



APPENDIX 5

TECHNICAL MEMORANDUM NO. 5 – DETAILED PREFERRED ALIGNMENT



Hidden Waters Parkway Corridor Feasibility Study – Watermelon Road to Interstate 10

Contract No.: 2008-046
Work Order No.: TT005

FINAL Technical Memorandum No. 5 **Detailed Preferred Alignment**

Prepared by:



Kimley-Horn
and Associates, Inc.

May 2010
091337118

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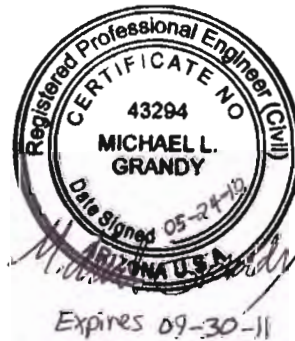




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1. INTRODUCTION

Technical Memorandum No. 5 (TM 5), entitled *Detailed Preferred Alignment*, provides more detailed information on the proposed location and characteristics of the preferred alignment for the Hidden Waters Parkway between Watermelon Road and Interstate 10. Specifically, TM 5 provides a summary of the study background and study area; a description of the preferred alternatives; standard cross-sections and design considerations for the preferred alignment of the parkway facility; and plan view drawings on aerial photographs showing the preferred alignment centerline and right-of-way limits at a scale of 1" = 200'. The preferred alignment centerline and right-of-way limits are subject to more detailed design work that may necessitate some adjustments as roadway profiles, drainage requirements, and land development plans are further defined. Additional detailed information is included in the following companion documents: *Existing and Future Corridor Features* (TM 1), *Environmental Overview* (TM 2), *Conceptual Drainage Report* (TM 3), and *Development and Evaluation of Candidate Alternative Alignments* (TM 4).

1.1 Study Background

In July 2008, the Maricopa Association of Governments (MAG) completed the *Interstate 10/Hassayampa Valley Transportation Framework Study* (known as the *Hassayampa Framework Study*), which 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 included the "Arizona Parkway" as a new facility type to supplement more traditional roadway classifications in meeting projected travel demand within the study area.

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 signal control. Left-turn movements are made indirectly using directional left-turn crossovers immediately downstream of the cross-street intersection.

A north-south Arizona Parkway known as the Hidden Waters Parkway was demonstrated to be needed in the *Hassayampa Framework Study* that generally is offset about two miles to the west of the Hassayampa River. The northern portion of the Hidden Waters Parkway is proposed to cross Interstate 10 at 339th Avenue (where a traffic interchange already exists) and extend southward to Old U.S. Highway 80 (Old US 80).

Similar to the *Hassayampa Framework Study*, the *Interstate 8 and Interstate 10 Hidden Valley Transportation Framework Study* (known as the *Hidden Valley Framework Study*), completed by MAG in October 2009, indicates the need for a network of Arizona Parkways to meet the future buildout travel demand for the area southwest of Interstate 10 (I-10) and north of Interstate 8 (I-8). In the *Hidden Valley Framework Study*, the need was demonstrated for the Hidden Waters Parkway identified previously in the *Hassayampa Framework Study* to extend further south, generally following the Old US 80 alignment, to Watermelon Road in Gila Bend.

In May 2009, the Maricopa County Department of Transportation (MCDOT) retained Kimley-Horn and Associates, Inc. (KHA) to conduct a corridor feasibility study for the southern portion of the Hidden Waters Parkway between Watermelon Road and I-10.



1.2 Project Study Area

The project study area for the proposed Hidden Waters Parkway is approximately 39 miles in length between Watermelon Road and I-10 and is roughly two miles wide, centered on the north-south segment of Old US 80. North of the Cactus Rose Road/Old US 80 intersection, where Old US 80 diverges to the east, the study area broadens to a four-mile wide corridor, centered on the 347th Avenue section-line alignment, extending north to the Salome Highway. North of the Salome Highway, the study area width narrows back to two miles, following the 339th Avenue alignment north to I-10. The study area covers approximately 93.9 square miles. The project study area is shown in **Figure 1**.

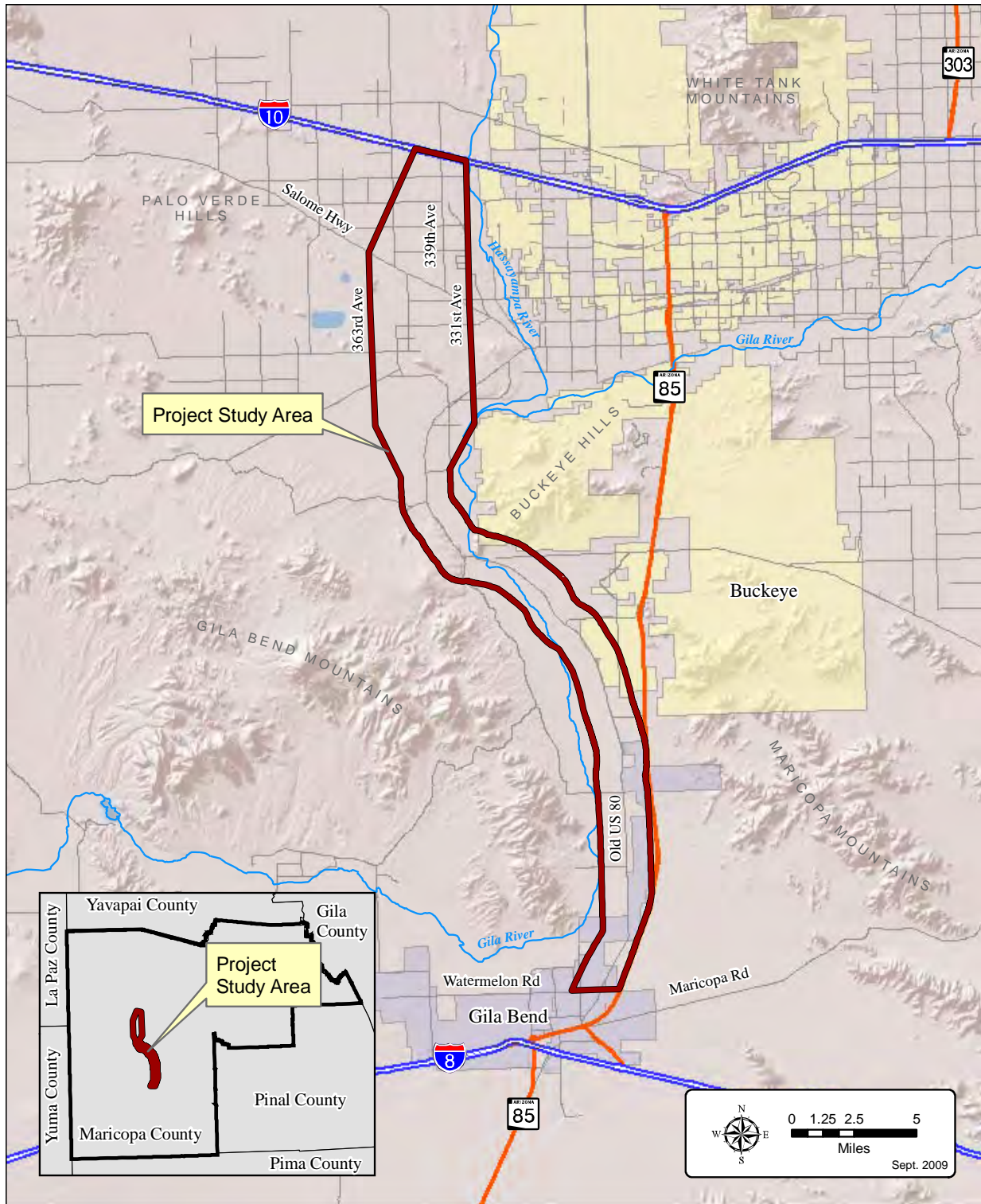


Figure 1 – Project Study Area

2. DEVELOPMENT OF PREFERRED ALTERNATIVES

2.1 Process for Selecting the Preferred Alternatives

Selection of the preferred alternatives was accomplished through a two-step process. The first step was to identify a series of conceptual alternatives that were subjected to a “fatal flaw” analysis. 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 perform a more in-depth evaluation of the candidate alternatives and identify preferred alternatives. This process is discussed in greater detail in *Technical Memorandum No. 4 – Development and Evaluation of Candidate Alternative Alignments*. The conceptual alternatives, candidate alternatives, evaluation criteria, evaluation results, and preferred alternatives 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.

For alternatives development and evaluation purposes, the study area was divided into two separate segments: one south of the Old US 80 Bridge over the Gila River and one north of the Old US 80 Bridge over the Gila River.

For the southern segment, endpoints common to all of the alternatives were designated as the Old US 80/Watermelon Road intersection for the southern terminus and as the eastern edge of the proposed new Gila River Bridge location recommended in the *MCDOT Old U.S. Highway 80 Bridge (Gillespie Dam Bridge) Final Design Concept Report* for the northern terminus.

For the northern segment, the common endpoints were designated as the eastern edge of the proposed new Gila River Bridge location for the southern terminus and as the existing I-10/339th Avenue interchange for the northern terminus.

