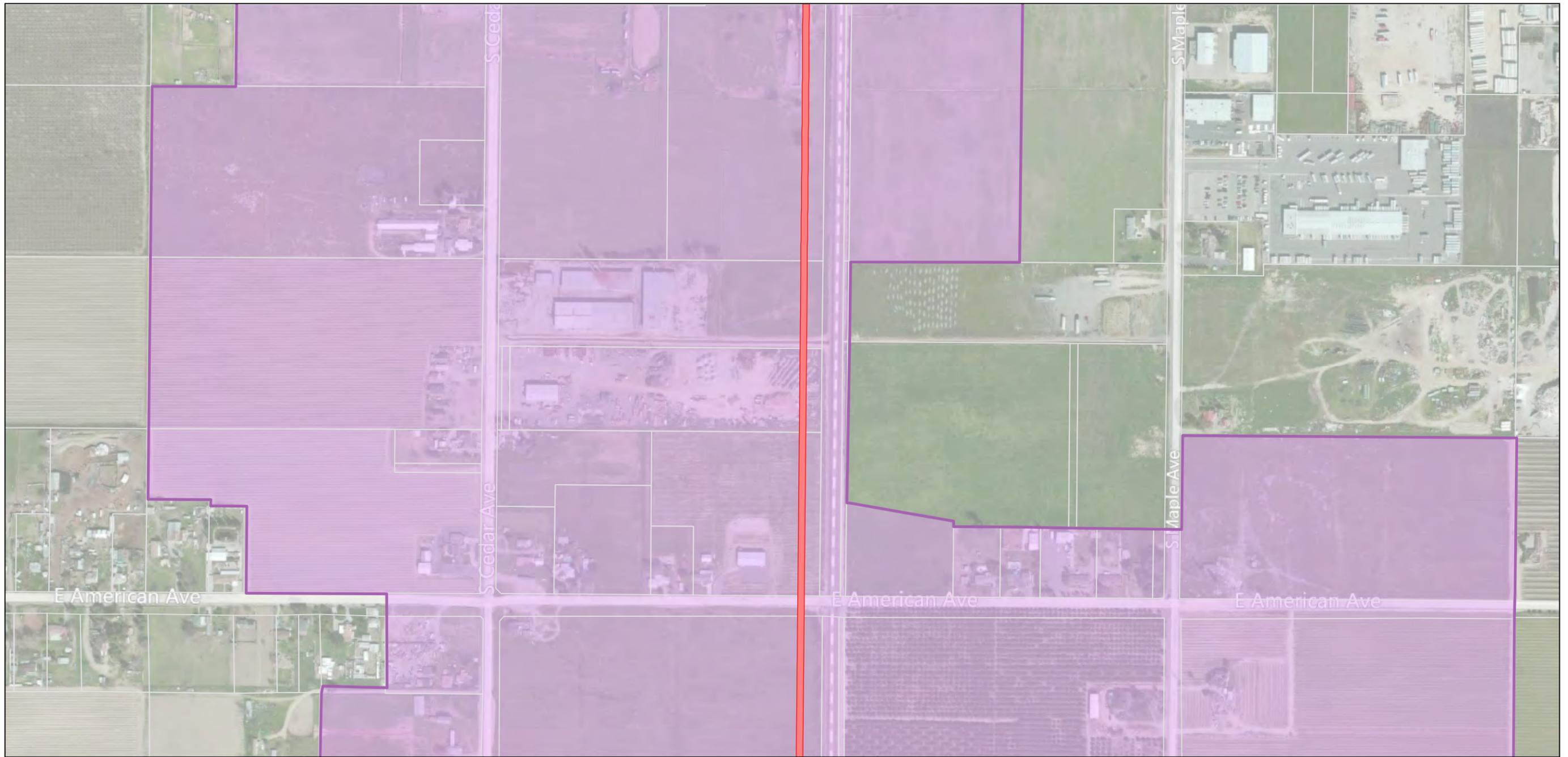


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December 20, 2012

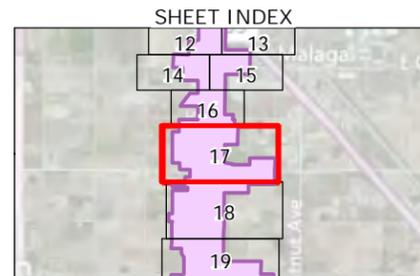
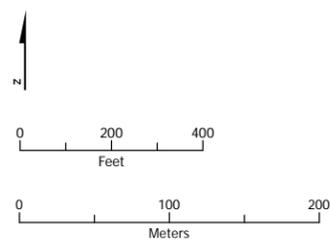


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December 20, 2012

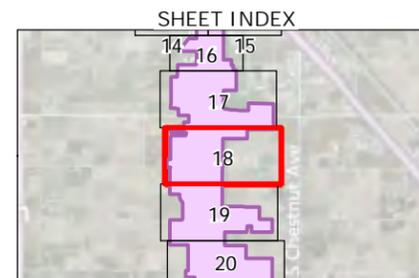
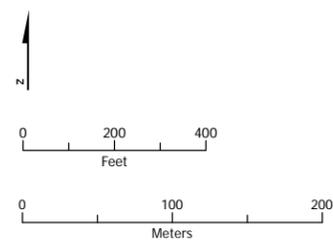


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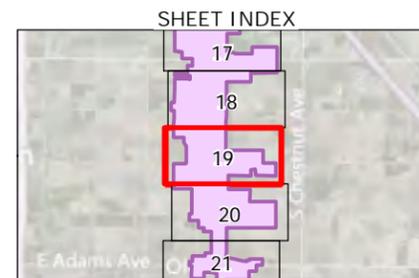
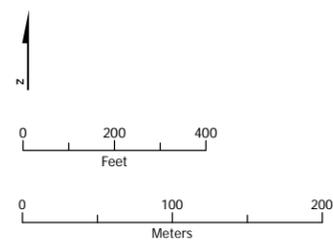


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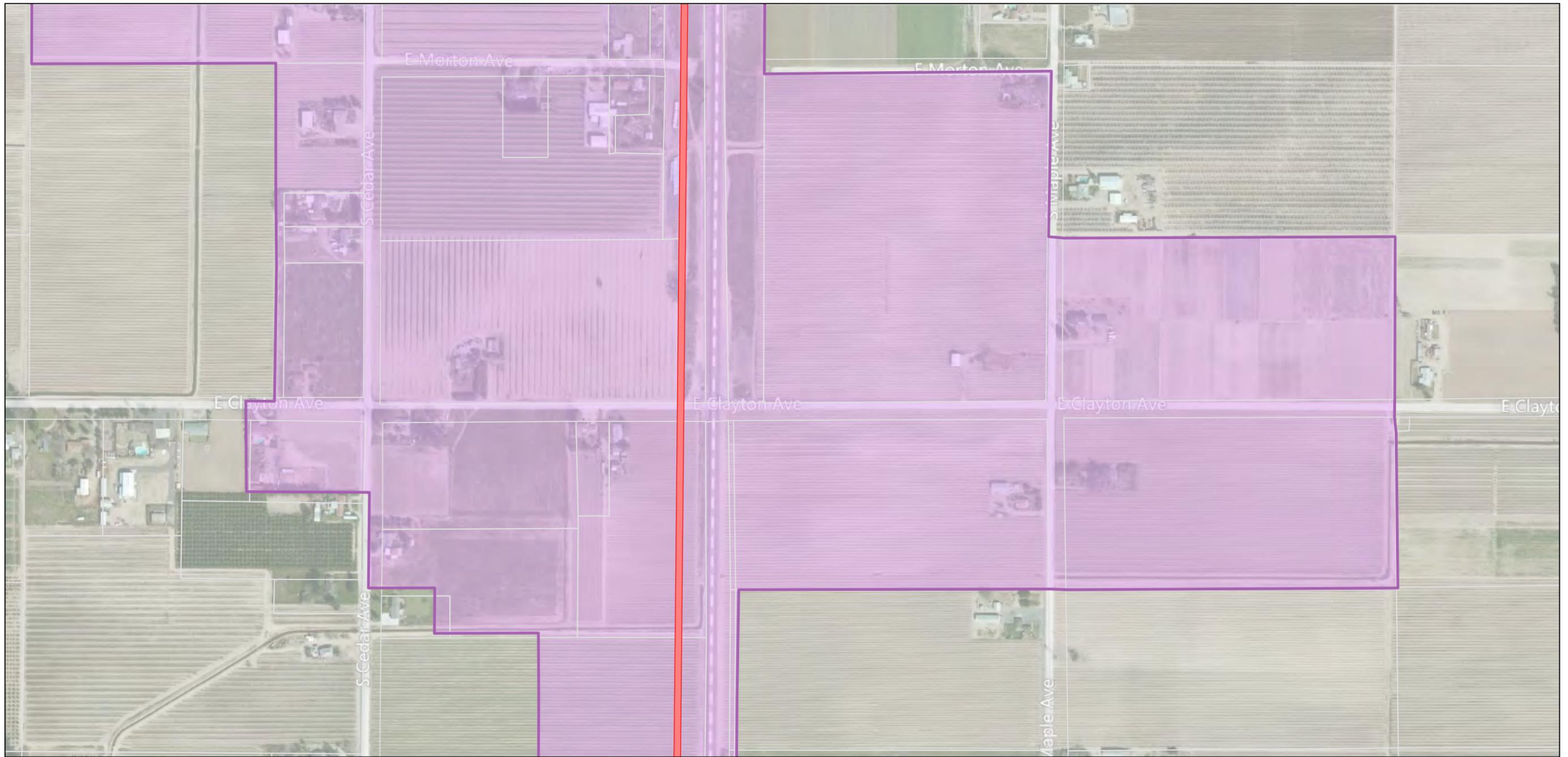


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December 20, 2012

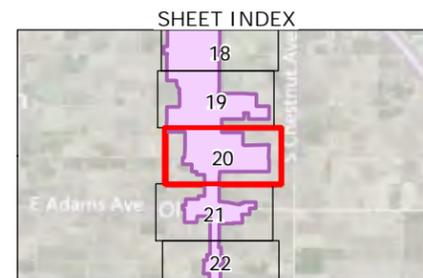
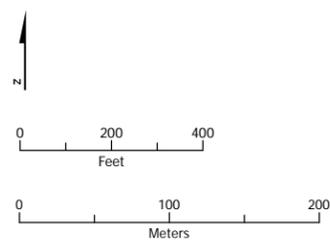


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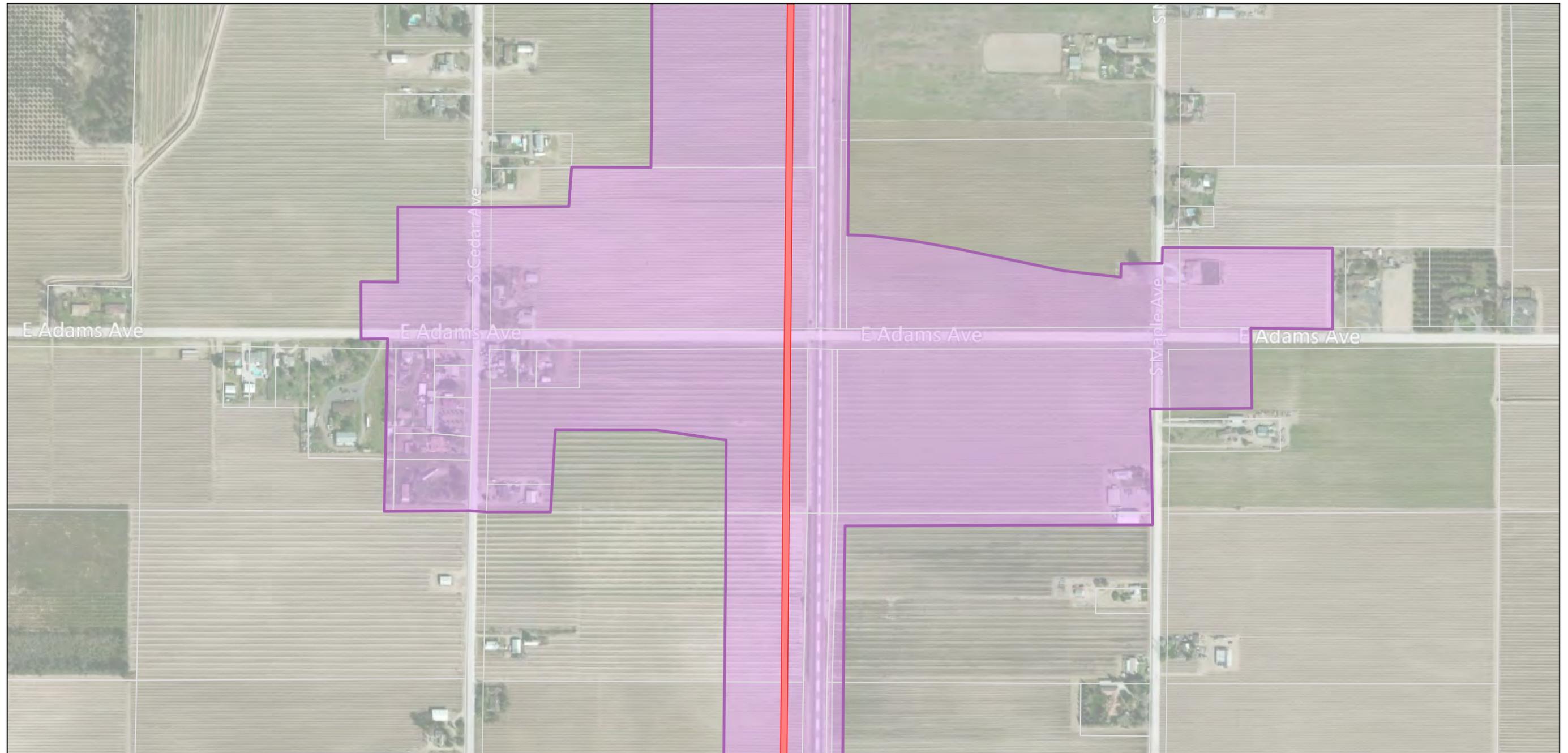


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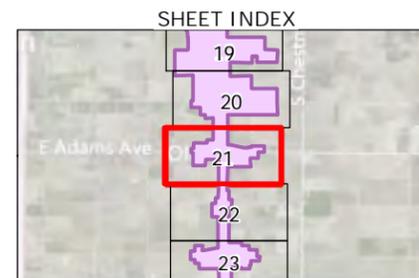
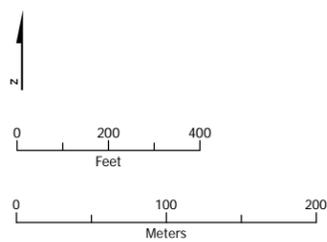


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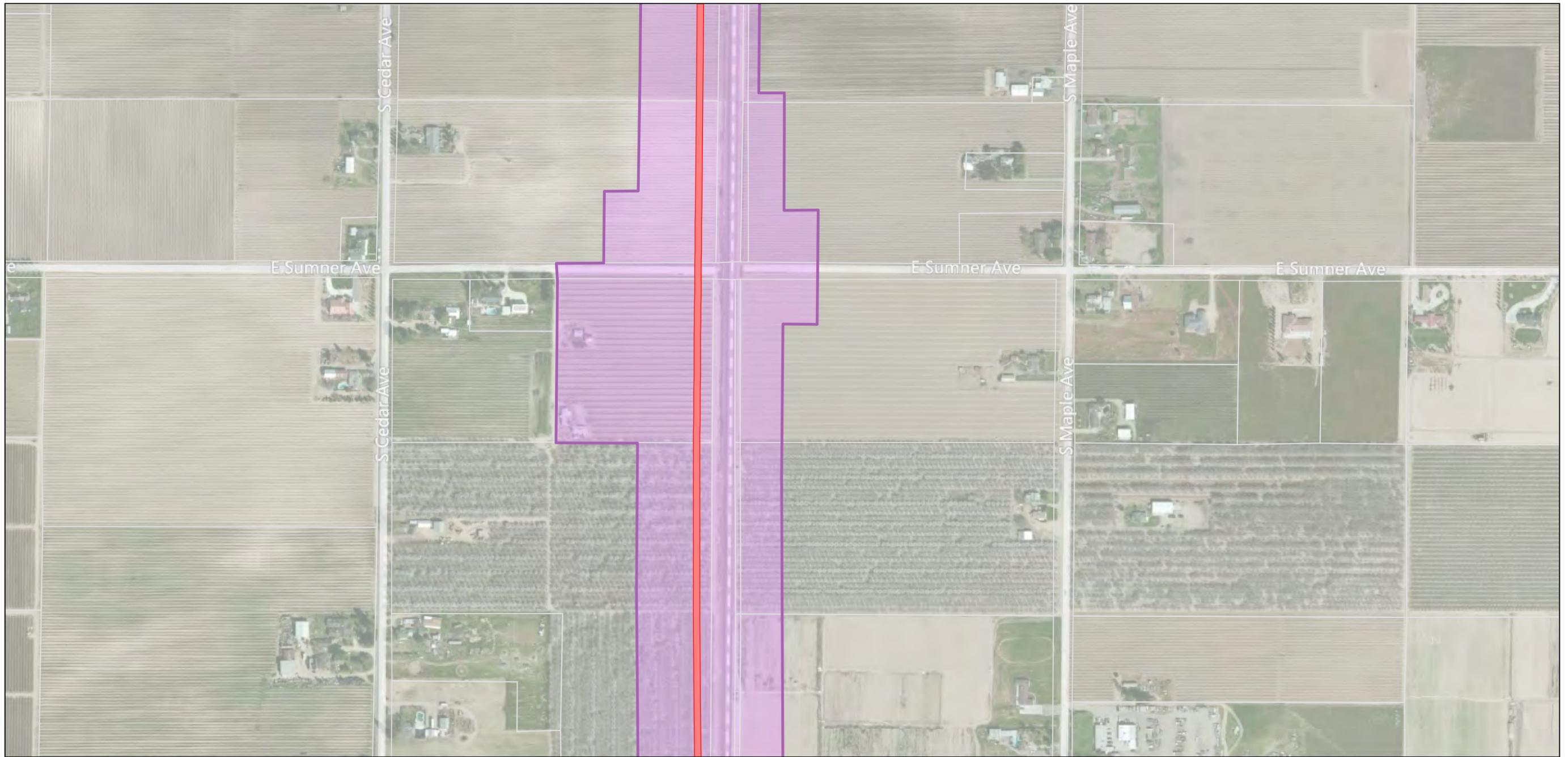


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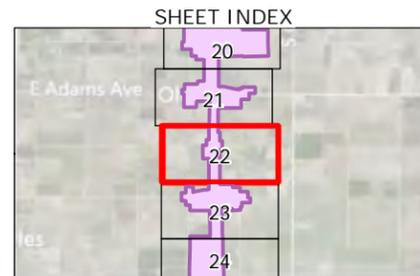
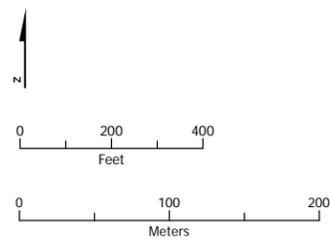


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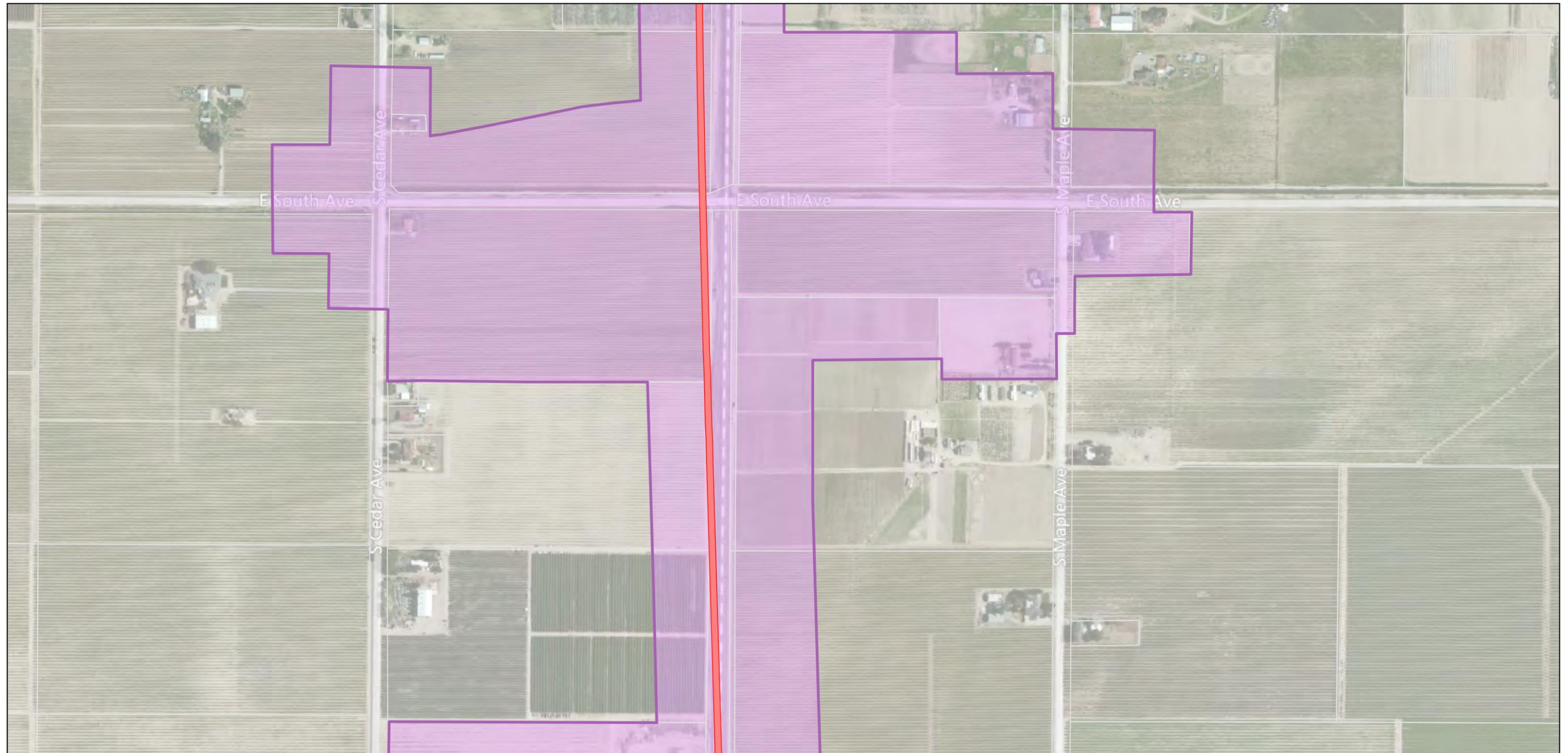


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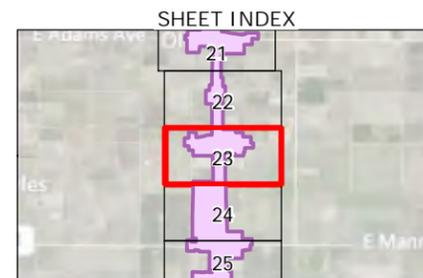
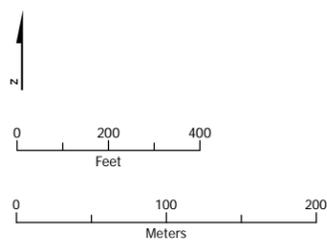


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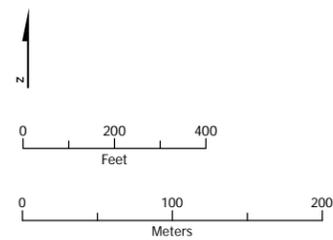


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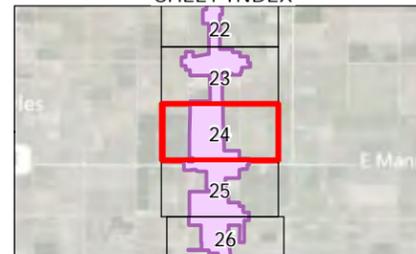


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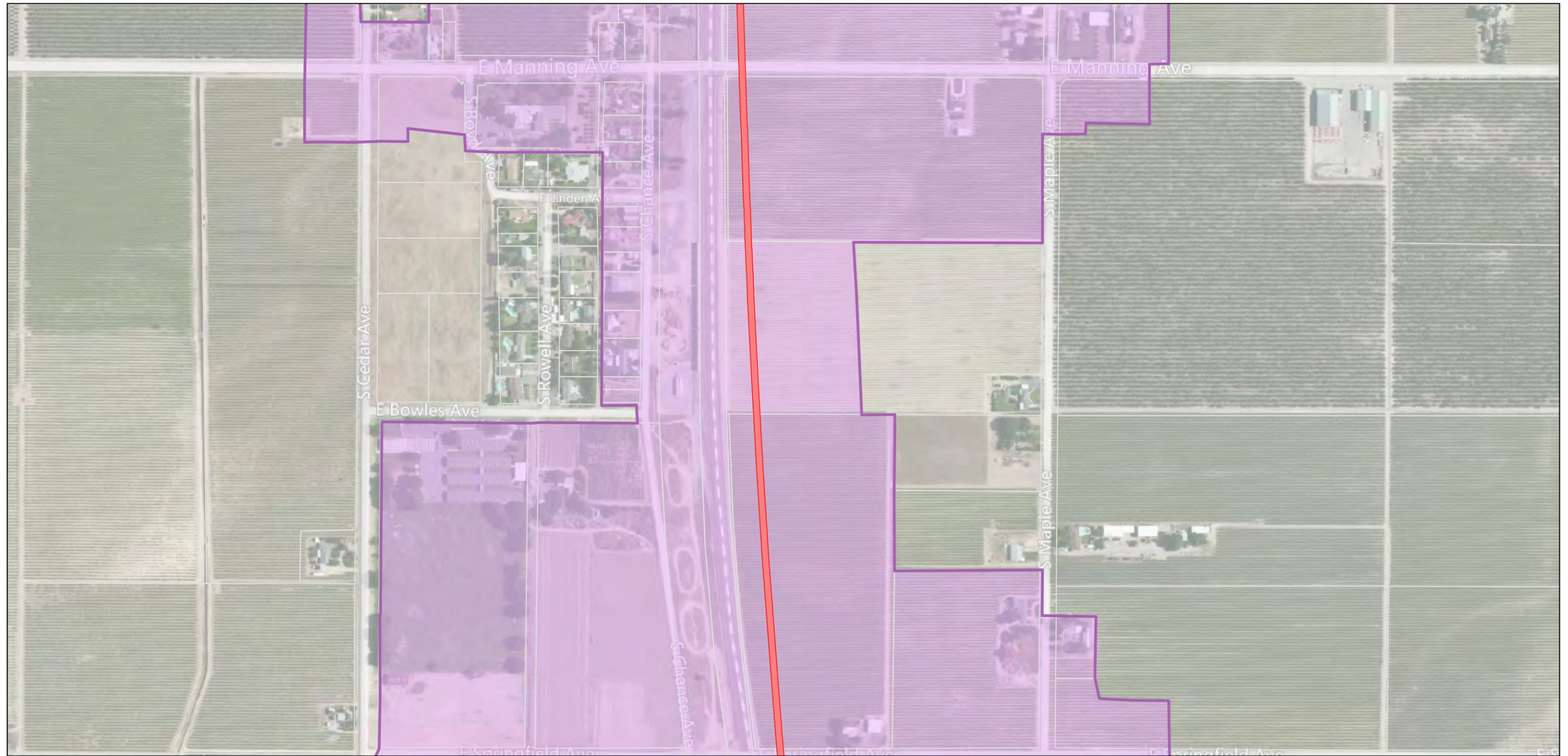
December 20, 2012



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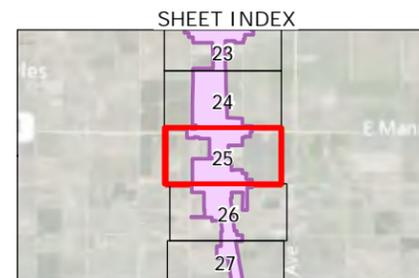
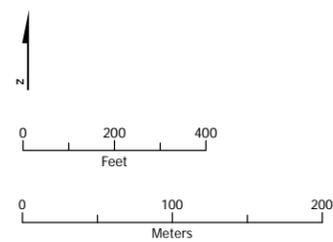


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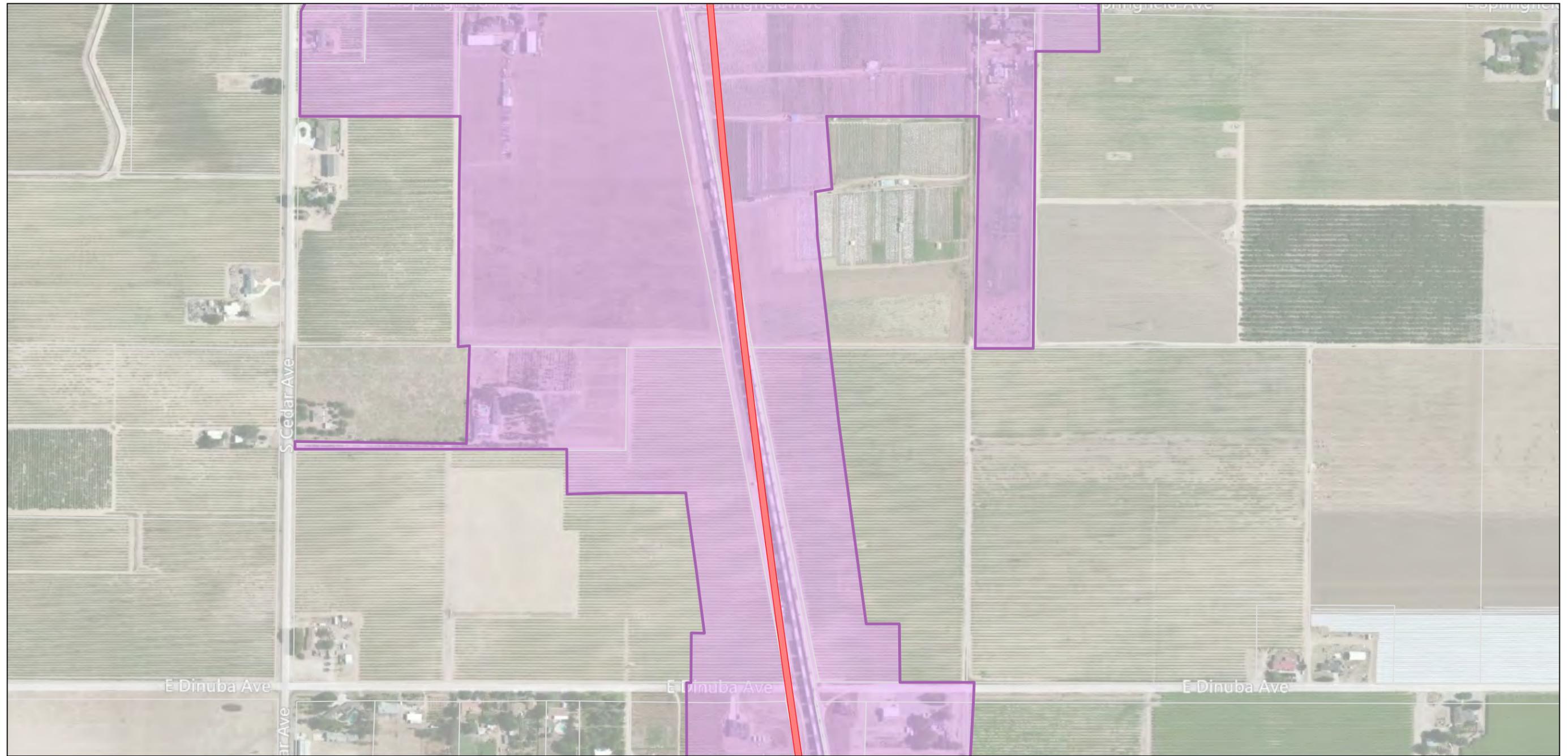


