



Kimley-Horn
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APPENDIX 4

TECHNICAL MEMORANDUM 4 – CANDIDATE ALTERNATIVE ALIGNMENTS AND EVALUATION

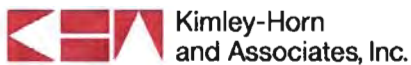


Yuma Parkway Feasibility Study – Salome Highway to Palo Verde Road

Contract No.: 2010-055
Project No.: TT005

FINAL Technical Memorandum 4 Candidate Alternative Alignments and Evaluation

Prepared by:



December 2011
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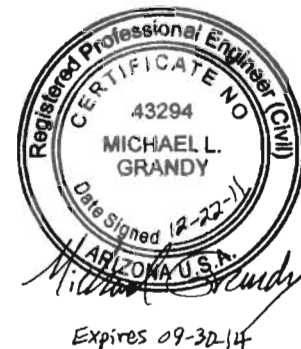




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1. INTRODUCTION

Technical Memorandum 4 (TM 4), entitled *Candidate Alternative Alignments and Evaluation*, provides a summary of the alternatives development and evaluation process for the *Yuma Parkway Feasibility Study – Salome Highway to Palo Verde Road*. Specifically, TM 4 describes the study background and study area; the process used to develop conceptual and candidate alternative alignments; constraints that were considered in the development of alternatives; and evaluation criteria that were applied to candidate alternative alignments to identify preferred alternative alignments for further analysis. Additional detailed information about the study is included in the following companion documents: *Existing and Future Corridor Features* (TM 1) *Environmental Overview* (TM 2), *Conceptual Drainage Report* (TM 3), and *Detailed Preferred Alignment* (TM 5).

1.1 Background and Study Need

In July 2008, the Maricopa Association of Governments (MAG) completed the *Interstate 10/Hassayampa Valley Transportation Framework Study* (known as the Hassayampa Framework Study), that recommended a comprehensive roadway network to meet the future traffic demands that result when the area west of the White Tank Mountains is completely developed (hereafter referred to as buildout travel demand). This long-range regional transportation network includes the “Arizona Parkway” as a new facility type to supplement more traditional roadway classifications in meeting projected travel demand.

The Arizona Parkway utilizes a distinct intersection treatment that prohibits left turns at major cross-street intersections and controls intersection traffic movements with two-phased traffic signal control. Left-turn movements are made indirectly using directional left-turn crossovers in the median immediately downstream of cross-street intersections. The typical right-of-way width for an Arizona Parkway is 200 feet.

The Hassayampa Framework Study recommended Yuma Parkway as an Arizona Parkway to meet buildout travel demands and provide a continuous parkway network. Although today’s land development and travel demands in the study area do not warrant a major new high capacity roadway in the short-term, the buildout forecast for future land development and travel demands does warrant major new high capacity roadways in the long-term future. Plans are already underway to convert some of the vacant lands within the study area to land uses that will generate future traffic.

The scope of work for this study includes preparation of a feasibility report that will provide Maricopa County, the Town of Buckeye, area property owners, developers, and other stakeholders with guidelines to preserve a 200-foot wide right-of-way corridor to accommodate the typical Arizona Parkway design. This will require significant coordination with various governing bodies, other public agencies, development interests, and the general public.

1.2 Study Area

The Yuma Parkway study area is approximately 13 miles long and two miles wide and is generally centered on the Buckeye Road/Yuma Road section line, from one-half mile west of Salome Highway to one-half mile east of Palo Verde Road. The study area boundary is shown in **Figure 1**.

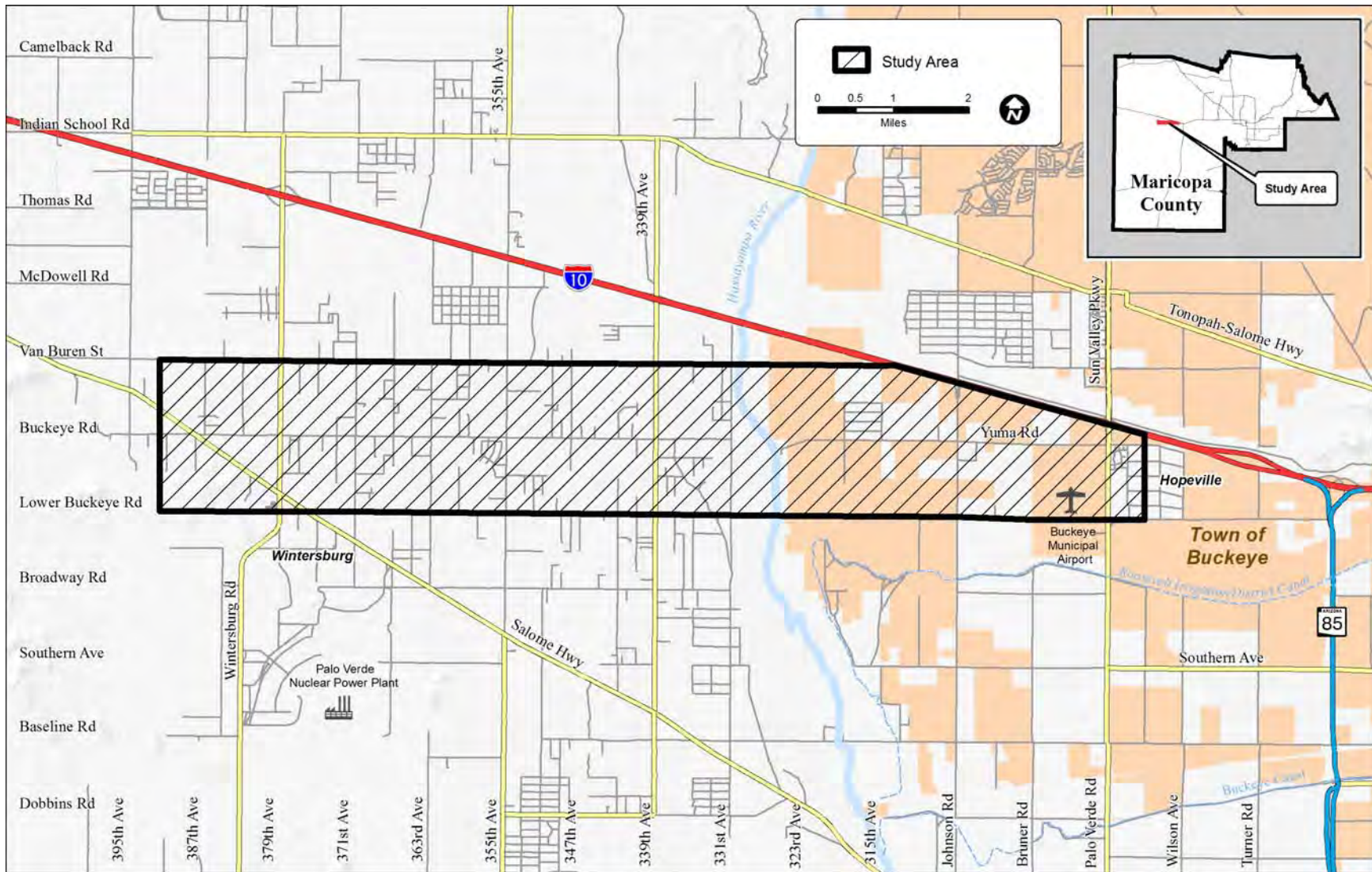


Figure 1 - Study Area

2. DEVELOPMENT OF ALTERNATIVES

2.1 Alternatives Development Process

The alternatives development process involved two steps. The first step was to identify a series of conceptual alternatives that would be subjected to a “fatal flaw” analysis. Study team members participated in a brainstorming session to produce a wide range of potentially viable 200-foot wide conceptual alternatives. The conceptual alternatives were developed only to the extent necessary to conduct a meaningful comparative analysis that would produce up to three candidate alternatives that could be defined and evaluated in greater detail.

The second step was to more clearly define the candidate alternatives and evaluate them with respect to a series of evaluation criteria. The conceptual alternatives, candidate alternatives, and evaluation criteria were all developed in consultation with the Technical Advisory Committee (TAC) and stakeholders and were presented for general public input at public open house meetings.

2.2 Potential Constraints

Based on the findings reported in TM 1, TM 2, and TM 3, potential constraints were mapped for consideration in developing conceptual alternatives. Potential constraints consist of features that may have some bearing on the location and configuration of conceptual alternatives. Many of the potential constraints are not truly “fatal flaws” but rather may result in higher costs if they cannot be avoided and mitigation measures are required.

The potential constraints that are considered to be more significant and should be avoided if possible include schools, churches, landfills, cultural and historic resources, wildlife areas, floodplains, steep slope areas, approved planned developments, and large utility facilities.

Potential constraints that were considered in developing the conceptual alternatives are summarized as follows:

- Land ownership:
 - Private land;
 - Bureau of Land Management; and
 - Arizona State Trust land.
- Land use:
 - Existing and planned developments; and
 - Community of Hopeville.
- Transportation:
 - Existing and planned roadways;
 - Existing and planned traffic interchanges and overpasses on Interstate 10 (I-10);
 - Planned future connections with Salome Parkway, Wintersburg Parkway, Hassayampa Freeway, Hidden Waters Parkway, and Sun Valley Parkway;
 - Planned transit and rail lines; and
 - Lack of Hassayampa River crossing.

- Facilities:
 - Buckeye Municipal Airport;
 - Stotz Dairy;
 - Winters' Well Elementary School; and
 - Potential sand and gravel operations.
- Utilities:
 - CenturyLink/Qwest telecommunications building;
 - 69kV and 500kV power lines;
 - Transwestern natural gas pipeline;
 - Wells; and
 - Water tanks.
- Environment:
 - Suitable habitat for wildlife species of special concern;
 - Hassayampa River wildlife linkage zone;
 - Planned recreational trails;
 - Section 404/401 of Clean Water Act requirements for crossing floodplains and washes;
 - Residences near existing roadways;
 - Disadvantaged populations; and
 - Potential cultural resources.
- Drainage:
 - Existing floodplains and washes – most notably the Hassayampa River;
 - Size and location of drainage crossing structures; and
 - Steep topography in the southwest corner of the study area.

2.3 Conceptual Alternatives

As a starting point in the development of conceptual alternatives, a brainstorming session was conducted with study task leaders and the MCDOT project manager to generate a wide range of 200-foot-wide alternatives that span the full width and length of the study area. The conceptual alignment alternatives along with potential constraints for Yuma Parkway are shown in **Figure 2**. As this figure shows, there are opportunities to assemble multiple combinations of alternatives at common intersecting points to produce numerous options for consideration.

In developing conceptual alternatives, constraints considered to be potential “fatal flaws” were avoided to the extent possible to produce a set of realistic alternatives. The conceptual alternatives were presented to the TAC and stakeholders for review and input.

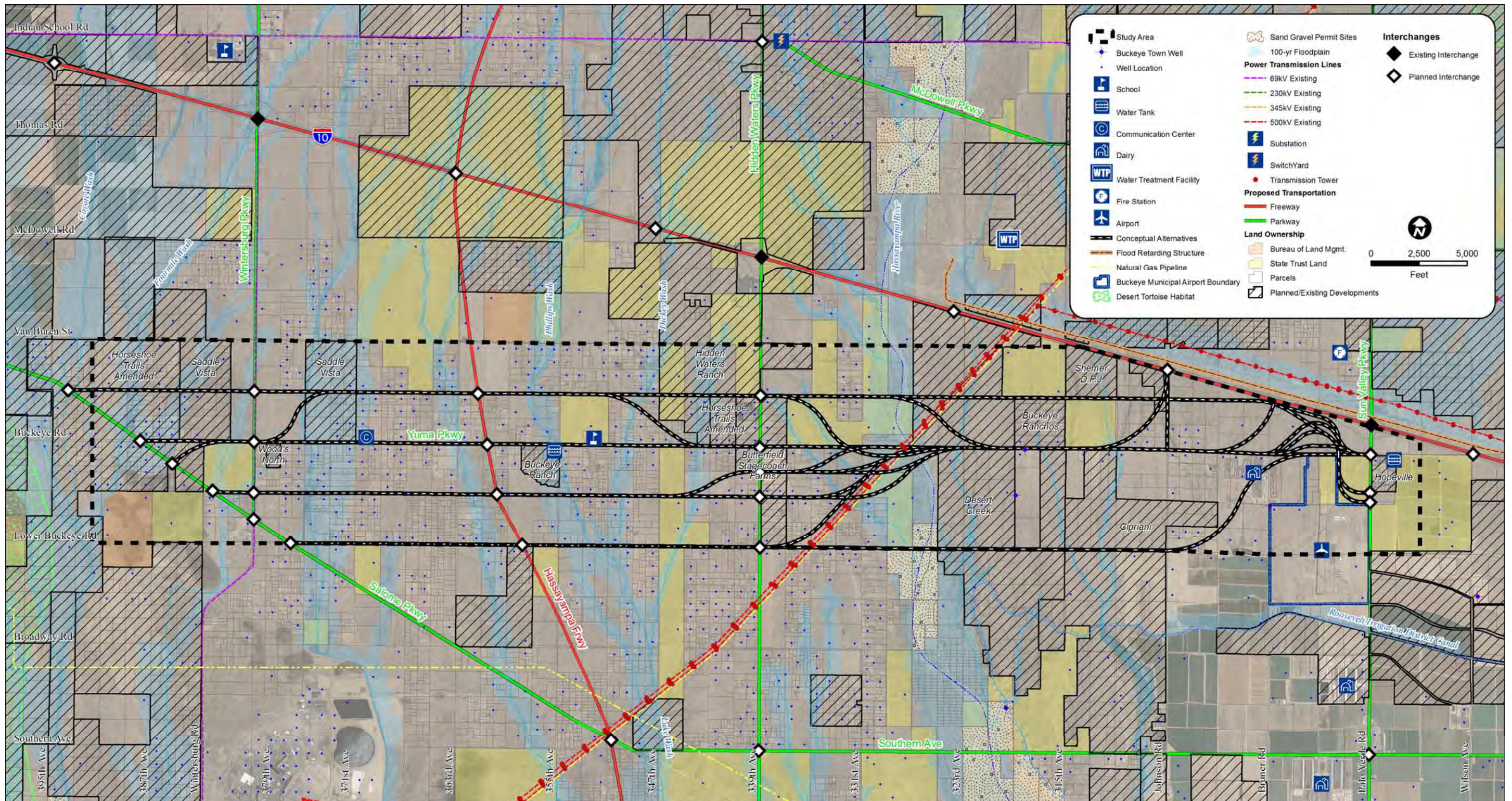


Figure 2 - Conceptual Alternatives

2.4 Candidate Alternatives

To narrow the range of alternatives to be evaluated in greater detail, a subjective, qualitative assessment was performed on all conceptual alternatives. This assessment included input from the TAC, stakeholders, and general public.