After performing the fatal flaw assessment of the conceptual alternatives and then narrowing the conceptual alternatives to three candidate alternatives for the southern segment and four candidate alternatives for the northern segment, the candidate alternatives, along with a “no-build” alternative, were evaluated against a number of criteria. The evaluation criteria included the following:

- Future development compatibility;
- System continuity and capacity;
- Irrigation impacts;
- Drainage impacts;
- Building/property impacts;
- Wildlife impacts;
- Cultural/archaeological impacts;
- Utility impacts;
- Public acceptability; and
- Cost.

Most of the evaluation criteria do not lend themselves to numerical quantification, so the candidate alternatives evaluation was performed on a “qualitative” basis. The evaluation results



were discussed with the TAC members and stakeholders and were presented for public input at the third open house. There was general consensus that the evaluation results are reasonable and valid. After considering the evaluation results and the input received on the alternatives, preferred alternatives were selected.

2.2 Description of the Preferred Alternatives

For the southern segment, Alternative C was selected as the preferred alternative. Alternative C generally follows the existing Old US 80 alignment for its entirety. For the northern segment, Alternative D was selected as the preferred alternative. Alternative D generally follows the 351st Avenue alignment in the bottom portion of the northern segment and then transitions to the existing 339th Avenue alignment in the top portion of the northern segment.

The preferred alternatives for the southern and northern segments of the Hidden Waters Parkway are respectively shown in **Figure 2a** and **Figure 2b**. Also included in these figures are the proposed locations where other major roadways (i.e., freeways, parkways, and arterials) are expected to intersect the Hidden Waters Parkway, per the *Hassayampa Framework Study* and the *Hidden Valley Framework Study* and input from the TAC. These intersection/interchange locations are preliminary and subject to change.

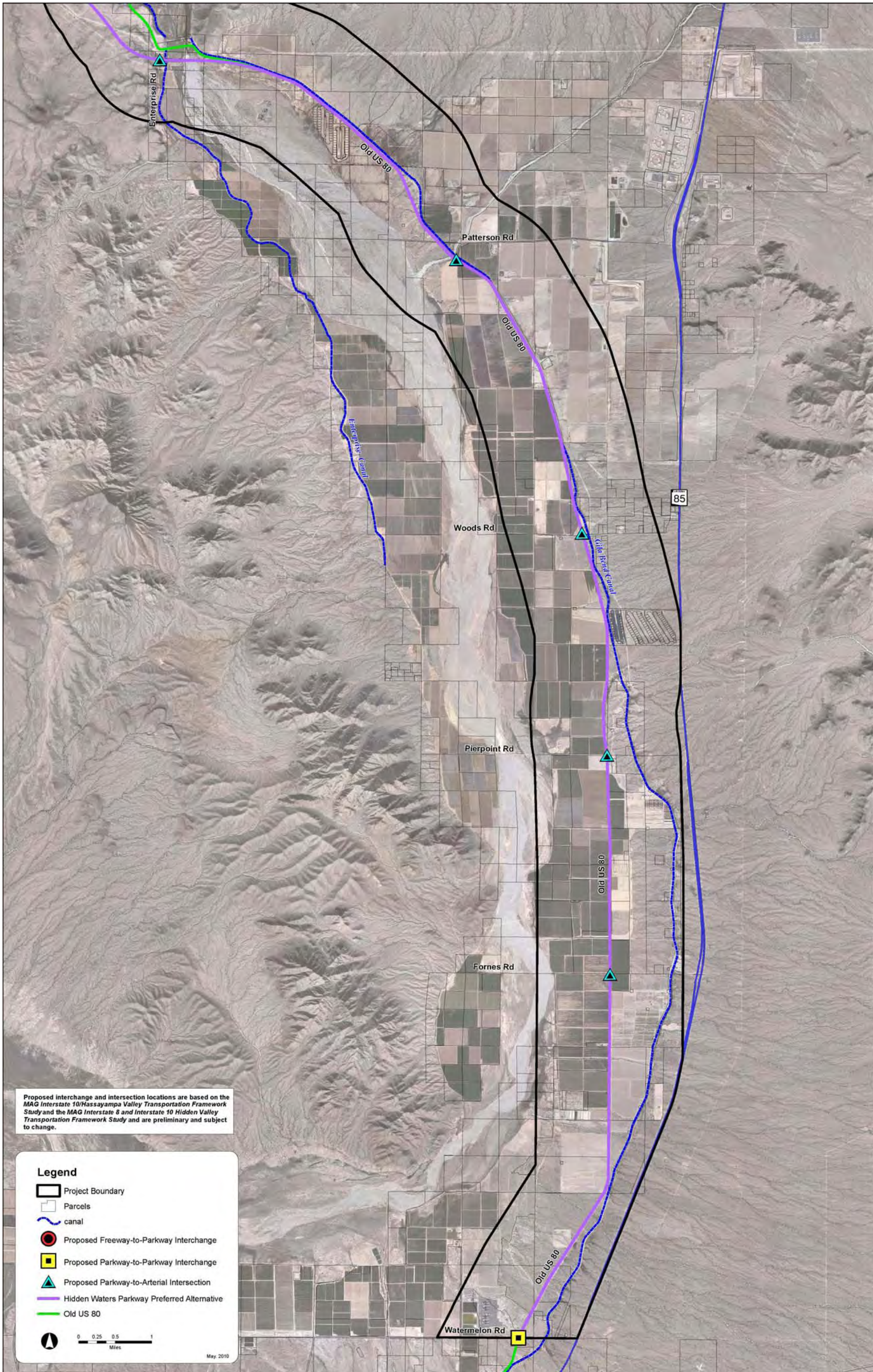


Figure 2a – Preferred Alternative (South)

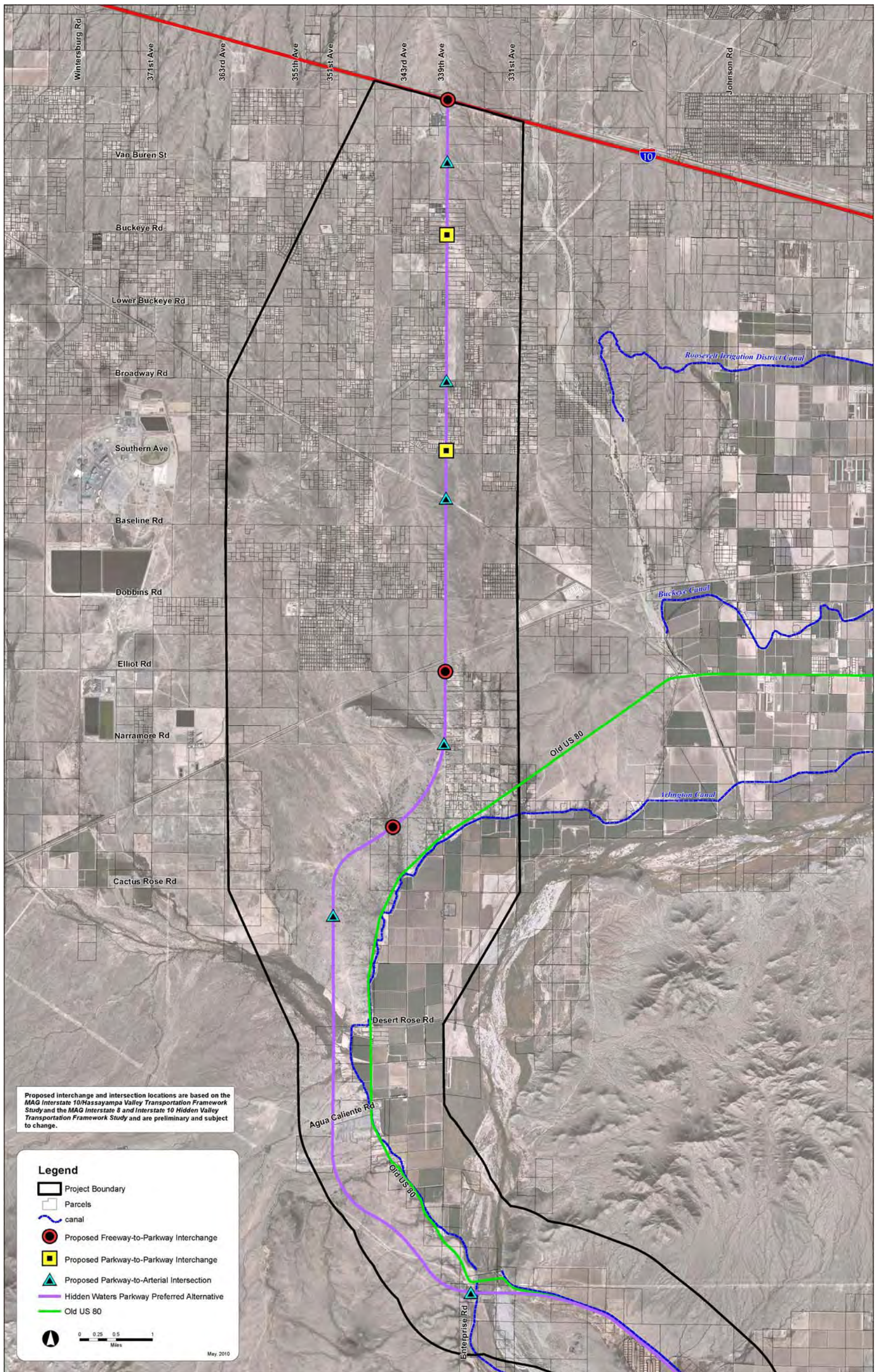


Figure 2b – Preferred Alternative (North)

3. PREFERRED ALIGNMENT DESIGN CONSIDERATIONS

Once the preferred alternatives were selected, the preferred alignment was defined in greater detail in light of the following design considerations.