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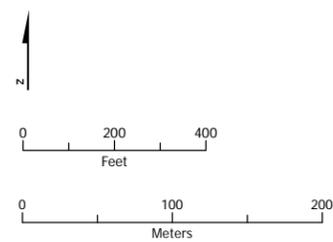


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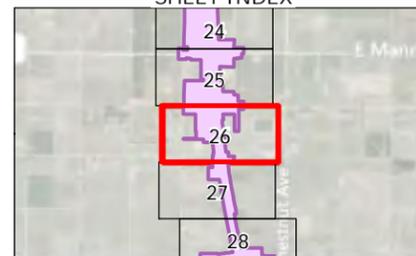


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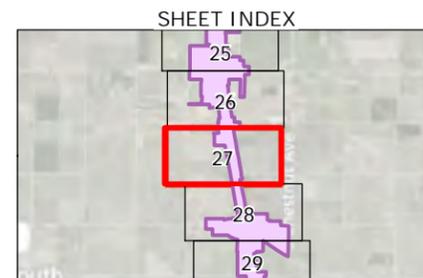
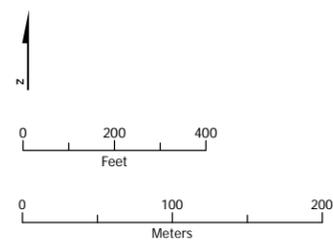


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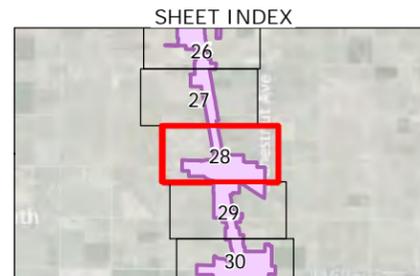
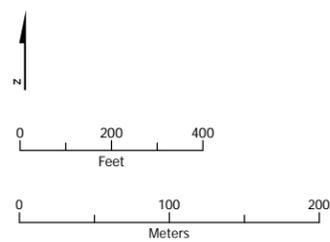


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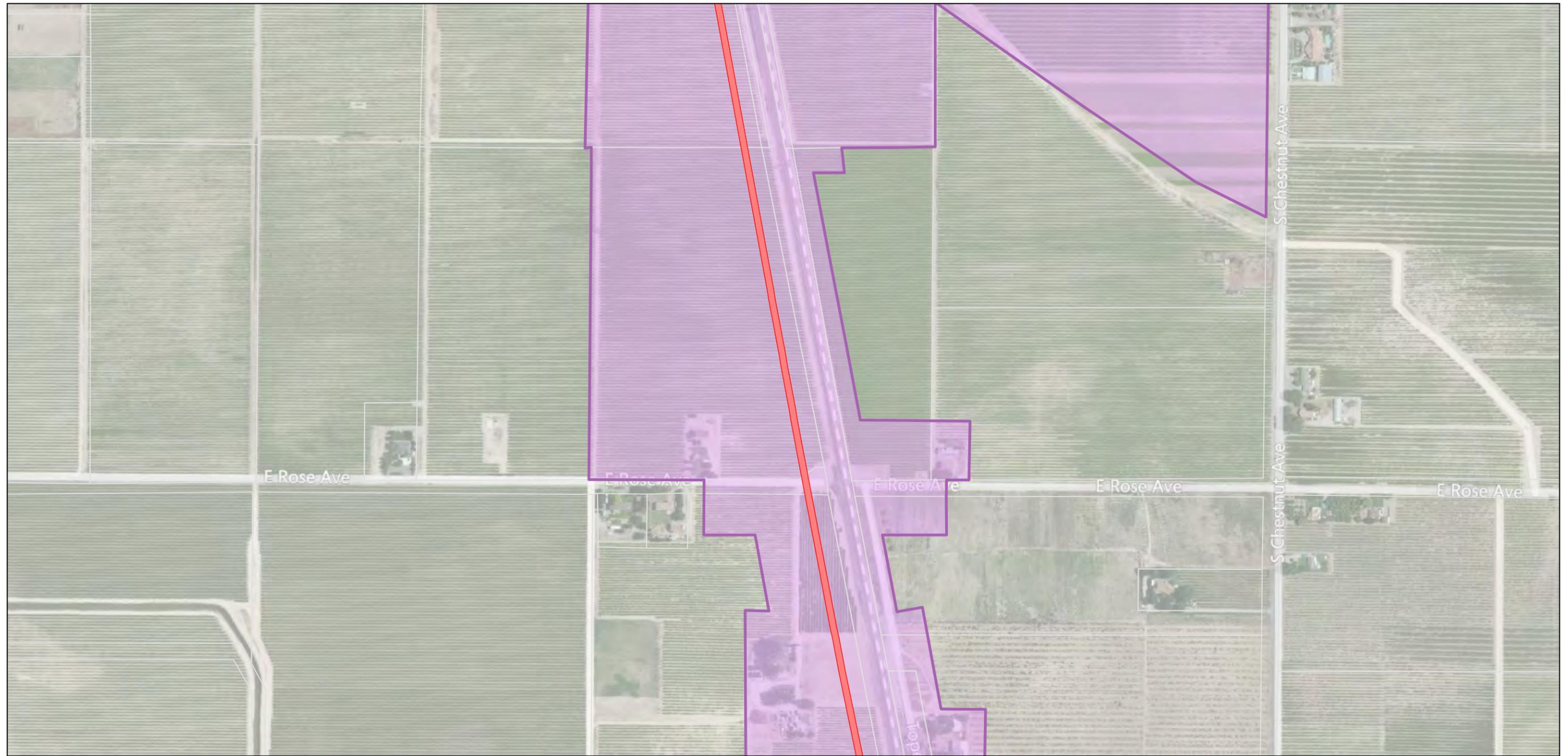


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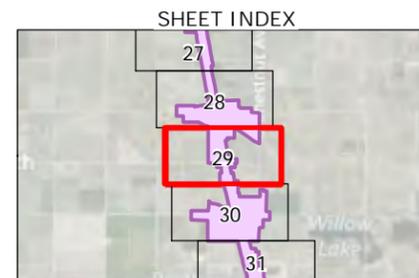
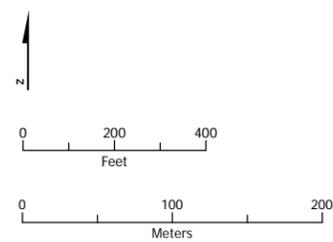


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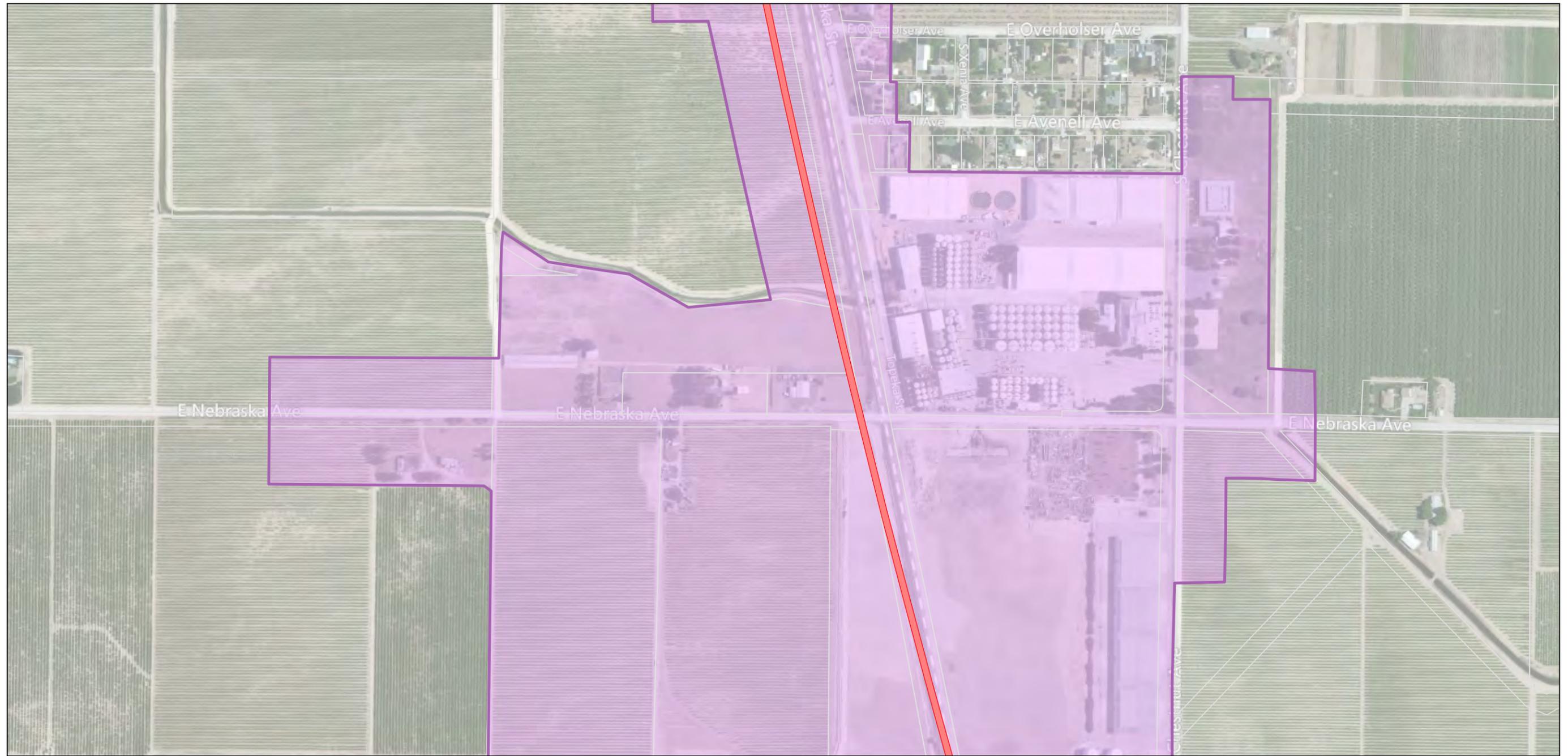


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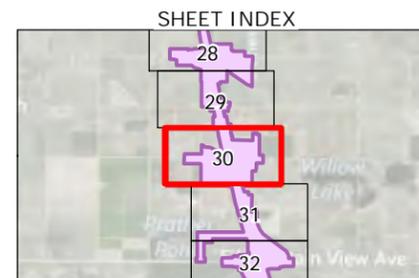
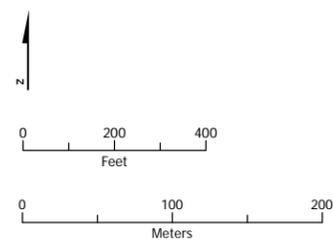


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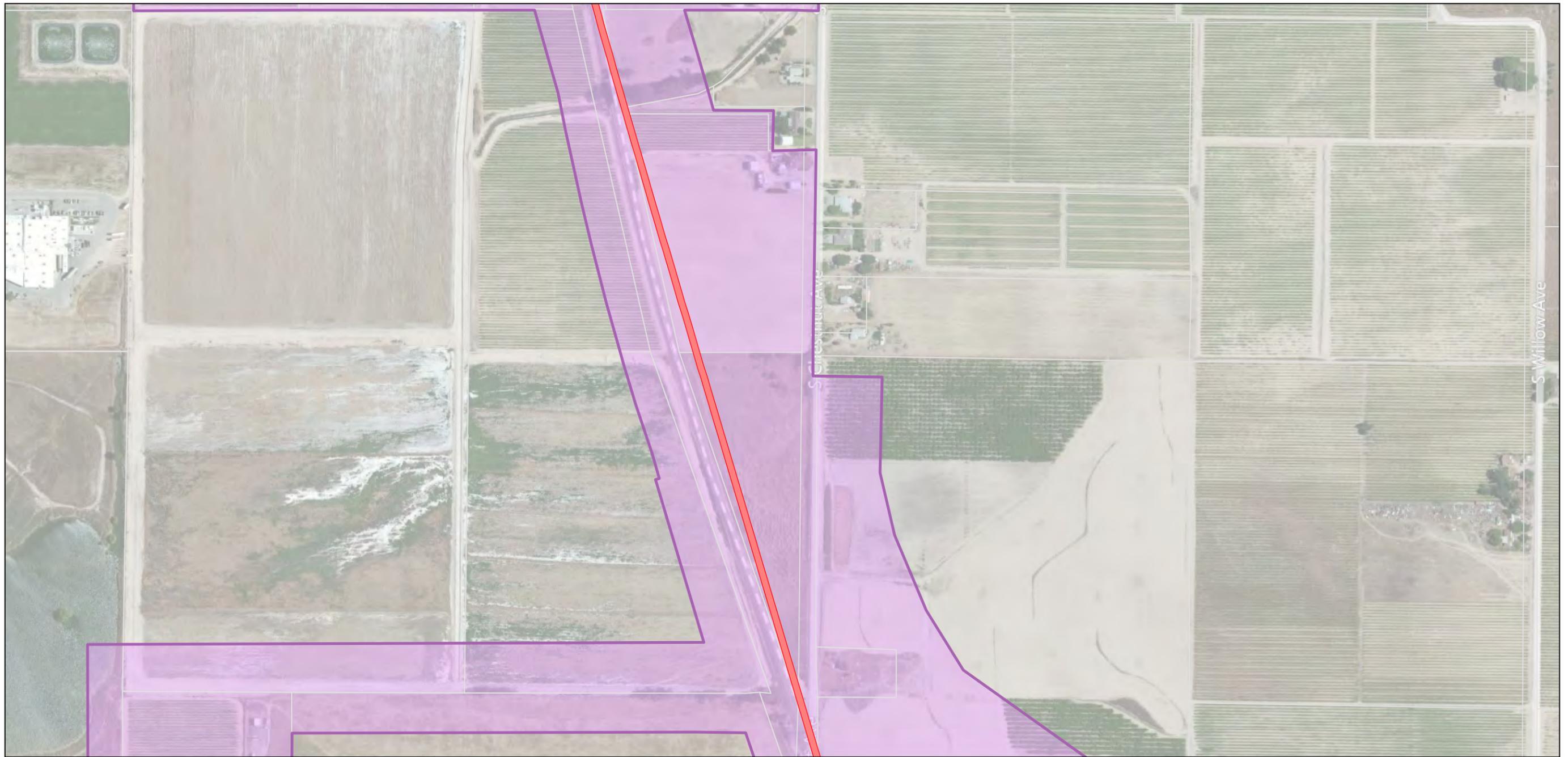


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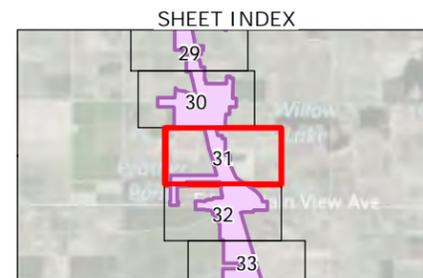
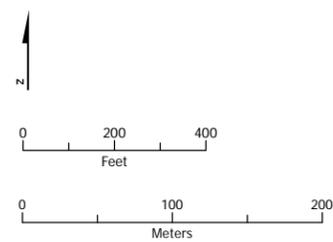


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December 20, 2012

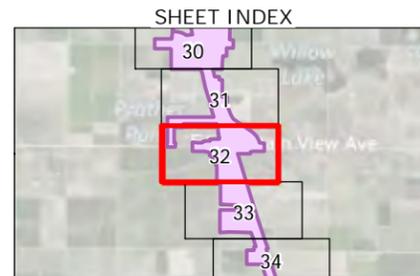
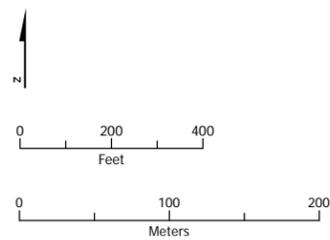


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- Below-grade alignment
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PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED  
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December 20, 2012

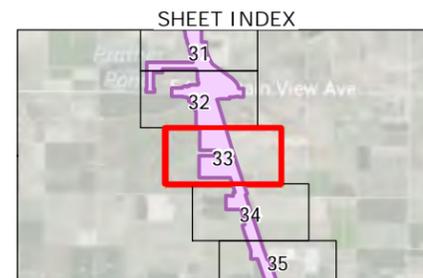
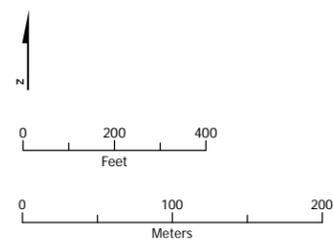


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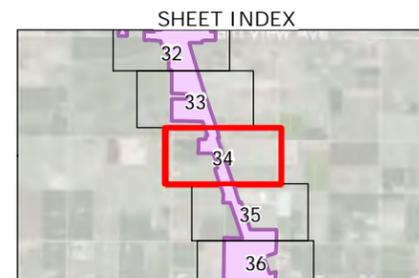
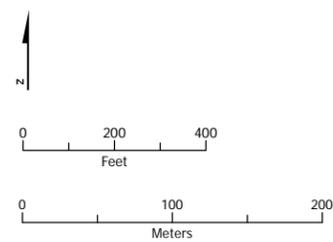


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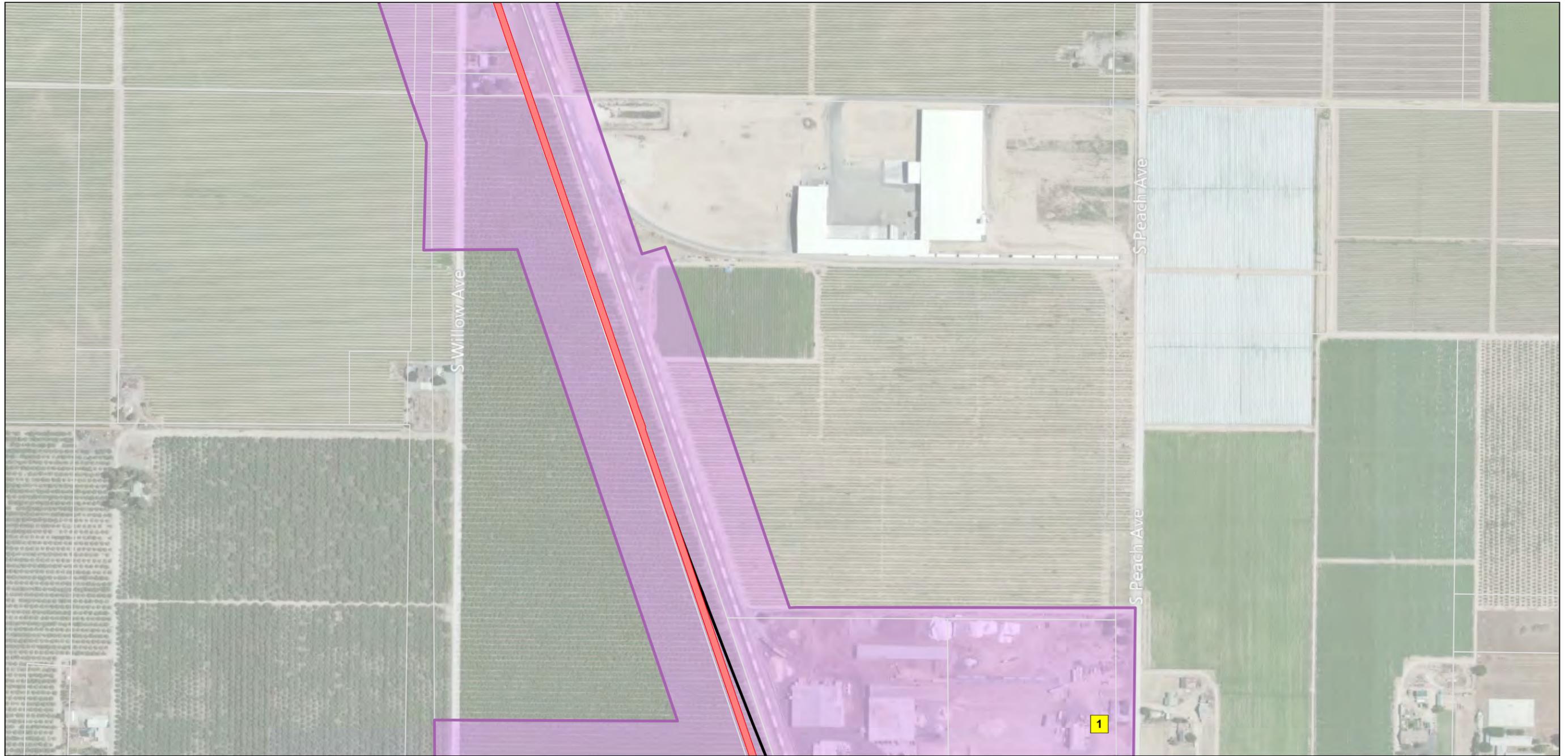


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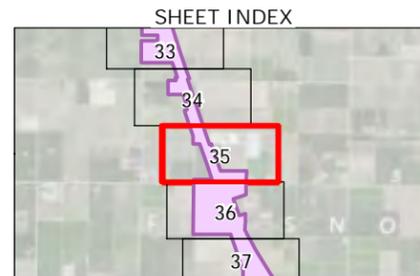
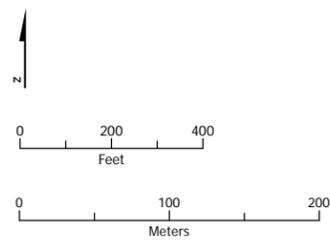


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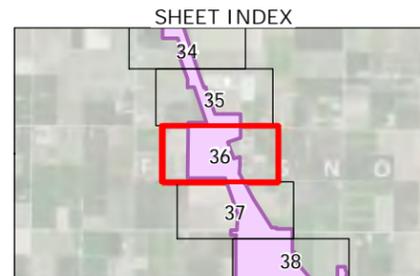
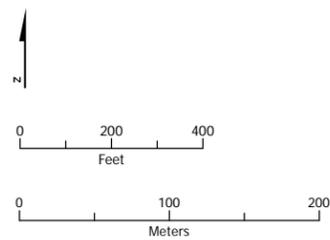


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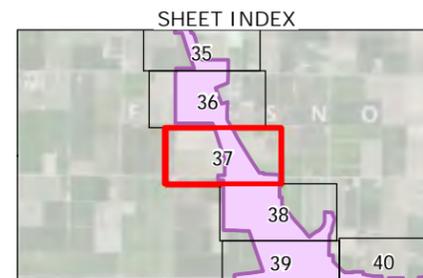
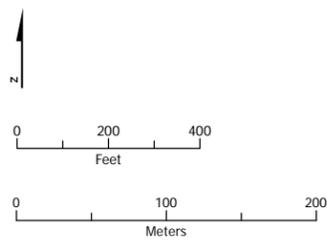


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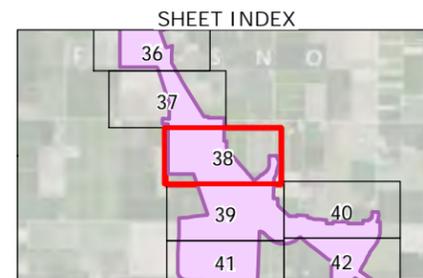
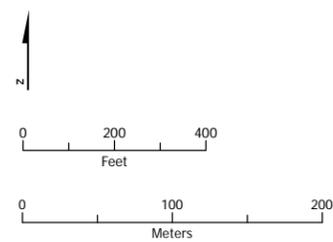


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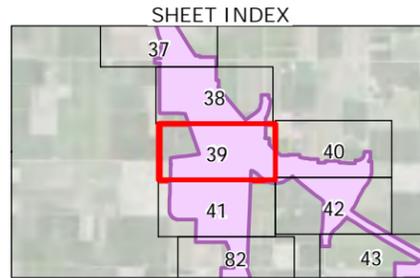
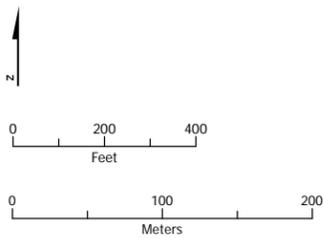


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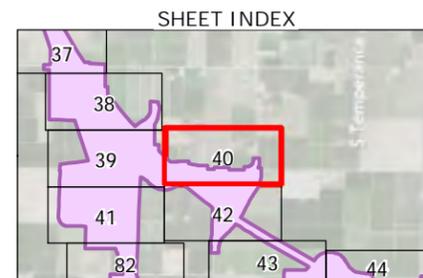
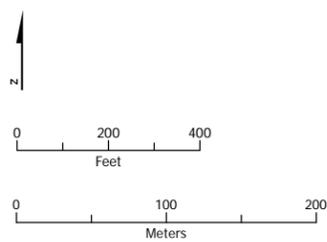


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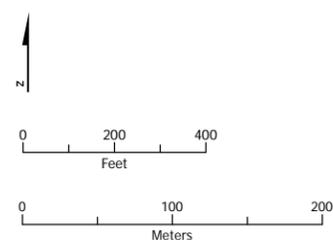


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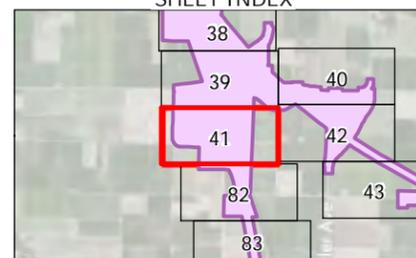


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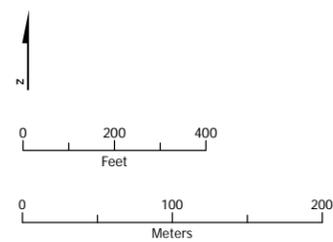


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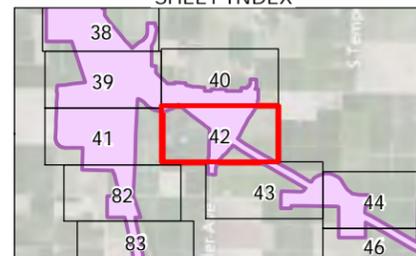


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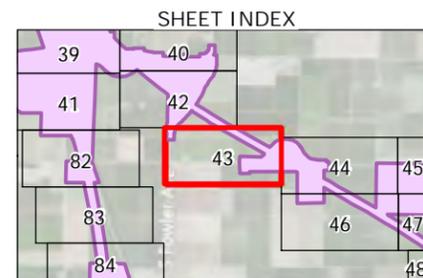
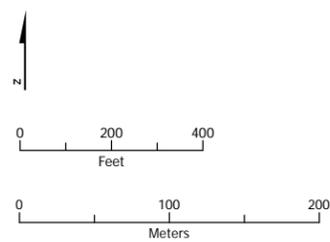


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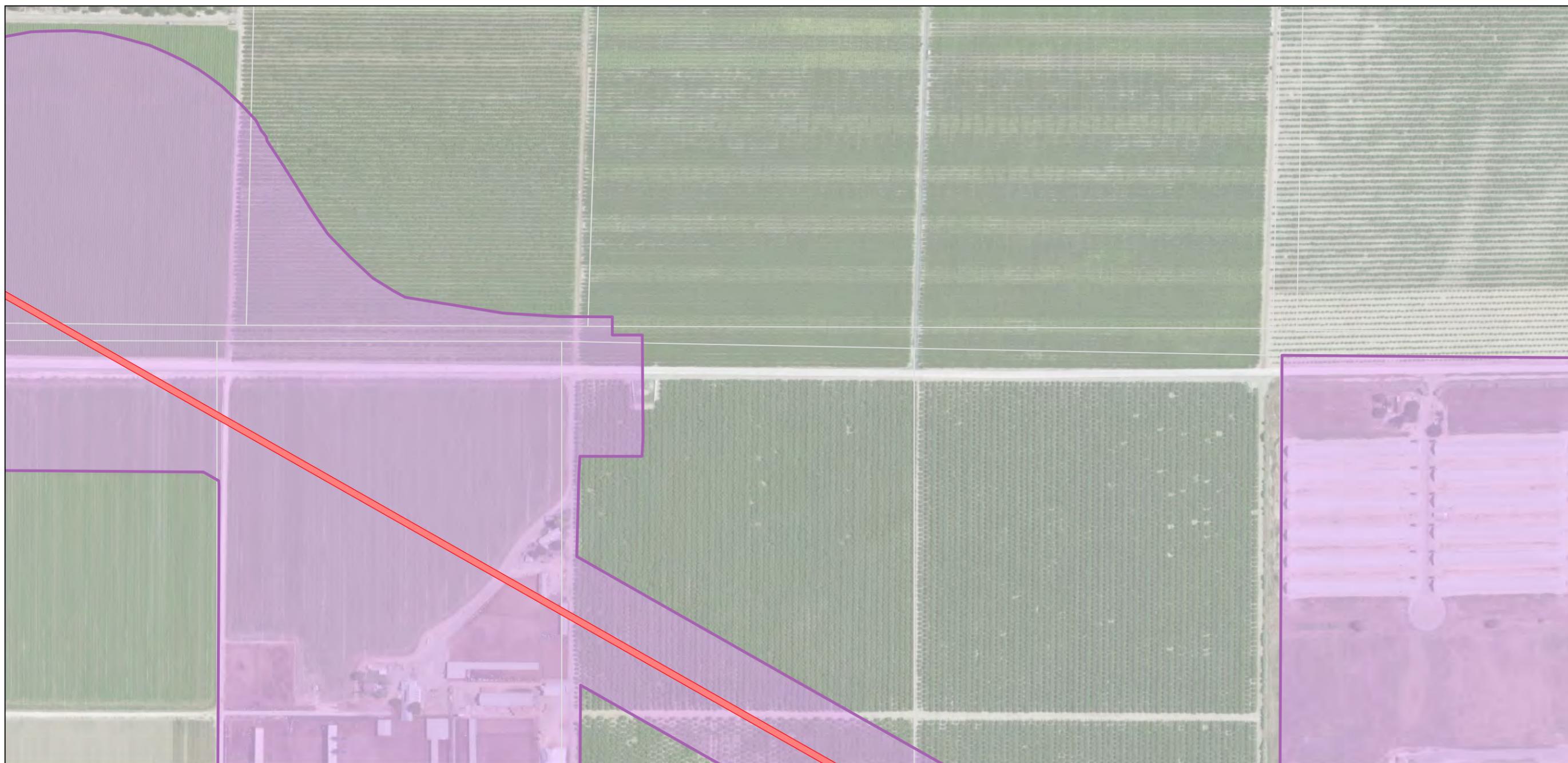