Based on this assessment, the following general recommendations were developed:

- The western terminus for all Yuma Parkway candidate alternatives should be Wintersburg Road rather than Salome Parkway. This recommendation was based on the relatively low buildout traffic projections west of Wintersburg Road, the established low density residential developments in the area, and topographic constraints that will limit development to the south and west of the study area;
- Between the Hassayampa River and Johnson Road, the Yuma Road alignment should be the only candidate alternative considered besides the no-build alternative. This recommendation is compatible with the approved Desert Creek and Cipriani Community Master Plans (CMPs) that have been approved by the Town of Buckeye. The approved master plans include stipulations to reserve 200 feet of right-of-way along Yuma Road for the future Yuma Parkway facility; and
- East of Johnson Road, a special analysis area should be designated for more detailed study. Issues requiring closer examination include expansion plans for the Buckeye Municipal Airport, the Community of Hopeville, planned interchange and frontage road configurations along I-10, and the Town of Buckeye area plan for roadways between Palo Verde Road and State Route 85.

The TAC and stakeholders concurred with these general recommendations, which were reflected in the selection of candidate alternatives to be evaluated in greater detail for the following three segments within the study area.

For the Yuma Parkway segment between Wintersburg Road and the Hassayampa River, three candidate alternatives were proposed as follows:

- Alternative A – A 200-foot-wide corridor located one-half mile north of the Buckeye Road alignment;
- Alternative B – A 200-foot-wide corridor located on the Buckeye Road alignment; and
- Alternative C – A 200-foot-wide corridor located one-half mile south of the Buckeye Road alignment.

These alternatives have the least impact on existing subdivided properties, are most compatible with planned developments, and converge at the same general crossing location at the Hassayampa River.

For the Yuma Parkway segment between the Hassayampa River and Johnson Road, a single alternative, Alternative A, was designated for more detailed evaluation as a candidate alternative. This is the only alternative that is compatible with the approved CMPs in this segment.

For the Yuma Parkway segment between Johnson Road and Palo Verde Road – which is the special analysis area – three candidate alternatives were developed. These candidate alternatives were developed after conducting more detailed analysis on constraints and opportunities in the special analysis area and meeting with the Town of Buckeye, MAG, and the Federal Highway Administration to discuss the findings of the analysis and the feasibility of various conceptual

alternatives. The three candidate alternatives developed for this segment of Yuma Parkway are as follows:

- Alternative A – A 200-foot-wide corridor that matches the preliminary alignment for Yuma Parkway shown in the Hassayampa Framework Study. This alternative was based on the assumption that the Buckeye Municipal Airport primary runway would be extended to the north of Yuma Road and that it would not be feasible to extend Yuma Parkway between Bruner Road and Palo Verde Road. As a result, this alternative terminates at a planned Bruner Road overpass on I-10;
- Alternative B – A 200-foot-wide corridor located on the Yuma Road alignment. This alternative is based on the Town of Buckeye current plan to extend the Buckeye Municipal Airport primary runway to the south rather than the north. This makes it possible to extend the Yuma Parkway between Bruner Road and Palo Verde Road. This alternative would shift the Yuma Parkway centerline sufficiently north to avoid encroaching on existing airport or Hopeville properties; and
- Alternative C – A 200-foot-wide corridor following a curvilinear alignment traversing north of Yuma Road and then south to connect with Palo Verde Road south of Hopeville. This alternative is intended to provide maximum flexibility for expanding the Buckeye Municipal Airport. It also provides greater separation from the I-10 interchange with Sun Valley Parkway and from Hopeville.

Drawings showing the candidate alternatives as described above are shown in **Figure 3**. Schematic drawings showing the candidate alternatives at a scale of 1 inch = 800 feet are shown in **Figure 4**.