3.1 Parkway Design Guidelines and Typical Cross-Sections

Guidelines to be followed for implementation of a parkway such as Hidden Waters Parkway are documented in the MCDOT publications *Enhanced Parkway Study (August 2007)*, *Design Guideline Recommendations for the Arizona Parkway (August 2008)* and *Arizona Parkway Intersection/Interchange Operational Analysis and Design Concepts Study (August 2009)*.

Design guidelines for the Arizona Parkway are intended to provide a higher level of service than an arterial street but less than a freeway facility. Basic cross-section elements and design guidelines are summarized as follows:

- A 200-foot minimum right-of-way is recommended. Additional right-of-way and/or easements may be needed for turn lanes, bus bays, drainage structures, drainage facilities, side slopes, utilities, and landscaping;
- Twelve-foot wide lanes are recommended, with four-foot wide inside paved shoulders and six-foot wide outside paved shoulders;
- An additional eight-foot minimum width public utility easement is recommended on each side of the parkway;
- Median width varies based on the number of lanes;
- Minimum design speeds for rolling terrain are 60 miles per hour (mph) in rural areas and 50 mph in urban areas; and
- WB-50 is the recommended design vehicle.

Parkway typical cross-sections from the *Design Guideline Recommendations for the Arizona Parkway* are shown in **Appendix TM5-1**. The basic Hidden Waters Parkway design configuration will be a combination of four-, six-, and eight-lane parkways, depending on projected traffic volumes.

3.2 Crossing Features

There are a number of locations where major roadways, utilities, drainage washes, and other features will cross the Hidden Waters Parkway that will require more detailed analyses during design of the parkway. The following design considerations relate to these crossing features:

- Minimum right-of-way width for at-grade parkway-to-parkway intersections of up to eight lanes is 225 feet on each approach, assuming 60-foot medians and dual right-turn lanes on both parkways;
- Additional right-of-way will need to be preserved at parkway-to-parkway intersections requiring grade separations (approximately fifteen acres of additional right-of-way for a typical grade-separated interchange and approximately 30 acres of additional right-of-way for a grade-separated interchange with fly-over ramps per the *Arizona Parkway Intersection/Interchange Operational Analysis and Design Concepts Study*, the design concepts of which are provided in **Appendix TM5-1**);

- There are three anticipated parkway-to-parkway intersections within the project study area:
 - Hidden Waters Parkway/Watermelon Road Parkway (grade-separated interchange with possible fly-over ramps);
 - Hidden Waters Parkway/Southern Avenue Parkway (grade-separated interchange); and
 - Hidden Waters Parkway/Yuma Parkway (at-grade intersection).
- The Arizona Department of Transportation (ADOT) recently initiated a study that will result in guidelines and design templates for parkway-to-freeway interchanges. The findings and recommendations of this ADOT study will ultimately need to be incorporated into the three anticipated parkway-to-freeway interchanges within the project study area:
 - Hidden Waters Parkway/ Hassayampa Freeway (planned freeway);
 - Hidden Waters Parkway/State Route 801 (planned freeway); and
 - Hidden Waters Parkway/ I-10 (existing freeway).
- A railroad grade separation will be required where the Hidden Waters Parkway crosses the Union Pacific Railroad (UPRR) tracks;
- There are numerous washes throughout the study area that will require culverts, pipes, or bridges, which may result in the need for additional right-of-way; and
- The Arizona Game and Fish Department (AGFD) has recommended that all grade separation structures along the parkway – particularly those located within wildlife linkage zones – be designed to enhance wildlife movement through the area where feasible.

3.3 Access Management Guidelines

To preserve the operating efficiency of the parkway facility, a higher level of access management than what is applied to arterial streets is recommended. Because MCDOT will not have operational control over all parkway facilities, it will be up to those agencies with jurisdiction over the roadway to apply and enforce access management policies. The following are recommended as minimum access management guidelines (per the *Design Guideline Recommendations for the Arizona Parkway*) that may be supplemented by the responsible agency with jurisdiction over the roadway:

- Intersections (full median breaks) will preferably be restricted to one-mile spacing, with a minimum spacing of one-half mile, and are only recommended where intersecting with arterial or major collector streets;
- Left turns in any direction are prohibited at all intersections;
- Left turns from a side-street or driveway onto the parkway are prohibited;
- Left turns from the parkway to a cross-street or driveway are discouraged due to conflicts between u-turns and right turns;
- U-turn directional crossovers are recommended to be restricted to a maximum of eight per mile; and
- Recommended minimum driveway spacing is 165 feet for low-volume segments and 330 feet for high-volume segments. The typical driveway will be limited to right-in/right-out maneuvers.

3.4 Gila River Crossing

MCDOT has determined that the existing Old US 80 Bridge across the Gila River needs to be replaced with a new all-weather bridge crossing the Gila River approximately 1,000 feet downstream from the existing bridge. Relevant studies that have been completed by MCDOT include the *Old U.S. Highway 80 Bridge (Gillespie Dam Bridge) Final Design Concept Report (September 2007)*, and the *Old U.S. Highway 80 Bridge (Gillespie Dam Bridge) Final Value Engineering Report (May 2008)*. The Hidden Waters Parkway Corridor Feasibility Study has been conducted under the assumption that the Hidden Waters Parkway will cross the Gila River along the same alignment as the future recommended all-weather bridge crossing alternative identified in these two reports. Relevant findings and recommendations from these two reports include:

- The future recommended alternative (known as Alternative #4), includes a new bridge approximately 1,000 feet downstream from the existing bridge;
- The proposed bridge location is south of the existing gas lines and directly north of the existing 500kV electrical lines;
- The proposed bridge would be 14-span and 1,800 feet long and would utilize AASHTO Type 6 Prestressed Concrete I-girders with a cast-in-place concrete deck slab supported on drilled shaft foundations;
- The proposed right-of-way for the new bridge is a minimum of 130 feet, with even greater right-of-way needed at the curved approaches to the new bridge;
- The proposed six-lane bridge is assumed to be 87 feet wide, with a design speed of 55 mph;
- The value engineering recommendation proposes to initially construct a new interim low-flow crossing of the Gila River along the same alignment as the proposed six-lane bridge (Alternative #4) that would ultimately be replaced by the proposed six-lane bridge;
- Acquisition of new right-of-way, 404 permitting, and environmental clearance will be required to implement the low-flow crossing; and
- While the low-flow crossing does not meet ultimate traffic demands, it will serve as an interim facility that can be replaced with the recommended six-lane bridge when warranted and when funding is available.

The AGFD recommendation that all grade separation structures along the parkway be designed to enhance wildlife movement through the area should be addressed as part of future design efforts for the new bridge over the Gila River.

4. PREFERRED ALIGNMENT IMPLEMENTATION

4.1 Detailed Preferred Alignment Drawings

The design considerations described previously were applied in developing the preferred alignment for the Hidden Waters Parkway. Detailed preferred alignment drawings were then created that show the parkway center line and right-of-way limits at a scale of 1 inch = 200 feet. The detailed preferred alignment drawings are provided in **Appendix TM5-2**. The preferred alignment centerline and right-of-way limits are subject to more detailed design work that may necessitate some adjustments as roadway profiles, drainage requirements, and land development plans are further defined.

In developing the detailed preferred alignment drawings, existing roadway centerlines, section lines, right-of-way lines, and property lines were reviewed to determine the feasibility of following some or all of these lines to the greatest extent possible. In some cases, existing roadway centerlines, section lines, right-of-way lines, and property lines do not provide optimum roadway geometrics for the Hidden Waters Parkway because they contain numerous angle points and discontinuities or are not parallel to each other. To preserve the high-capacity functionality of the parkway, it was determined that the preferred alignment should remain as straight as possible.

At major roadway and drainage wash crossings along the parkway, additional right-of-way will likely be required that will expand the right-of-way limits beyond the basic 200-foot parkway footprint. Areas that may potentially require additional right-of-way are noted in the detailed preferred alignment drawings as being subject to further study as land development and roadway improvement plans are further defined.

4.2 Project Development and Phasing Considerations

It is important to recognize that the *Hidden Waters Corridor Feasibility Study* is a long-range transportation planning study and the earliest phase of project development. This study is intended to identify the “feasibility” of constructing a parkway facility at some future date to accommodate traffic demands that will be associated with future land development within and in close proximity to the Hidden Waters study area.

No public funding is currently allocated for design, right-of-way acquisition, or construction of any elements of the Hidden Waters Parkway. The recommended center lines and right-of-way limits will be used to guide future planning efforts and ensure that subsequent land development proposals and transportation system plans are compatible with future construction of the Hidden Waters Parkway. Some refinement and negotiation of the parkway centerline and right-of-way requirements may occur in later phases of the project as properties are developed and as transportation improvements are implemented.