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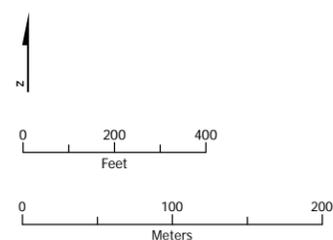


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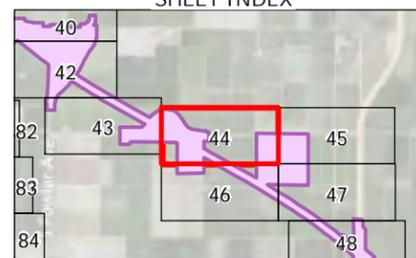


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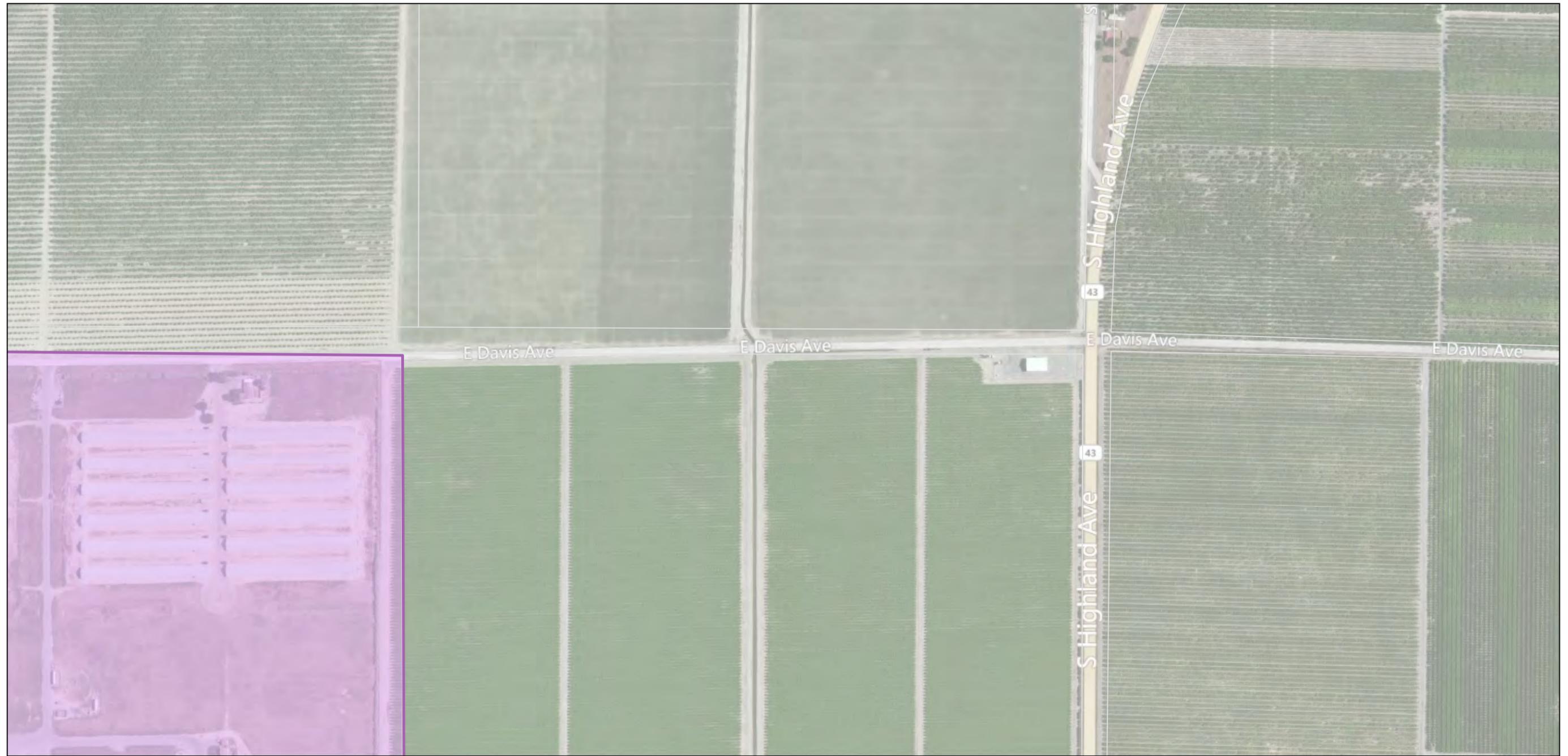
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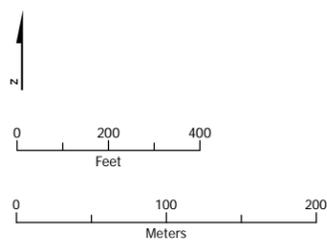


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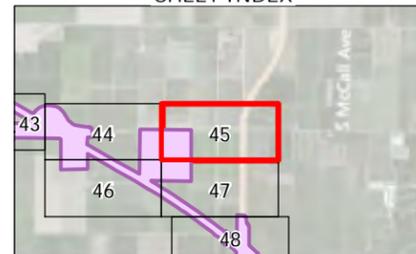


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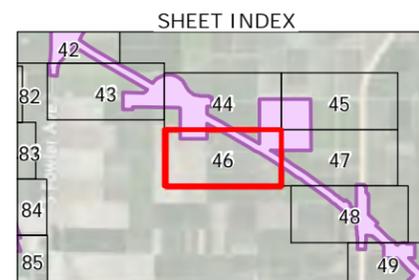
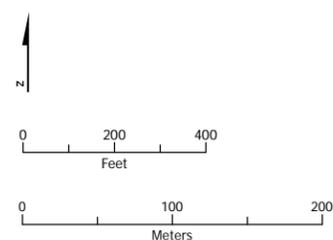


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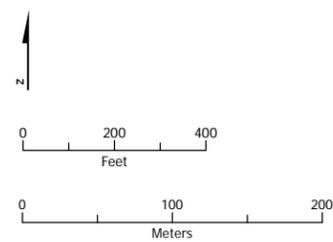


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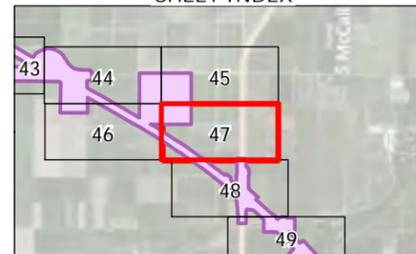


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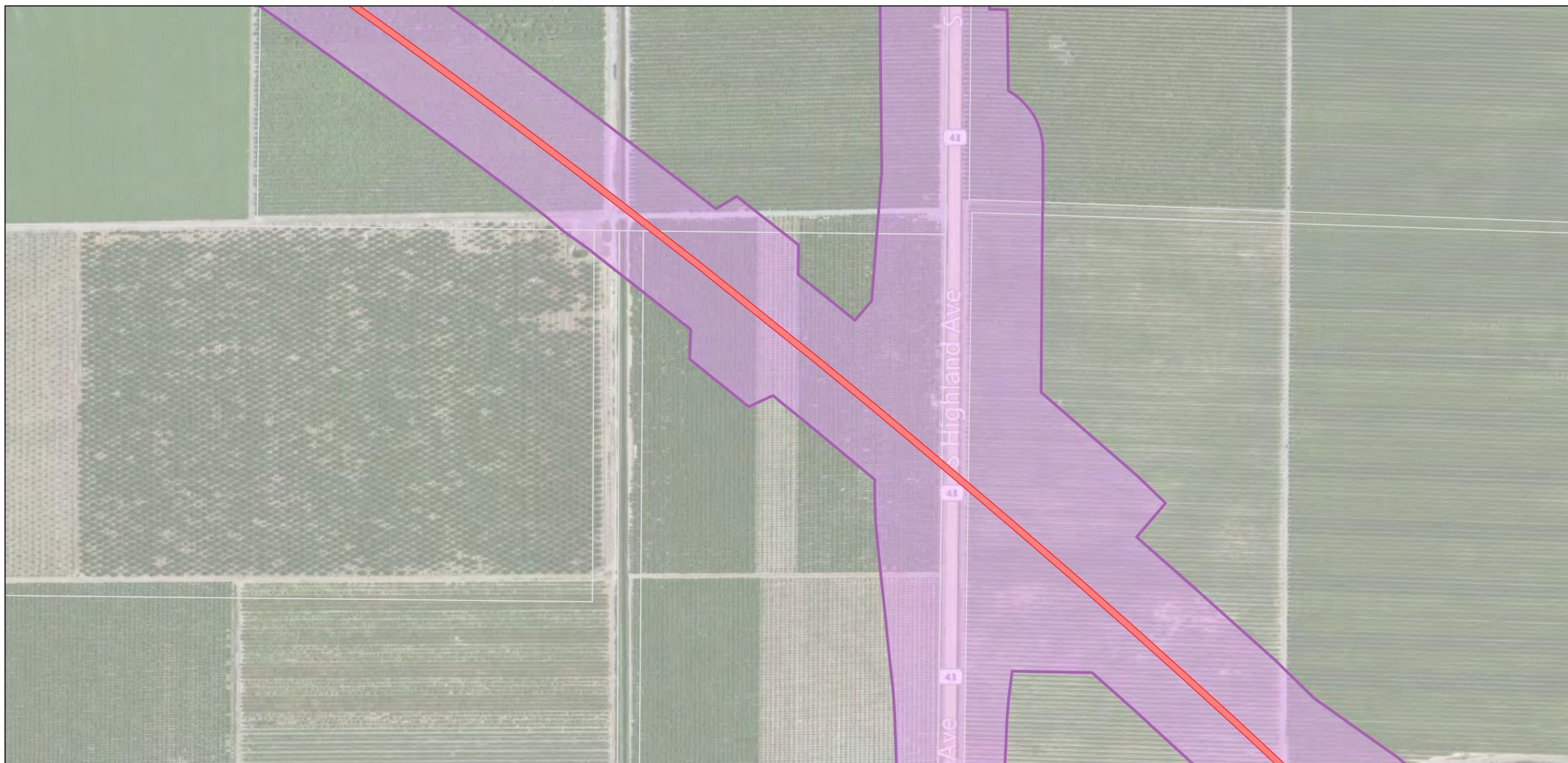
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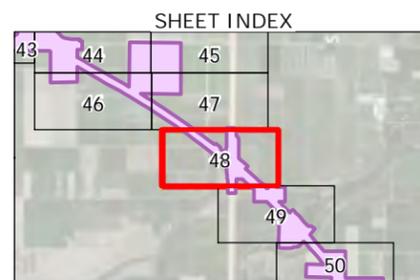
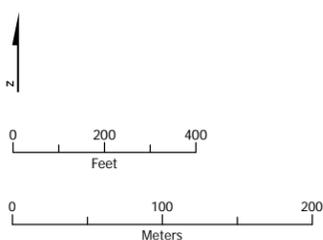


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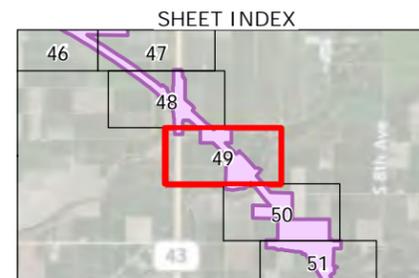
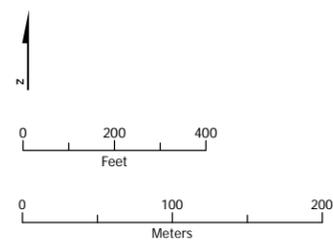


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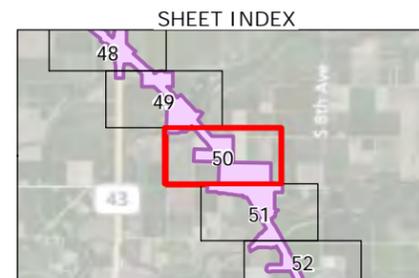
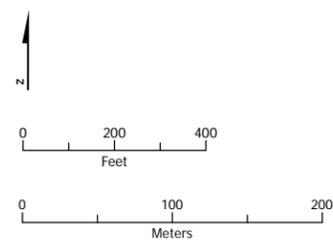


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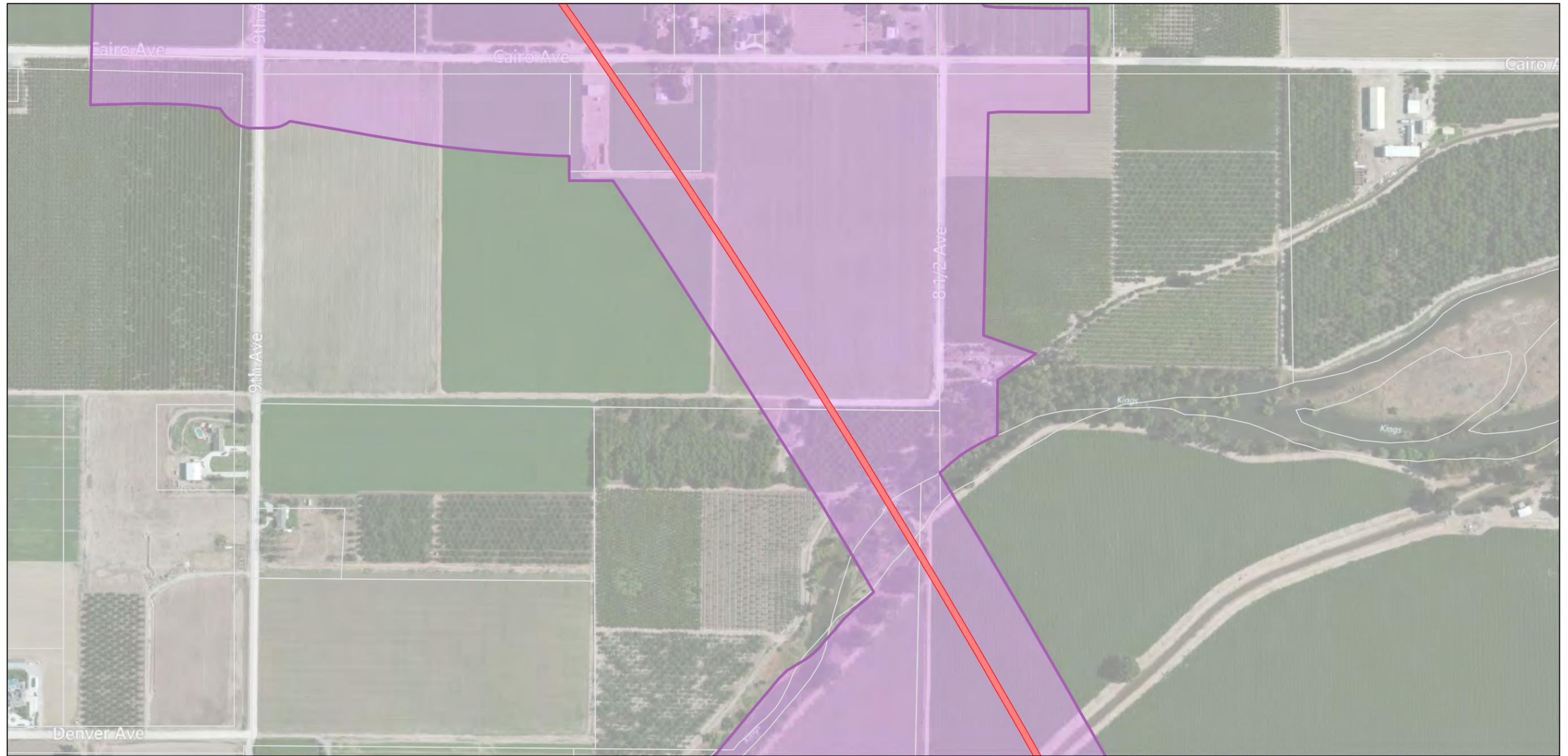


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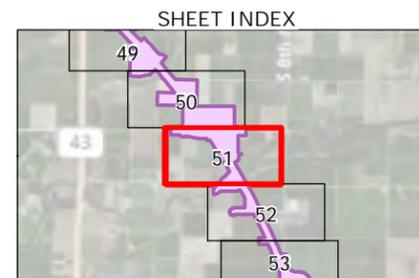
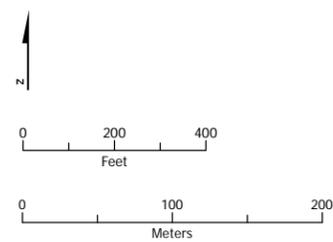


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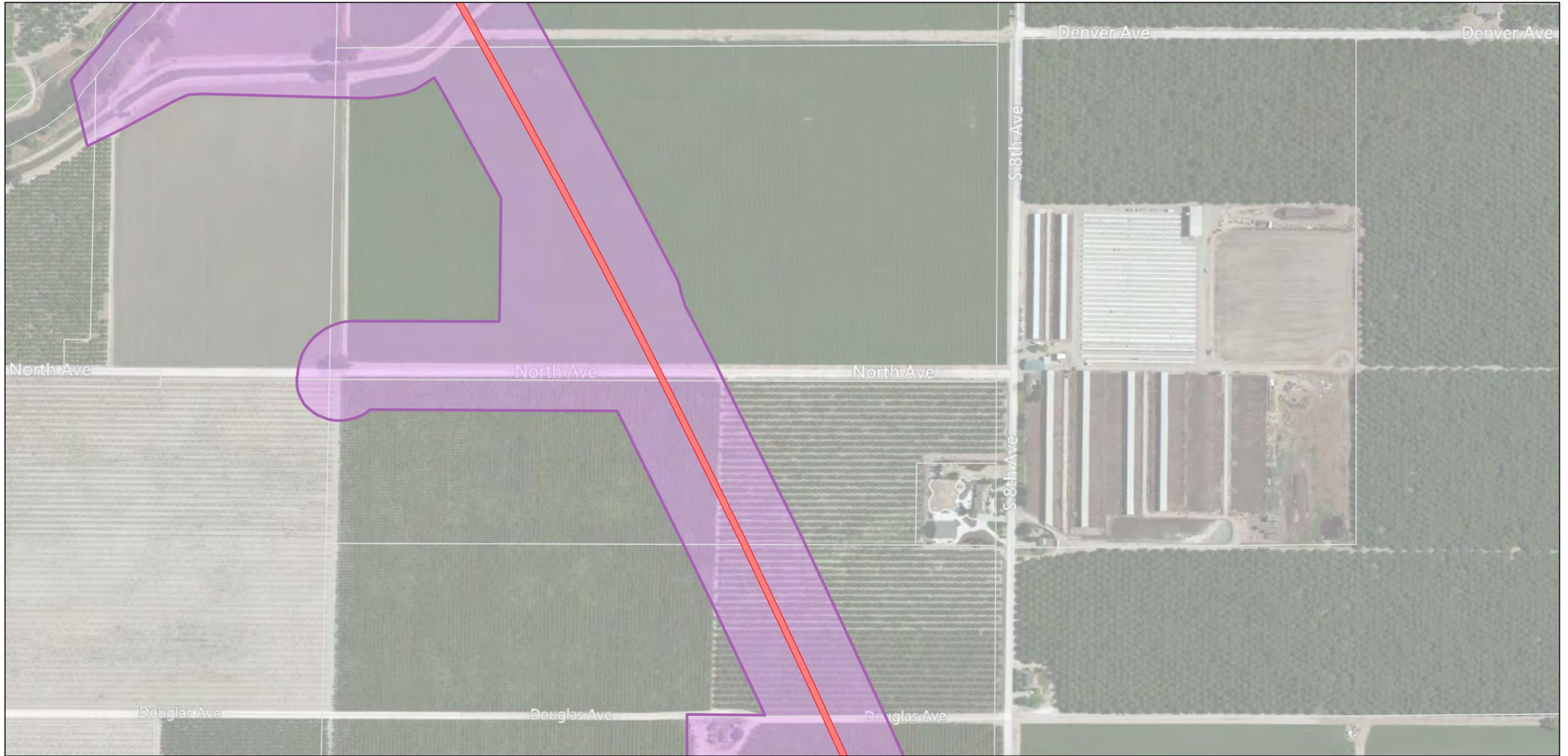


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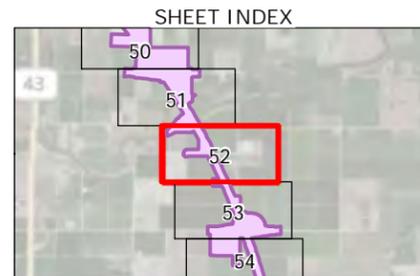
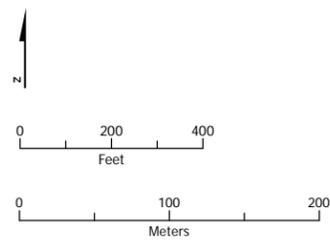


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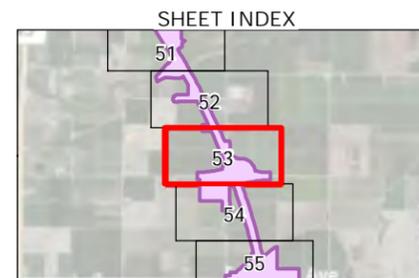
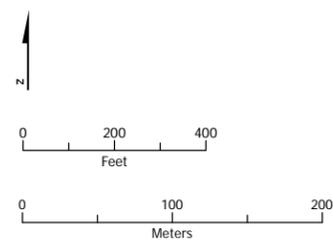


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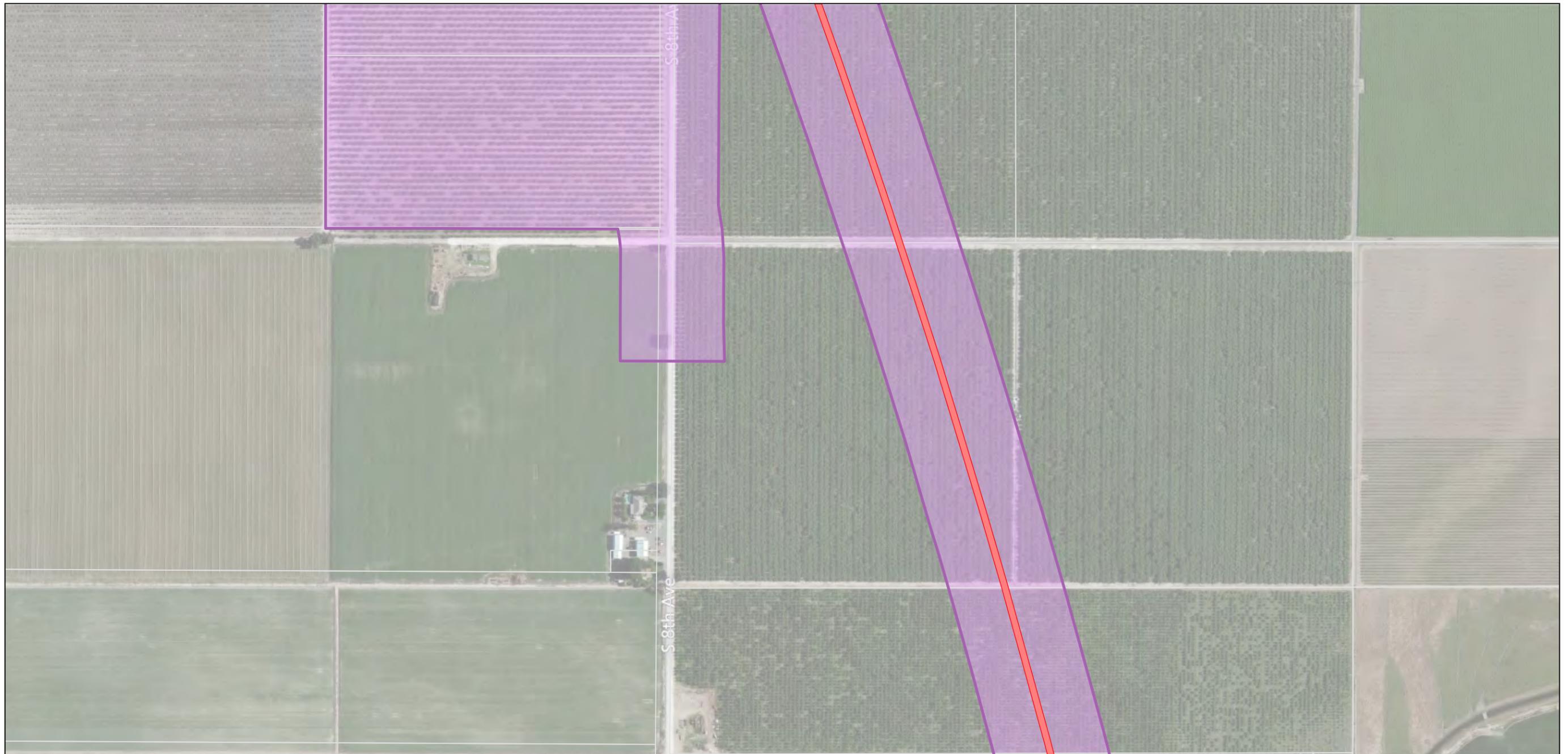


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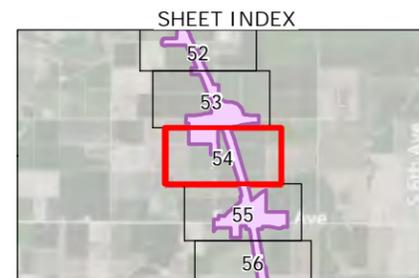
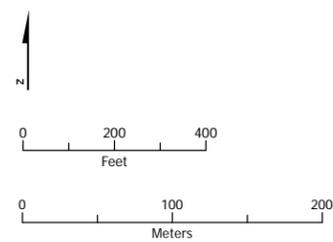


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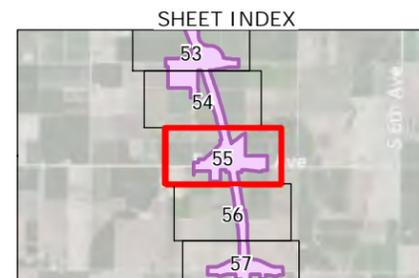
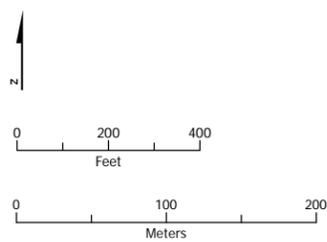


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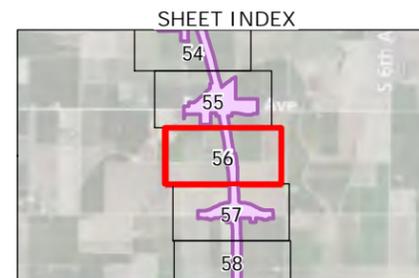
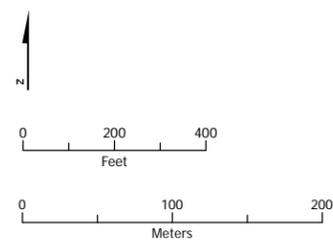


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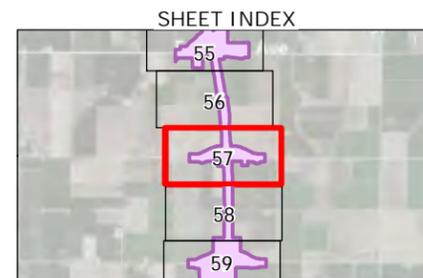
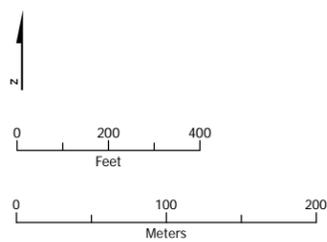


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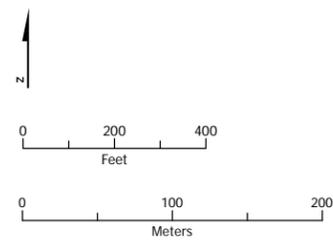


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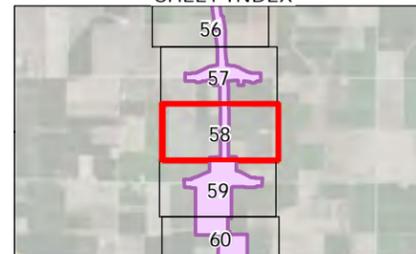


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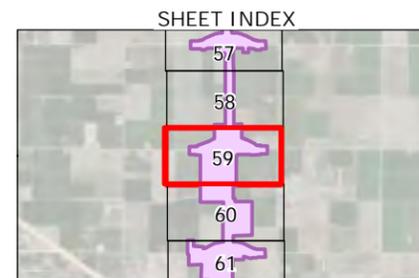
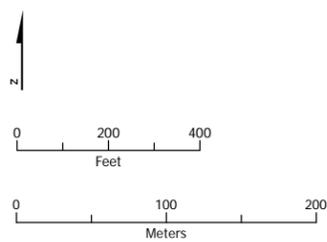