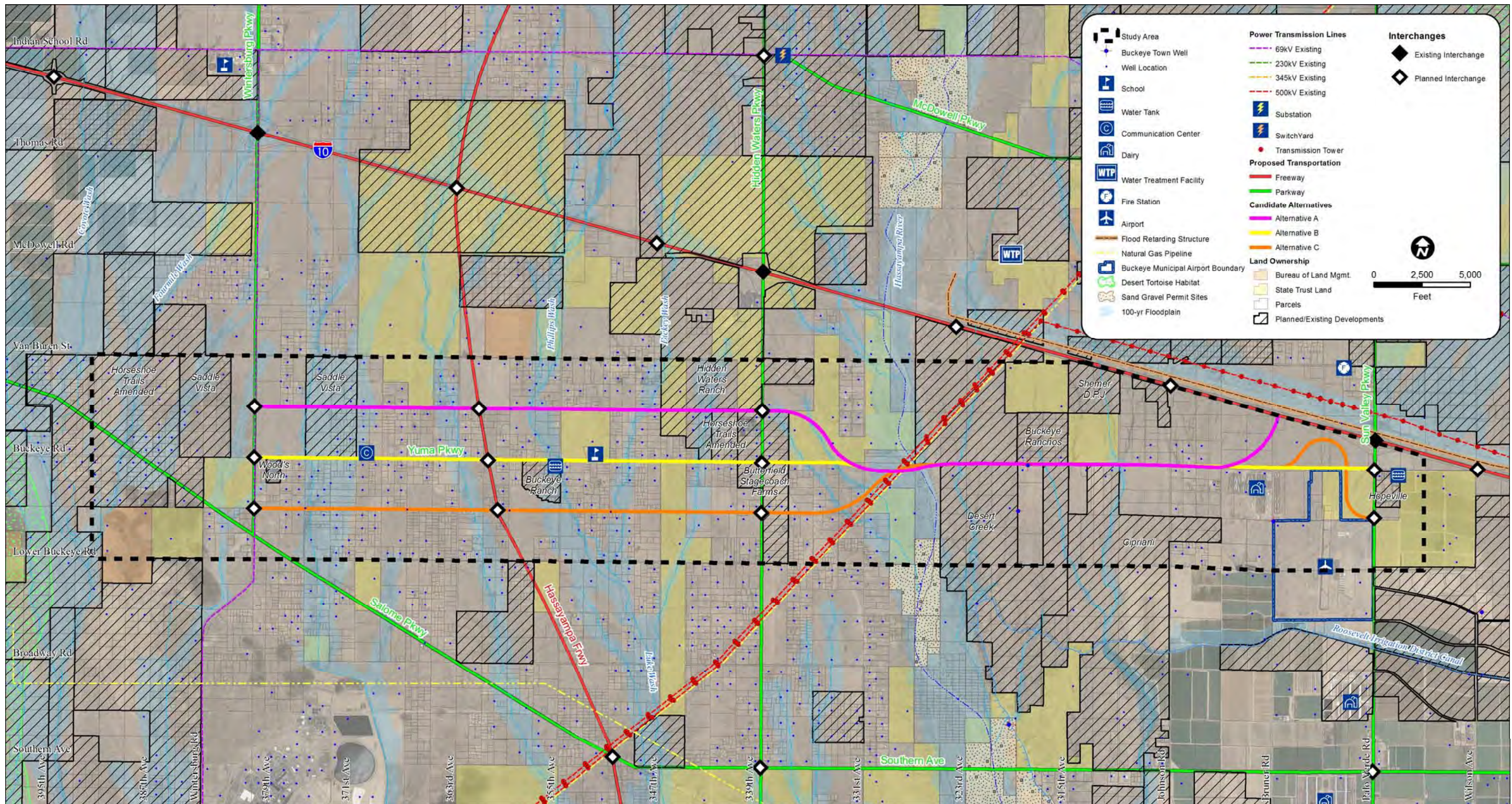


Figure 3 - Candidate Alternatives

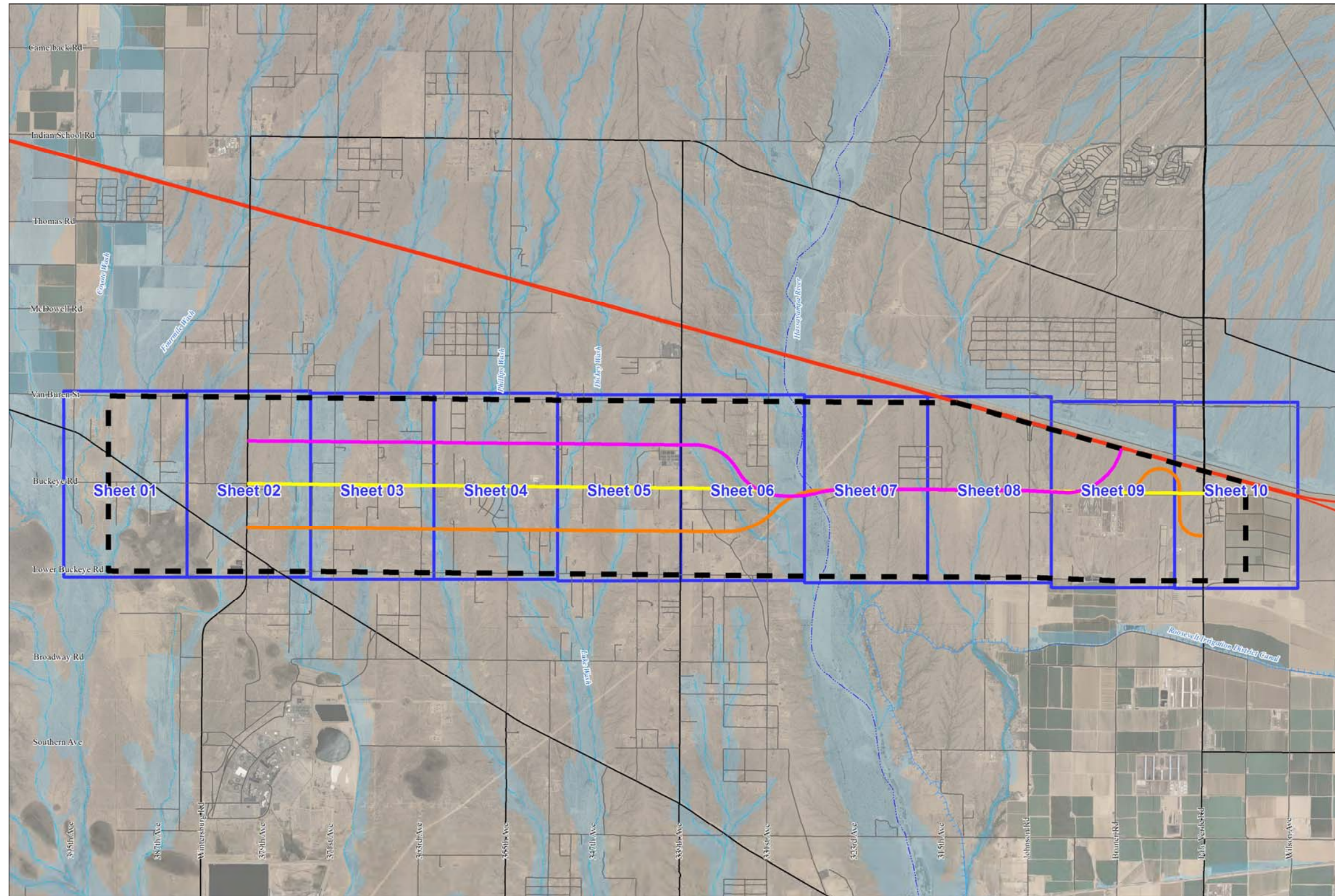


Figure 4 - Candidate Alternatives Schematic Drawings Key Map

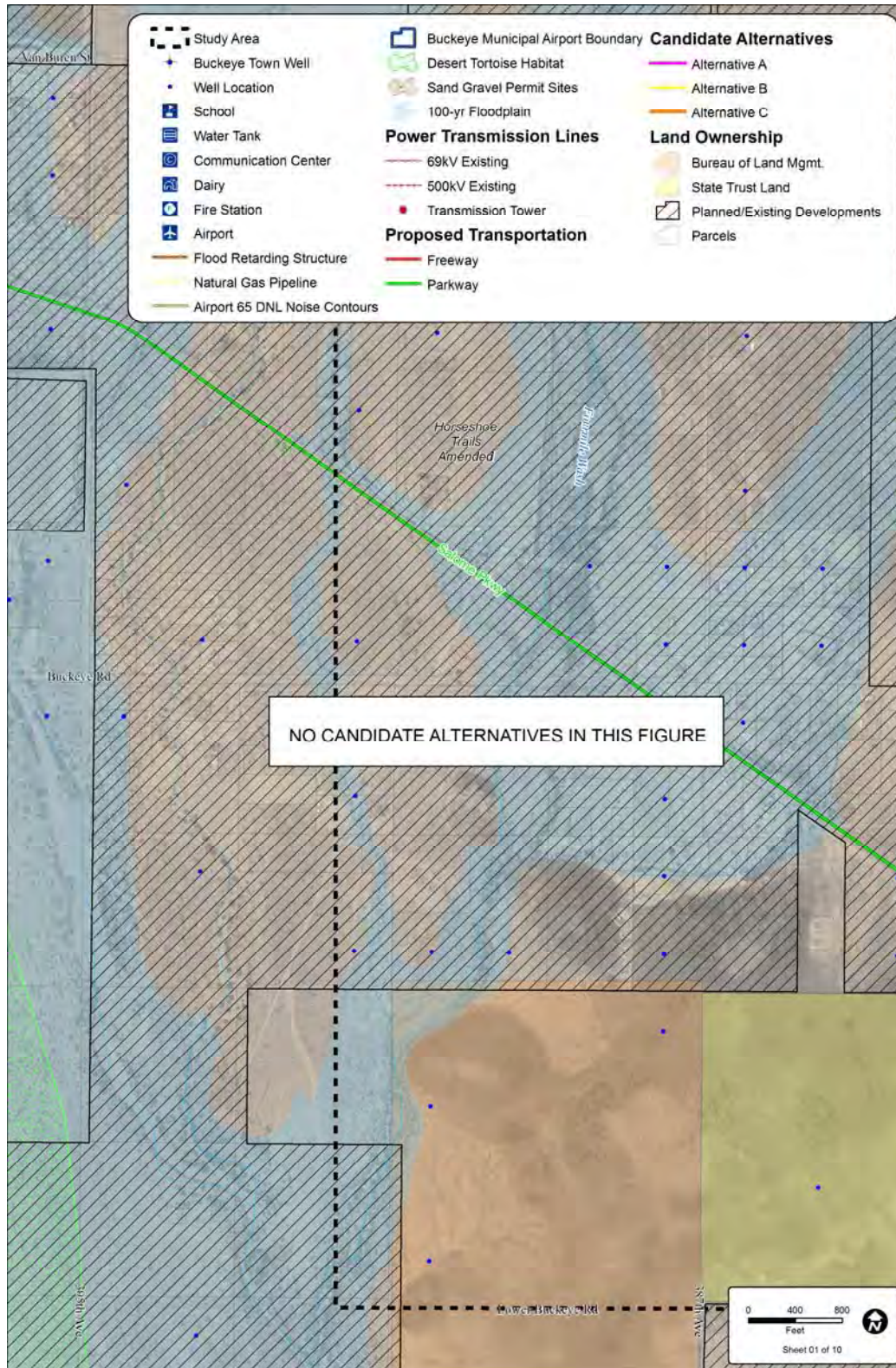


Figure 4A - Candidate Alternatives Schematic Drawings

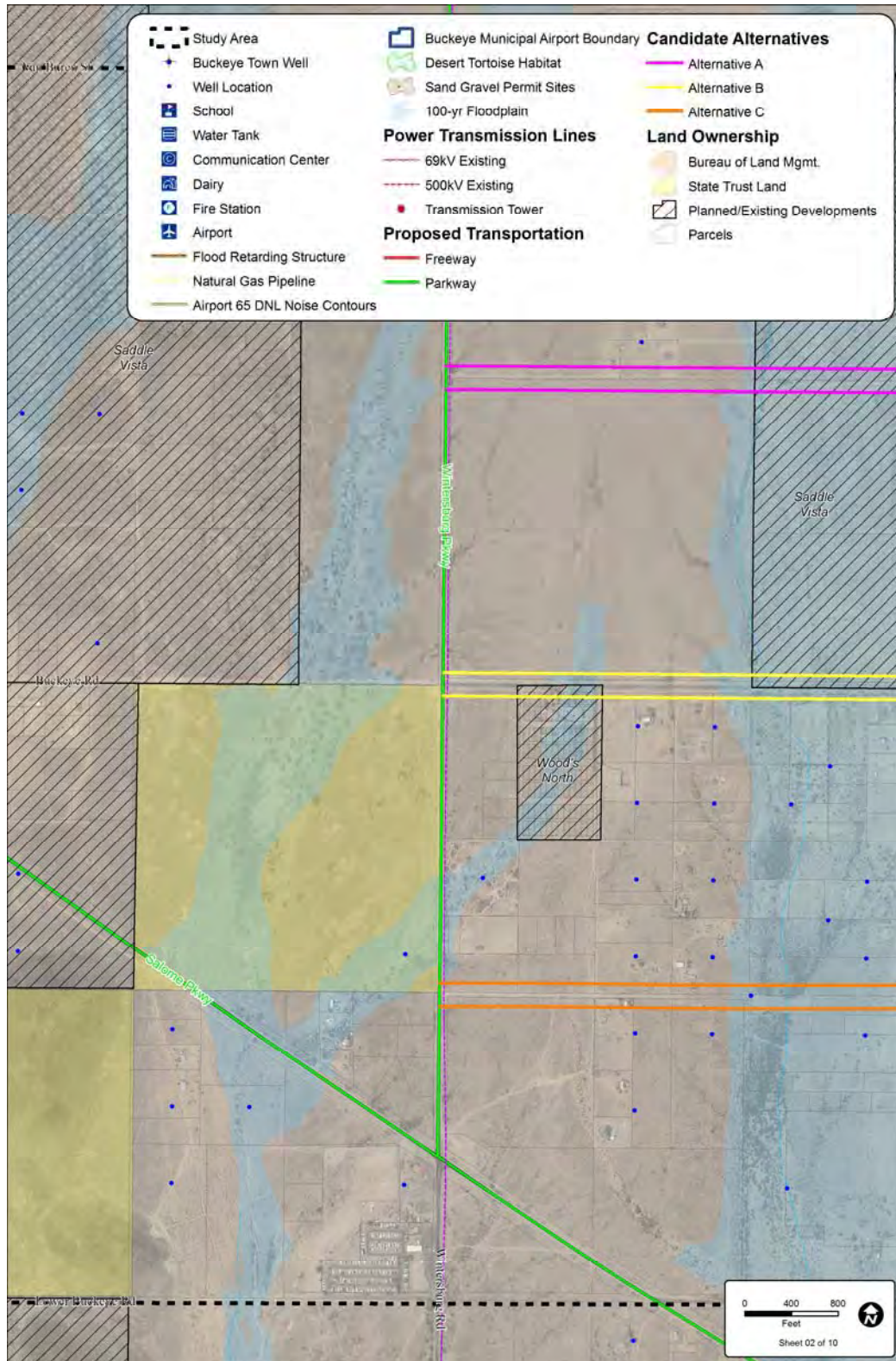


Figure 4B - Candidate Alternatives Schematic Drawings

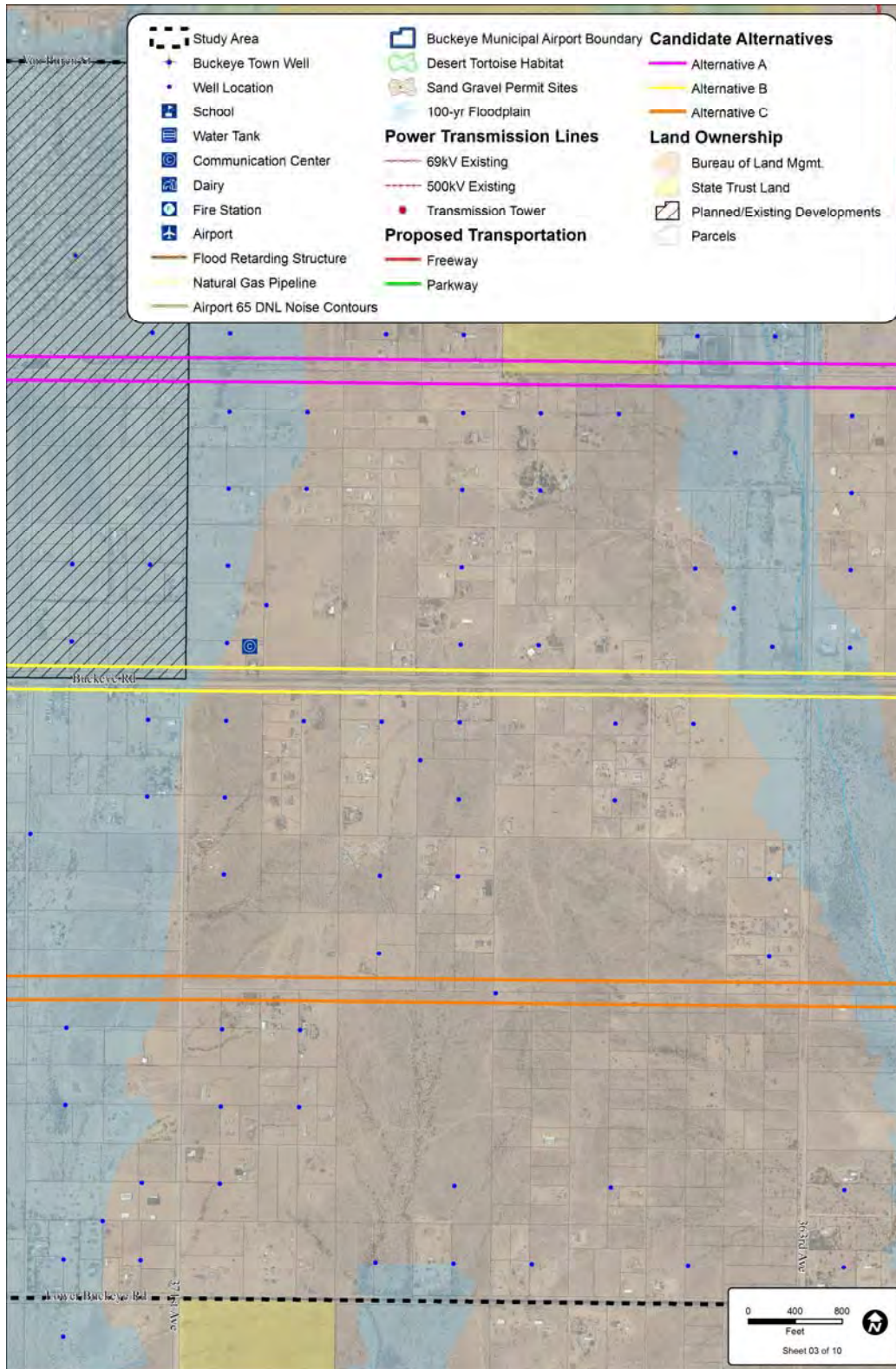


Figure 4C - Candidate Alternatives Schematic Drawings

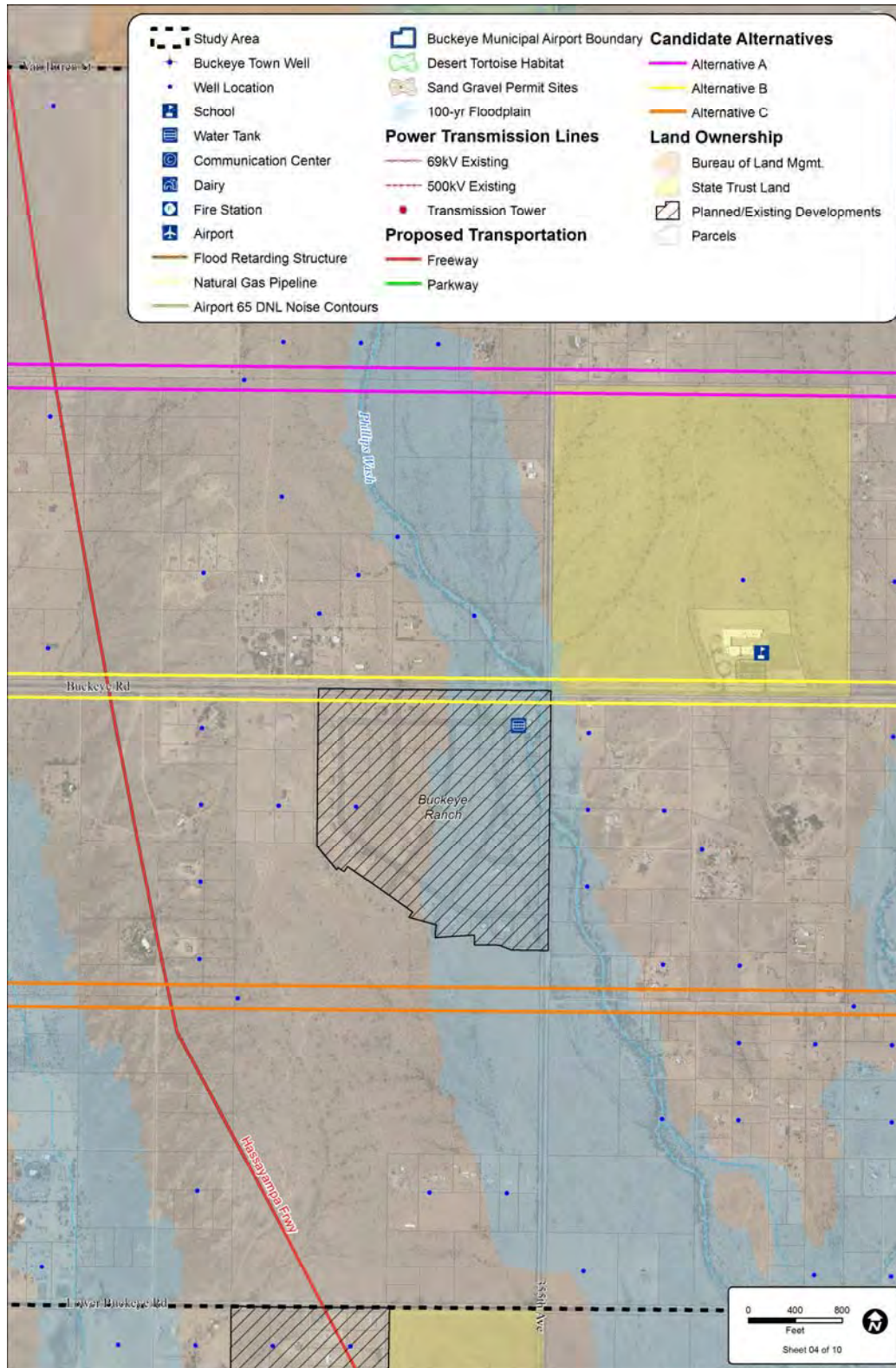


Figure 4D - Candidate Alternatives Schematic Drawings

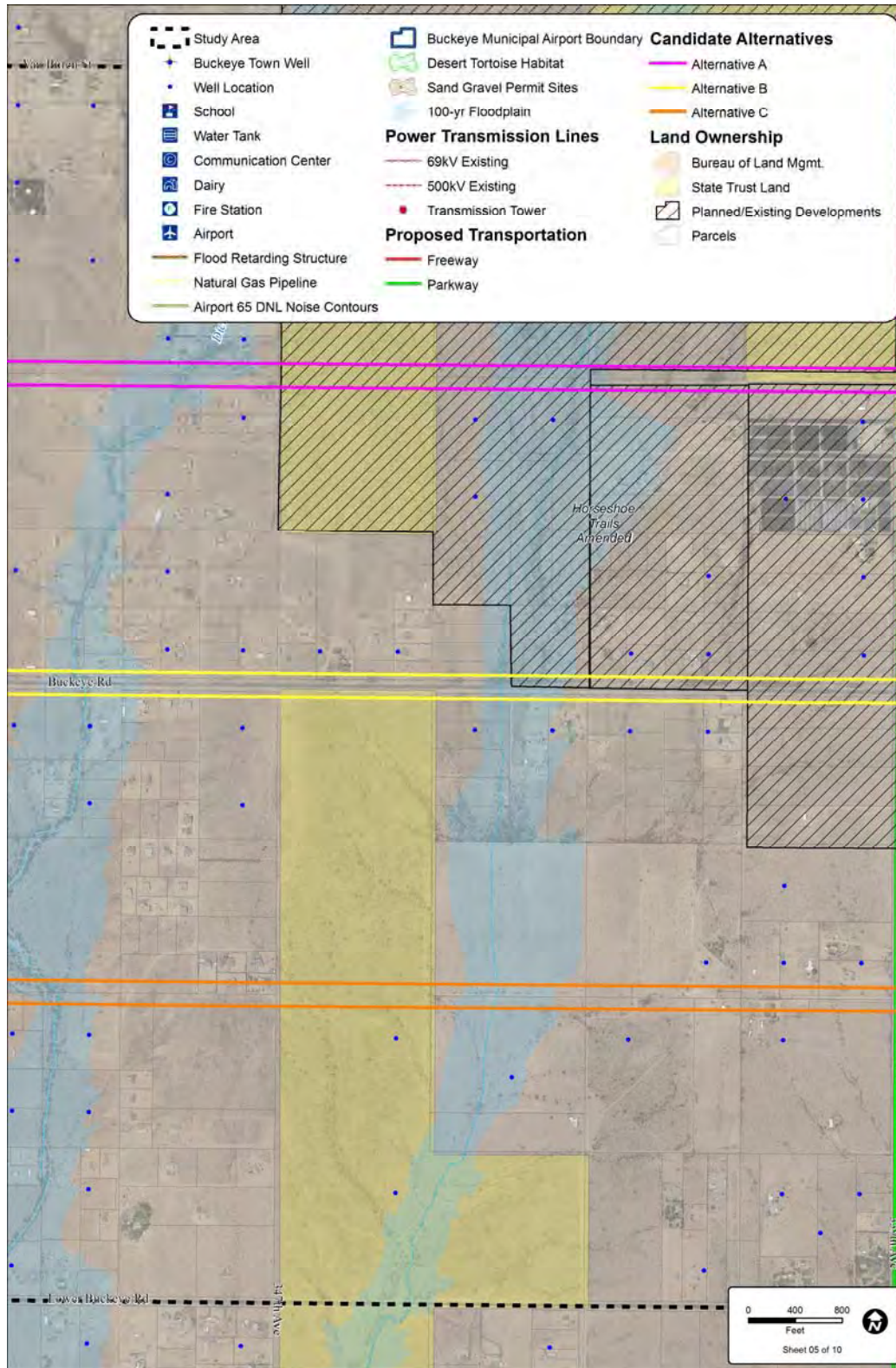


Figure 4E - Candidate Alternatives Schematic Drawings

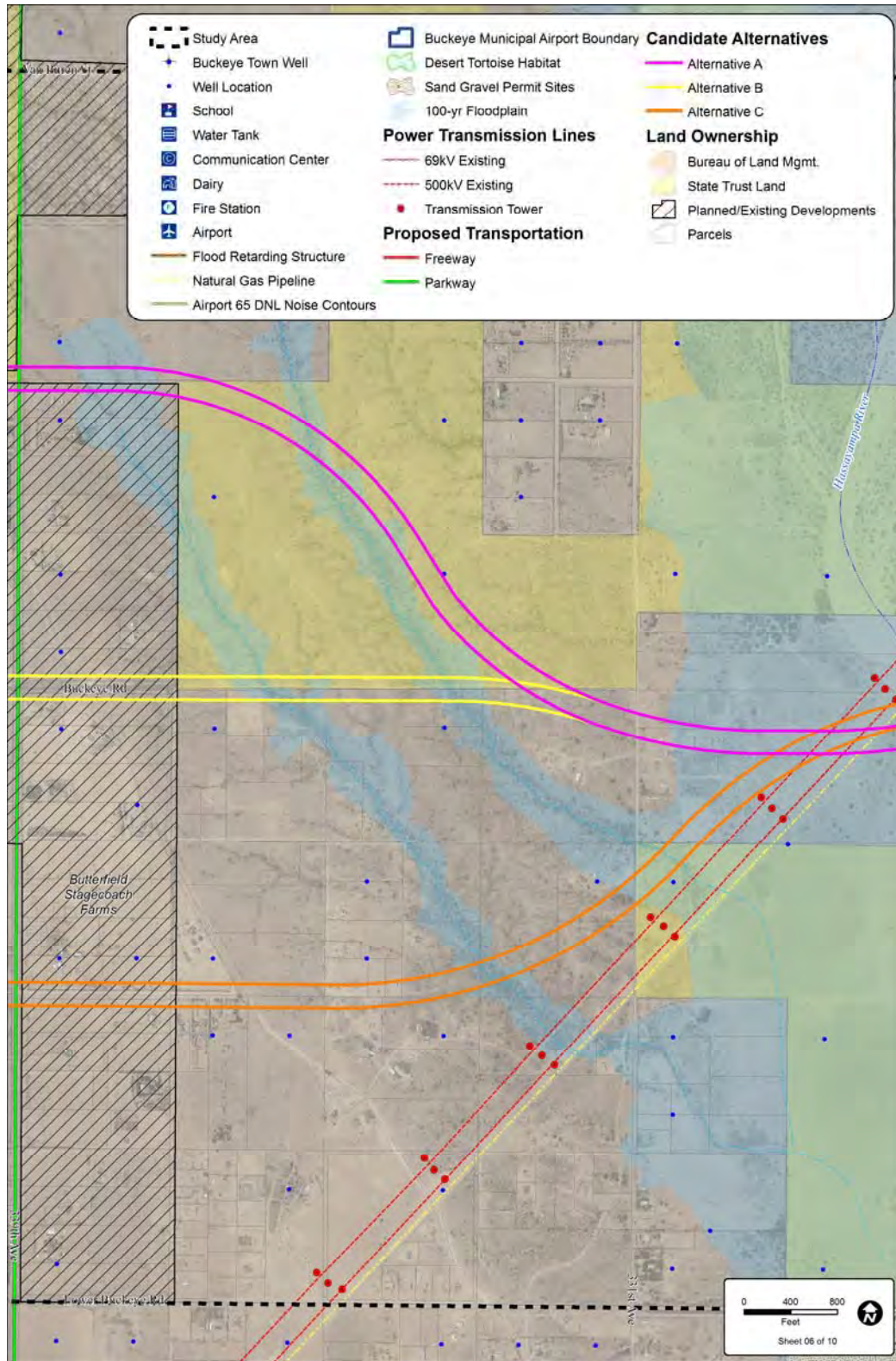


Figure 4F - Candidate Alternatives Schematic Drawings

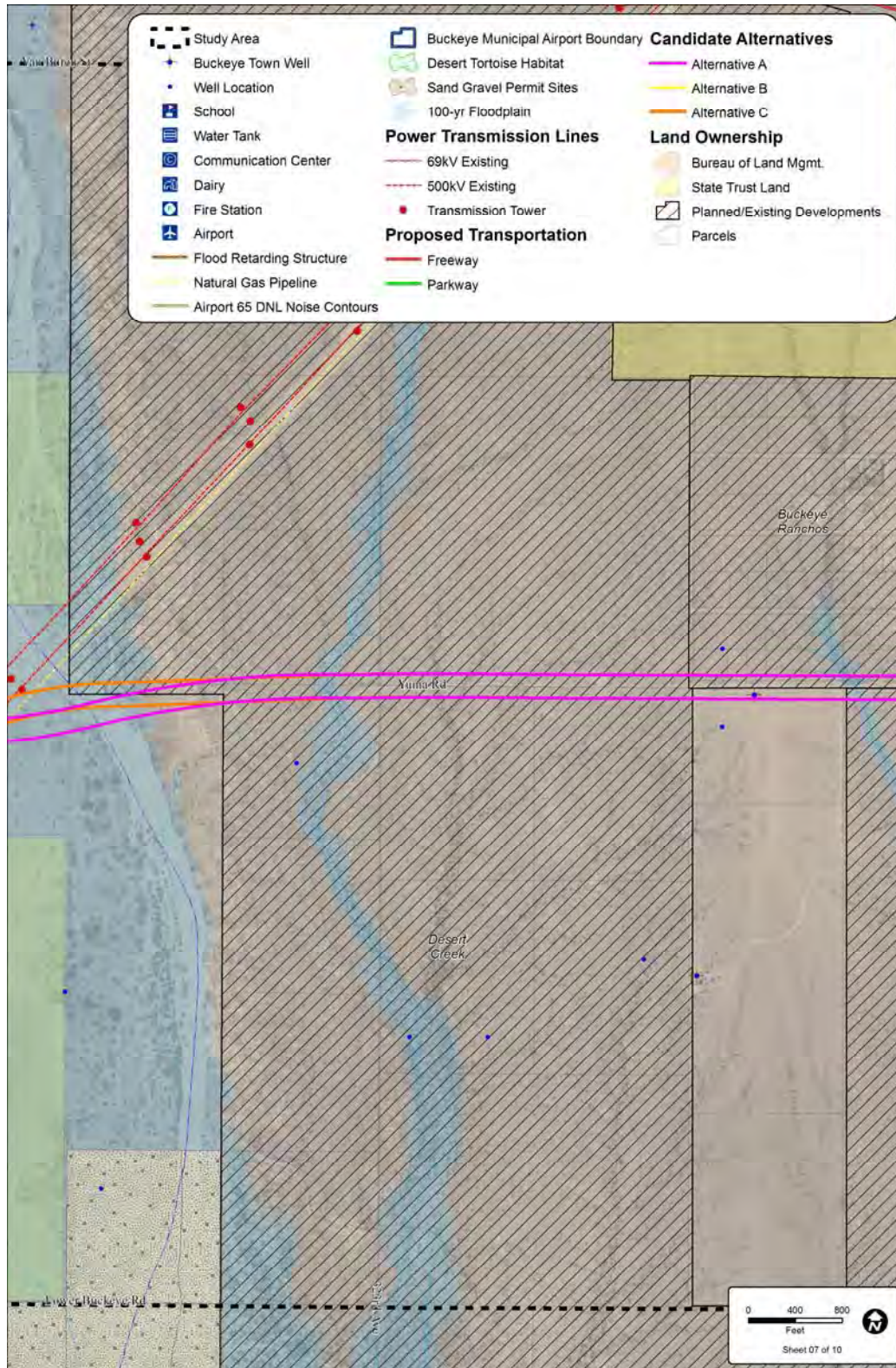


Figure 4G - Candidate Alternatives Schematic Drawings

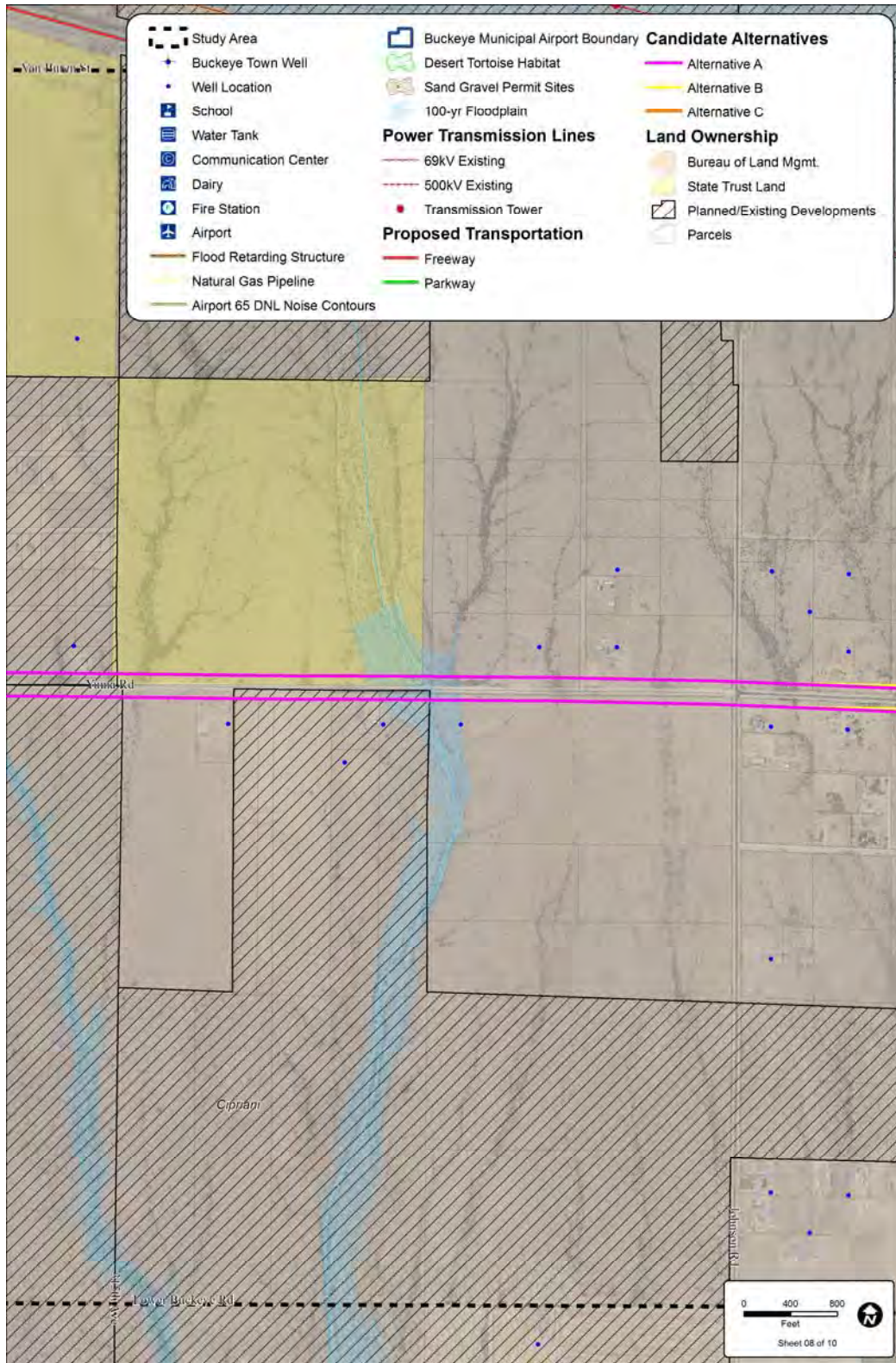


Figure 4H - Candidate Alternatives Schematic Drawings

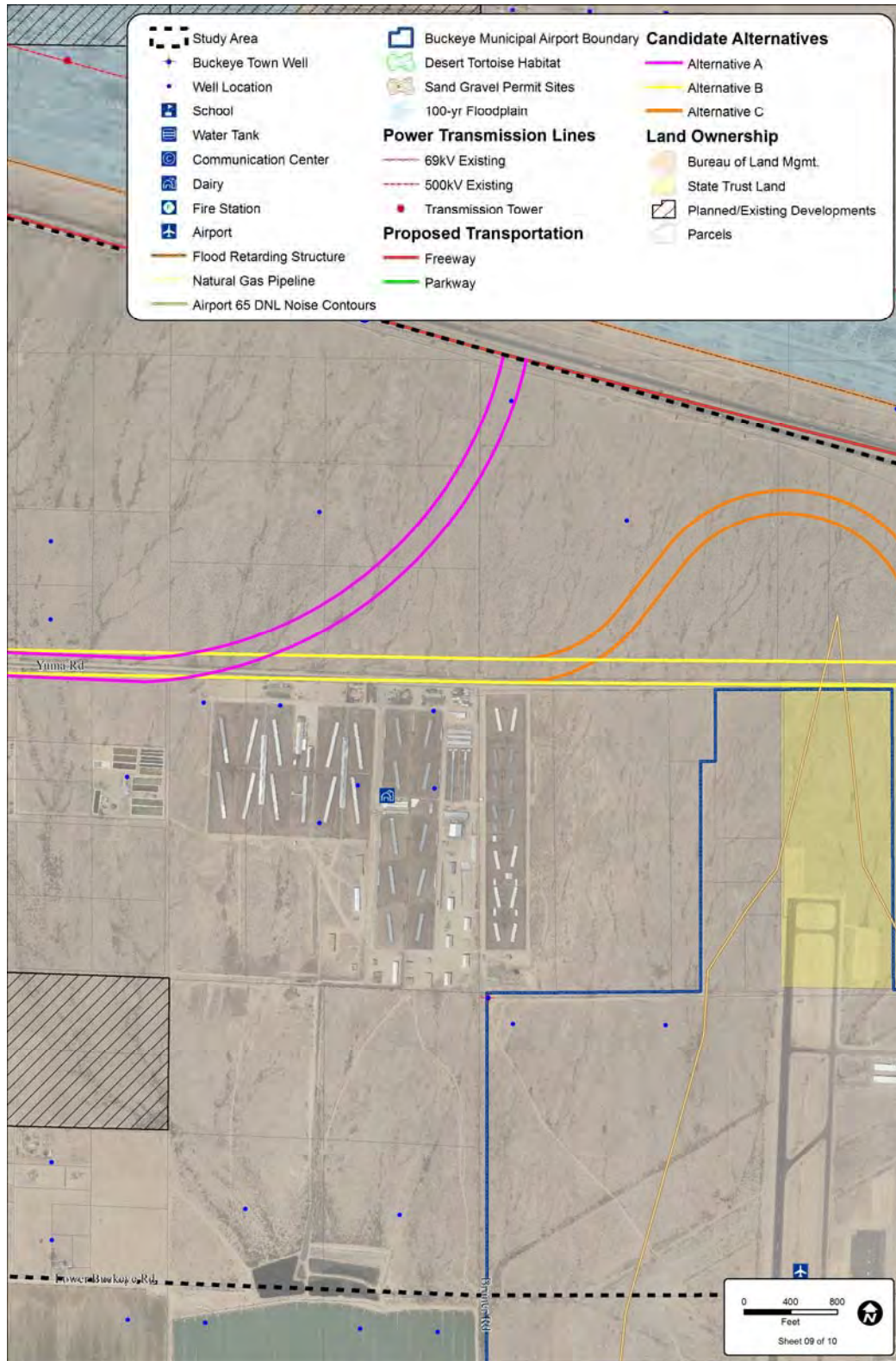


Figure 4I - Candidate Alternatives Schematic Drawings

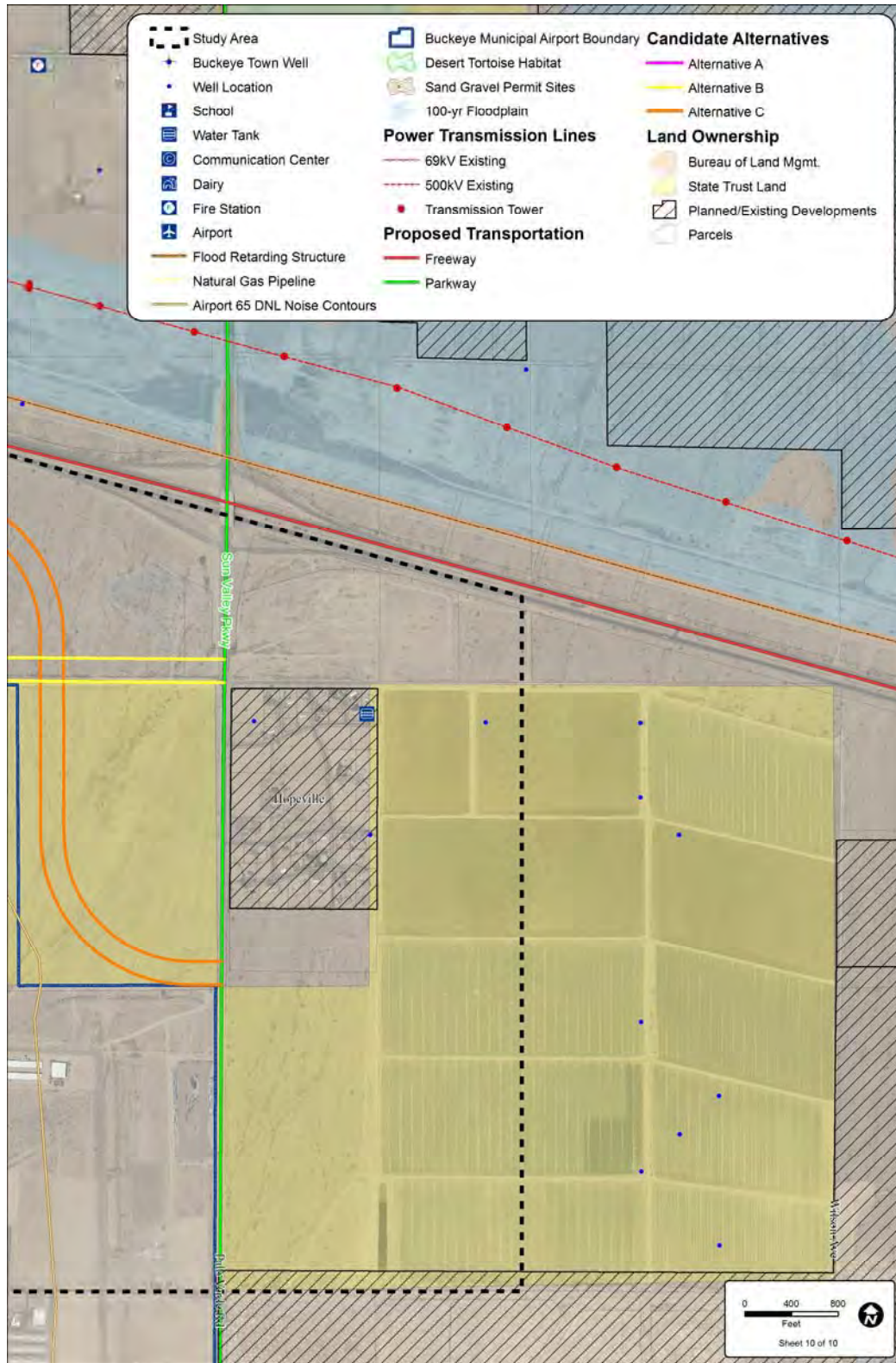


Figure 4J - Candidate Alternatives Schematic Drawings

3. EVALUATION OF CANDIDATE ALTERNATIVES

3.1 Evaluation Criteria

After performing the fatal flaw assessment of the conceptual alternatives and then narrowing the conceptual alternatives to the candidate alternative alignments described in Section 2.4, the candidate alternatives, along with a no-build alternative, were evaluated against a number of criteria. The evaluation criteria included the following:

- *System Continuity and Capacity* – This criterion is a measure of how each alternative contributes to providing a continuous transportation link through the study area with sufficient capacity to serve projected build-out traffic volumes. It also includes consideration of the ability to connect with other existing and planned freeways, parkways, and arterial streets;