The following are key issues captured during this study’s stakeholder and public involvement process that should be taken into consideration as the recommendations of this study are carried forward into design and construction:

- *Developer Participation* – It is anticipated that land developers will participate in dedicating right-of-way and participating in project design and construction costs;

- *Funding Strategies* – Long-term funding strategies need to be developed to position the Hidden Waters Parkway corridor to take advantage of available funding. When and how much funding is needed will be dependent on when and where development occurs, how much developer participation happens, and what the detailed designs call for;
- *Access Management Strategies* – Access management strategies that are consistent with the Arizona Parkway design guidelines should be implemented to ensure the Hidden Waters Parkway provides efficient traffic flow, safe operations, and reasonable local land access;
- *Environmental Impacts* – Specific impacts on environmental features, such as natural resources, wildlife habitats, cultural and archaeological resources, noise mitigation, and air quality will require further evaluation during future project development. Wildlife crossing facilities should be incorporated into the final project design where feasible;
- *New Right-of-Way Requirements* – Final roadway configurations will need to be developed through a more detailed design process to determine exactly how much land will need to be acquired to accommodate the future parkway;
- *Landscaping Plans* – Final project design should specify the type of landscaping to be used;
- *Drainage Structures* – Bridges and culverts along the new roadway should be designed during subsequent design efforts that ensure that the roadway is designed to provide all-weather crossings during major storm events. Opportunities to create drainage structures that accommodate wildlife movements across the parkway should also be designed;
- *Bicycle, Pedestrian, and Transit Access* – Future projects should be designed to accommodate alternative modes of travel and provide access to trails and neighborhoods in the area;
- *Coordination with Other Planned Transportation Facilities* – Implementation of the Hidden Waters Parkway should be coordinated with the implementation of other planned transportation facilities that intersect or impact the Hidden Waters Parkway (e.g., intersecting freeways, parkways, and arterials);
- *Corridor Traffic Management* – ITS (Intelligent Transportation Systems) should be implemented in conjunction with roadway construction to promote efficient traffic operations and management through the parkway corridor; and
- *Jurisdictional Coordination* – Implementation of corridor improvement, traffic management, and access management concepts should be coordinated among the responsible jurisdictions to ensure a safe, seamless, and efficient transportation facility.

4.3 Planning-Level Cost Estimates

Planning-level cost estimates were developed for the preferred Hidden Waters Parkway alignment. Because this study does not include preparation of an “engineered” roadway alignment and does not address detailed design issues for various features, the cost estimate was based on generalized unit costs. The planning-level unit cost estimates were applied to the Hidden Waters Parkway preferred alignment characteristics and are summarized in **Table 1**.

The estimated cost for the Hidden Waters Parkway totals \$605 million, excluding the construction costs of freeway-to-parkway interchanges at Interstate 10, the planned SR 801 Freeway, and the planned Hassayampa Freeway, which are subject to further study and design.

Table 1 – Planning-Level Cost Estimates

Facility Characteristic	South Segment	North Segment	Total
Segment Length (miles)	20.17	19.07	39.24
Number of Drainage Crossings			
Small	14	1	15
Medium	2	2	4
<u>Large</u>	<u>1</u>	<u>5</u>	<u>6</u>
Total	17	8	25
Right-of-Way Required (acres)	346	523	869
Estimated Total Project Cost (Millions of 2010 \$)			
Roadway Construction Cost	\$195	\$185	\$380
Right-of-Way	\$50	\$75	\$125
Major Structural Elements			
PGSI	\$25	\$20	\$45
Gila River Bridge	-	\$30	\$30
UPRR Overpass	-	\$25	\$25
Total Estimated Project Cost	\$270	\$335	\$605
<i>Notes:</i>			
1) <i>Due to wide fluctuations in construction bids in 2008 and 2009, no inflation factors were applied to convert unit costs for those years to 2010 construction costs.</i>			
2) <i>Estimated project costs are rounded to the nearest \$5 million.</i>			
3) <i>Major structural elements do not include parkway-to-freeway interchanges at Interstate 10, the planned SR 801 Freeway, and the planned Hassayampa Freeway. These interchanges are subject to further study and design.</i>			

A roadway construction unit cost estimate of \$9.6 million per mile was used for a typical six-lane parkway. This unit cost was developed for the *Turner Parkway Corridor Feasibility Study* by averaging estimated roadway construction costs reported in recently completed MCDOT planning studies conducted for similar parkway facilities in 2007 and 2008. It excludes major structural elements for crossing features but does include 20% contingencies for addressing drainage requirements. To give a sense of the amount of required drainage facilities anticipated in the study area, the number of anticipated drainage crossings in the study area, and their relative size, were estimated based off of aerial photography.

For right-of-way, a generalized estimate of \$143,000 per acre was provided by MCDOT. The anticipated required right-of-way was estimated by taking the area of the proposed new right-of-way limits for the parkway and subtracting out the area of the existing public right-of-way that occurs within the proposed new right-of-way envelope.

The major structural elements along Hidden Waters Parkway are anticipated to include a parkway-to-parkway grade-separated interchange (PGSI) with a fly-over at the Watermelon Parkway, a PGSI without a fly-over at the Southern Avenue Parkway, a new all-weather bridge over the Gila River, and a UPRR overpass. The PGSI unit cost estimates were developed as part



of the *Arizona Parkway Intersection/Interchange Operational and Analysis and Design Concepts Study*. The Gila River Bridge estimate is derived from the *Old U.S. Highway 80 Bridge (Gillespie Dam Bridge) Final Design Concept Report*. The UPRR overpass estimate is based on the *Town of Wellton Railroad Crossing Alternatives Design Parameters Report* prepared by KHA in June 2008.

4.4 Next Steps

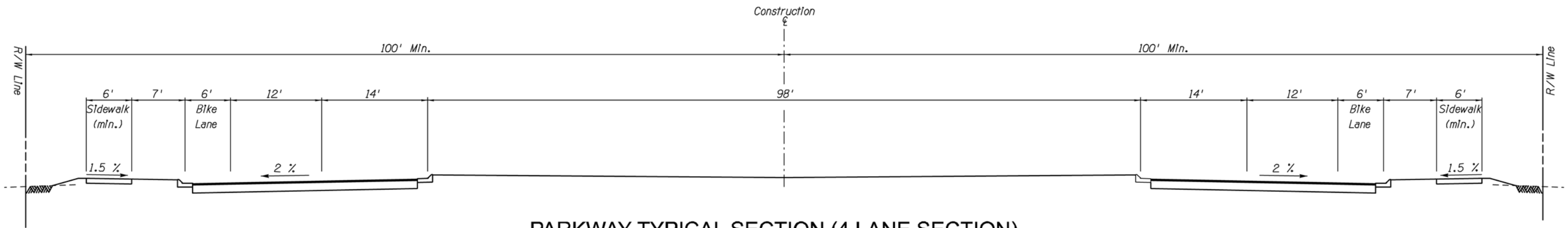
Agencies with primary responsibility for implementing the recommendations of this study are Maricopa County (Transportation, Planning, and Flood Control), Town of Buckeye, Town of Gila Bend, and ADOT. Among the critical long-range planning actions that need to commence are:

- Adoption of the Arizona Parkway designation and general preferred alignment for the Hidden Waters Parkway;
- Right-of-way preservation in developing areas as needed to protect the long-term viability of the parkway facility;
- Preparation of Design Concept Reports for consideration in project programming;
- Appropriation of funding for design, right-of-way acquisition, and construction as needed for joint participation with land developers; and
- Coordination among the jurisdictions and key stakeholders on planning, design, and operational issues.

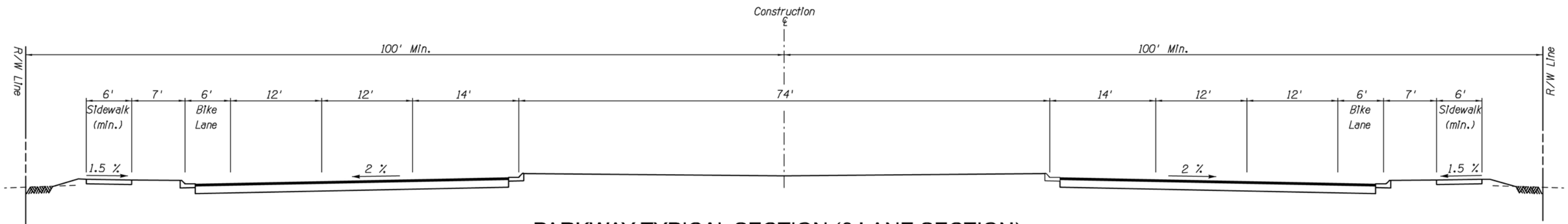
While implementation timing of the Hidden Waters Parkway will be driven by land development, it is up to the public sector agencies to establish the transportation system planning framework now to be responsive to future land development interests while also protecting the broader long-term public interests.