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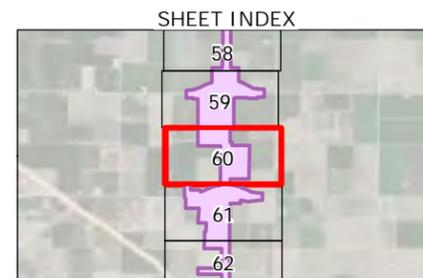
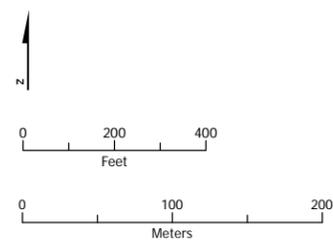


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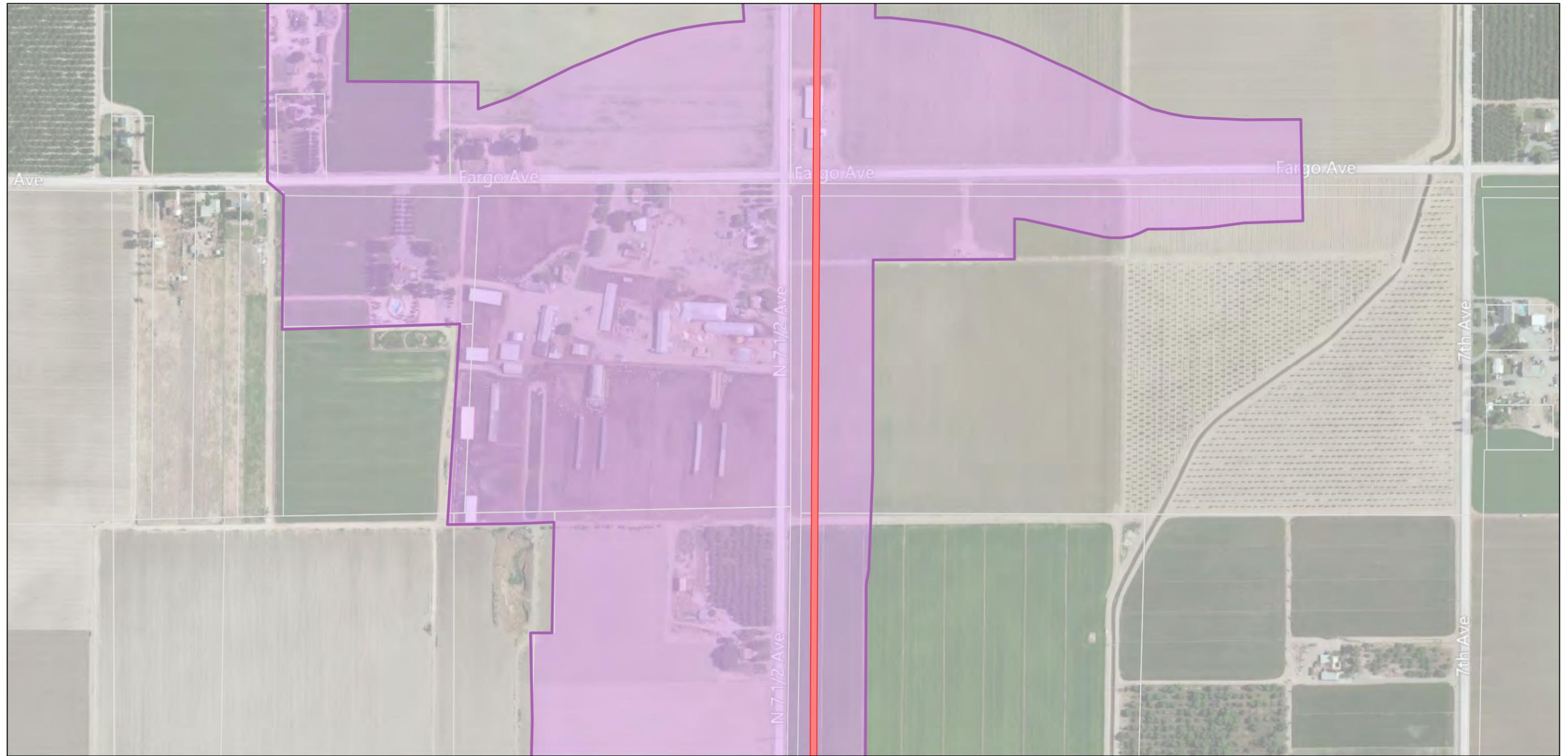


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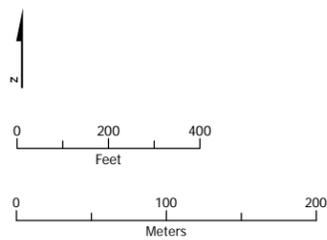


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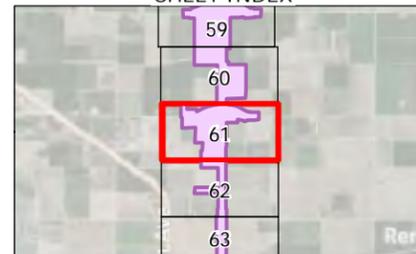


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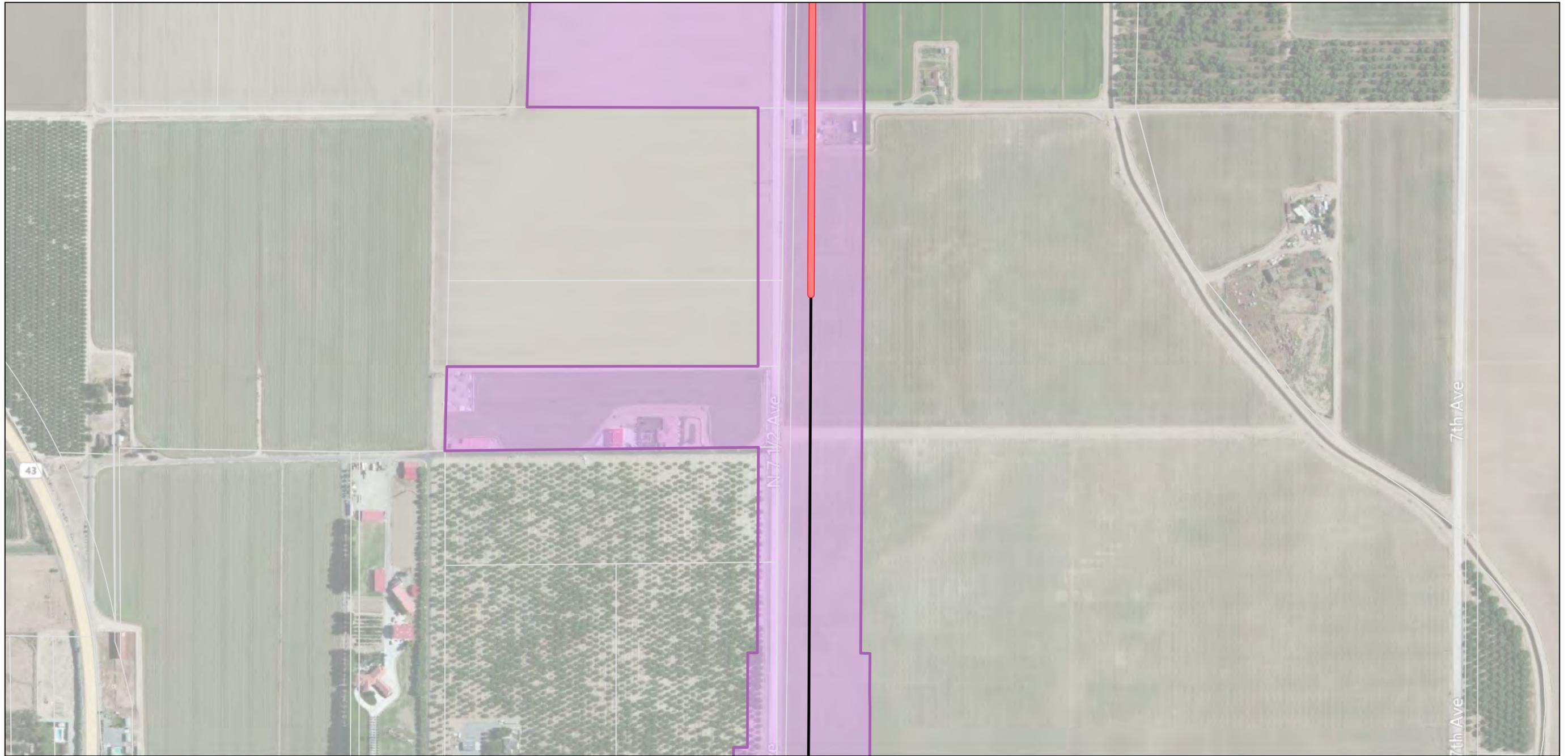
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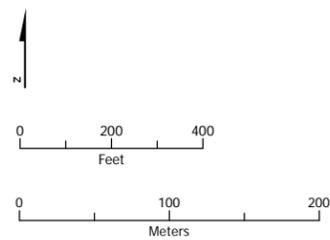


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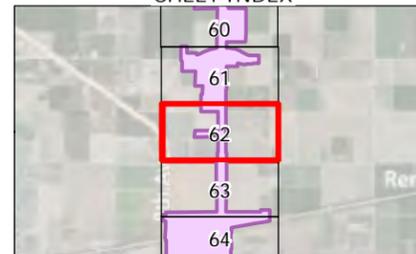


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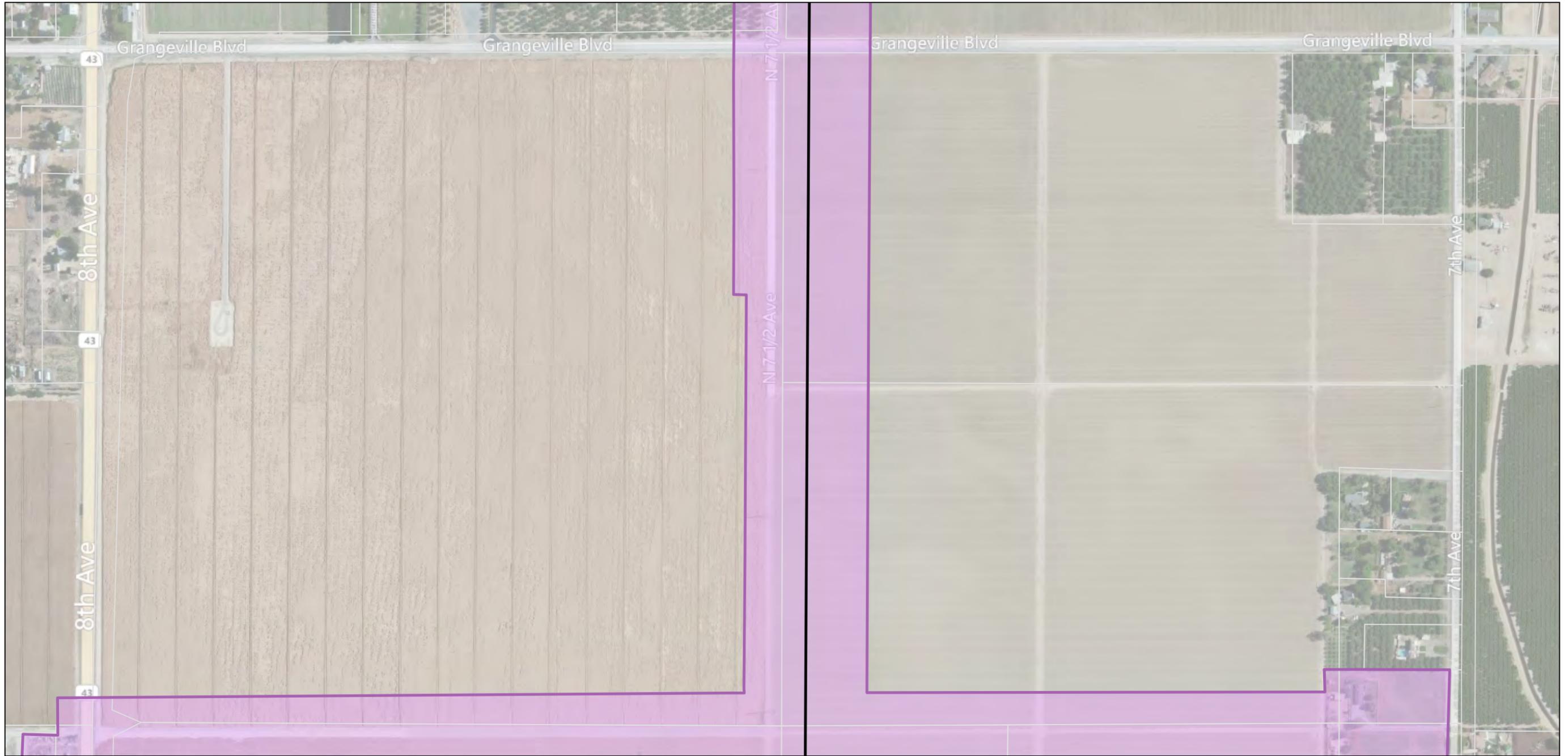
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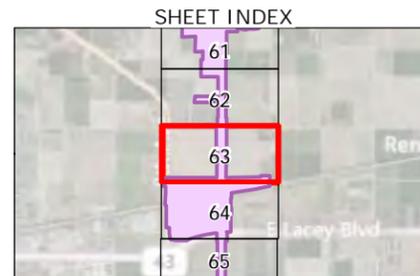
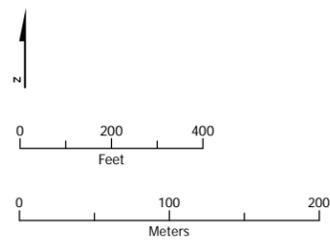


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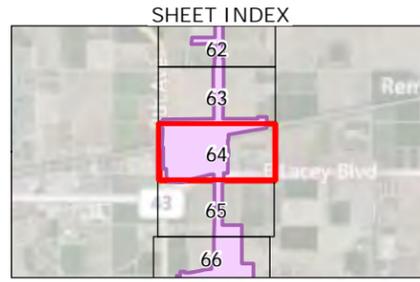
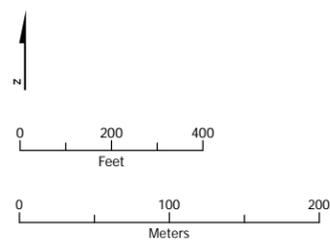


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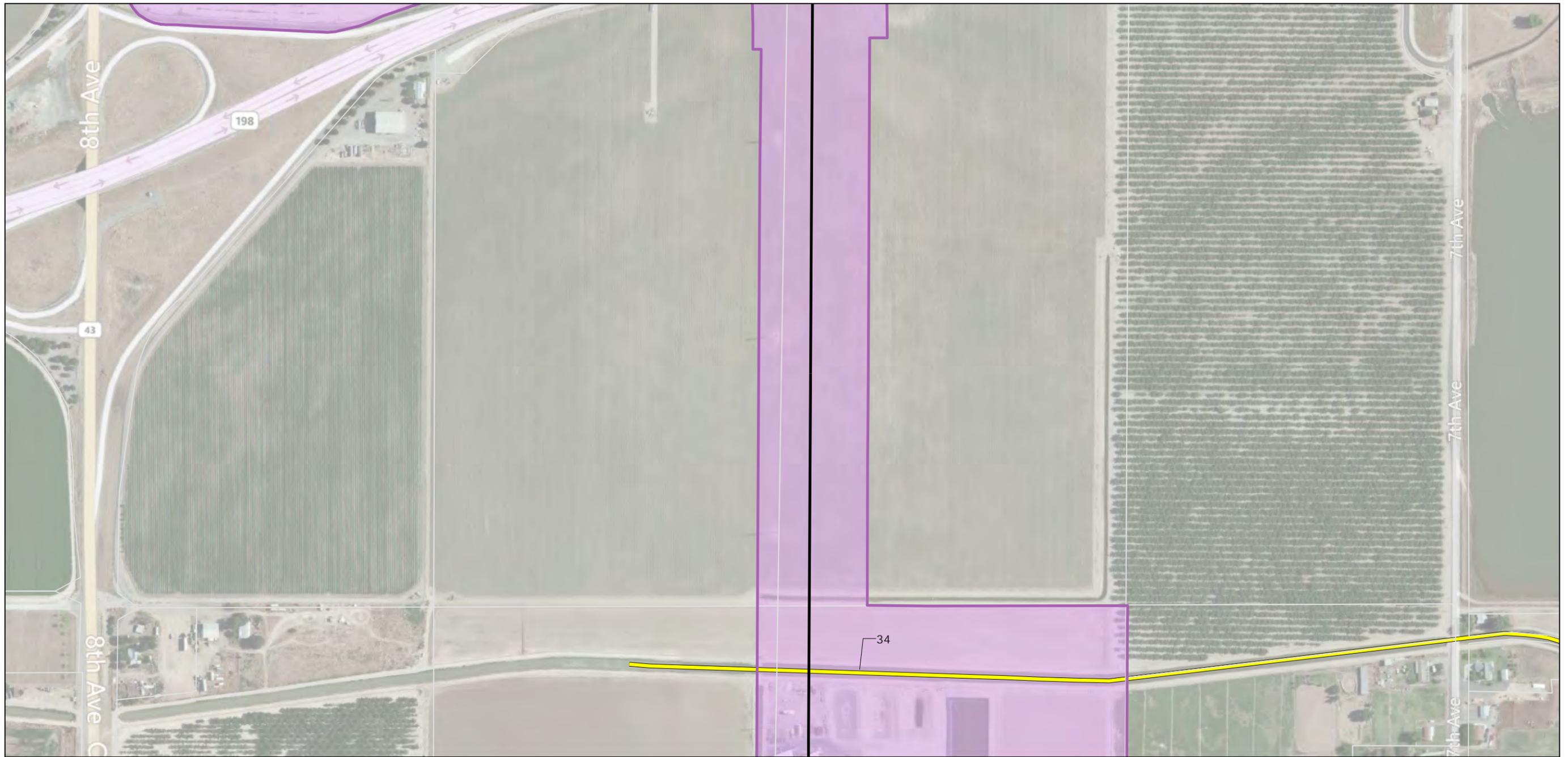


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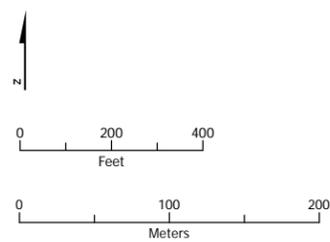


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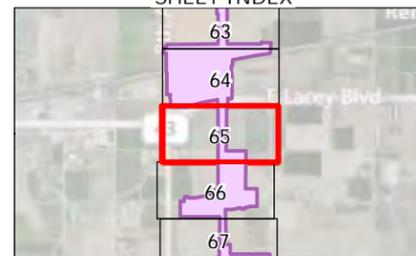


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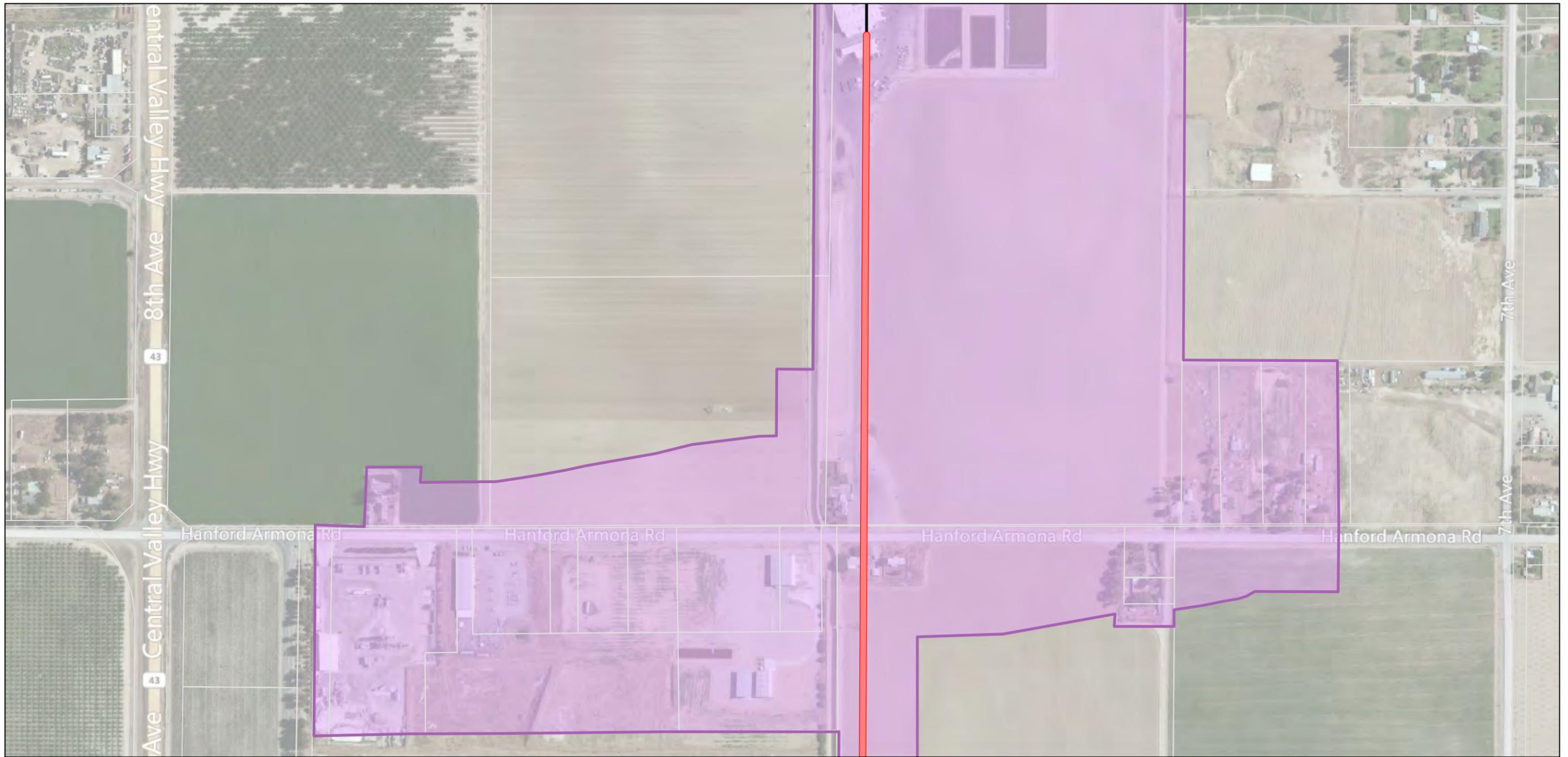
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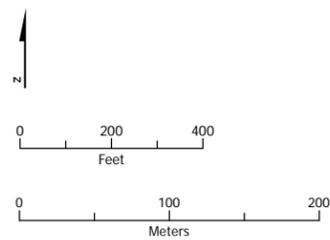


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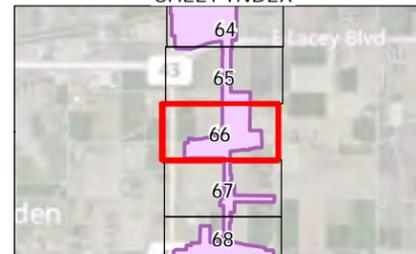


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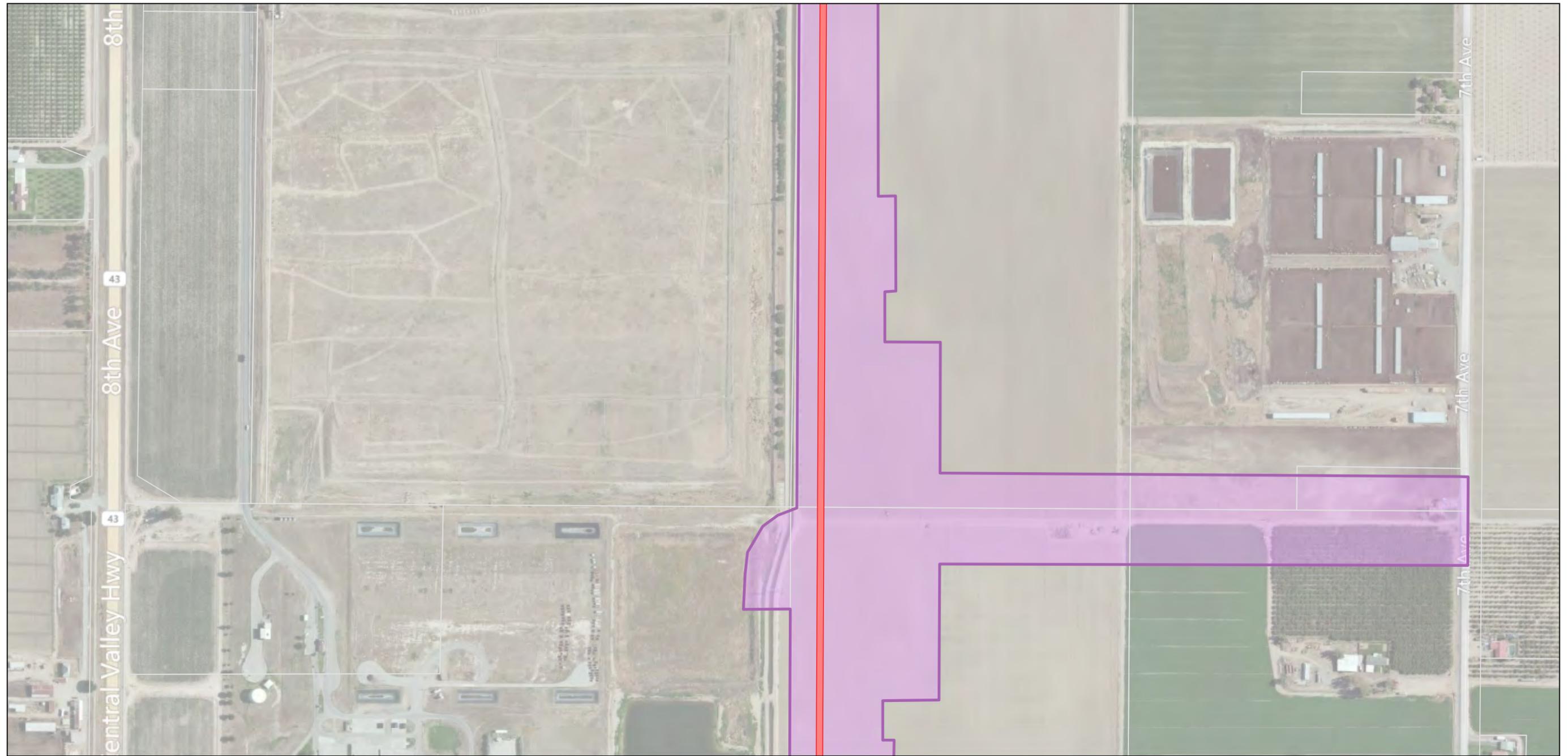
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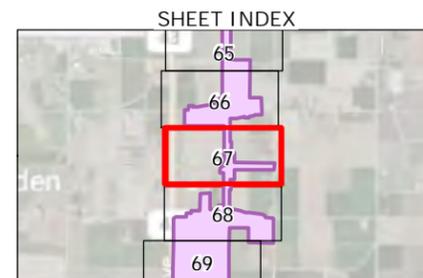
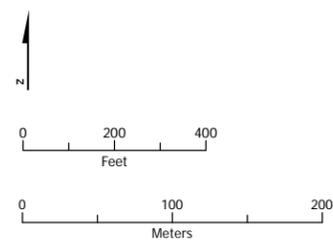


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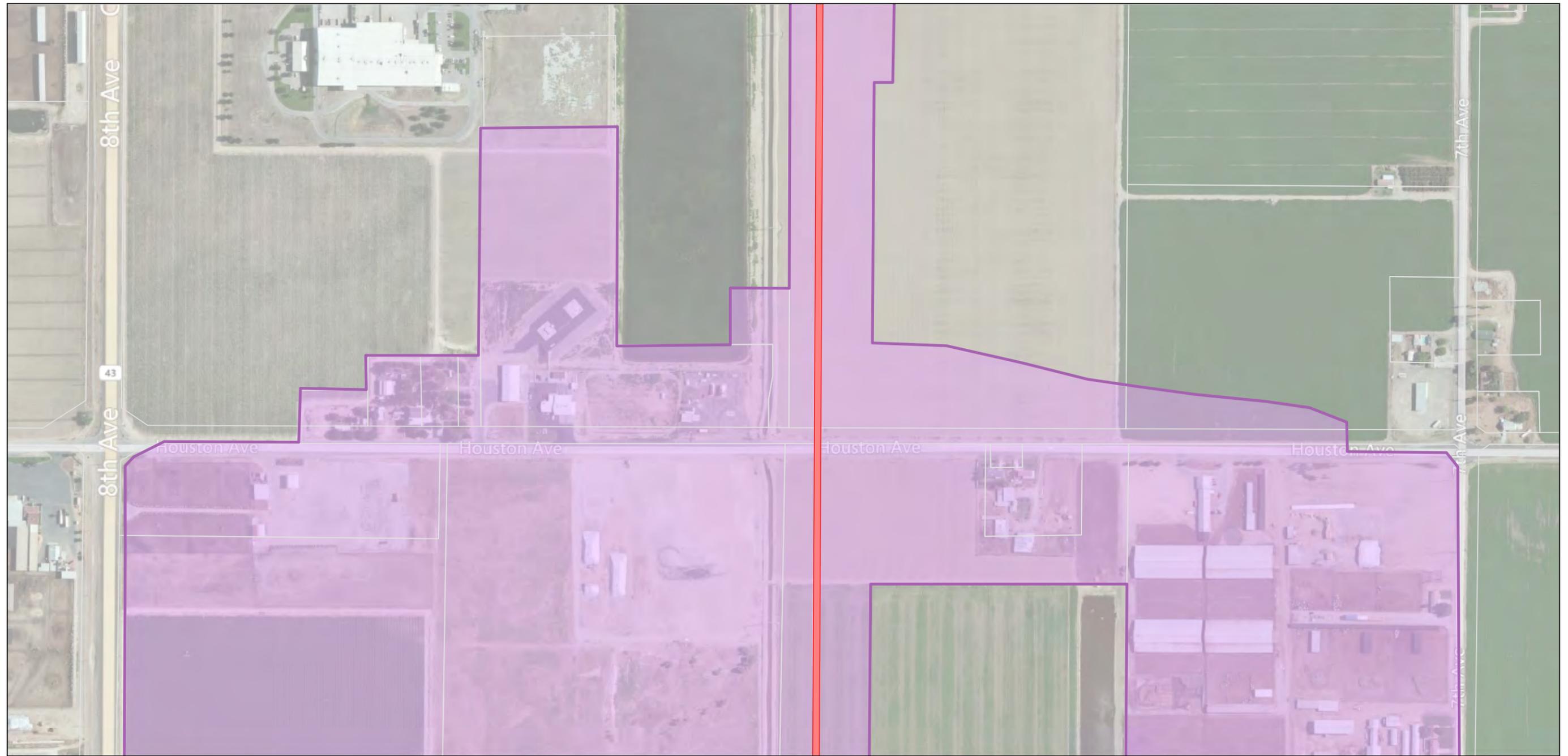