- *Building/Property Impacts* – There are a number of low density residential properties and agricultural properties that may be adversely impacted by the parkway. Some residential buildings may have to be relocated or vacated and demolished, and some properties may be fully or partially acquired;
- *Future Development Compatibility* – This criterion addresses the impacts that each alternative has with respect to planned future development and whether or not the alternative is compatible with the planned development. For example, some planned developments in the study area already have stipulations requiring the reservation of a 200-foot-wide corridor for Yuma Parkway along portions of Yuma Road while other planned developments are based on a no-build or arterial street scenario. This criterion does not address the potential benefits of the parkway to future development, only whether or not the future development plan can accommodate Yuma Parkway;
- *Utility Impacts* – Most existing utilities are located adjacent to existing transportation facilities. Some combination of utility relocations and parkway alignment shifts will likely be required;
- *Wildlife Impacts* – Some alternatives may have more impacts than other alternatives on the existing suitable habitat for several wildlife species of concern and the de facto wildlife linkage zone along the Hassayampa River within the study area;
- *Cultural/Archaeological Impacts* – Throughout the study area, there are a combination of known and potential cultural and archaeological sites. Some alternatives could have more adverse impacts than others on these resources. This criterion is limited to known cultural and archaeological sites. Further alignment-specific cultural and archaeological analyses will be needed to identify and mitigate unknown resources;
- *Drainage Impacts* – The Hassayampa River and numerous washes are located in the study area. In most cases, implementing a parkway facility will require new drainage structures, which will typically improve existing drainage patterns;
- *Cost* – Some alternatives will have greater right-of-way, utility, drainage, and construction costs than others and can be evaluated on a comparative planning-level cost assessment; and