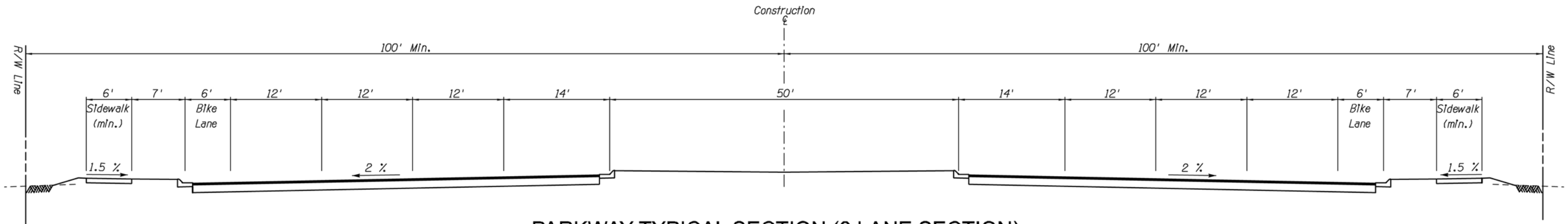
APPENDIX TM5-1
ARIZONA PARKWAY CROSS-SECTIONS AND LAYOUTS



PARKWAY TYPICAL SECTION (4 LANE SECTION)



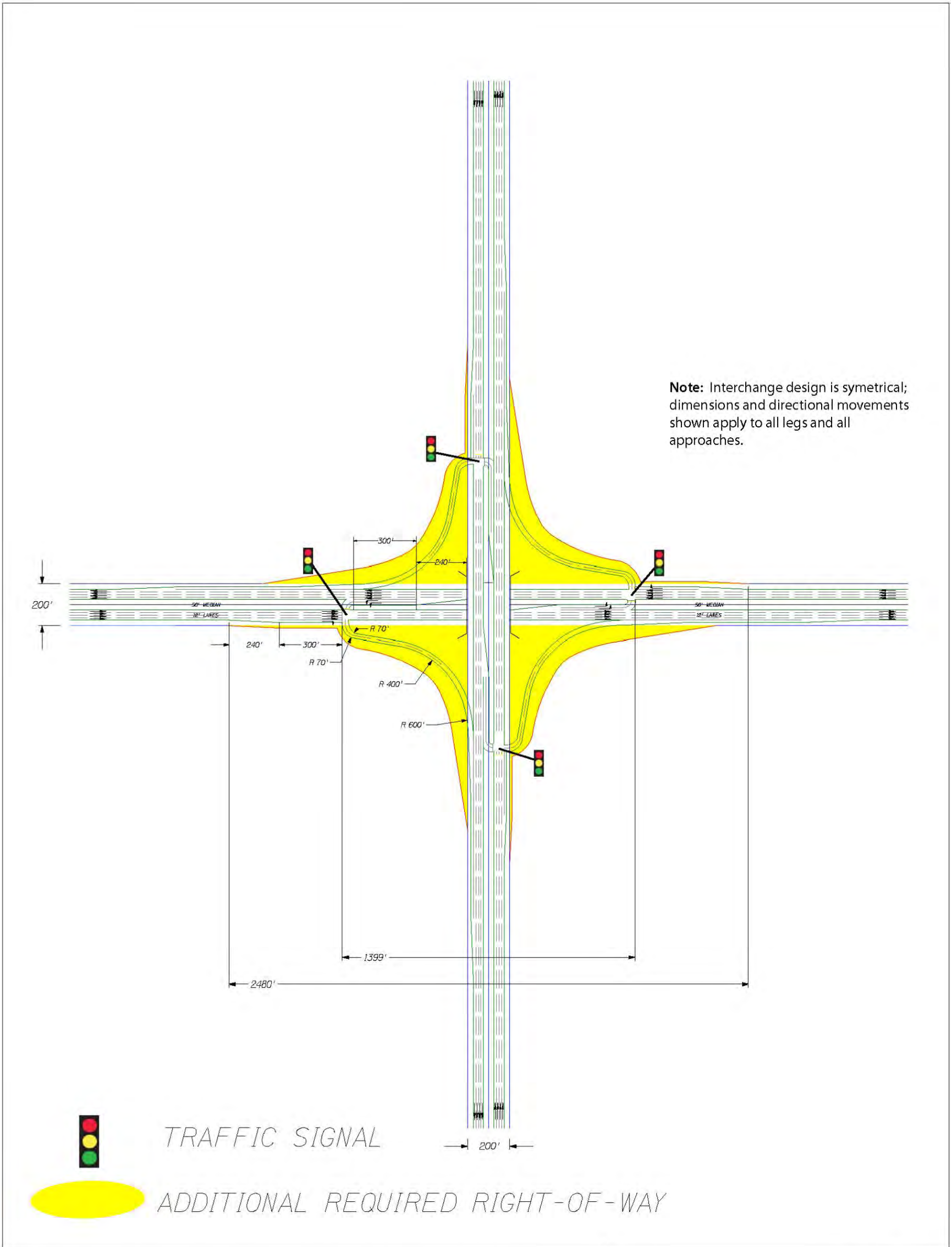
PARKWAY TYPICAL SECTION (6 LANE SECTION)



PARKWAY TYPICAL SECTION (8 LANE SECTION)

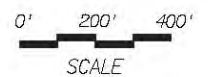
Notes:
When curb is present, dimensions are to face of curb