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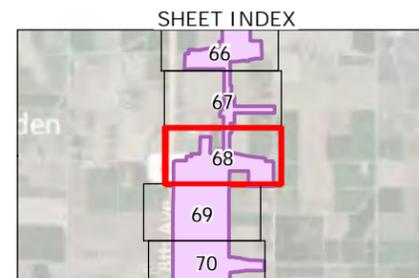
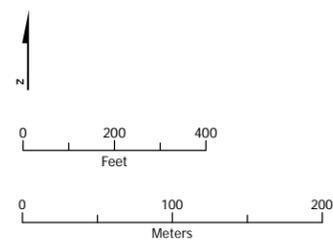


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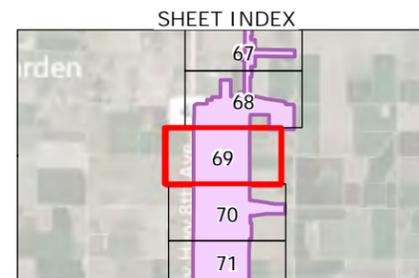
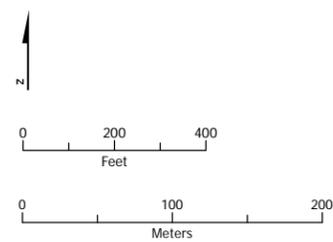


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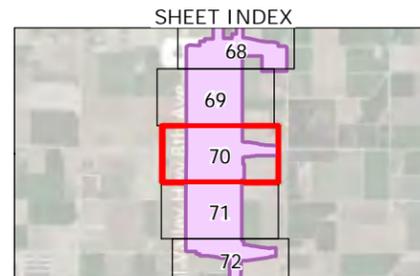
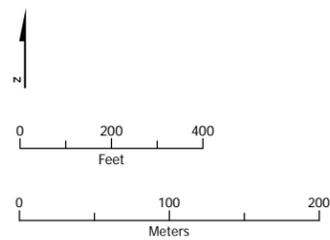


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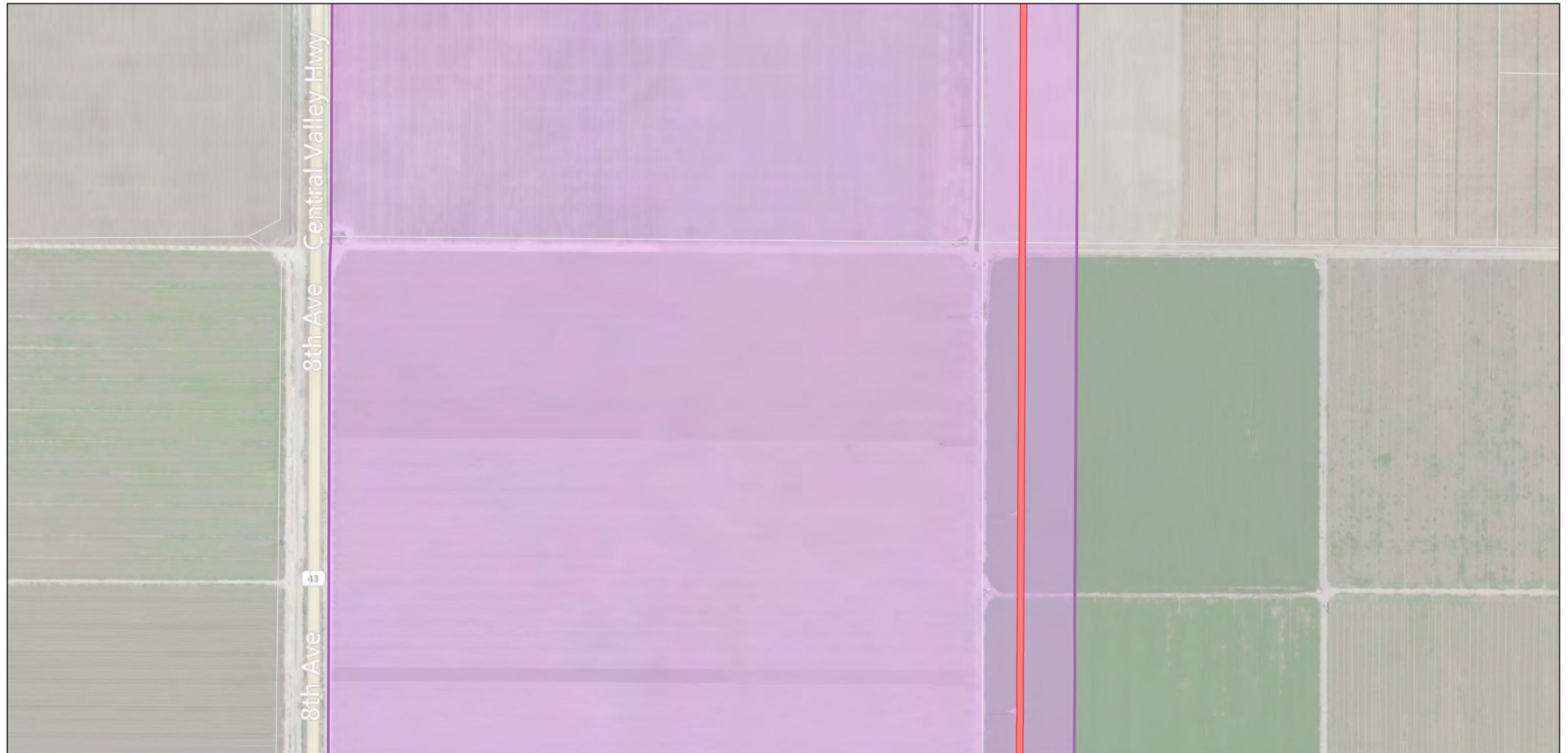


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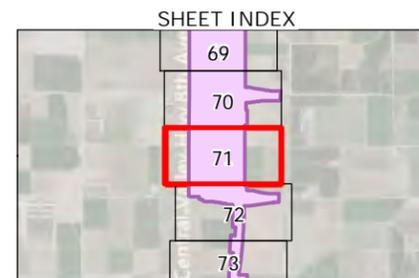
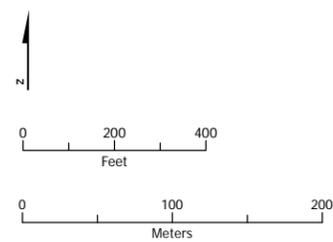


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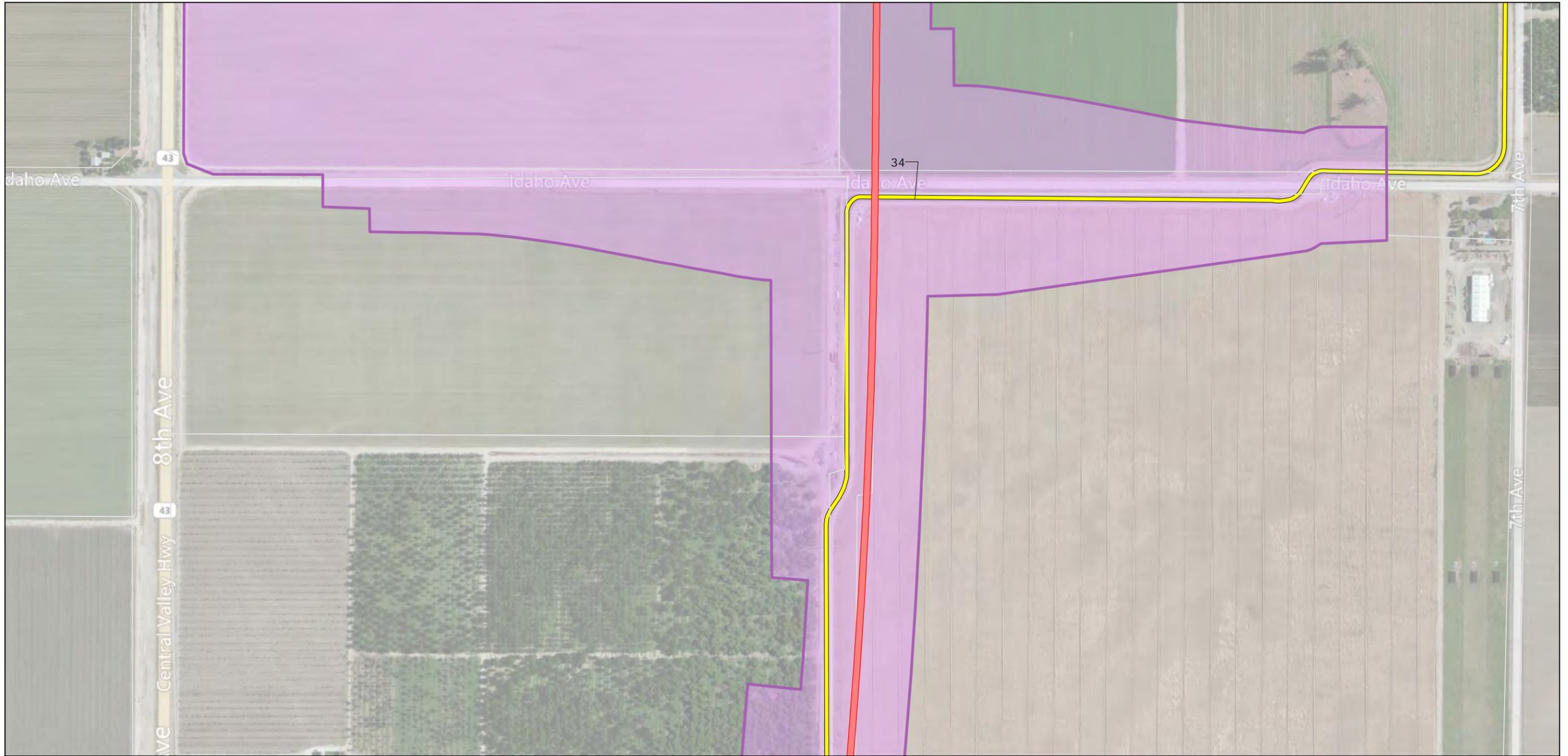


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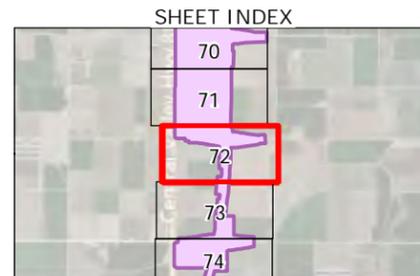
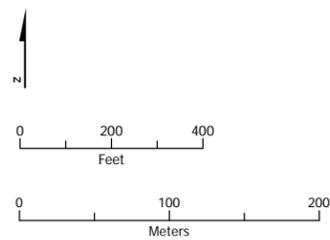


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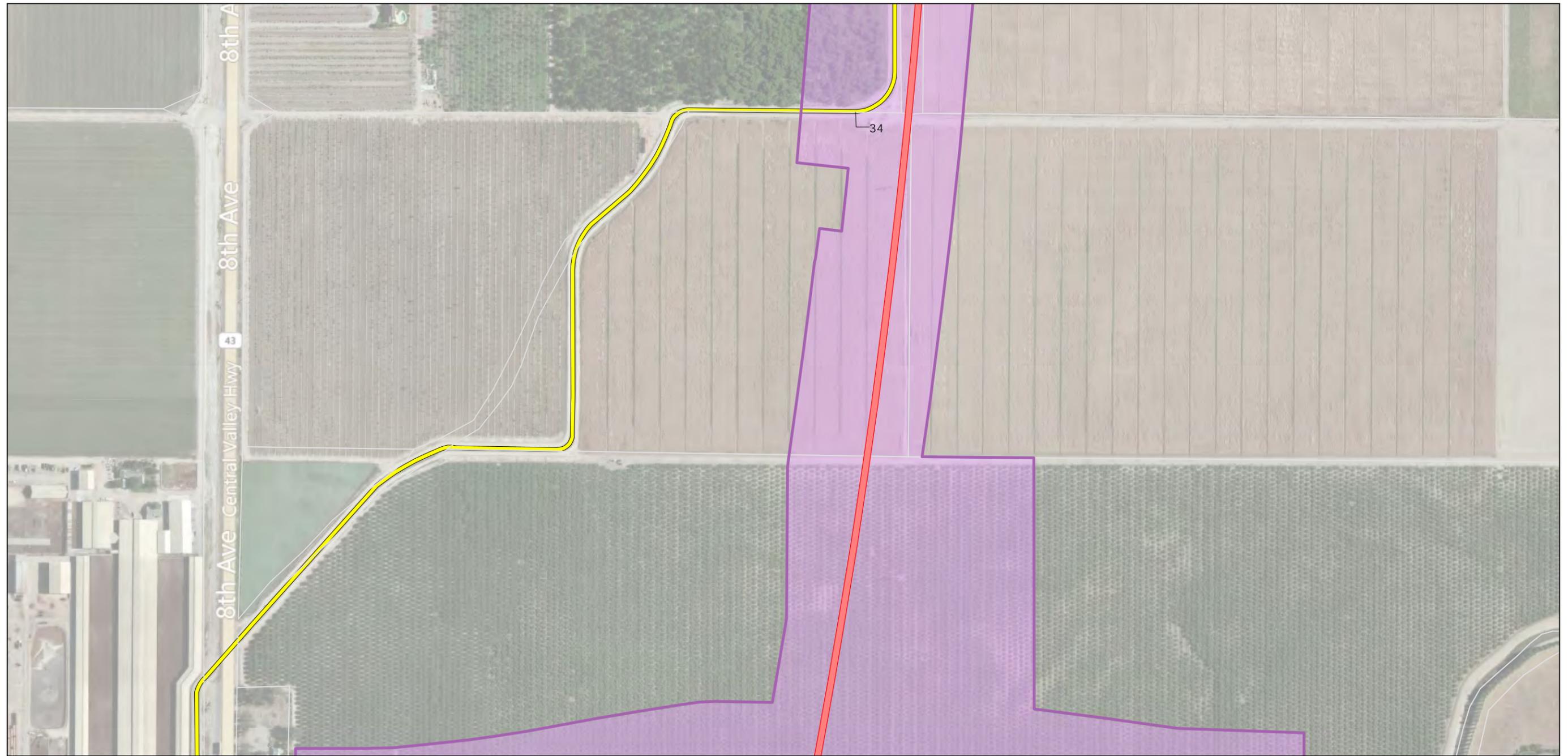


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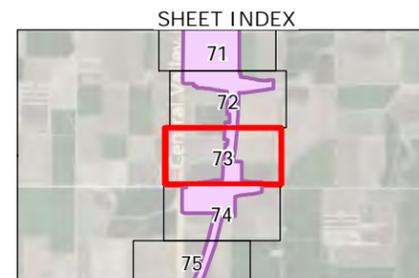
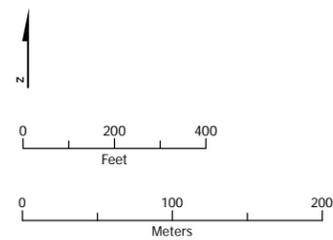


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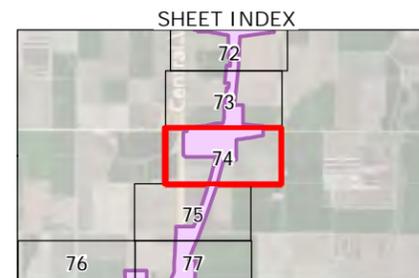
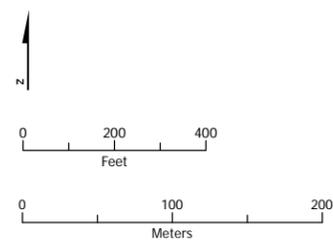


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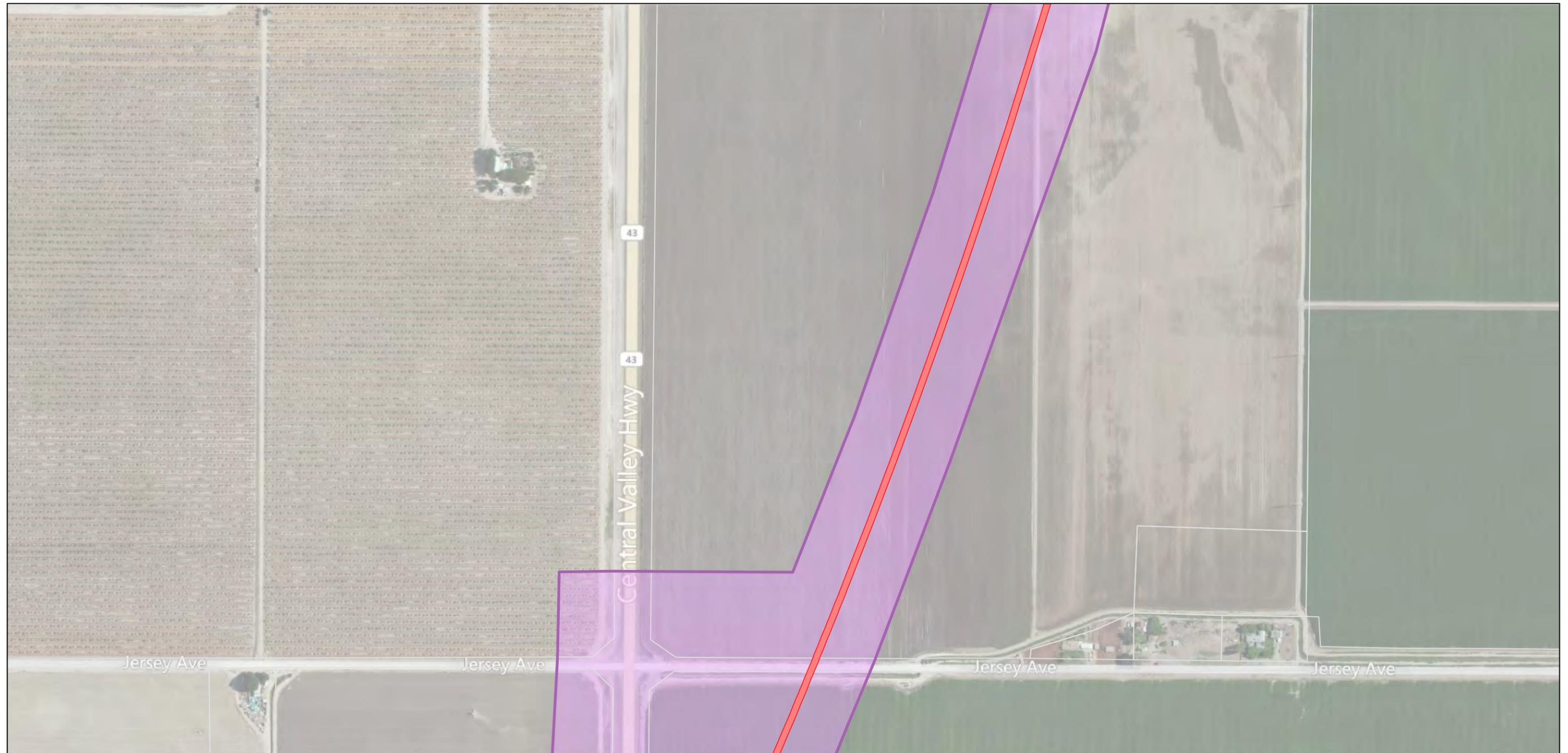


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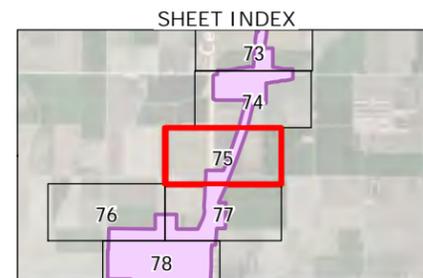
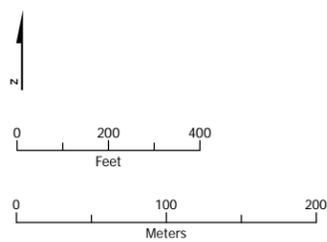


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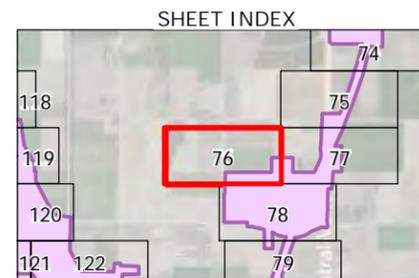
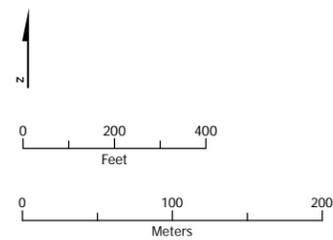


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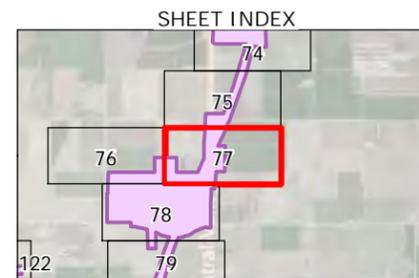
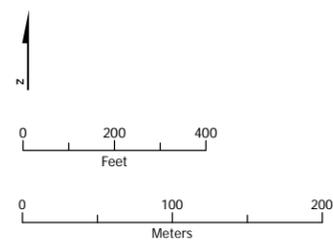


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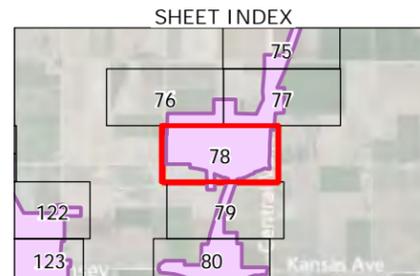
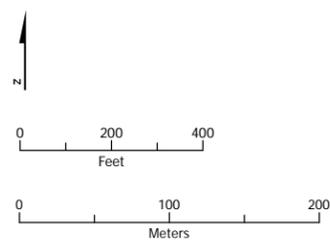


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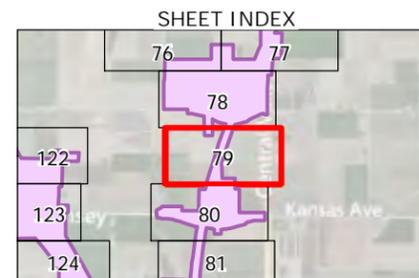
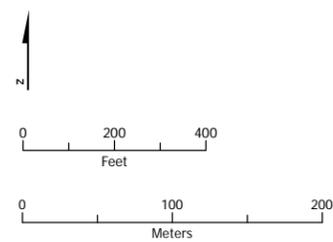


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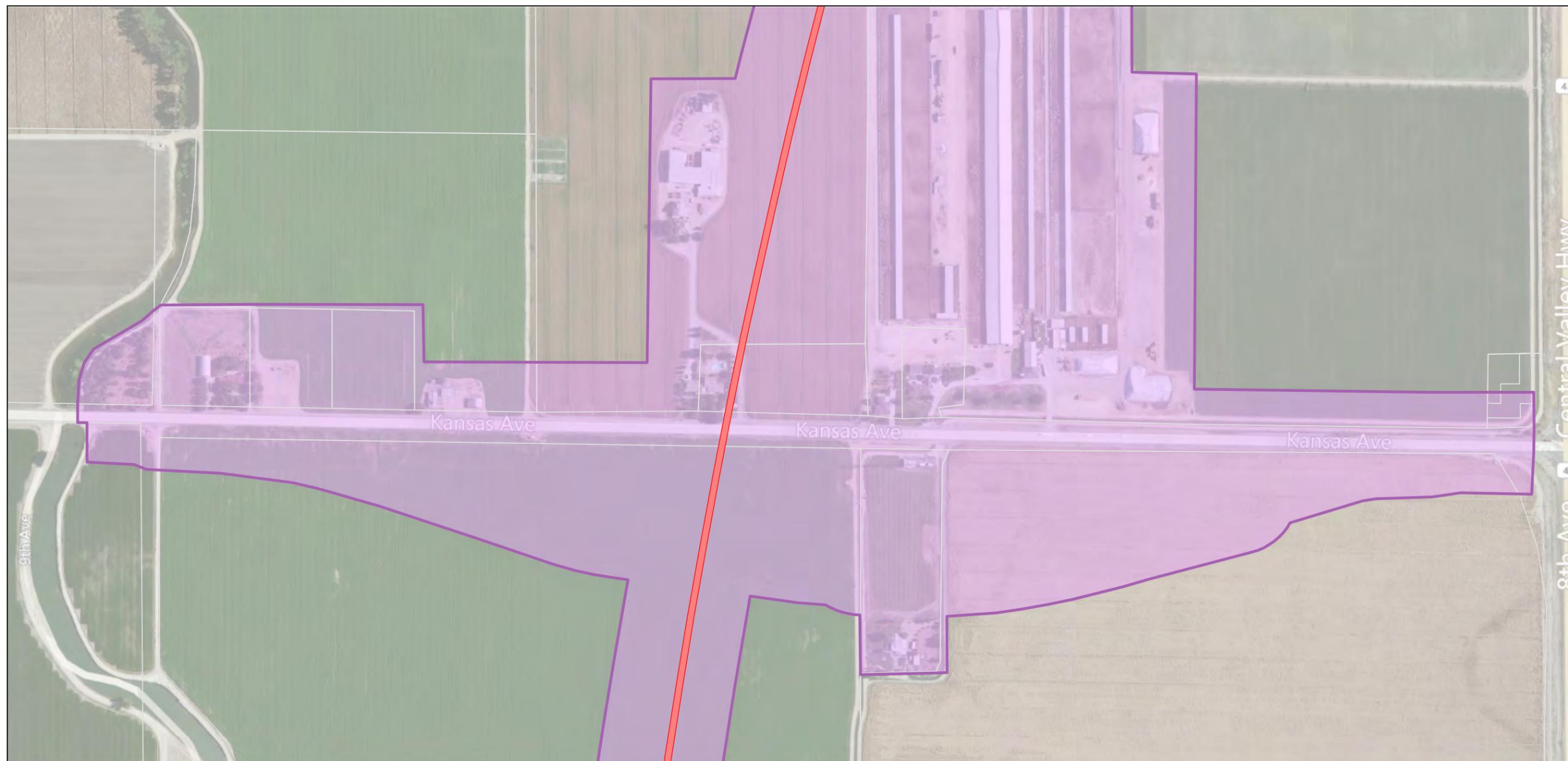


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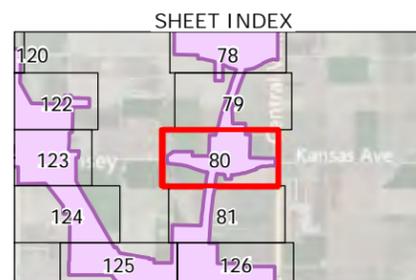
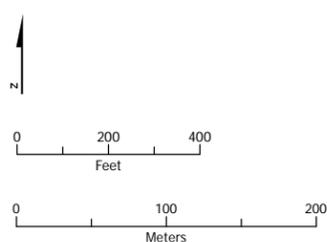


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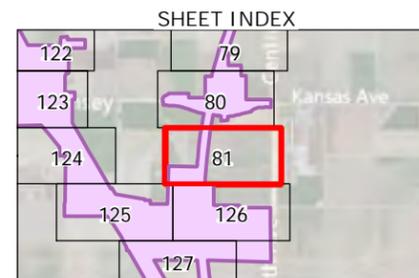
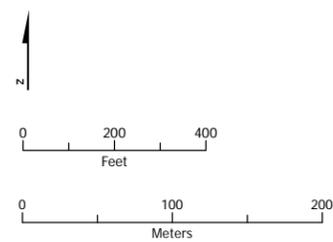


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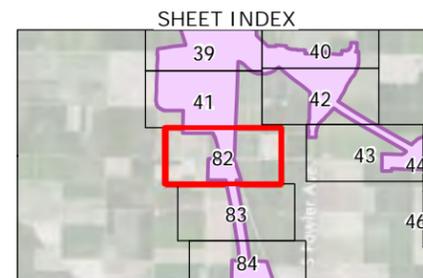
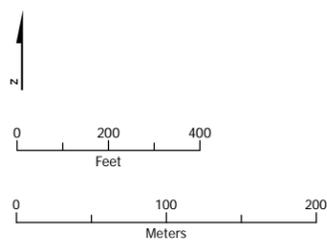