- *Public Acceptability* – Residents and landowners in the study area have differing opinions regarding the need and desirability of constructing new major roadways through the study area. Public input received through the TAC, stakeholder, and open house meetings provides an indication of the general level of support for each alternative.

3.2 Candidate Alternative Evaluation Results

Most of the evaluation criteria listed in the previous section do not lend themselves to numerical quantification, so the evaluation was performed on a “qualitative” basis using the following descriptors to describe the relative impacts of each of the candidate alternatives plus the no-build alternative:

- Strong advantage;
- Advantage;
- Neutral;
- Disadvantage; and
- Strong disadvantage.

Table 1 provides a narrative description of the issues that pertain to each of the evaluation criteria and evaluation ratings according to the above descriptors for each of the Yuma Parkway candidate alternatives in the segment between Wintersburg Road and the Hassayampa River. **Table 2** and **Table 3** respectively provide similar evaluations of the Yuma Parkway candidate alternatives in the segment between the Hassayampa River and Johnson Road and in the segment between Johnson Road and Palo Verde Road. **Table 4** graphically summarizes the overall evaluation of the candidate alternatives.

A visual inspection of **Table 4** without applying any weighting factors to the criteria indicates that for the Yuma Parkway segment between Wintersburg Road and the Hassayampa River, the No-Build Alternative and Alternative B have the most positive ratings (i.e., more Strong advantage and Advantage ratings and/or fewer Strong disadvantage and Disadvantage ratings). For the Yuma Parkway segment between the Hassayampa River and Johnson Road, Alternative A has a slightly more positive overall rating than the no-build alternative. For the Yuma Parkway segment between Johnson Road and Palo Verde Road, Alternative B has a slightly more positive overall rating.