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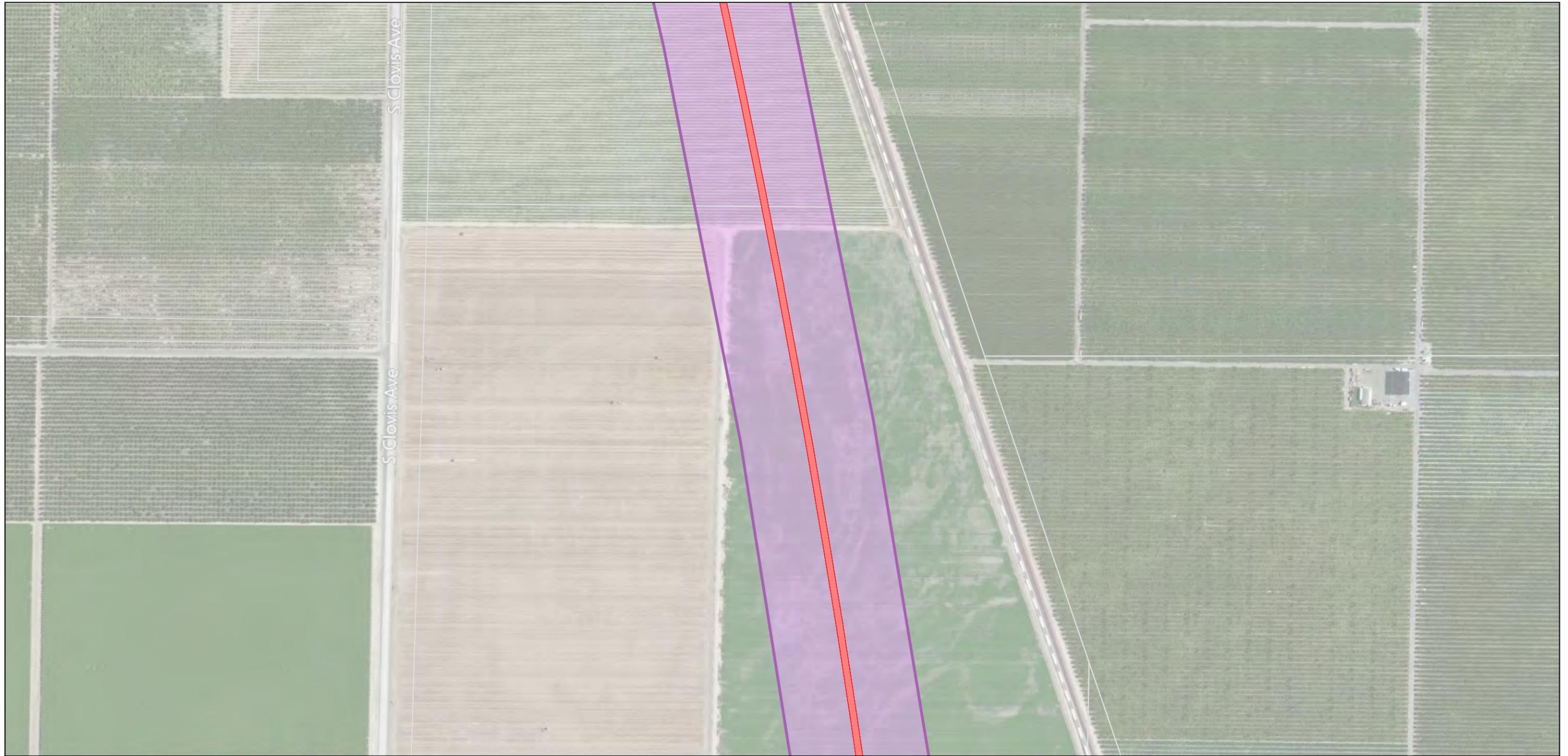


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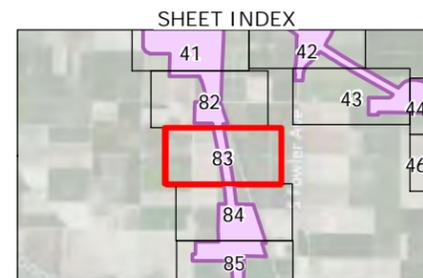
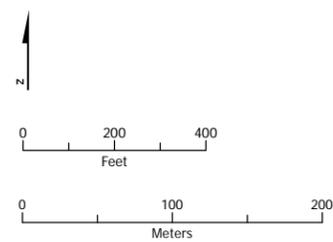


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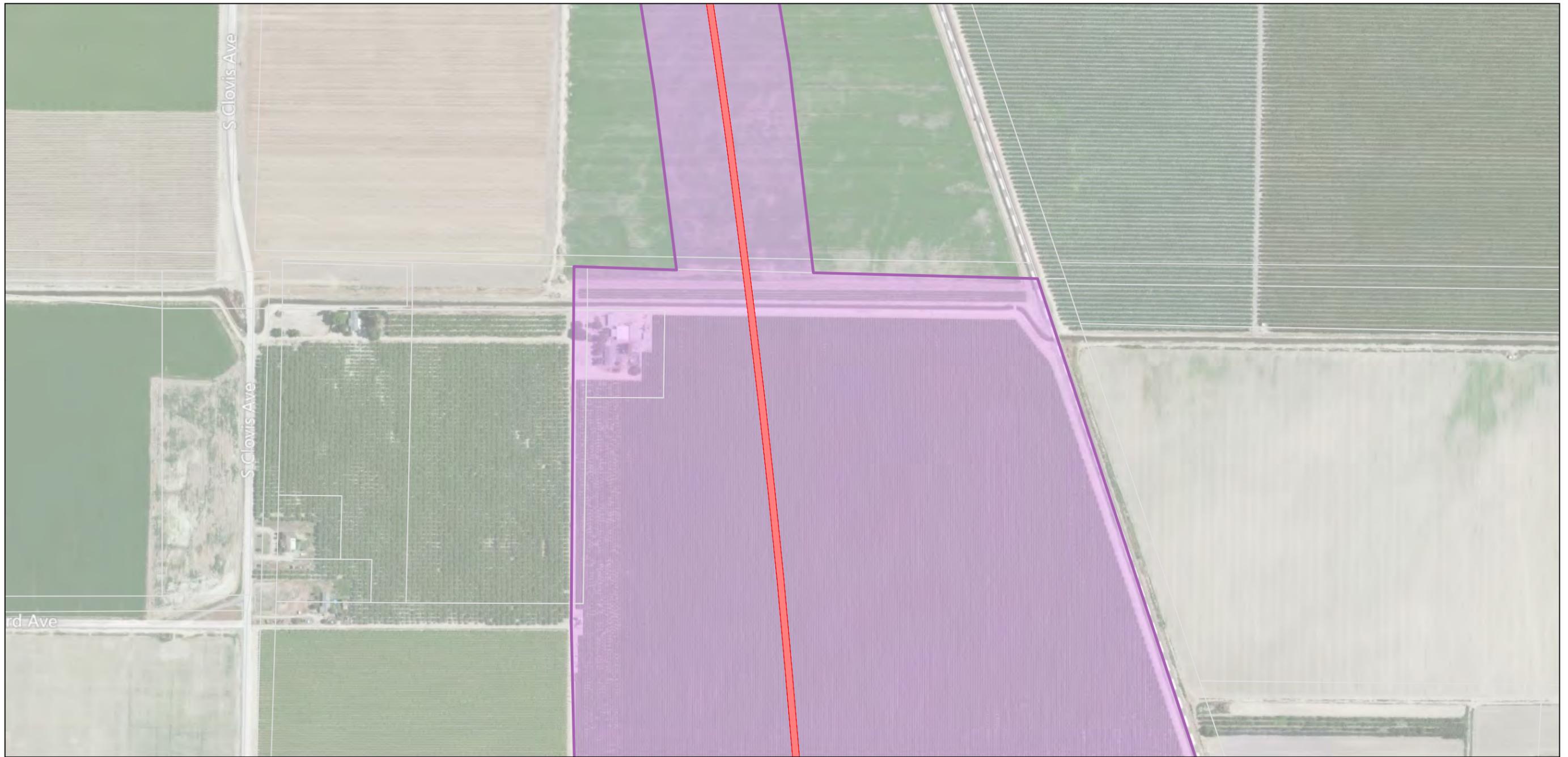


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 Imagery source: Microsoft Bing Maps

December 20, 2012

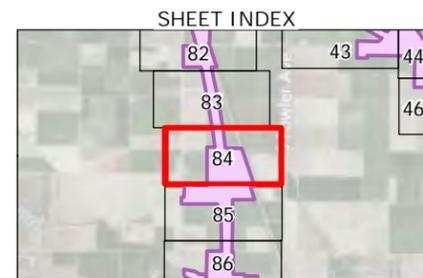
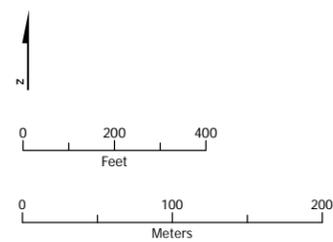


- At-grade alignment
- Elevated alignment
- Below-grade alignment
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- HASR property location
- HASR canal
- Parcel boundary



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December 20, 2012

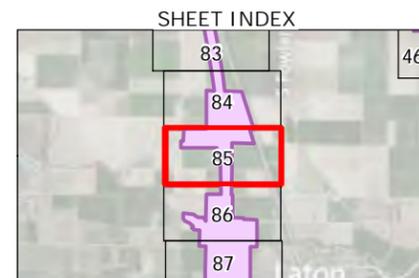
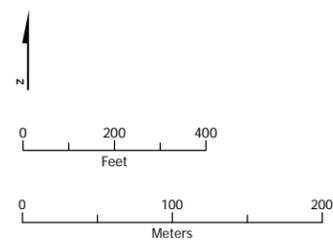


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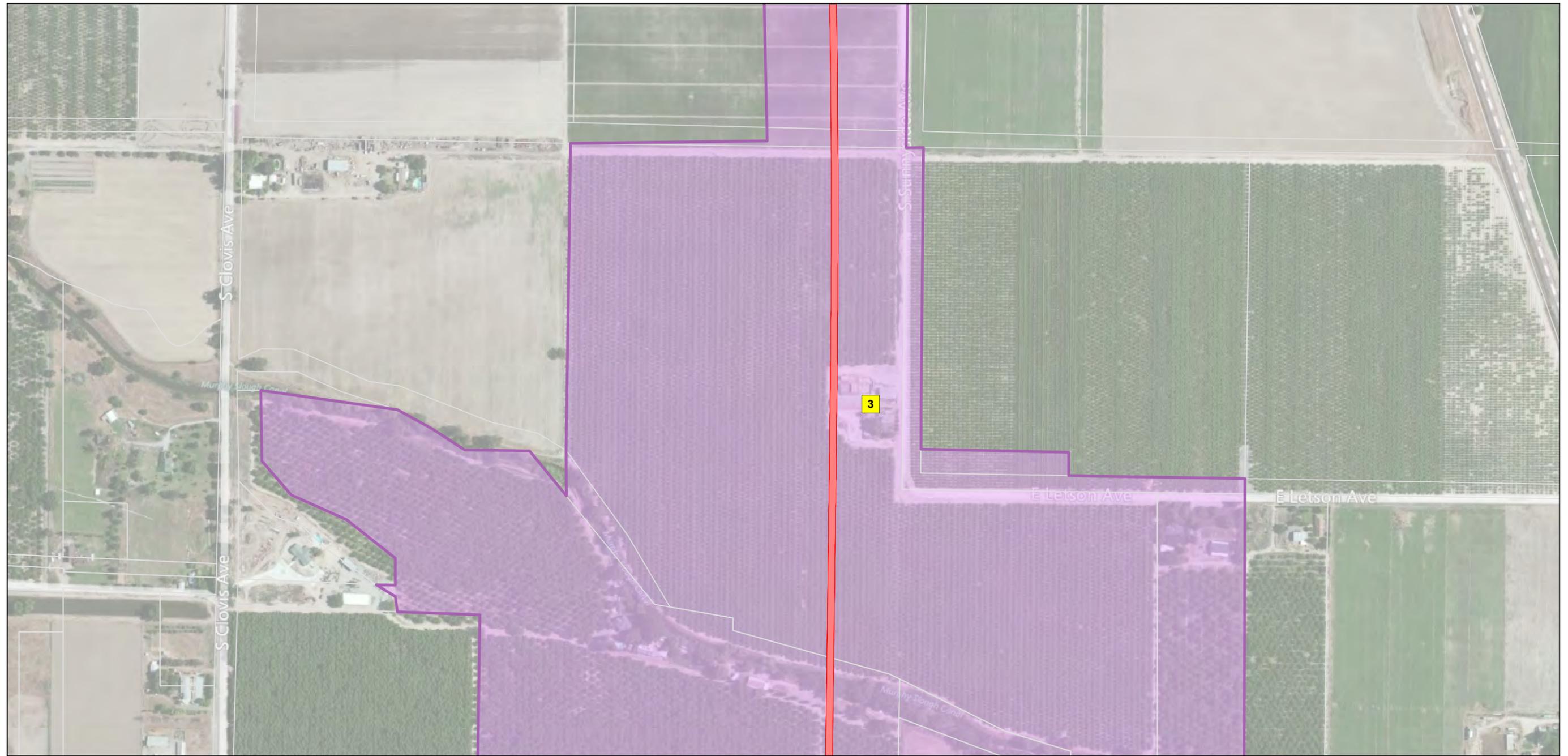


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December 20, 2012

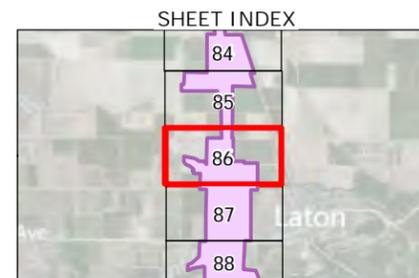
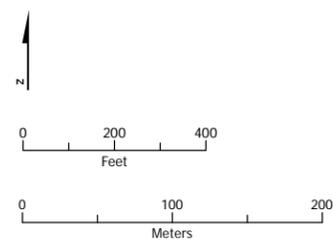


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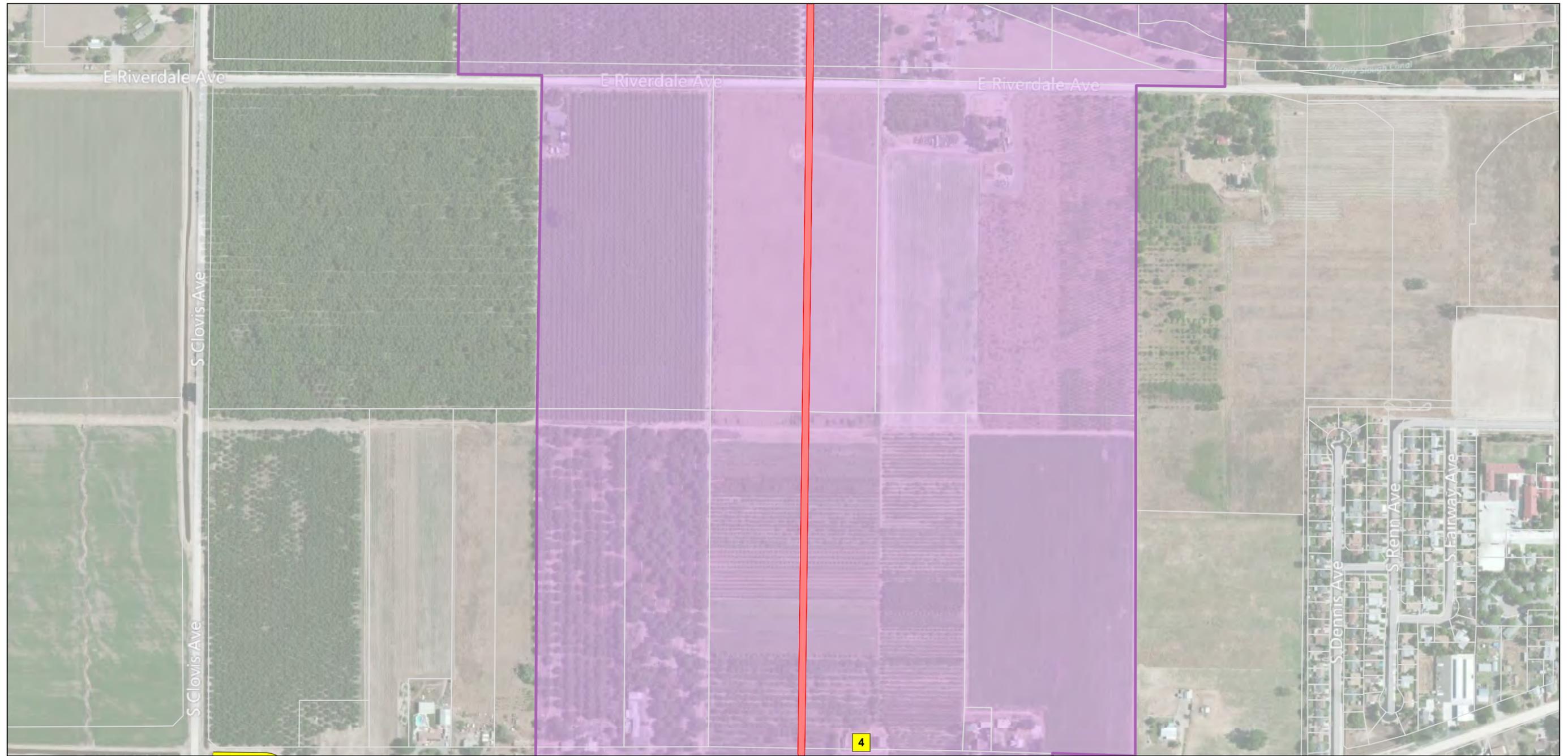


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December 20, 2012

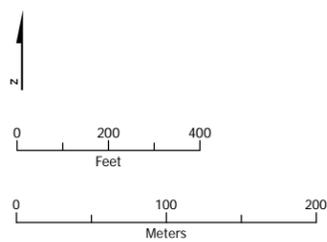


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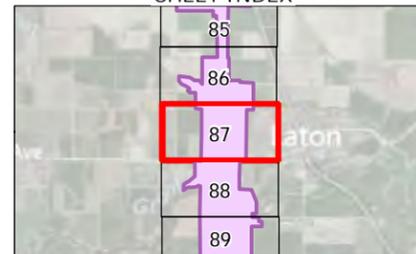


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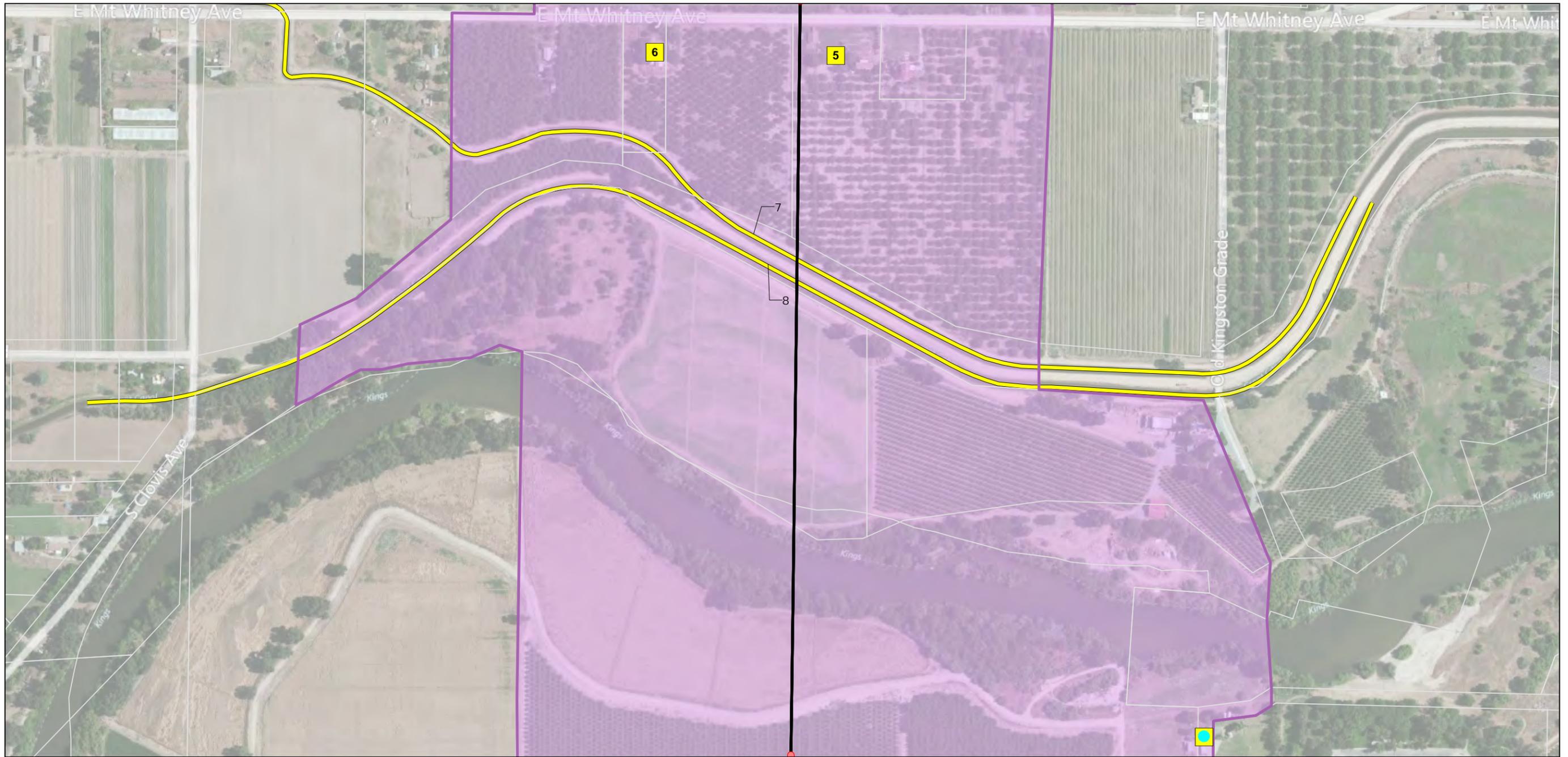
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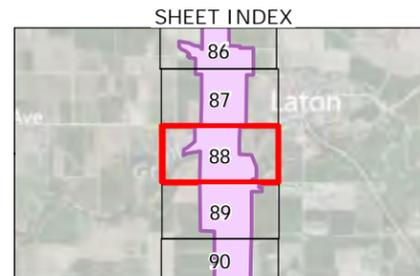
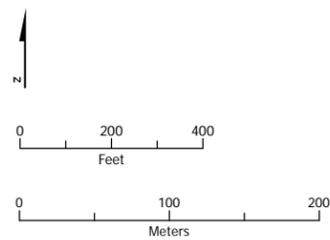


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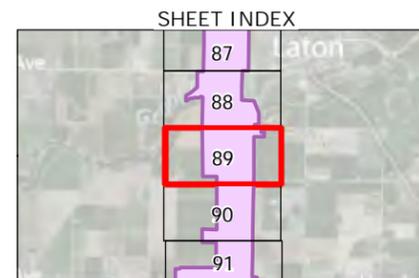
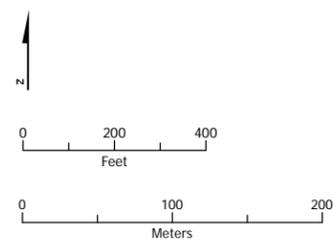


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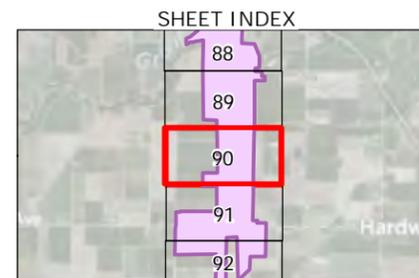
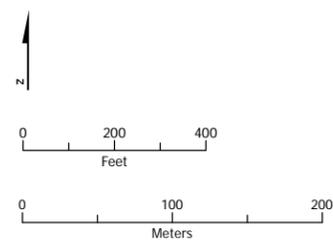


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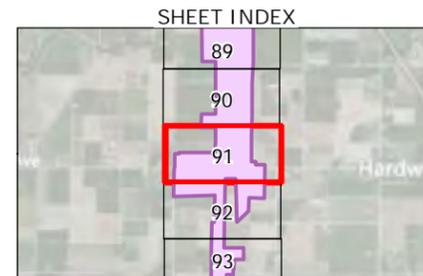
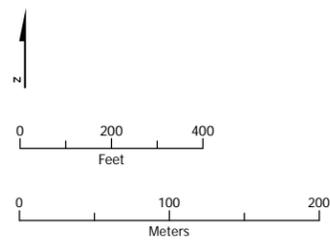


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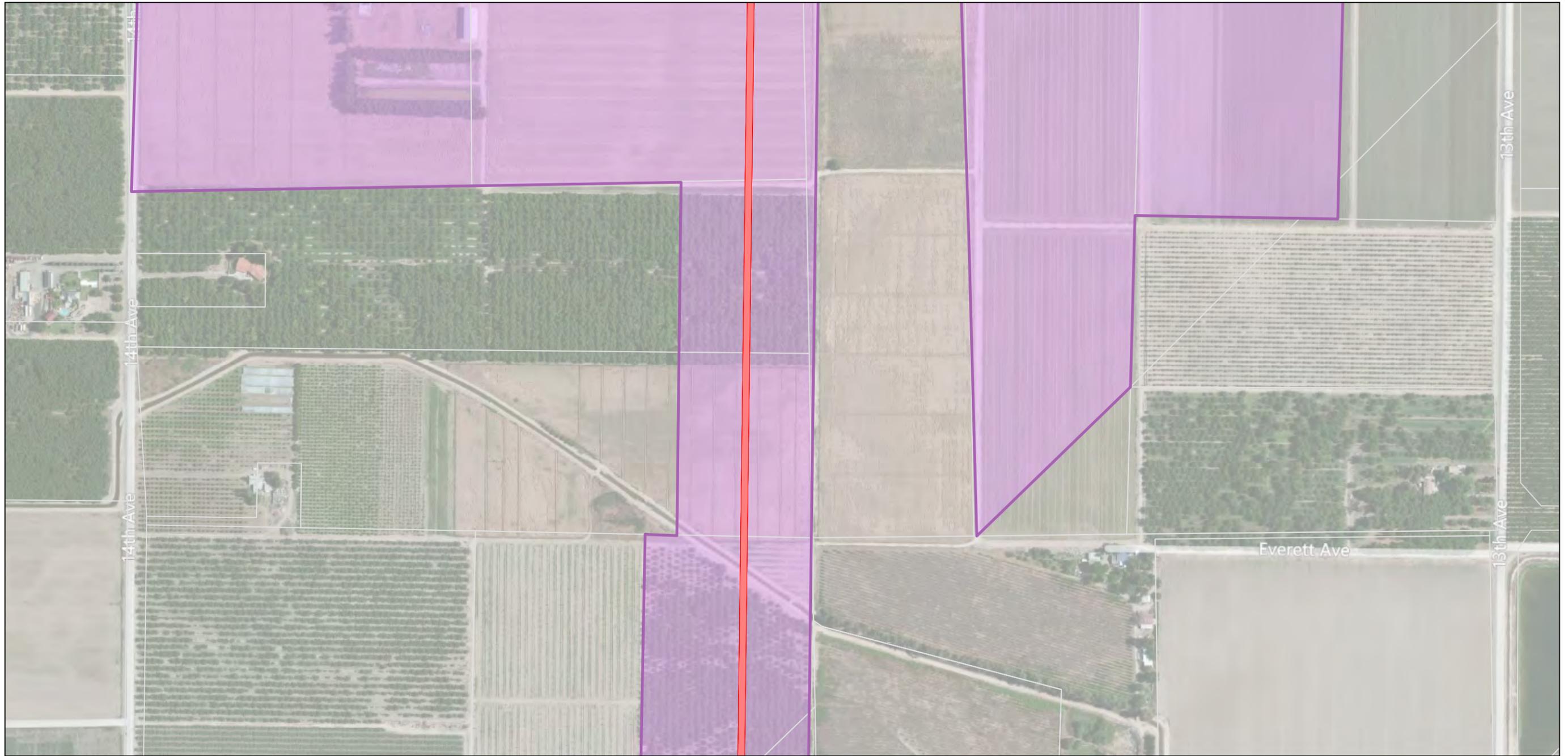


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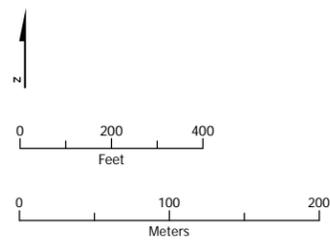


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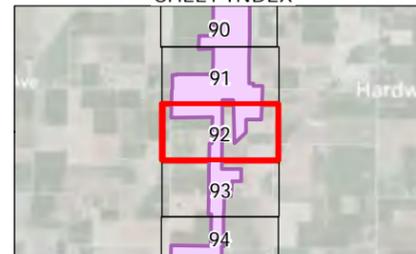


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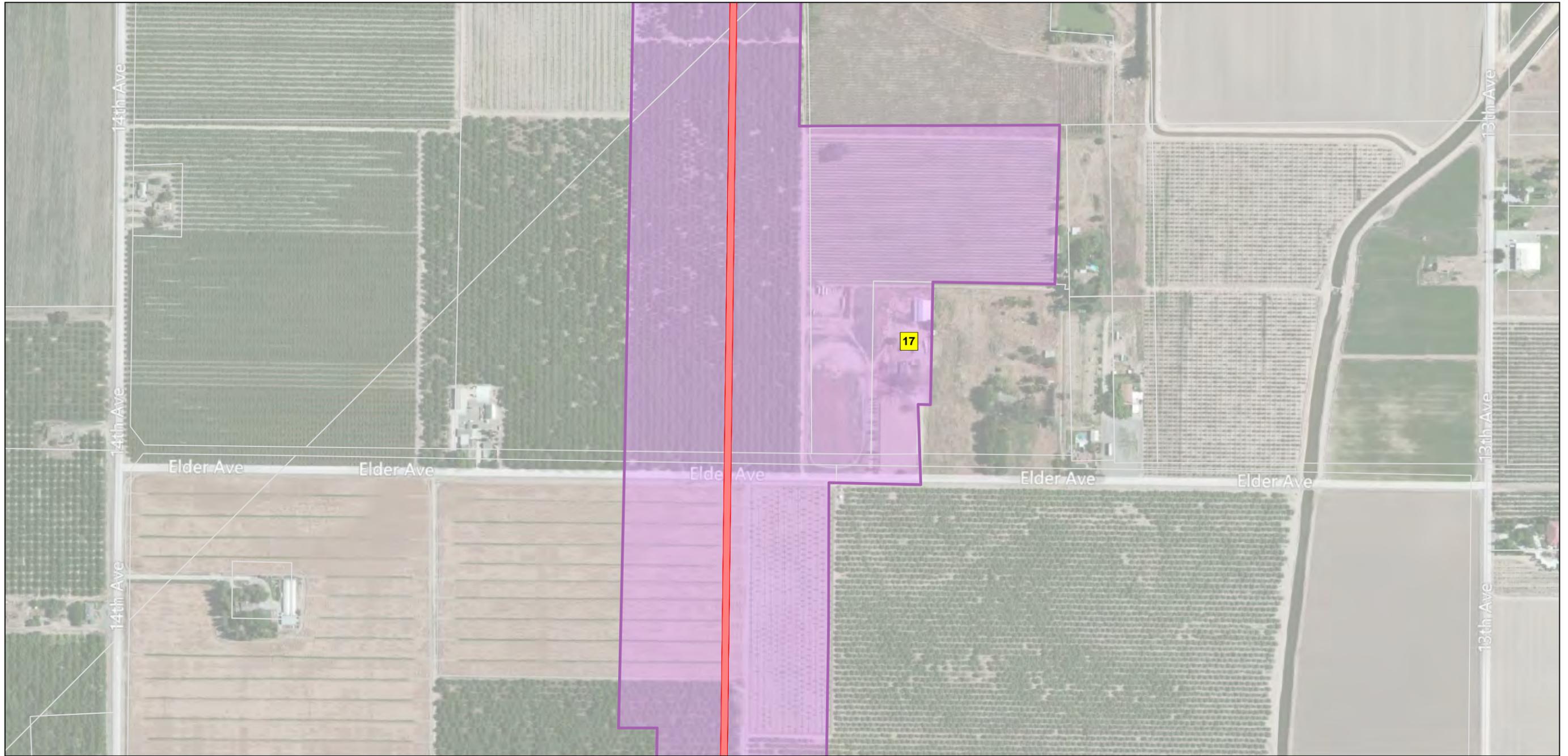
December 20, 2012