Table 1 - Yuma Parkway Alternatives Evaluation Matrix: Wintersburg Road to Hassayampa River

Evaluation Criteria	No-Build Alternative	Alternative A	Alternative B	Alternative C
System Continuity and Capacity	<p>The No-Build Alternative provides an existing two-lane paved arterial centered on the Buckeye Road alignment between Wintersburg Road and 339th Avenue. The Maricopa Association of Governments Hassayampa Framework Study calls for a parkway in the general vicinity of the Buckeye Road alignment between Wintersburg Parkway and the Hassayampa River to serve long-term traffic needs. The No-Build Alternative does not conform to the recommended roadway network connectivity of the Hassayampa Framework Study and does not adequately serve long-term traffic needs.</p> <p><i>Net Effect: Strong disadvantage</i></p>	<p>Alternative A generally conforms to the recommended roadway network connectivity of the Hassayampa Framework Study by providing a parkway centered on the Harrison Street alignment between Wintersburg Parkway and the Hassayampa River that adequately serves long-term traffic needs.</p> <p><i>Net Effect: Strong advantage</i></p>	<p>Alternative B generally conforms to the recommended roadway network connectivity of the Hassayampa Framework Study by providing a parkway centered on the Buckeye Road alignment between Wintersburg Parkway and the Hassayampa River that adequately serves long-term traffic needs.</p> <p><i>Net Effect: Strong advantage</i></p>	<p>Alternative C generally conforms to the recommended roadway network connectivity of the Hassayampa Framework Study by providing a parkway centered on the Durango Street alignment between Wintersburg Parkway and the Hassayampa River that adequately serves long-term traffic needs.</p> <p><i>Net Effect: Strong advantage</i></p>
Building/Property Impacts	<p>There are existing residential buildings dispersed throughout this portion of the study area. The No-Build Alternative does not change the current status and therefore will not have positive or negative impacts on adjacent buildings or properties.</p> <p><i>Net Effect: Neutral</i></p>	<p>There is generally no existing public R/W along the Alternative A alignment. An additional 200' of new public R/W will generally be needed for the parkway.</p> <p>Alternative A will likely require the relocation/purchase of 16 existing residential buildings. Alternative A will likely require R/W acquisition from 82 privately-owned parcels, including 6 full parcel acquisitions. Alternative A will also likely require R/W acquisitions from 5 State Trust Land parcels, 2 of which will be bisected by the parkway.</p> <p><i>Net Effect: Strong disadvantage</i></p>	<p>There are generally 110' of existing public R/W along the Alternative B alignment. An additional 90' of new public R/W will generally be needed for the parkway.</p> <p>Alternative B will likely require the relocation/purchase of 23 existing residential buildings. Alternative B will likely require R/W acquisition from 146 privately-owned parcels, including 14 full parcel acquisitions. One of the parcels from which R/W will likely need to be acquired contains Winters' Well Elementary School. The parking lot and circulation patterns of the elementary school will likely have to be reconfigured. Alternative B will also likely require R/W acquisitions from 3 State Trust Land parcels.</p> <p><i>Net Effect: Strong disadvantage</i></p>	<p>There is generally no existing public R/W along the Alternative C alignment. An additional 200' of new public R/W will generally be needed for the parkway.</p> <p>Alternative C will likely require the relocation/purchase of 23 existing residential buildings. Alternative C will likely require R/W acquisition from 120 privately-owned parcels, including 25 full parcel acquisitions. Alternative C will also likely require R/W acquisitions from 2 State Trust Land parcels, both of which will be bisected by the parkway</p> <p><i>Net Effect: Strong disadvantage</i></p>
Future Development Compatibility	<p>The No-Build Alternative provides an existing two-lane paved arterial centered on the Buckeye Road alignment between Wintersburg Road and 339th Avenue that typically has 110' of right-of-way (R/W).</p> <p>The Hidden Waters Ranch planned development is stipulated to provide 100' of half-street right-of-way for a 200' parkway centered on the Buckeye Road alignment between 344th Avenue and 343rd Avenue.</p> <p>While a roadway does exist along the Buckeye Road alignment where planned development had assumed a roadway would be provided, the No-Build Alternative is not compatible with the approved Hidden Waters Ranch planned development, which had assumed a 200' parkway on Buckeye Road instead of a 110' arterial to accommodate the projected traffic demands in the area.</p> <p><i>Net Effect: Disadvantage</i></p>	<p>Alternative A provides a 200' parkway centered on the Harrison Street alignment (1/2 mile north of Buckeye Road).</p> <p>The Hidden Waters Ranch planned development is stipulated to provide an 80' collector on the Harrison Street alignment between 347th Avenue and 339th Avenue.</p> <p>Providing a 200' parkway on the Harrison Street alignment is not compatible with the approved Hidden Waters Ranch planned development. Hidden Waters Ranch will be required to provide an additional 120' of R/W to accommodate the parkway. Planned land uses along the Harrison Street alignment that will be impacted by the wider required R/W for a parkway include an elementary school, a park, and small-lot single family residential.</p> <p><i>Net Effect: Strong disadvantage</i></p>	<p>Alternative B provides a 200' parkway centered on the Buckeye Road alignment.</p> <p>The Hidden Waters Ranch planned development is stipulated to provide 100' of half-street right-of-way for a 200' parkway along Buckeye Road between 344th Avenue and 343rd Avenue.</p> <p>Providing a 200' parkway on the Buckeye Road alignment is compatible with the approved Hidden Waters Ranch planned development,</p> <p><i>Net Effect: Advantage</i></p>	<p>Alternative C provides a 200' parkway centered on the Durango Street alignment (1/2 mile south of Buckeye Road).</p> <p>While there are no approved planned developments through which a parkway on the Durango Street alignment will traverse, the Hidden Waters Ranch planned development assumed the parkway would centered on the Buckeye Road alignment between 344th Avenue and 343rd Avenue.</p> <p>Providing a 200' parkway on the Durango Street alignment is not compatible with the approved Hidden Waters Ranch planned development.</p> <p><i>Net Effect: Disadvantage</i></p>
Utility Impacts	<p>The existing major utilities identified as being located within this portion of the study area include a natural gas line, overhead 69kV and 500kV electrical lines, a CenturyLink telecommunications building along Buckeye Road east of 371st Avenue, and water wells/tanks dispersed throughout the study area. The No-Build Alternative does not change the current status and therefore will not have positive or negative impacts on identified utilities.</p> <p><i>Net Effect: Neutral</i></p>	<p>Alternative A will cross the natural gas line and overhead 500kV and 69kV electrical lines but should not significantly impact these utilities. Alternative A will likely require the relocation of 1 water well.</p> <p><i>Net Effect: Disadvantage</i></p>	<p>Alternative B will cross the natural gas line and overhead 500kV and 69kV electrical lines but should not significantly impact these utilities. Alternative B will likely require the relocation of the CenturyLink telecommunications building along Buckeye Road east of 371st Avenue unless the parkway alignment can be shifted to the south.</p> <p><i>Net Effect: Strong disadvantage</i></p>	<p>Alternative C will cross the natural gas line and overhead 500kV and 69kV electrical lines but should not significantly impact these utilities. Alternative C will likely require the relocation of 4 water wells.</p> <p><i>Net Effect: Disadvantage</i></p>

Table 1 - Yuma Parkway Alternatives Evaluation Matrix: Wintersburg Road to Hassayampa River (continued)

Evaluation Criteria	No-Build Alternative	Alternative A	Alternative B	Alternative C
Wildlife Impacts	<p>There are no designated wildlife linkage zones in this portion of the study area, but the Hassayampa River is a de facto wildlife linkage zone. No roadways in the study area currently provide wildlife crossing treatments, but wildlife-vehicle conflicts have not been identified as a common occurrence within this portion of the study area. The No-Build Alternative does not change the current status and therefore will not have positive or negative impacts on wildlife.</p> <p><i>Net Effect: Neutral</i></p>	<p>Alternative A will result in a new roadway centered primarily on the Harrison Street alignment that creates an additional barrier to wildlife crossings, particularly where Alternative A crosses the Hassayampa River. The adverse impacts of this additional barrier could be mitigated to some degree by incorporating wildlife crossing treatments into the new roadway design, particularly at the Hassayampa River.</p> <p><i>Net Effect: Disadvantage</i></p>	<p>Alternative B will result in a wider roadway footprint than currently exists on Buckeye Road, increasing the crossing distance for wildlife. Alternative B will also result in a new roadway across the Hassayampa River that creates an additional barrier to wildlife crossings. The increase in crossing distance and additional barrier could be mitigated to some degree by incorporating wildlife crossing treatments into the new roadway design, particularly at the Hassayampa River.</p> <p><i>Net Effect: Disadvantage</i></p>	<p>Alternative C will result in a new roadway centered primarily on the Durango Street alignment that creates an additional barrier to wildlife crossings, particularly where Alternative A crosses the Hassayampa River. The adverse impacts of this additional barrier could be mitigated to some degree by incorporating wildlife crossing treatments into the new roadway design, particularly at the Hassayampa River.</p> <p><i>Net Effect: Disadvantage</i></p>
Cultural/Archaeological Impacts	<p>There are identified cultural or archaeological resources dispersed throughout this portion of the study area. The No-Build Alternative does not change the current status and therefore will not have positive or negative impacts on identified cultural or archaeological resources. It should be noted that approximately 50 percent of the study area has not been surveyed for cultural or archaeological resources.</p> <p><i>Net Effect: Neutral</i></p>	<p>Alternative A will likely impact 1 identified cultural or archaeological resource. Because approximately 50 percent of the study area has not been surveyed for cultural or archaeological resources, it is possible that future surveys conducted as Alternative A is designed could potentially identify additional cultural or archaeological resources that could be impacted by Alternative A.</p> <p><i>Net Effect: Disadvantage</i></p>	<p>Alternative B will likely impact 3 cultural or archaeological resources. Because approximately 50 percent of the study area has not been surveyed for cultural or archaeological resources, it is possible that future surveys conducted as Alternative B is designed could potentially identify additional cultural or archaeological resources that could be impacted by Alternative B.</p> <p><i>Net Effect: Disadvantage</i></p>	<p>Alternative C will likely impact 1 cultural or archaeological resource. Because approximately 50 percent of the study area has not been surveyed for cultural or archaeological resources, it is possible that future surveys conducted as Alternative C is designed could potentially identify additional cultural or archaeological resources that could be impacted by Alternative C.</p> <p><i>Net Effect: Disadvantage</i></p>
Drainage Impacts	<p>Phillips Wash, Dickey Wash, and several other smaller unnamed washes carry water through this portion of the study area and across Buckeye Road during flood events, causing occasional roadway closures due to roadway pavement erosion and sedimentation build-up. There are currently no drainage structures to control the flow and lateral migration of the Hassayampa River.</p> <p>The No-Build Alternative does not provide a continuous all-weather roadway, will not correct any of the identified drainage issues, and could result in additional future adverse impacts from drainage issues such as roadway erosion and sedimentation.</p> <p><i>Net Effect: Strong disadvantage</i></p>	<p>Alternative A provides a continuous all-weather roadway that will include culverts to convey cross-drainage at smaller washes and structures to convey cross-drainage at larger washes such as Phillips Wash and Dickey Wash and to control the flow and lateral migration of the Hassayampa River.</p> <p><i>Net Effect: Strong advantage</i></p>	<p>Alternative B provides a continuous all-weather roadway that will include culverts to convey cross-drainage at smaller washes and structures to convey cross-drainage at larger washes such as Phillips Wash and Dickey Wash and to control the flow and lateral migration of the Hassayampa River.</p> <p><i>Net Effect: Strong advantage</i></p>	<p>Alternative C provides a continuous all-weather roadway that will include culverts to convey cross-drainage at smaller washes and structures to convey cross-drainage at larger washes such as Phillips Wash and Dickey Wash and to control the flow and lateral migration of the Hassayampa River.</p> <p><i>Net Effect: Strong advantage</i></p>
Cost	<p>The No-Build Alternative will not have right-of-way or construction costs but it will have continued on-going maintenance costs related to cross-drainage pavement repairs.</p> <p><i>Net Effect: Neutral</i></p>	<p>Because there is little existing public R/W along the Alternative A alignment and the parkway alignment is curvilinear, Alternative A will likely have right-of-way, construction, and maintenance costs that are more than the Alternative B costs and similar to the Alternative C costs.</p> <p><i>Net Effect: Strong disadvantage</i></p>	<p>Because there is much existing public R/W along the Alternative B alignment and the parkway alignment is straight, Alternative B will likely have right-of-way, construction, and maintenance costs that are less than the costs of Alternative A and Alternative C.</p> <p><i>Net Effect: Disadvantage</i></p>	<p>Because there is little existing public R/W along the Alternative C alignment and the parkway alignment is curvilinear, Alternative C will likely have right-of-way, construction, and maintenance costs that are more than the Alternative B costs and similar to the Alternative A costs.</p> <p><i>Net Effect: Strong disadvantage</i></p>
Public Acceptability	<p>Public input was mixed regarding the No-Build Alternative. Some residents and property owners expressed concerns about property impacts associated with implementing the parkway while others expressed support for the parkway because it will provide roadway network continuity across the Hassayampa River and provide additional roadway capacity.</p> <p><i>Net Effect: Neutral</i></p>	<p>Public input from those in favor of one of the "build" alternatives was generally less supportive of Alternative A than Alternative B.</p> <p><i>Net Effect: Disadvantage</i></p>	<p>Public input from those in favor of one of the "build" alternatives was generally more supportive of Alternative B than Alternative A or Alternative C.</p> <p><i>Net Effect: Neutral</i></p>	<p>Public input from those in favor of one of the "build" alternatives was generally less supportive of Alternative C than Alternative B.</p> <p><i>Net Effect: Disadvantage</i></p>

Table 2 - Yuma Parkway Alternatives Evaluation Matrix: Hassayampa River to Johnson Road

Evaluation Criteria	No-Build Alternative	Alternative A
System Continuity and Capacity	<p>The No-Build Alternative does not provide a continuous roadway between the Hassayampa River and Johnson Road within the study area.</p> <p>The Maricopa Association of Governments Hassayampa Framework Study calls for a parkway in the general vicinity of the Yuma Road alignment between the Hassayampa River and Johnson Road to serve long-term traffic needs. The No-Build Alternative does not conform to the recommended roadway network connectivity of the Hassayampa Framework Study and does not adequately serve long-term traffic needs.</p> <p><i>Net Effect: Strong disadvantage</i></p>	<p>Alternative A generally conforms to the recommended roadway network connectivity of the Hassayampa Framework Study by providing a parkway centered on the Yuma Road alignment between the Hassayampa River and Johnson Road that adequately serves long-term traffic needs.</p> <p><i>Net Effect: Strong advantage</i></p>
Building/Property Impacts	<p>There are few existing buildings in this portion of the study area. The No-Build Alternative does not change the current status and therefore will not have positive or negative impacts on adjacent buildings or properties.</p> <p><i>Net Effect: Neutral</i></p>	<p>There are generally 0'-65' of existing public R/W along the Alternative A alignment. Most of the adjacent parcels in this portion of the study area are part of the approved Desert Creek or Cipriani planned developments and as such would not require additional R/W beyond what is already stipulated in the development agreements for a parkway.</p> <p>Alternative A will not require the relocation/purchase of any residential buildings. Alternative A will likely require R/W acquisition from 39 privately-owned parcels, including 9 full parcel acquisitions. Alternative A will also likely require R/W acquisition from 1 State Trust Land parcel.</p> <p><i>Net Effect: Disadvantage</i></p>
Future Development Compatibility	<p>The No-Build Alternative does not provide any paved roadway between the Hassayampa River and Johnson Road within the study area.</p> <p>The Desert Creek and Cipriani planned developments are stipulated to provide 100' of half-street right-of-way (R/W) for a 200' parkway centered on the Yuma Road alignment between the Hassayampa River and Johnson Road. The No-Build Alternative is not compatible with the approved Desert Creek and Cipriani planned developments, which had assumed a 200' parkway would provide access between the Hassayampa River and Johnson Road and the needed capacity to accommodate the projected traffic demands in the area.</p> <p><i>Net Effect: Strong disadvantage</i></p>	<p>Alternative A provides a 200' parkway centered on the Yuma Road alignment.</p> <p>The Desert Creek and Cipriani planned developments are stipulated to provide 100' of half-street R/W for a 200' parkway centered on the Yuma Road alignment between the Hassayampa River and Johnson Road. Providing a 200' parkway on the Yuma Road alignment is compatible with the approved Desert Creek and Cipriani planned developments.</p> <p><i>Net Effect: Strong advantage</i></p>
Utility Impacts	<p>The existing major utilities identified as being located within this portion of the study area are water wells, most notably the water well owned by the Town of Buckeye along Yuma Road east of Powers Butte Road. The No-Build Alternative does not change the current status and therefore will not have positive or negative impacts on the identified utility.</p> <p><i>Net Effect: Neutral</i></p>	<p>Alternative A will likely require the relocation of the water well owned by the Town of Buckeye unless the parkway alignment can be shifted to the north.</p> <p><i>Net Effect: Disadvantage</i></p>
Wildlife Impacts	<p>There are no designated wildlife linkage zones in this portion of the study area and no wildlife-vehicle conflicts have been identified as a common occurrence within this portion of the study area. The No-Build Alternative does not change the current status and therefore will not have positive or negative impacts on wildlife.</p> <p><i>Net Effect: Neutral</i></p>	<p>Alternative A will result in a new roadway centered on the Yuma Road alignment that creates an additional barrier to wildlife crossings. The adverse impacts of this additional barrier could be mitigated to some degree by incorporating wildlife crossing treatments into the new roadway design.</p> <p><i>Net Effect: Disadvantage</i></p>
Cultural/Archaeological Impacts	<p>There are identified cultural or archaeological resources dispersed throughout this portion of the study area. The No-Build Alternative does not change the current status and therefore will not have positive or negative impacts on identified cultural or archaeological resources. It should be noted that approximately 50 percent of the study area has not been surveyed for cultural or archaeological resources.</p> <p><i>Net Effect: Neutral</i></p>	<p>Alternative A will likely impact 2 identified cultural or archaeological resources. Because approximately 50 percent of the study area has not been surveyed for cultural or archaeological resources, it is possible that future surveys conducted as Alternative A is designed could potentially identify additional cultural or archaeological resources that could be impacted by Alternative A.</p> <p><i>Net Effect: Disadvantage</i></p>
Drainage Impacts	<p>Several small unnamed washes carry water through this portion of the study area during flood events, although the magnitude of the wash flows is relatively small due to the upstream presence of the flood retarding structure just north of I-10. The No-Build Alternative does not provide a continuous all-weather roadway.</p> <p><i>Net Effect: Disadvantage</i></p>	<p>Alternative A provides a continuous all-weather roadway that will include culverts to convey cross-drainage at the small washes.</p> <p><i>Net Effect: Advantage</i></p>
Cost	<p>The No-Build Alternative will not have right-of-way or construction costs but it will have continued on-going maintenance costs related to dust control and grading for the unpaved roadway between Powers Butte Road and Johnson Road.</p> <p><i>Net Effect: Neutral</i></p>	<p>Alternative A will have right-of-way, construction, and maintenance costs that are more than the No-Build Alternative costs.</p> <p><i>Net Effect: Disadvantage</i></p>
Public Acceptability	<p>Public input was mixed regarding the No-Build Alternative. Some residents and property owners expressed concerns about property impacts associated with implementing the parkway while others expressed support for the parkway because it will provide east-west roadway network continuity and provide additional roadway capacity.</p> <p><i>Net Effect: Neutral</i></p>	<p>Public input was mixed regarding Alternative A. Some residents and property owners expressed concerns about property impacts associated with implementing the parkway while others expressed support for the parkway because it will provide east-west roadway network continuity and provide additional roadway capacity.</p> <p><i>Net Effect: Neutral</i></p>

Table 3 - Yuma Parkway Alternatives Evaluation Matrix: Johnson Road to Palo Verde Road

Evaluation Criteria	No-Build Alternative	Alternative A	Alternative B	Alternative C
System Continuity and Capacity	<p>The No-Build Alternative provides an existing two-lane paved arterial centered on the Yuma Road alignment between Johnson Road and Palo Verde Road. The Maricopa Association of Governments Hassayampa Framework Study calls for a parkway in the general vicinity of the Yuma Road alignment between Johnson Road and I-10 to serve long-term traffic needs. The parkway alignment recommended in the Hassayampa Framework Study assumed the airport runway extension would be to the north, meaning a direct east-west connection along the existing Yuma Road alignment would not be feasible. Now that the airport runway extension is planned to be to the south, a direct east-west connection between Johnson Road and I-10 is feasible. The No-Build Alternative does not conform to the recommended roadway network connectivity of the Hassayampa Framework Study and does not adequately serve long-term traffic needs.</p> <p><i>Net Effect: Strong disadvantage</i></p>	<p>Alternative A generally conforms to the recommended roadway network connectivity of the Hassayampa Framework Study by providing a parkway centered on the existing Yuma Road alignment that curves at Bruner Road to connect to I-10 via proposed frontage roads. Alternative A will likely adequately serve long-term traffic needs, although there may be capacity-related issues resulting from bringing frontage roads into the I-10/Sun Valley Parkway/Palo Verde Road interchange.</p> <p><i>Net Effect: Advantage</i></p>	<p>Alternative B generally conforms to the recommended roadway network connectivity of the Hassayampa Framework Study by providing a parkway along the general Yuma Road alignment that connects directly to Palo Verde Road, which then connects to I-10. Alternative B adequately serves long-term traffic needs.</p> <p><i>Net Effect: Strong advantage</i></p>	<p>Alternative C generally conforms to the recommended roadway network connectivity of the Hassayampa Framework Study by providing a parkway centered on the existing Yuma Road alignment that curves near the airport and Hopeville and then connects to Palo Verde Road, which then connects to I-10. Alternative C will likely adequately serve long-term traffic needs, although it may not be feasible to provide median breaks through the curved portions of Alternative C, which could result in capacity-related issues at the median breaks on either side of the curved portions.</p> <p><i>Net Effect: Advantage</i></p>
Building/Property Impacts	<p>There are existing residential buildings dispersed throughout this portion of the study area. The No-Build Alternative does not change the current status and therefore will not have positive or negative impacts on adjacent buildings or properties.</p> <p><i>Net Effect: Neutral</i></p>	<p>There are generally 90' of existing public R/W along the straight portion and 0' of existing public R/W along the curved portion of the Alternative A alignment. An additional 110' of new public R/W will generally be needed for the straight portion and 200' of new public R/W for the curved portion of the parkway.</p> <p>Alternative A will likely not require the relocation/purchase of any existing residential buildings. Alternative A will likely require R/W acquisition from 15 privately-owned parcels but no full parcel acquisitions.</p> <p><i>Net Effect: Disadvantage</i></p>	<p>There are generally 90' of existing public R/W along the Alternative B alignment. An additional 110' of new public right-of-way will generally be needed for the parkway.</p> <p>Alternative B will likely not require the relocation/purchase of any existing residential buildings. Alternative B will likely require R/W acquisition from 15 privately-owned parcels but no full parcel acquisitions. Alternative B will also likely require R/W acquisitions from 1 State Trust Land parcel.</p> <p><i>Net Effect: Disadvantage</i></p>	<p>There are generally 90' of existing public R/W along the straight portion and 0' of existing public R/W along the curved portion of the Alternative C alignment. An additional 110' of new public R/W will generally be needed for the straight portion and 200' of new public R/W for the curved portion of the parkway.</p> <p>Alternative C will likely not require the relocation/purchase of any existing residential buildings. Alternative C will likely require R/W acquisition from 14 privately-owned parcels but no full parcel acquisitions. Alternative C will also likely require R/W acquisition from 1 State Trust Land parcel that will be bisected by the parkway</p> <p><i>Net Effect: Disadvantage</i></p>
Future Development Compatibility	<p>The No-Build Alternative provides an existing two-lane paved arterial centered on the Yuma Road alignment between Johnson Road and Palo Verde Road that typically has 90' of right-of-way (R/W). There are two approved planned developments (Desert Creek and Cipriani) just west of this portion of the study area that had assumed their developments would ultimately be connected to I-10 via a parkway or other high-capacity roadway that could accommodate the projected traffic demands that the planned developments will generate. The planned Buckeye Municipal Airport runway extension to the south impacts this portion of the study area because it is a change from its initial plan for a runway extension to the north, which would have required the realignment or elimination of Yuma Road near the airport. The runway extension to the south will not require the realignment or elimination of Yuma Road near the airport.</p> <p>While a roadway does exist along the Yuma Road alignment where planned developments had assumed a roadway would be provided, the No-Build Alternative is not compatible with the approved planned developments, which had assumed a 200' parkway on Yuma Road instead of a 90' arterial to accommodate the projected traffic demands.</p> <p><i>Net Effect: Disadvantage</i></p>	<p>Alternative A provides a 200' parkway centered on the existing Yuma Road alignment from Johnson Road that curves north to cross over I-10 at Bruner Road with no interchange. Proposed frontage roads provide access to I-10 at Johnson Road and Sun Valley Parkway/Palo Verde Road. This parkway alignment reflects the general alignment recommended in the Hassayampa Framework Study, which was conducted when the airport runway extension was still planned to be to the north. The curved segment of Alternative A bisects some of the parcels near I-10, which could adversely impact the development potential of these properties.</p> <p>Alternative A provides a connection to I-10 via proposed frontage roads at Bruner Road, but it is not the direct connection to I-10 via Sun Valley Parkway/Palo Verde Road that the planned developments prefer now that the airport runway extension will be to the south instead of to the north.</p> <p><i>Net Effect: Disadvantage</i></p>	<p>Alternative B provides a 200' parkway centered on the existing Yuma Road alignment between Johnson Road and Palo Verde Road that shifts slightly to the north in the vicinity of the Stotz Dairy and Buckeye Municipal Airport.</p> <p>Alternative B is compatible with the approved planned developments just west of this portion of the study area because it provides a connection to I-10 via Sun Valley Parkway/Palo Verde Road. Alternative B is compatible with the airport's planned runway expansion to the south and the development of adjacent land to the north of the airport.</p> <p><i>Net Effect: Advantage</i></p>	<p>Alternative C provides a 200' parkway centered on the existing Yuma Road alignment between Johnson Road and Palo Verde Road that curves north of the Buckeye Municipal Airport and then curves south to connect to Palo Verde Road south of Hopeville. Due to space constraints, these curves will likely require superelevation of approximately 4%, which can make it challenging to provide access points to adjacent properties, thereby adversely impacting the potential for future development through the curves.</p> <p>Alternative C is compatible with the approved planned developments just west of this portion of the study area because it provides a connection to I-10 via Sun Valley Parkway/Palo Verde Road. The curved segments of Alternative C are likely not compatible with future development of adjacent land.</p> <p><i>Net Effect: Neutral</i></p>

Table 3 - Yuma Parkway Alternatives Evaluation Matrix: Johnson Road to Palo Verde Road (continued)