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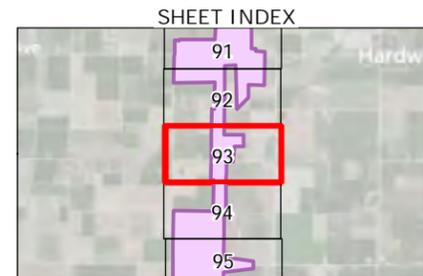
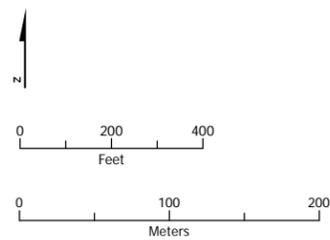


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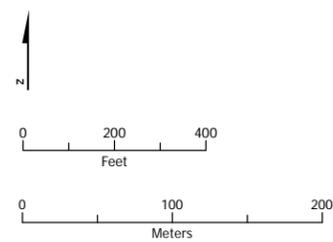


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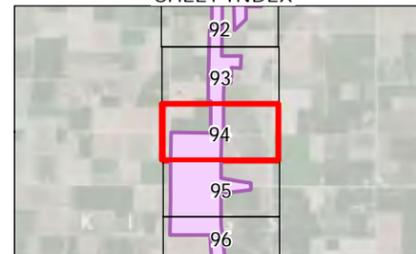


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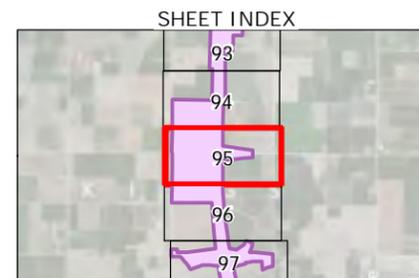
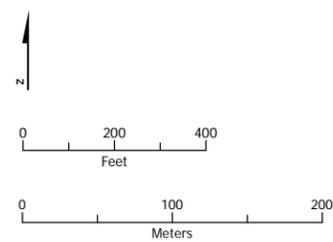


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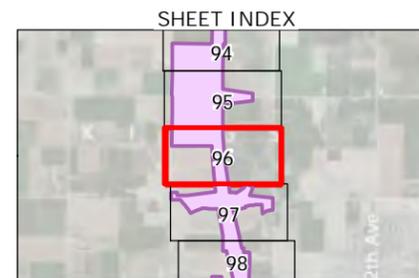
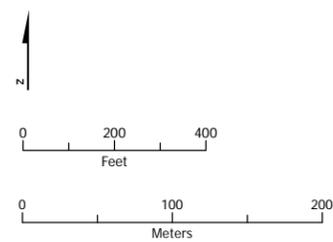


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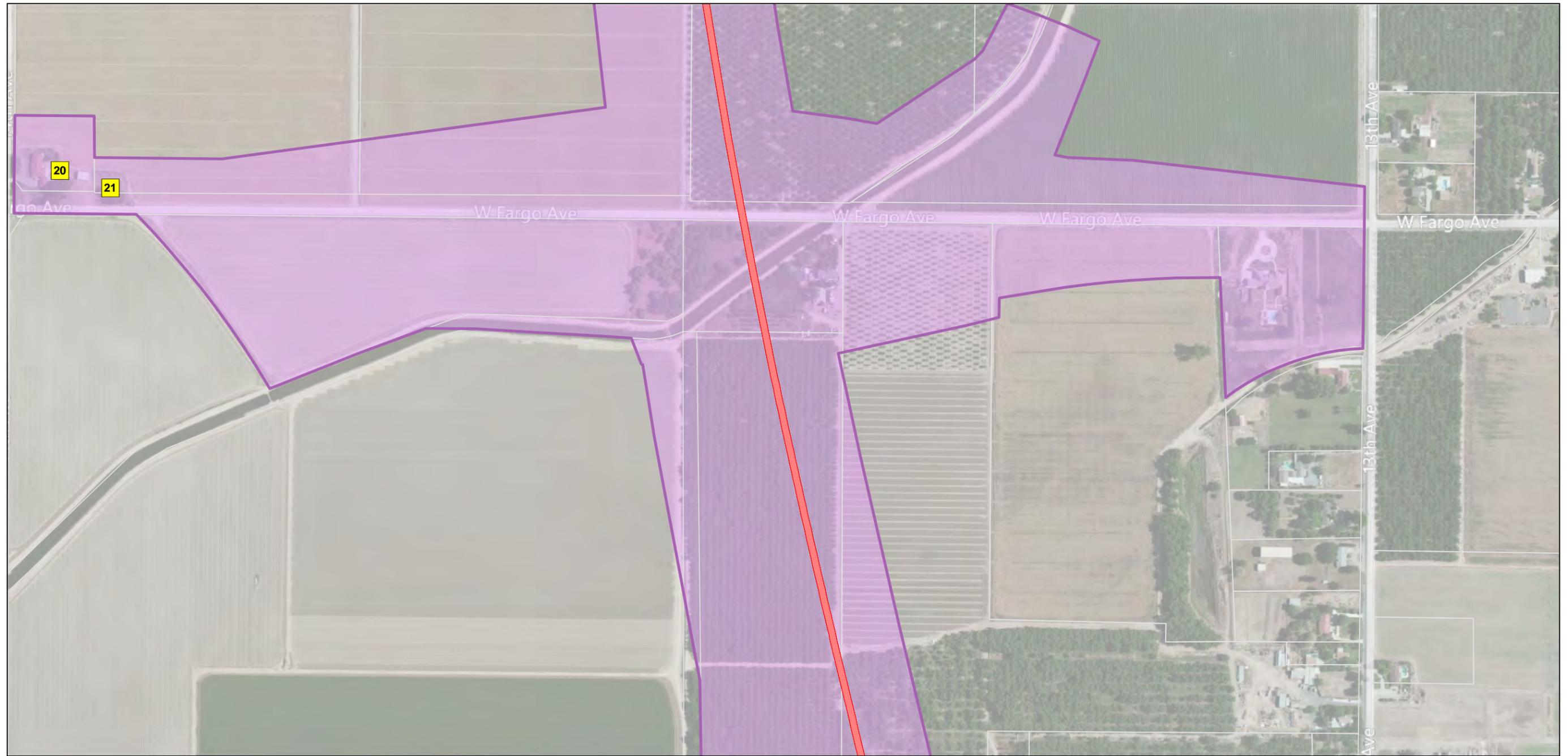


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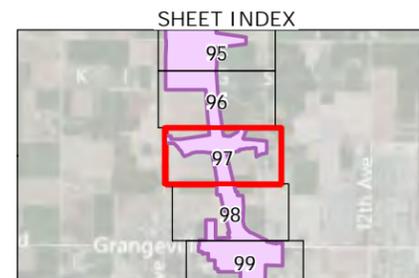
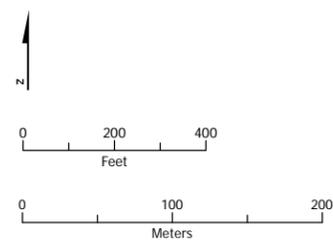


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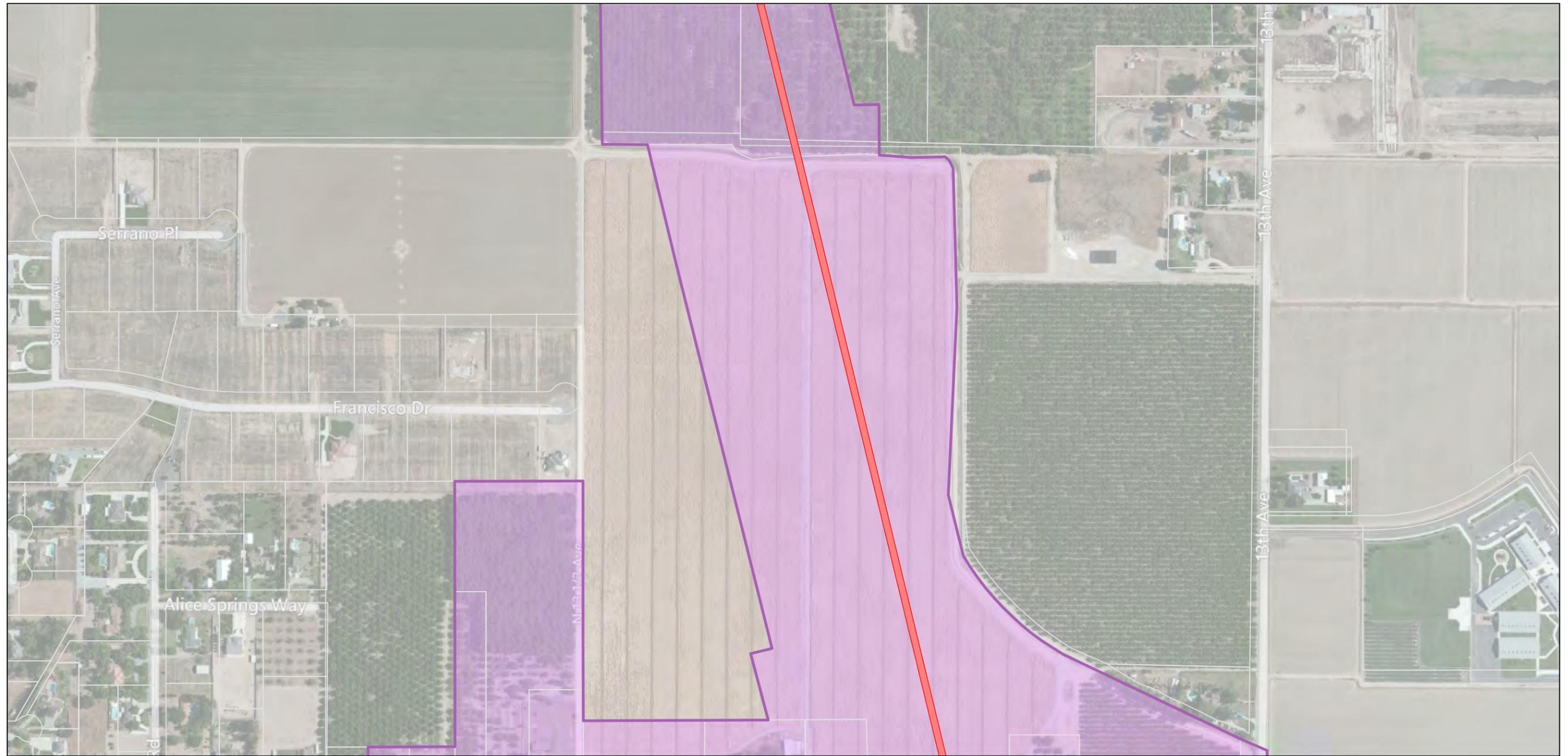


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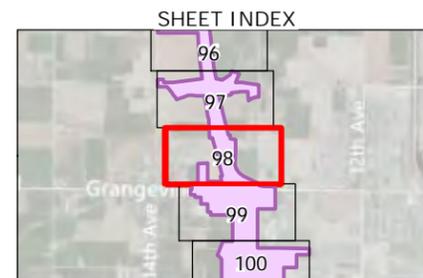
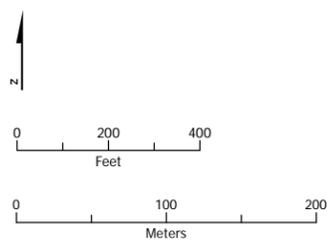


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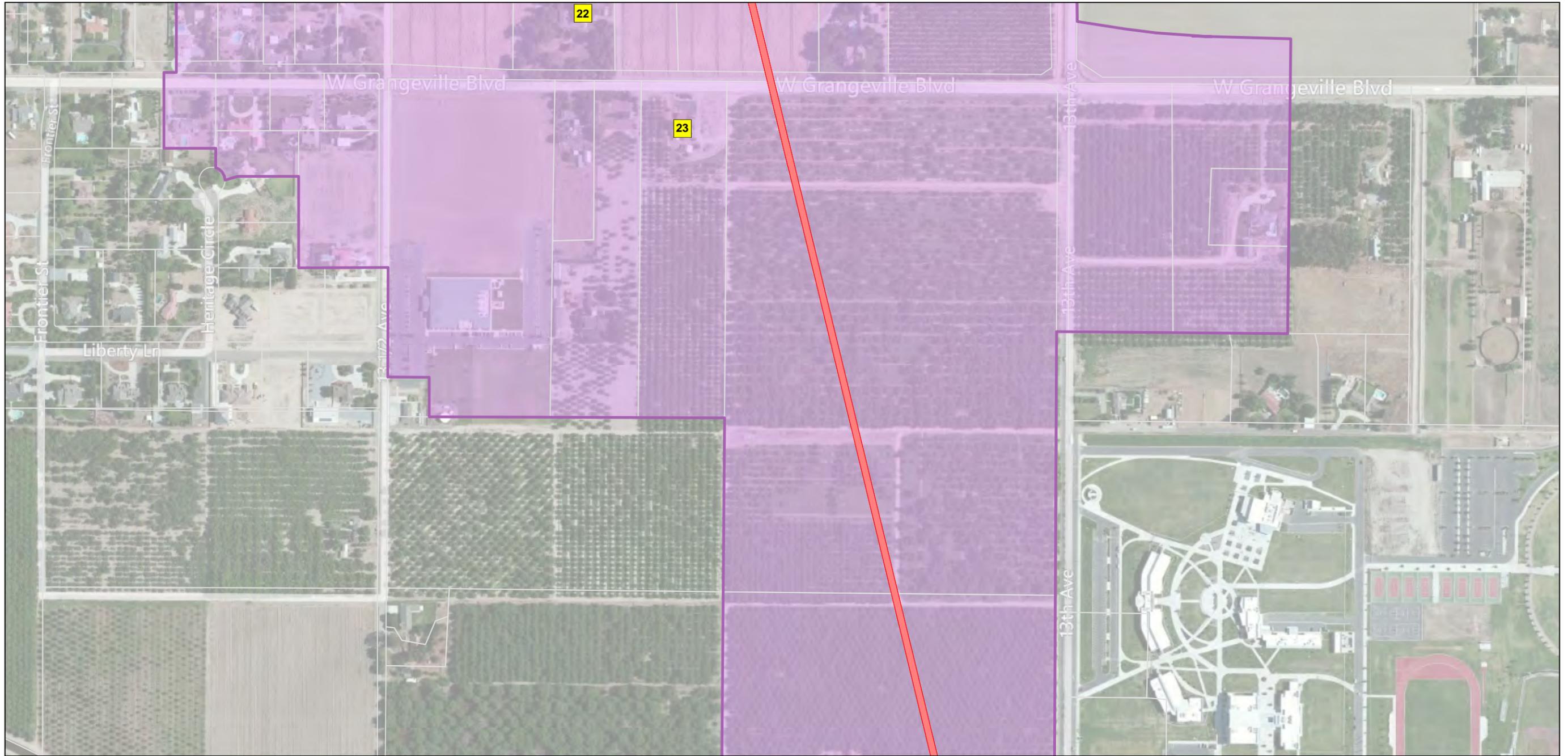


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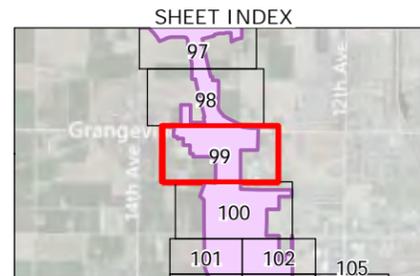
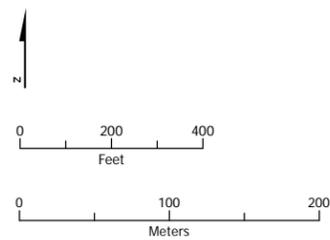


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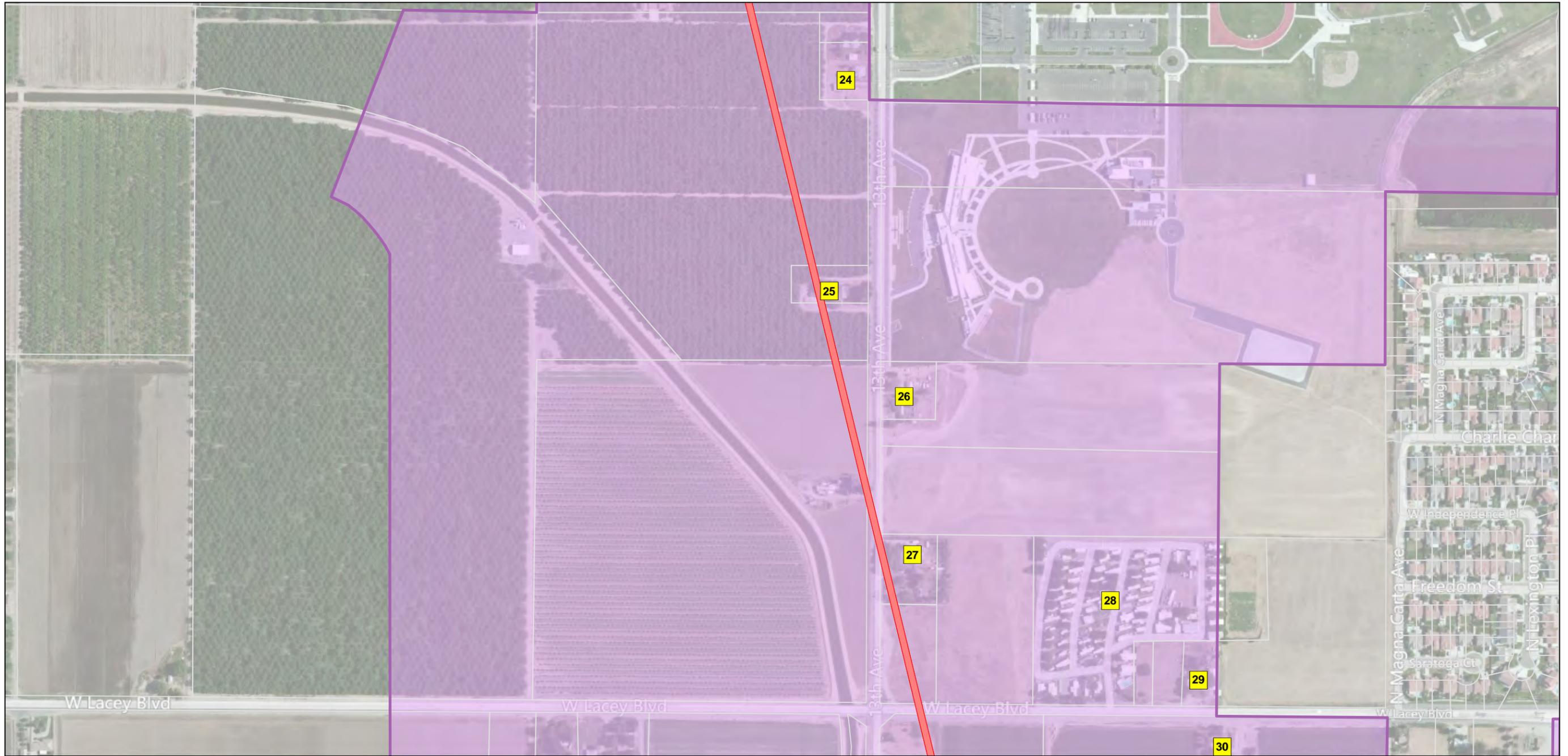


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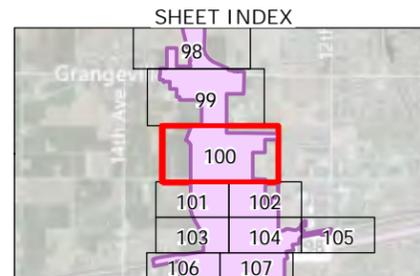
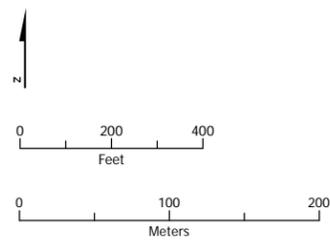


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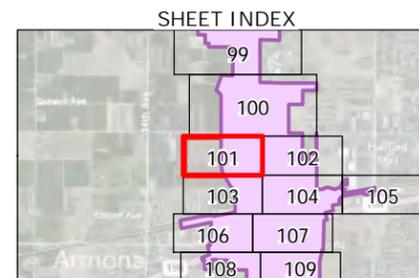
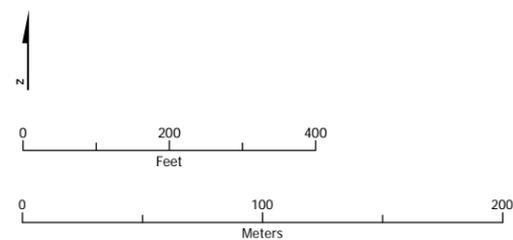


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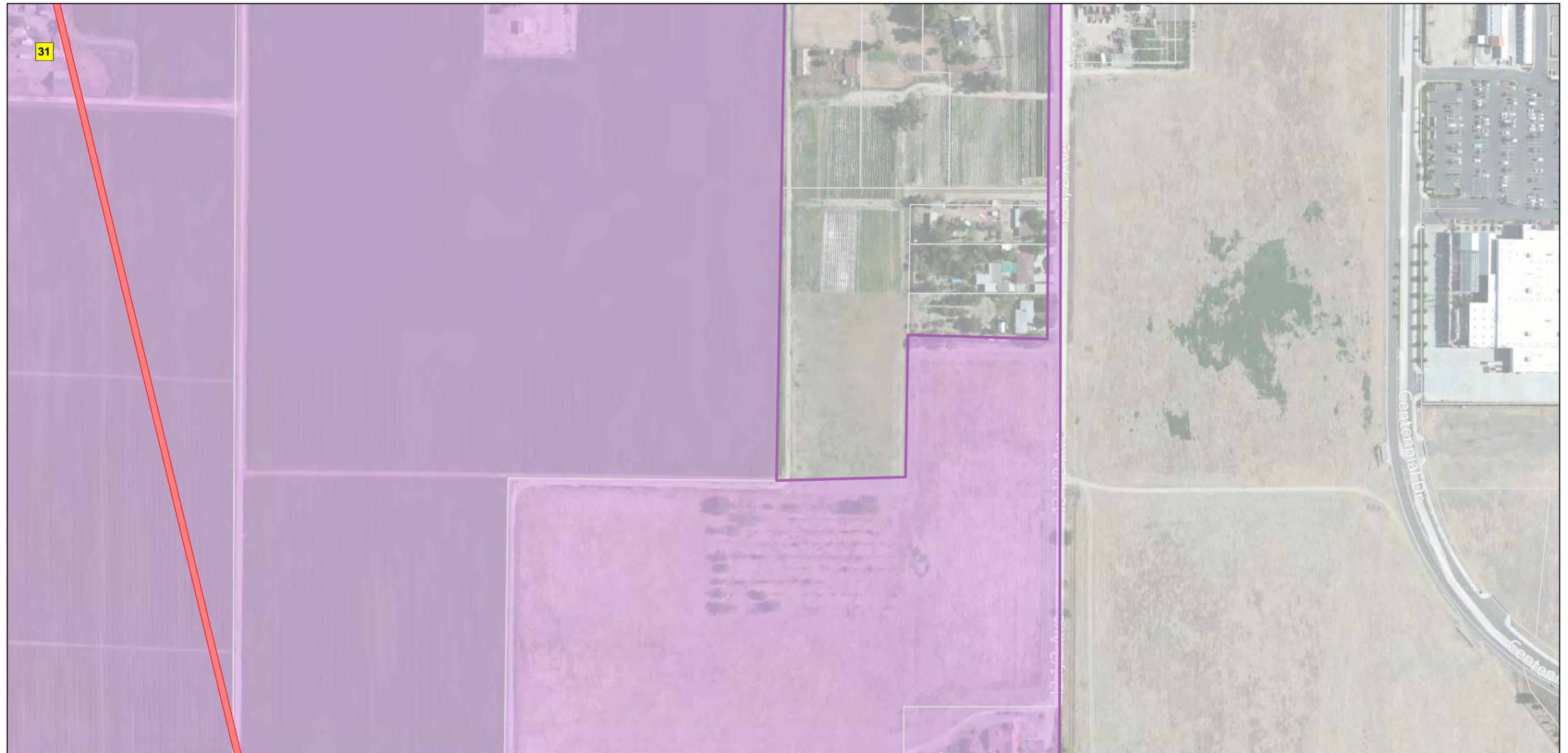


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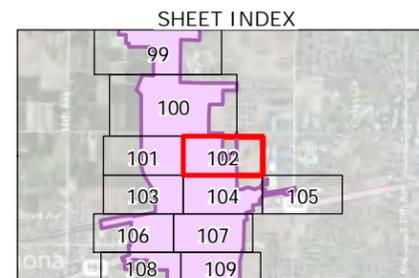
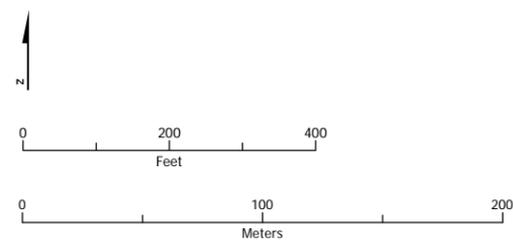


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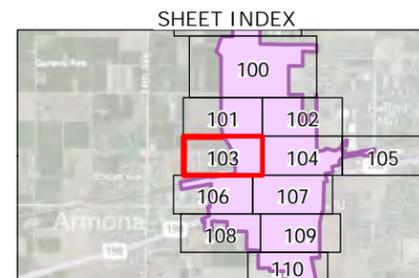
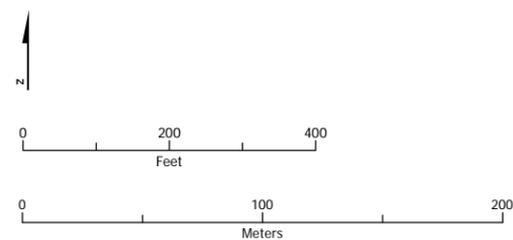


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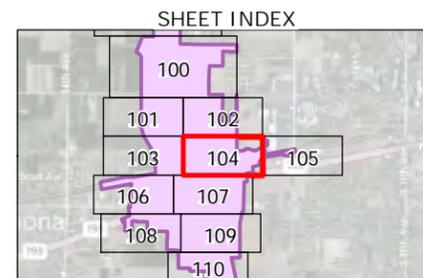
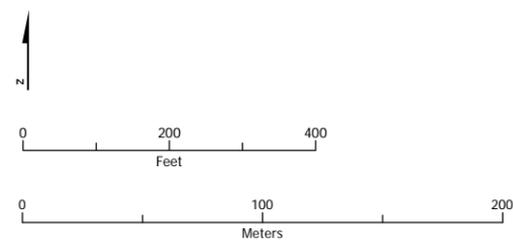


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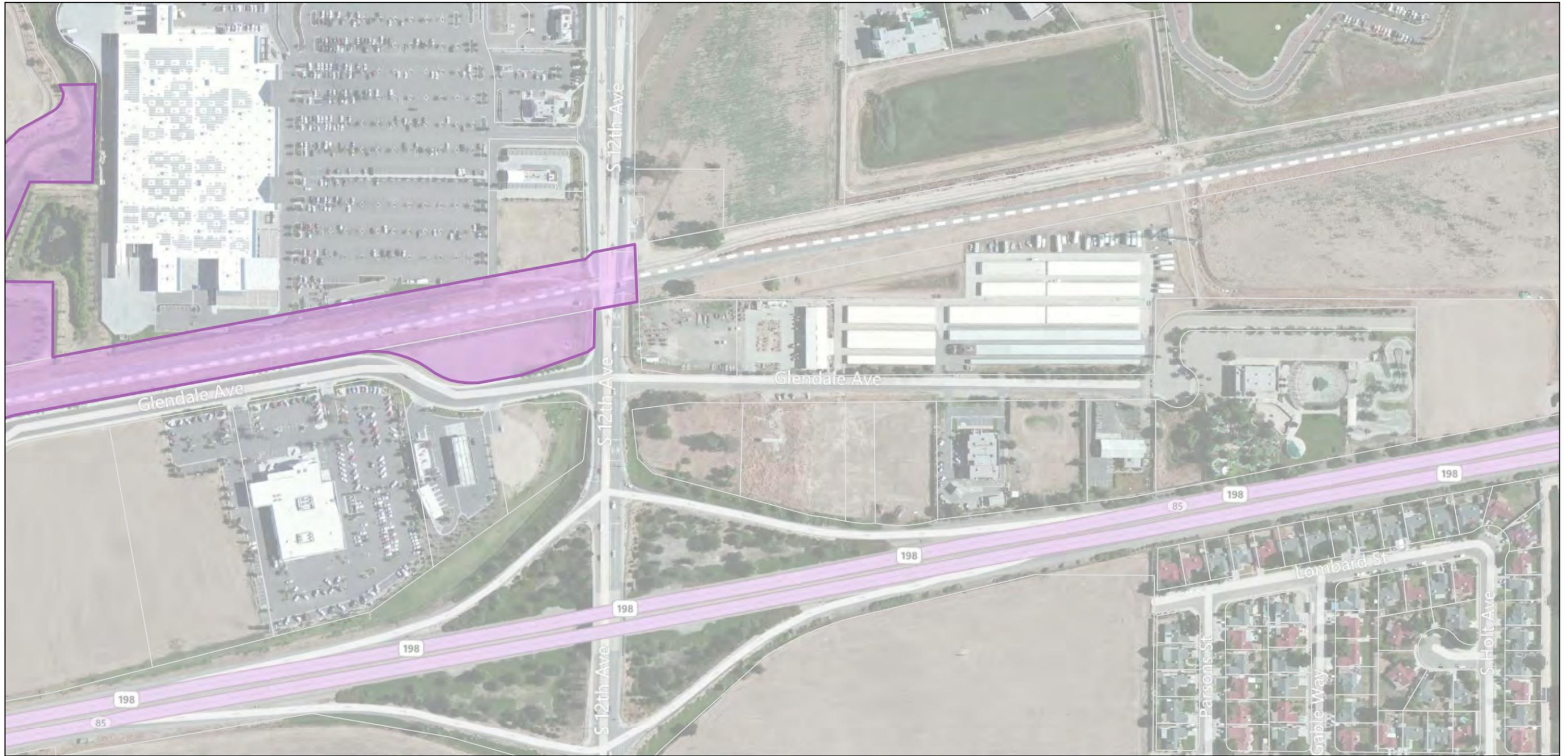