Evaluation Criteria	No-Build Alternative	Alternative A	Alternative B	Alternative C
Utility Impacts	The existing major utilities identified as being located within this portion of the study area are water wells. The No-Build Alternative does not change the current status and therefore will not have positive or negative impacts on identified utilities. <i>Net Effect: Neutral</i>	Alternative A will likely require the relocation of 1 water well. <i>Net Effect: Disadvantage</i>	Alternative B will likely not require the relocation of any water wells. <i>Net Effect: Neutral</i>	Alternative C will likely not require the relocation of any water wells. <i>Net Effect: Neutral</i>
Wildlife Impacts	There are no designated wildlife linkage zones in this portion of the study area. No roadways in the study area currently provide wildlife crossing treatments, but wildlife-vehicle conflicts have not been identified as a common occurrence within this portion of the study area. The No-Build Alternative does not change the current status and therefore will not have positive or negative impacts on wildlife. <i>Net Effect: Neutral</i>	The straight portion of Alternative A will result in a wider roadway footprint than currently exists on Yuma Road, increasing the crossing distance for wildlife. The curved portion of Alternative A will result in a new roadway that creates an additional barrier to wildlife crossings. The increase in crossing distance and additional barrier could be mitigated to some degree by incorporating wildlife crossing treatments into the new roadway design. <i>Net Effect: Disadvantage</i>	Alternative B will result in a wider roadway footprint than currently exists on Yuma Road, increasing the crossing distance for wildlife. This increase in crossing distance could be mitigated to some degree by incorporating wildlife crossing treatments into the new roadway design. <i>Net Effect: Disadvantage</i>	The straight portion of Alternative C will result in a wider roadway footprint than currently exists on Yuma Road, increasing the crossing distance for wildlife. The curved portions of Alternative C will result in a new roadway that creates an additional barrier to wildlife crossings. The increase in crossing distance and additional barrier could be mitigated to some degree by incorporating wildlife crossing treatments into the new roadway design. <i>Net Effect: Disadvantage</i>
Cultural/Archaeological Impacts	There are no identified cultural or archaeological resources within this portion of the study area. The No-Build Alternative does not change the current status and therefore will not have positive or negative impacts on identified cultural or archaeological resources. It should be noted that approximately 50 percent of the study area has not been surveyed for cultural or archaeological resources. <i>Net Effect: Neutral</i>	Alternative A will likely impact no known cultural or archaeological resources. Because approximately 50 percent of the study area has not been surveyed for cultural or archaeological resources, it is possible that future surveys conducted as Alternative A is designed could potentially identify additional cultural or archaeological resources that could be impacted by Alternative A. <i>Net Effect: Neutral</i>	Alternative B will likely impact no known cultural or archaeological resources. Because approximately 50 percent of the study area has not been surveyed for cultural or archaeological resources, it is possible that future surveys conducted as Alternative B is designed could potentially identify additional cultural or archaeological resources that could be impacted by Alternative B. <i>Net Effect: Neutral</i>	Alternative C will likely impact no known cultural or archaeological resources. Because approximately 50 percent of the study area has not been surveyed for cultural or archaeological resources, it is possible that future surveys conducted as Alternative C is designed could potentially identify additional cultural or archaeological resources that could be impacted by Alternative C. <i>Net Effect: Neutral</i>
Drainage Impacts	There are no identified washes or floodplains in this portion of the study area due to the upstream presence of the flood retarding structure just north of I-10. No drainage issues on the existing paved roadway have been identified. The No-Build Alternative does not change the current status and therefore will not have positive or negative impacts on drainage. <i>Net Effect: Neutral</i>	Alternative A provides a continuous all-weather roadway that will be designed to avoid creating drainage issues. <i>Net Effect: Neutral</i>	Alternative B provides a continuous all-weather roadway that will be designed to avoid creating drainage issues. <i>Net Effect: Neutral</i>	Alternative C provides a continuous all-weather roadway that will be designed to avoid creating drainage issues. The superelevation required on the curves near the airport and Hopeville will require more complex drainage design and drainage control measures than the other alternatives. <i>Net Effect: Disadvantage</i>
Cost	The No-Build Alternative will not have right-of-way or construction costs but it will have continued on-going maintenance costs related to cross-drainage pavement repairs. <i>Net Effect: Neutral</i>	Because there is little existing public R/W along the Alternative A alignment and the parkway length is short, Alternative A will likely have right-of-way, construction, and maintenance costs that are less than the Alternative C costs and similar to the Alternative B costs. <i>Net Effect: Disadvantage</i>	Because there is much existing public R/W along the Alternative A alignment and the parkway alignment is straight, Alternative B will likely have right-of-way, construction, and maintenance costs that are less than the Alternative C costs and similar to the Alternative A costs. <i>Net Effect: Disadvantage</i>	Because there is little existing public R/W along the Alternative C alignment and the parkway alignment is curvilinear, Alternative C will likely have right-of-way, construction, and maintenance costs that are more than the costs of Alternative A and Alternative B. <i>Net Effect: Strong disadvantage</i>
Public Acceptability	Public input was mixed regarding the No-Build Alternative. Some residents and property owners have expressed concerns about property impacts associated with implementing the parkway while others have expressed support for the parkway because it will provide east-west roadway network continuity and provide additional roadway capacity. <i>Net Effect: Neutral</i>	Public input from those in favor of one of the "build" alternatives was generally less supportive of Alternative A than Alternative B. <i>Net Effect: Disadvantage</i>	Public input from those in favor of one of the "build" alternatives was generally more supportive of Alternative B than Alternative A or Alternative C. <i>Net Effect: Neutral</i>	Public input from those in favor of one of the "build" alternatives was generally less supportive of Alternative C than Alternative B. <i>Net Effect: Disadvantage</i>

Table 4 - Yuma Parkway Candidate Alternatives Evaluation Matrix Summary

Evaluation Criteria	Wintersburg Road to Hassayampa River				Hassayampa River to Johnson Road		Johnson Road to Palo Verde Road			
	No-Build	Alt. A	Alt. B	Alt. C	No-Build	Alt. A	No-Build	Alt. A	Alt. B	Alt. C
System Continuity and Capacity	●	●	●	●	●	●	●	●	●	●
Building/Property Impacts	○	●	●	●	○	●	○	●	●	●
Future Development Compatibility	●	●	●	●	●	●	●	●	●	○
Utility Impacts	○	●	●	●	○	●	○	●	○	○
Wildlife Impacts	○	●	●	●	○	●	○	●	●	●
Cultural/Archaeological Impacts	○	●	●	●	○	●	○	○	○	○
Drainage Impacts	●	●	●	●	●	●	○	○	○	●
Cost	○	●	●	●	○	●	○	●	●	●
Public Acceptability	○	●	○	●	○	○	○	●	○	●

LEGEND: Strong advantage ● Advantage ● Neutral ○ Disadvantage ● Strong disadvantage ●

3.3 Preferred Alternatives

The evaluation results were presented to TAC members and stakeholders at the November 29, 2011 TAC/stakeholder meeting for review and discussion. The evaluation results also were presented for review and input at the third open house on December 6, 2011.

Based on TAC, stakeholder, and general public review and feedback on the evaluation results, the following are the preferred alternatives for the three Yuma Parkway segments:

- Alternative B between Wintersburg Road and the Hassayampa River;
- Alternative A between the Hassayampa River and Johnson Road; and
- Alternative B between Johnson Road and Palo Verde Road.

The ratings for the preferred alternatives are highlighted in **Table 4**.

Factors that support the selection of the preferred alternatives for the three Yuma Parkway study segments include the following:

Wintersburg Road to the Hassayampa River

- The No-Build Alternative will not provide a continuous, all-weather roadway and will not adequately serve projected traffic volumes associated with anticipated build-out land uses. Even though it may be many years before land uses and traffic volumes justify construction of a parkway facility, the transition to higher-intensity land uses is already occurring. Steps need to be taken now to preserve the long-term viability of constructing a parkway in the future by delineating the footprint and preferred location for Yuma Parkway;
- Alternative B is generally consistent with the Hassayampa Framework Study in that it provides a direct east-west connection between Wintersburg Road and the Hassayampa River, including a bridge across the Hassayampa River, that adequately serves projected traffic volumes associated with anticipated build-out land uses;
- Alternative B generally follows the Buckeye Road section line, making maximum use of existing roadway right-of-way;
- Alternative B will result in equitable right-of-way acquisition by generally being centered on the Buckeye Road section line;
- Alternative B is compatible with the approved Hidden Waters Ranch Development Master Plan, which has a stipulation requiring right-of-way preservation for a 200-foot-wide parkway facility along the Buckeye Road section line;
- Alternative B provides improved drainage facilities that better control cross-drainage and provide opportunities to incorporate wildlife crossing treatments; and
- Alternative B received the most stakeholder and public support from those in favor of one of the “build” alternatives.

Hassayampa River to Johnson Road

- The No-Build Alternative will not provide a continuous, all-weather roadway and will not adequately serve projected traffic volumes associated with anticipated build-out land uses. Even though it may be many years before land uses and traffic volumes justify construction of a parkway facility, the transition to higher-intensity land uses is already

occurring. Steps need to be taken now to preserve the long-term viability of constructing a parkway in the future by delineating the footprint and preferred location for Yuma Parkway;

- Alternative A is generally consistent with the Hassayampa Framework Study in that it provides a direct east-west connection between the Hassayampa River and Johnson Road that adequately serves projected traffic volumes associated with anticipated build-out land uses;
- Alternative A generally follows the Yuma Road section line, making maximum use of existing roadway right-of-way;
- Alternative A will result in equitable right-of-way acquisition by generally being centered on the Yuma Road section line;
- Alternative A is compatible with planned developments. The Desert Creek and Cipriani Community Master Plans both have stipulations requiring right-of-way preservation for a 200-foot-wide parkway facility along the Yuma Road section line;
- Alternative A provides improved drainage facilities that better control cross-drainage and provide opportunities to incorporate wildlife crossing treatments; and
- Alternative A received the most stakeholder and public support from those in favor of a “build” alternative.

Johnson Road to Palo Verde Road

- The No-Build Alternative will not provide a continuous, all-weather roadway and will not adequately serve projected traffic volumes associated with anticipated build-out land uses. Even though it may be many years before land uses and traffic volumes justify construction of a parkway facility, the transition to higher-intensity land uses is already occurring. Steps need to be taken now to preserve the long-term viability of constructing a parkway in the future by delineating the footprint and preferred location for Yuma Parkway;
- Alternative B is generally consistent with the Hassayampa Framework Study in that it provides a direct, continuous east-west connection between Johnson Road and Palo Verde Road that adequately serves projected traffic volumes associated with anticipated build-out land uses;
- Alternative B generally follows the Yuma Road section line, making maximum use of existing roadway right-of-way while minimizing adverse right-of-way impacts on Stotz Dairy and the Buckeye Municipal Airport;
- Alternative B is compatible with the planned developments of Desert Creek and Cipriani and with the Buckeye Municipal Airport’s planned runway expansion to the south and the development of adjacent land to the north of the airport; and
- Alternative B provides improved drainage facilities that better control cross-drainage and provide opportunities to incorporate wildlife crossing treatments; and
- Alternative B received the most stakeholder and public support from those in favor of one of the “build” alternatives.

For the reasons enumerated above, the preferred alternatives are Alternative B for Yuma Parkway between Wintersburg Road and the Hassayampa River; Alternative A for Yuma Parkway between the Hassayampa River and Johnson Road; and Alternative B for Yuma Parkway between Johnson Road and Palo Verde Road.

The overall preferred alternative for Yuma Parkway is shown in **Figure 5**. The preferred alternative will be depicted at a scale of 1 inch = 200 feet on preferred alignment drawings as part of *TM 5 – Detailed Preferred Alignment*. These detailed drawings will be used for long-term right-of-way preservation as land within the study area is developed and/or redeveloped.

3.4 Compliance with Title VI of the Civil Rights Act of 1964

As reported in *TM 2 – Environmental Overview*, the Yuma Parkway study area does include minority and low income population groups that exceed the thresholds for potential disproportionate adverse impacts as covered in Title VI of the Civil Rights Act of 1964. Because this is a feasibility study and the detailed roadway alignment, right-of-way requirements, and implementation schedules have not been finalized, exact impacts cannot be determined at this time. As the parkway moves towards final design and impacts to specific properties become more defined, further consideration for Title VI populations will likely be warranted as part of future environmental clearance documents.

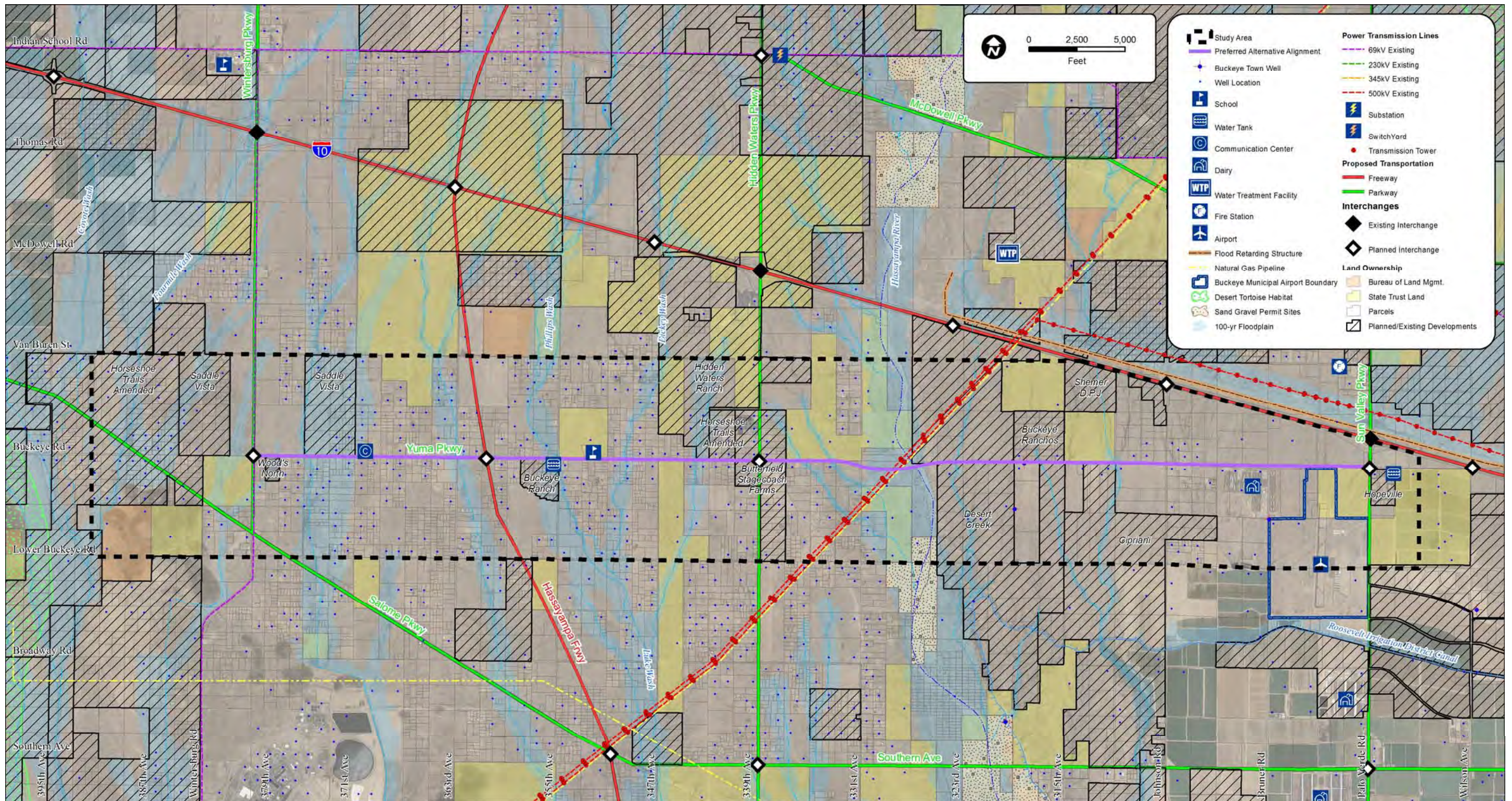


Figure 5 - Preferred Alternative