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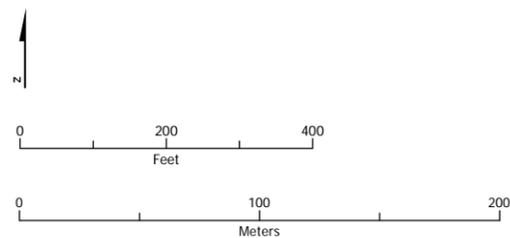


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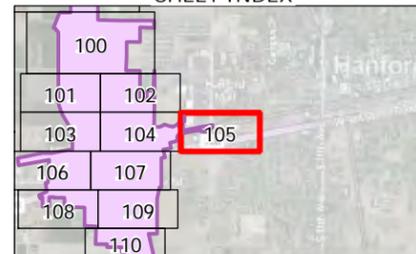


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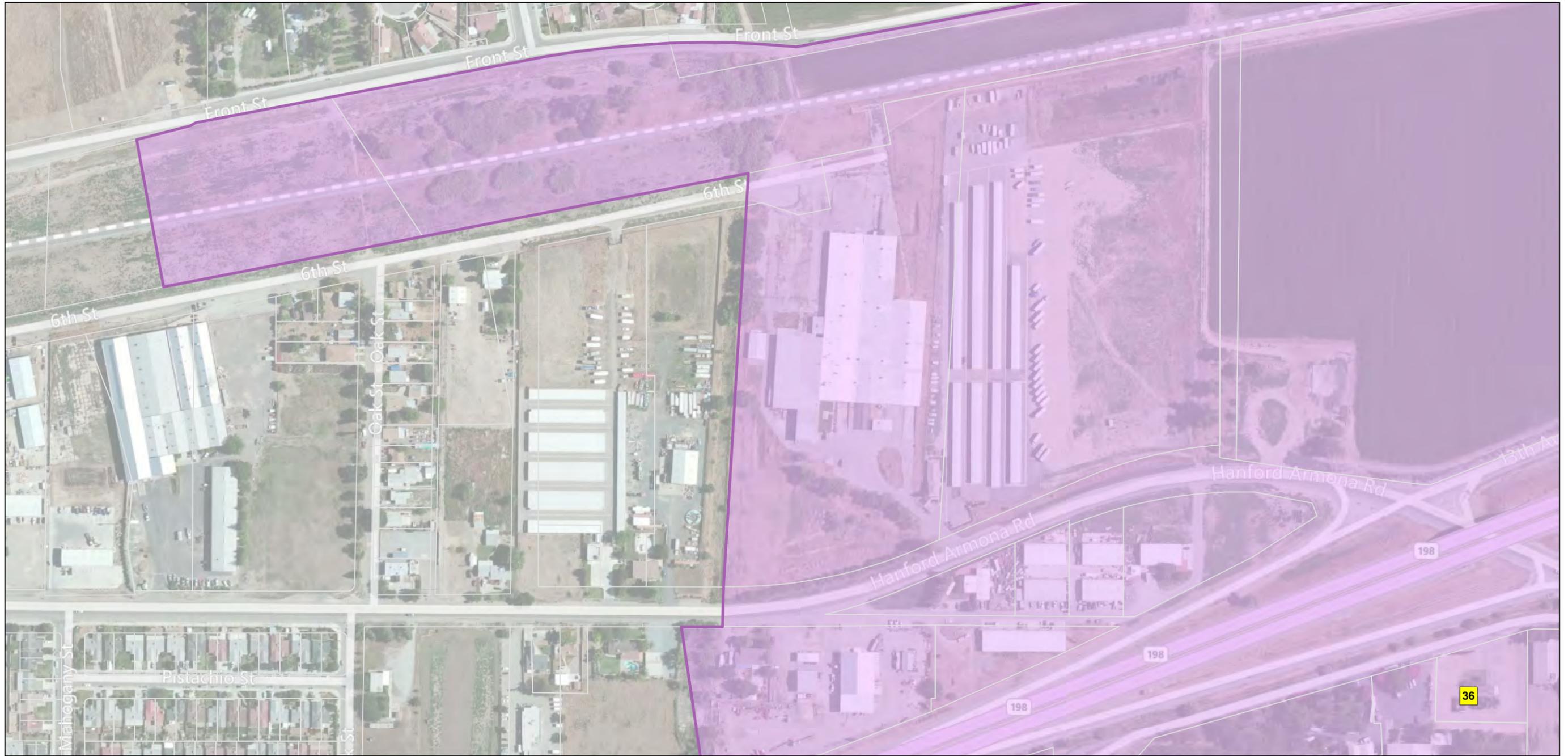
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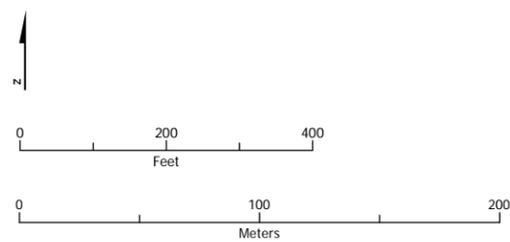


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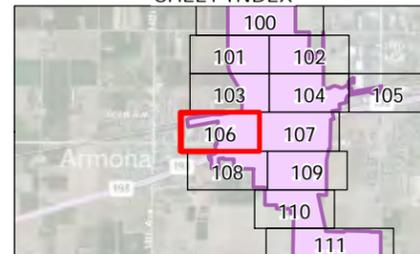


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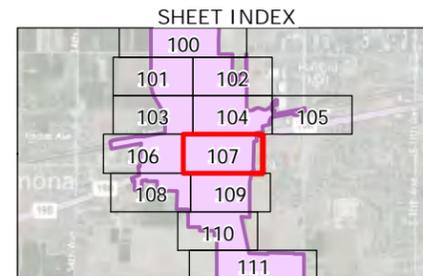
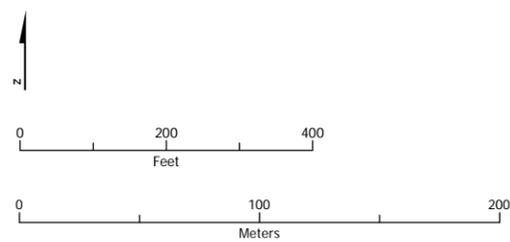


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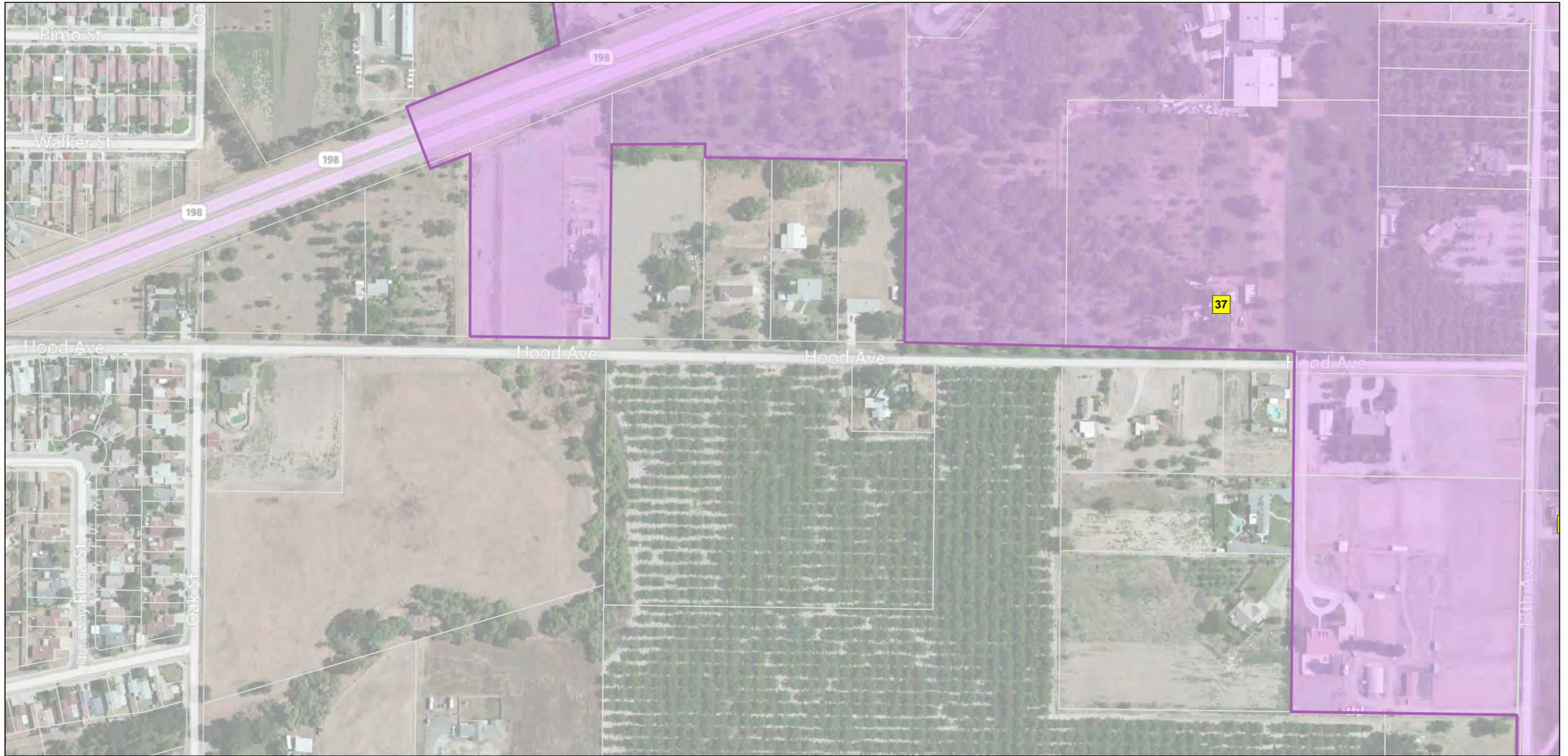


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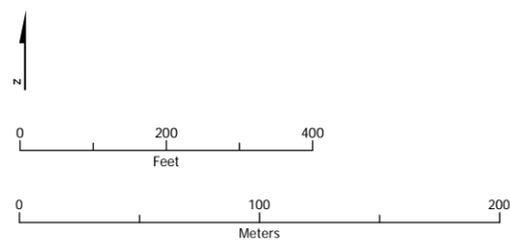


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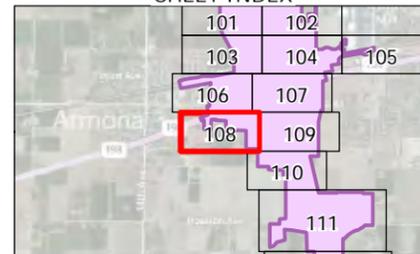


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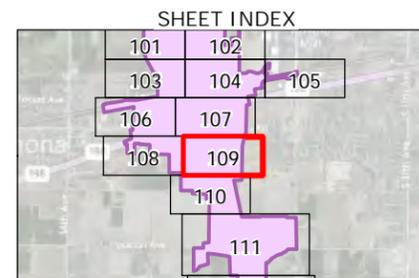
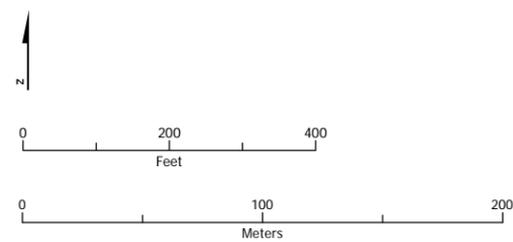


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- Elevated alignment
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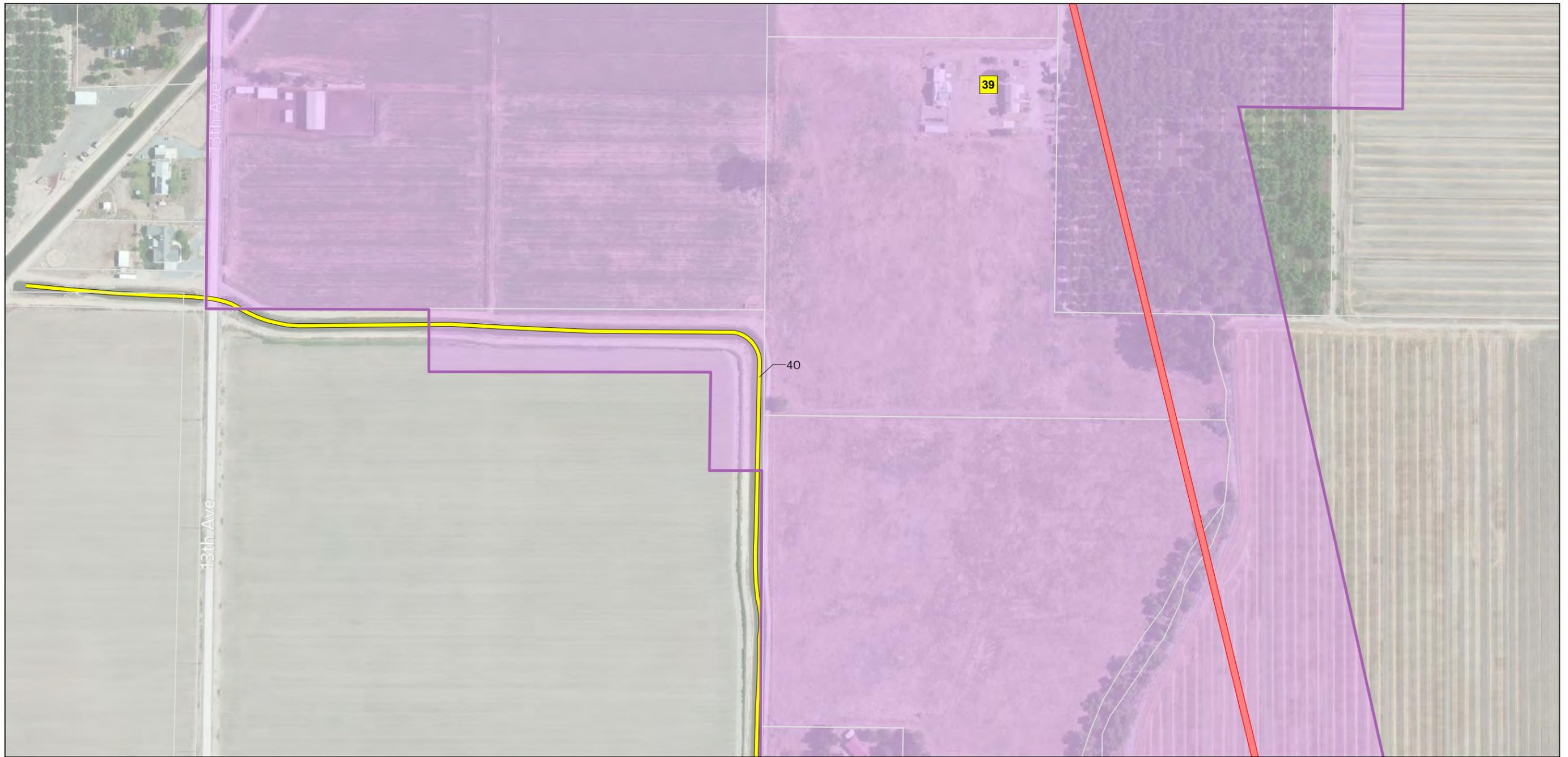


PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED  
 Data source: URS, 2012; JRP, 2012  
 Imagery source: Microsoft Bing Maps

December 20, 2012

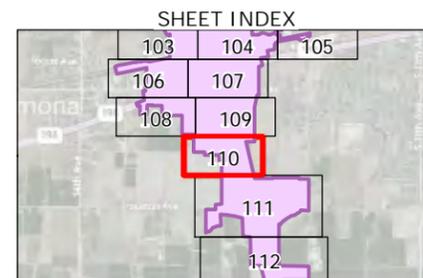
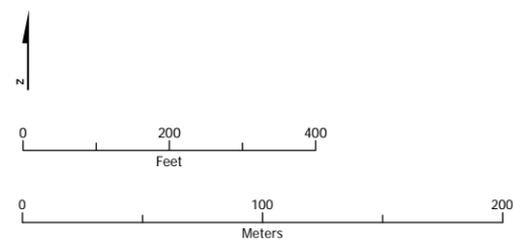


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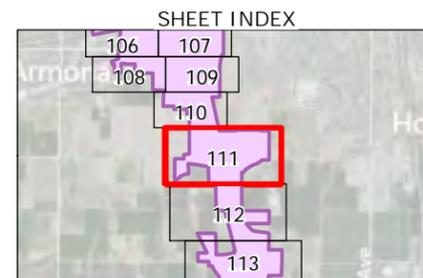
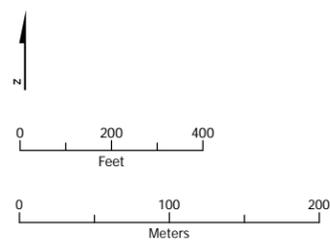


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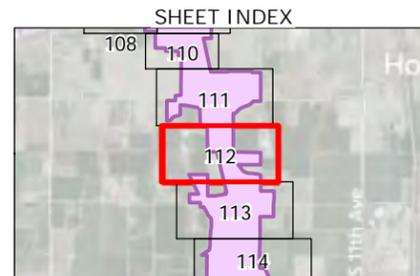
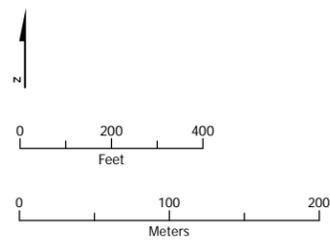


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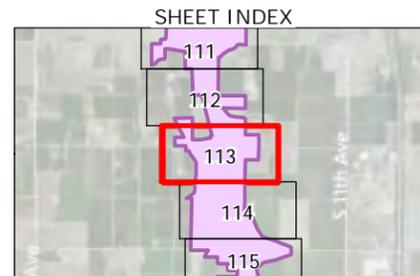
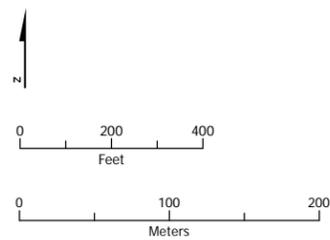


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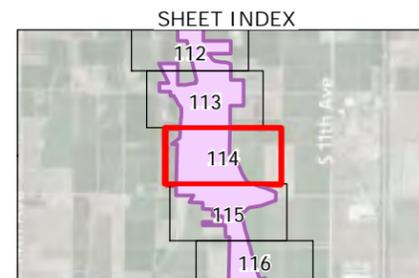
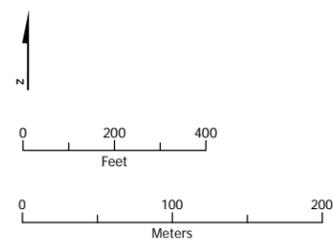


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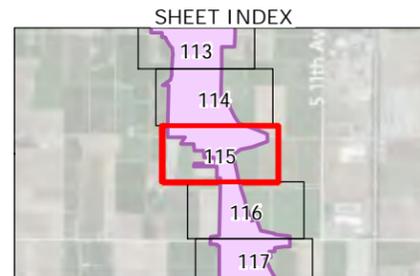
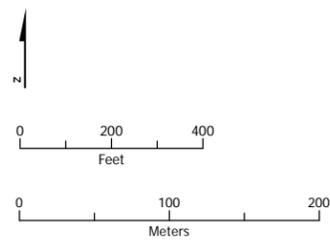


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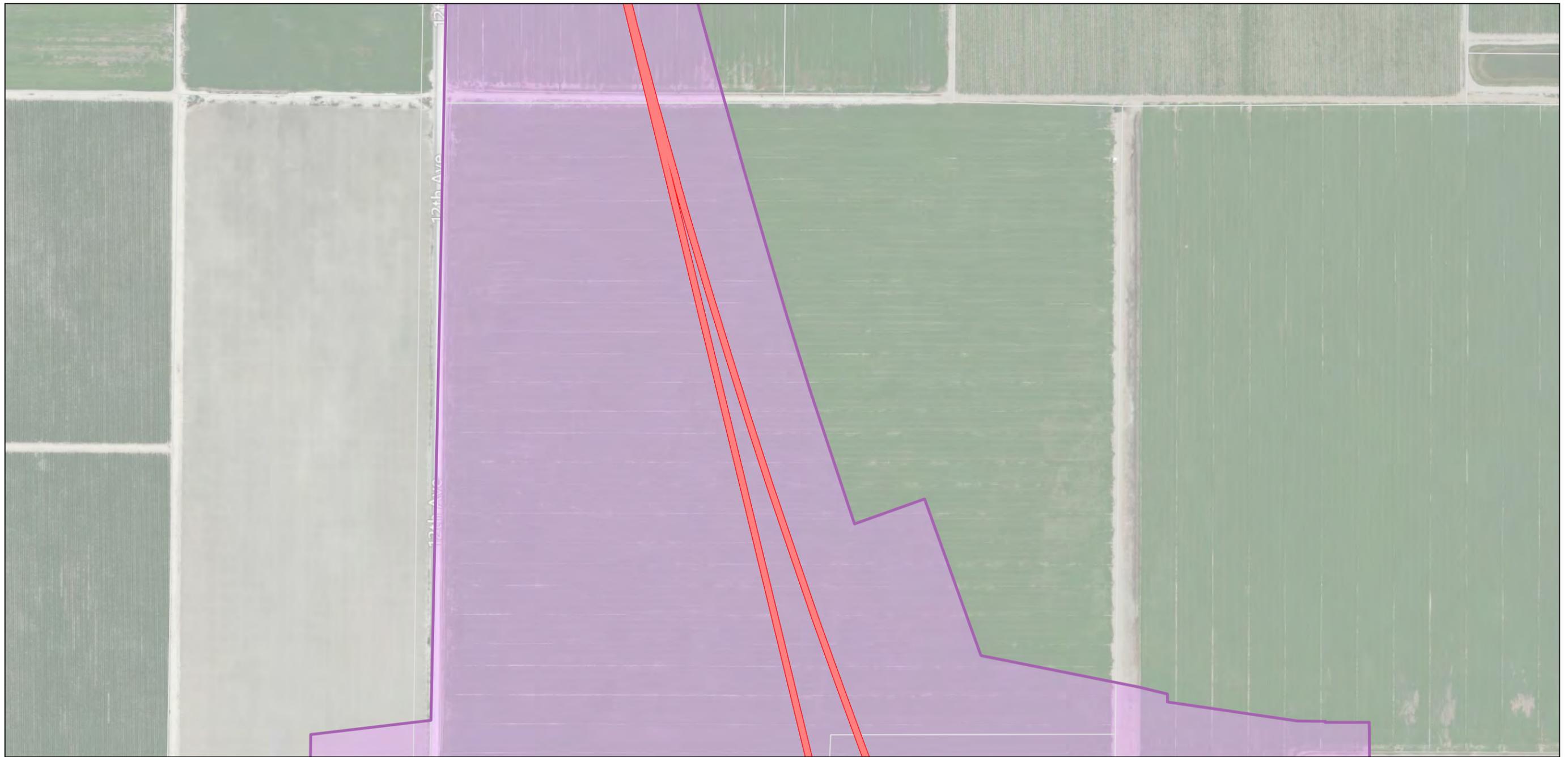


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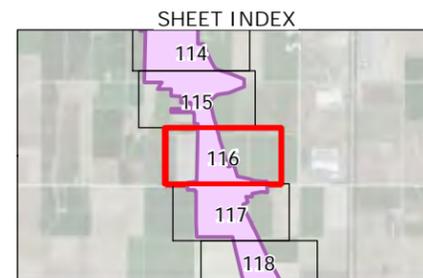
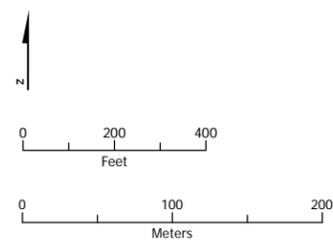


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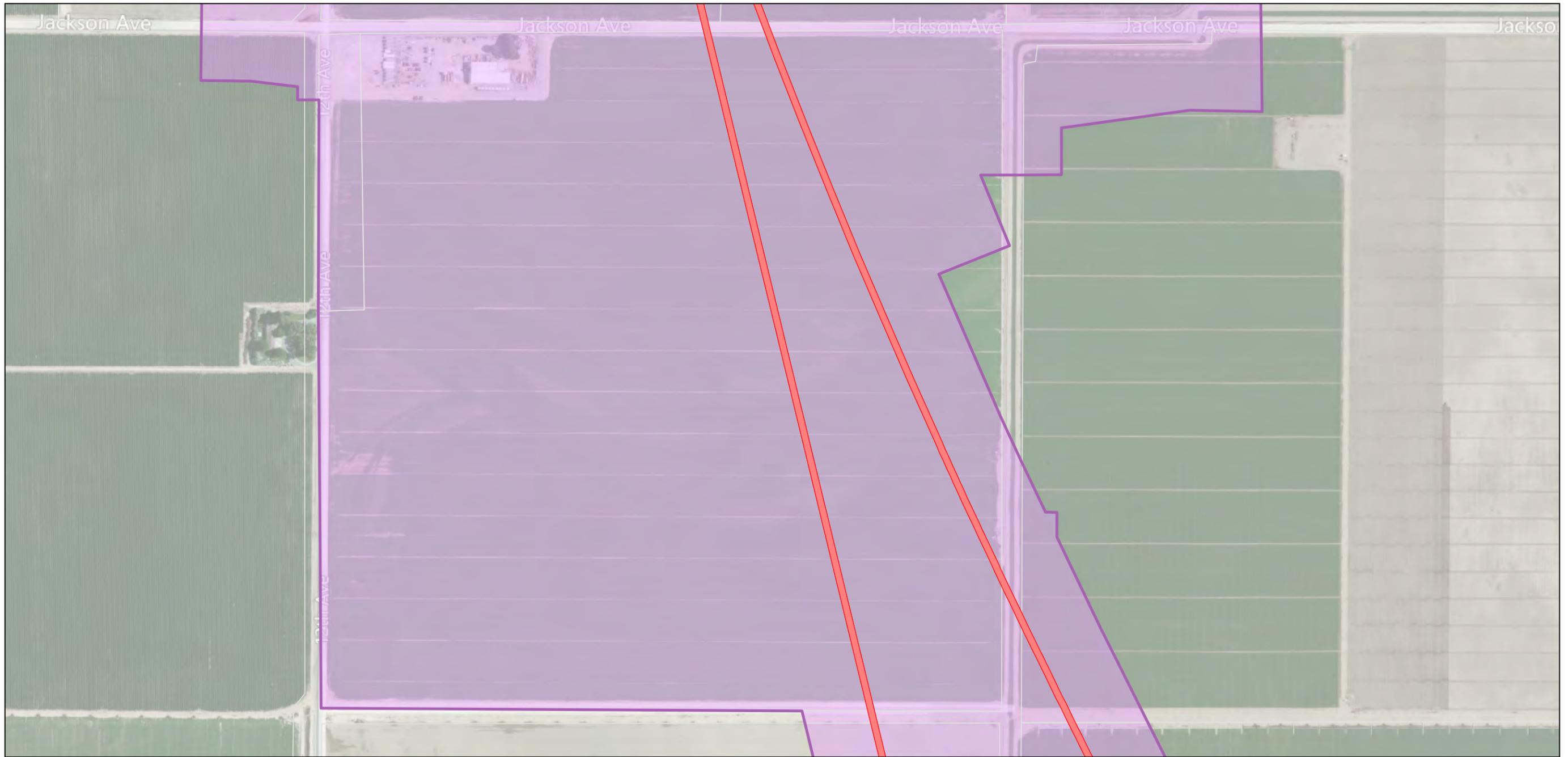


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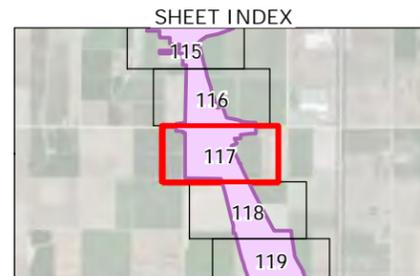
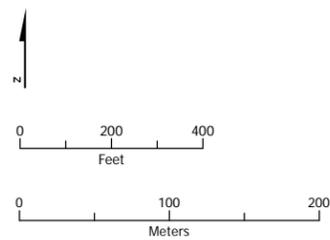


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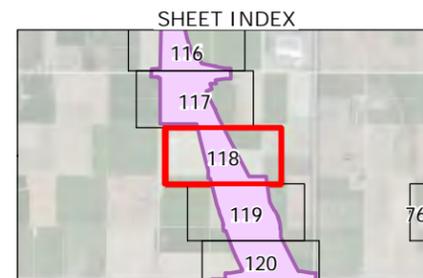
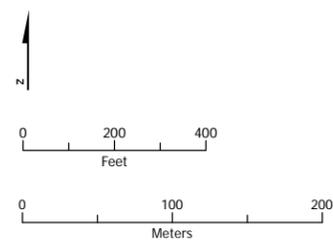


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Appendix A  
 Sheet 118  
 Supplemental historic architectural survey report APE