Figure 4.1
Parkway Grade-Separated Interchange Concept Design



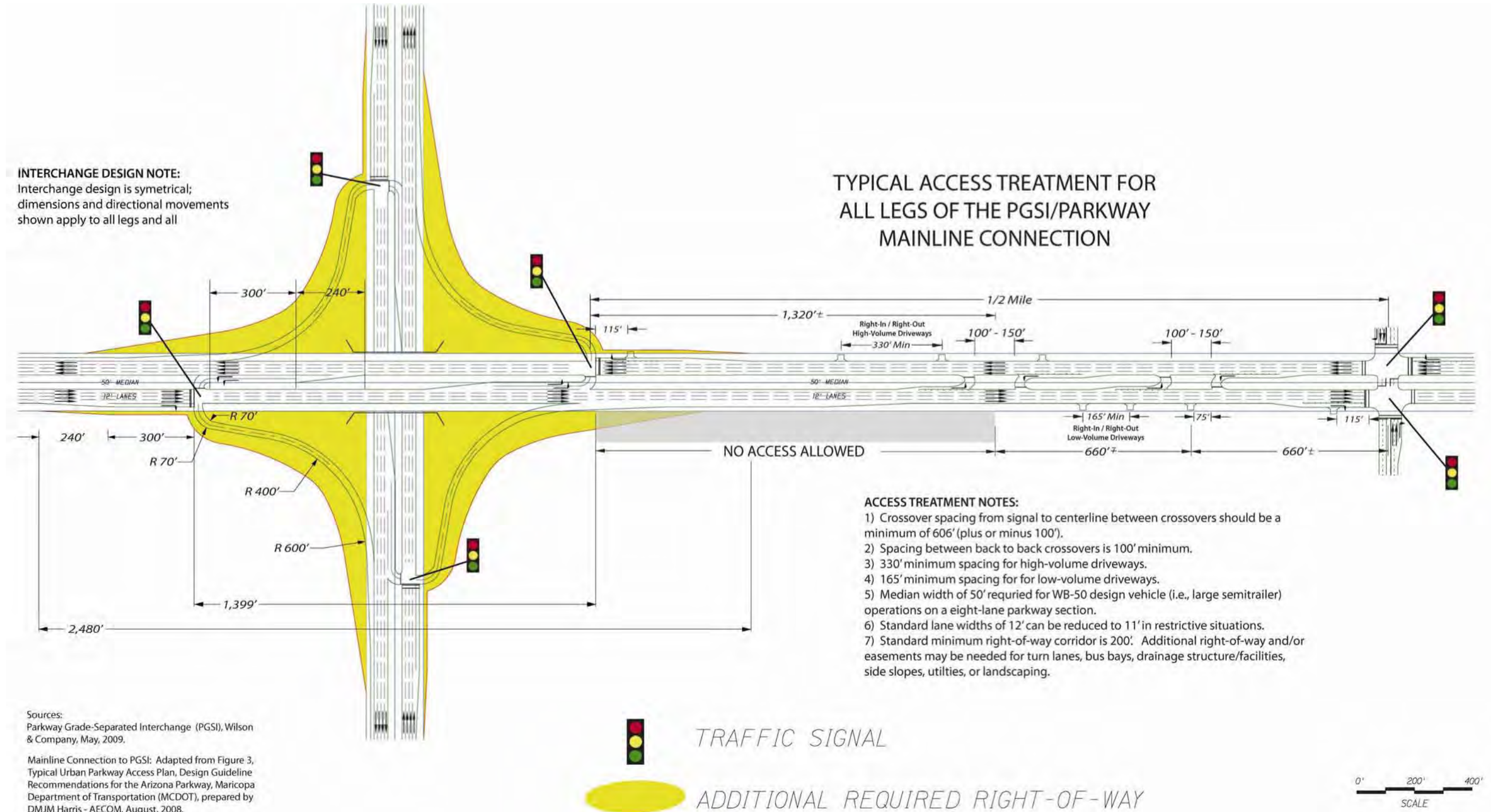
PARKWAY GRADE SEPARATED INTERCHANGE
 CONCEPT DESIGN LAYOUT

ADDITIONAL ACREAGE: 14.76 ACRES



PREPARED FOR: MARICOPA COUNTY
 DEPARTMENT OF TRANSPORTATION
 PREPARED BY: WILSON & COMPANY, INC.
 DATE: 05/20/09

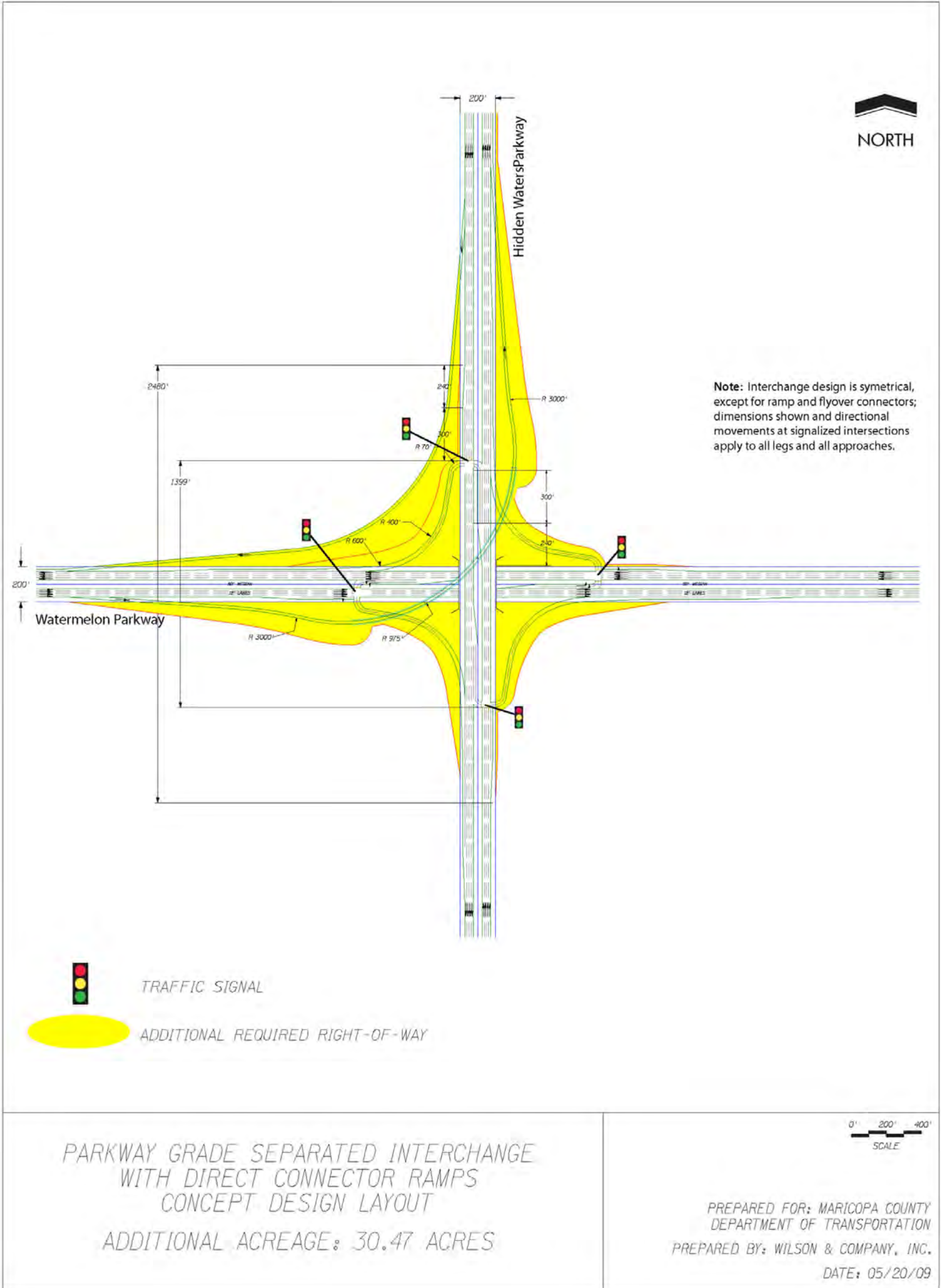
Figure 4.6
Access Management Concept for PGSI and Arizona Parkway (6-Lane to 8-Lane)



Sources:
 Parkway Grade-Separated Interchange (PGSI), Wilson & Company, May, 2009.

Mainline Connection to PGSI: Adapted from Figure 3, Typical Urban Parkway Access Plan, Design Guideline Recommendations for the Arizona Parkway, Maricopa Department of Transportation (MCDOT), prepared by DMJM Harris - AECOM, August, 2008.

Figure 4.4
Parkway Grade-Separated Interchange Concept Design with High Volume Direct Connector/Flyover Ramp:
Intersection #61 – Hidden Waters Parkway at Watermelon Parkway

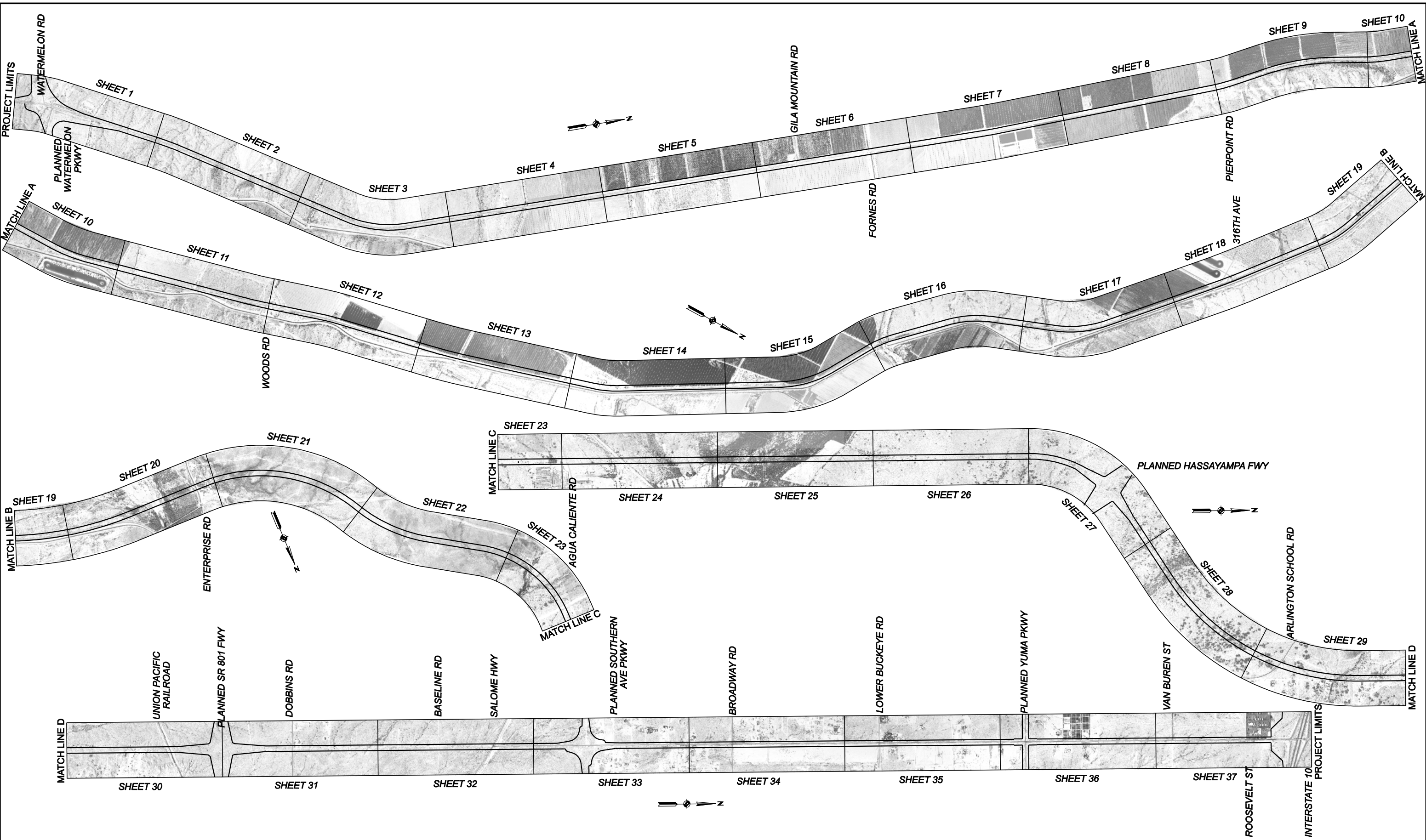




APPENDIX TM5-2
DETAILED PREFERRED ALIGNMENT DRAWINGS

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MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

**HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY**
MCDOT PROJECT NO. TT005

**RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR**
KEY MAP

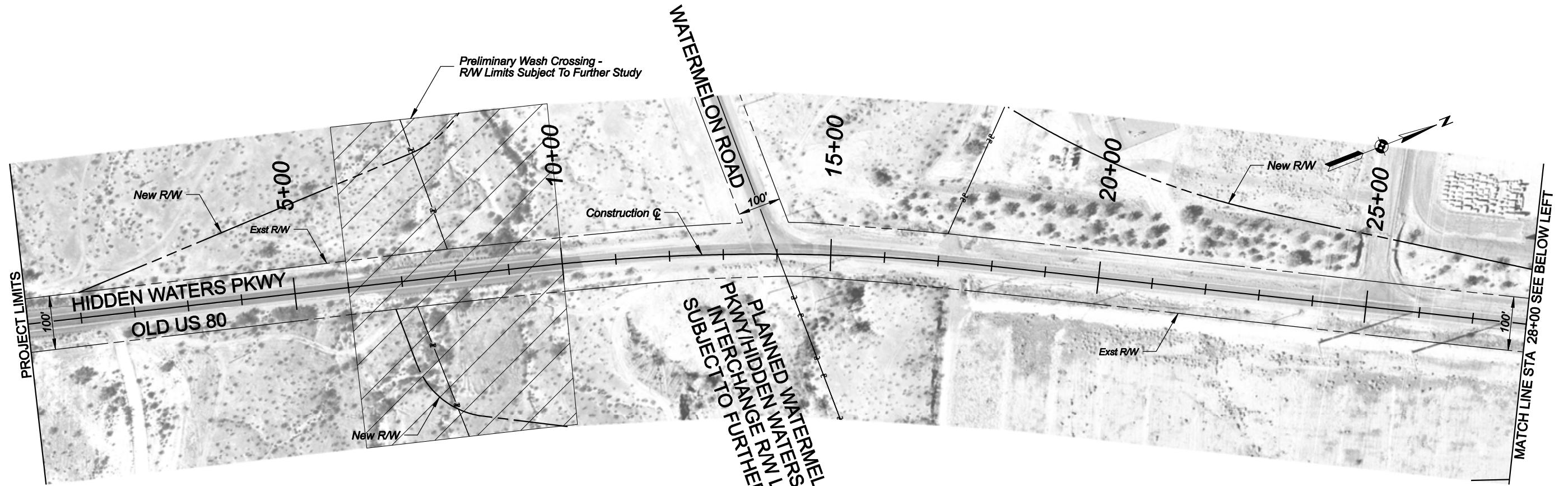


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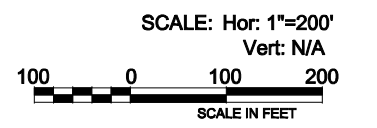
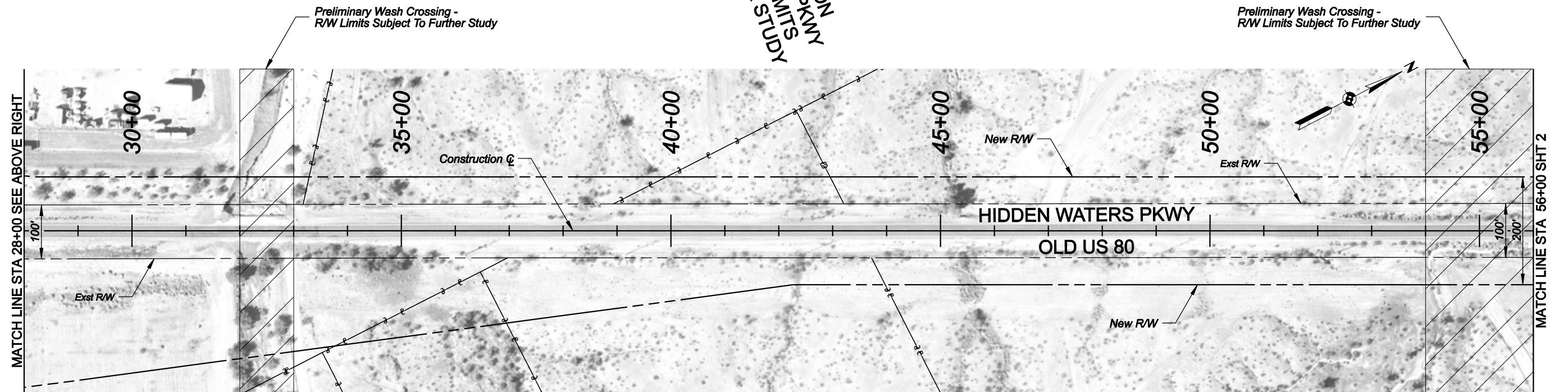
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PLANNED WATERMELON PKWY/HIDDEN WATERS PKWY INTERCHANGE R/W LIMITS SUBJECT TO FURTHER STUDY



MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY
MCDOT PROJECT NO. TT005

RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR

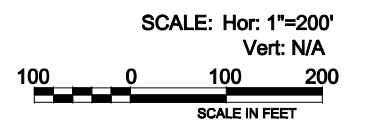
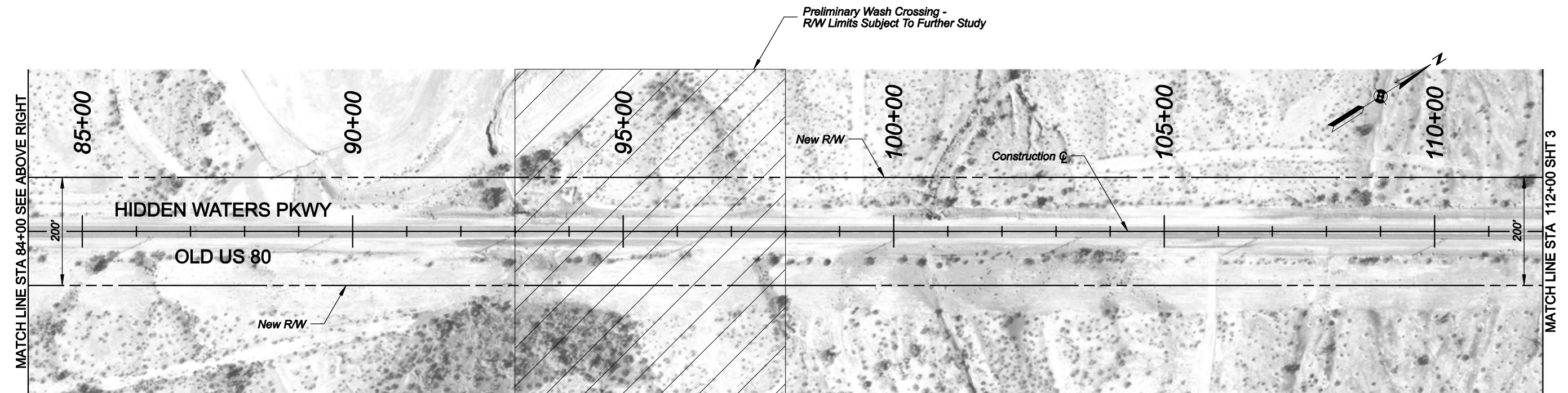
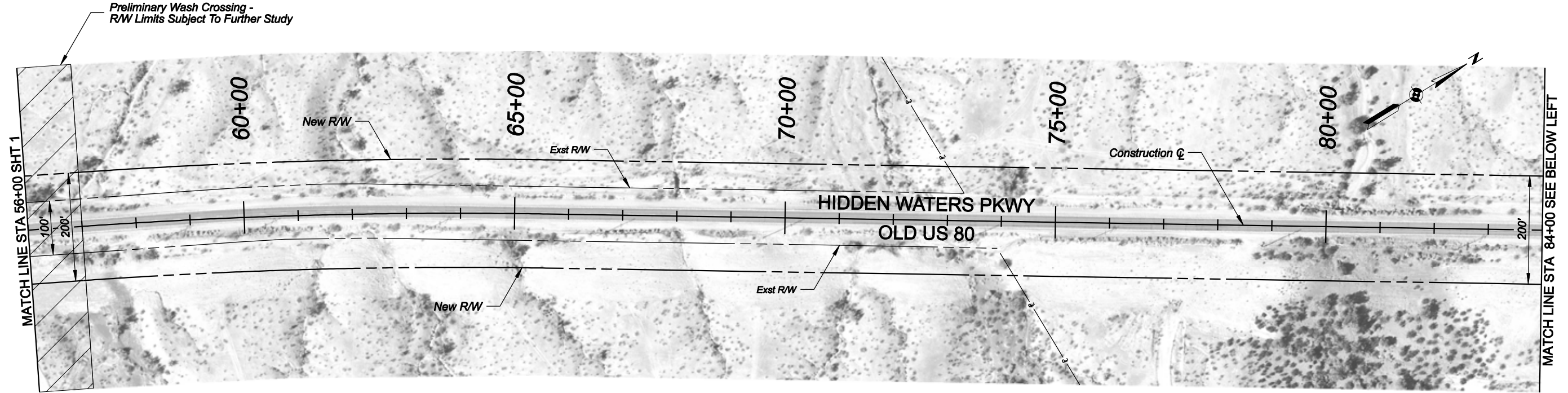
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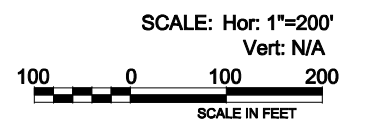
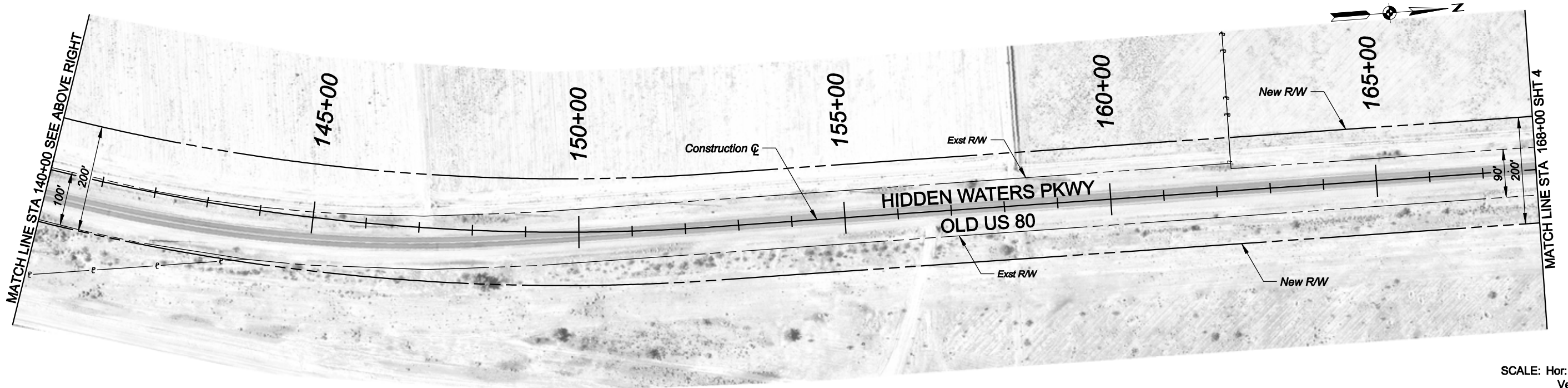
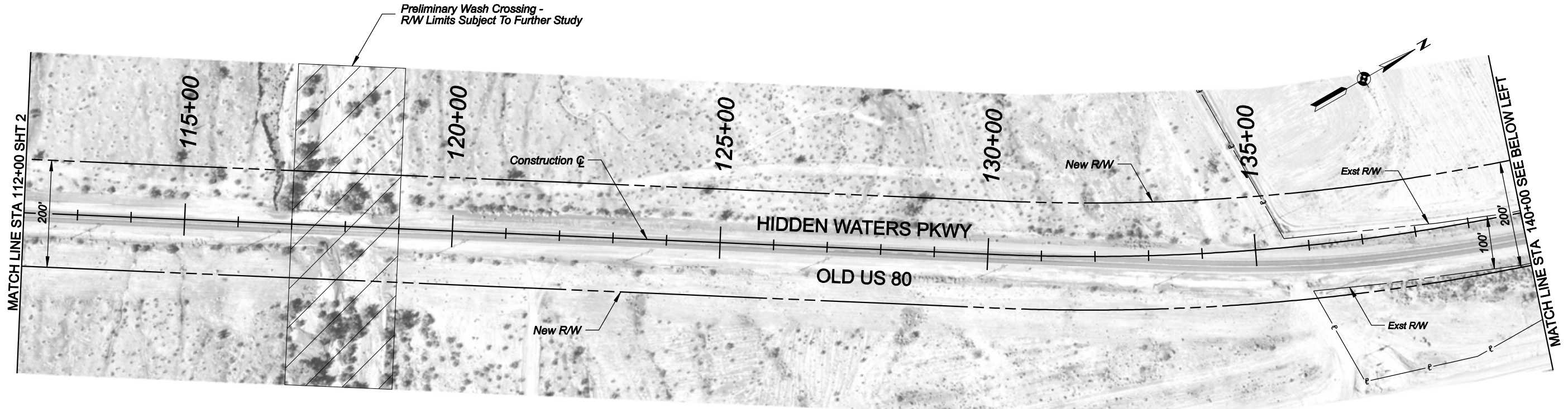
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY
MCDOT PROJECT NO. TT005

RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR

SHEET 2 OF 37





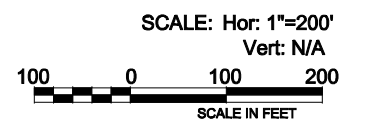
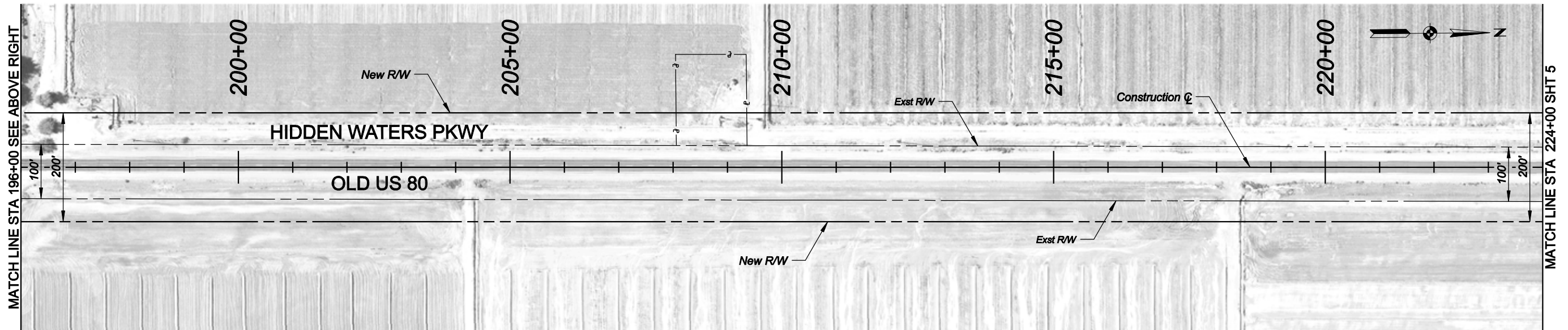
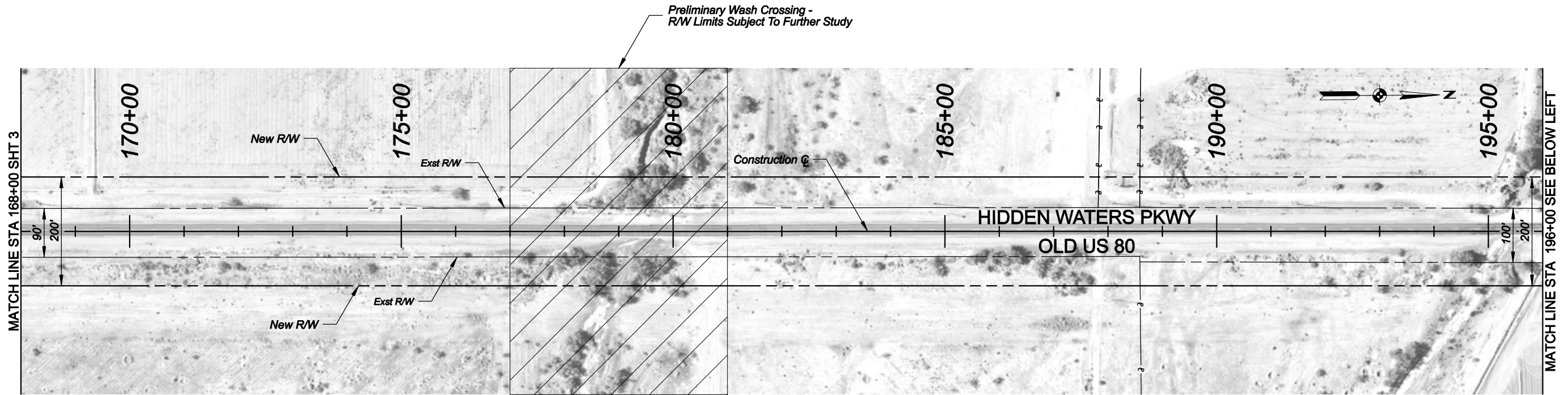
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY
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RIGHT-OF-WAY CORRIDOR

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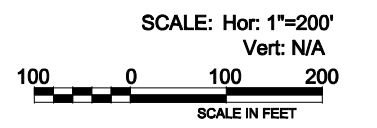
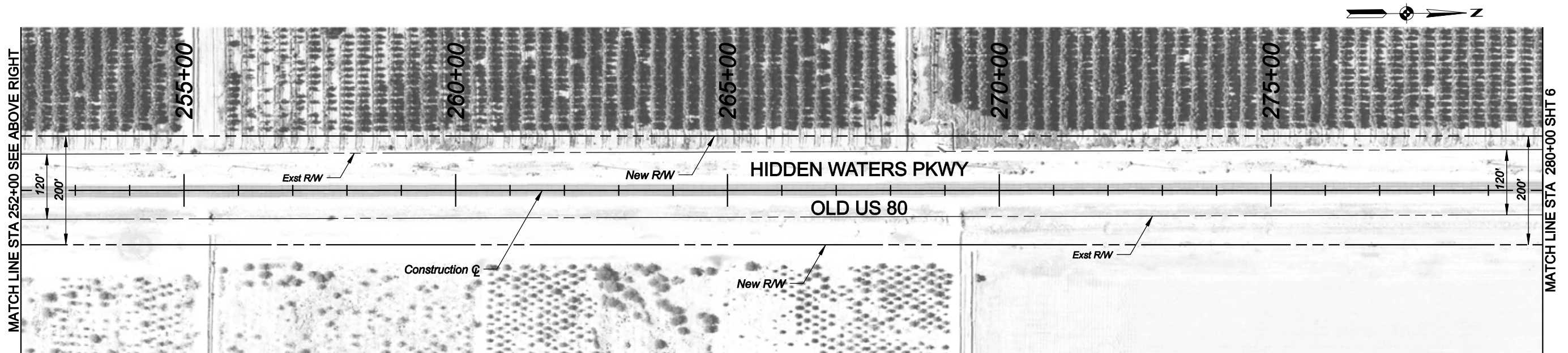
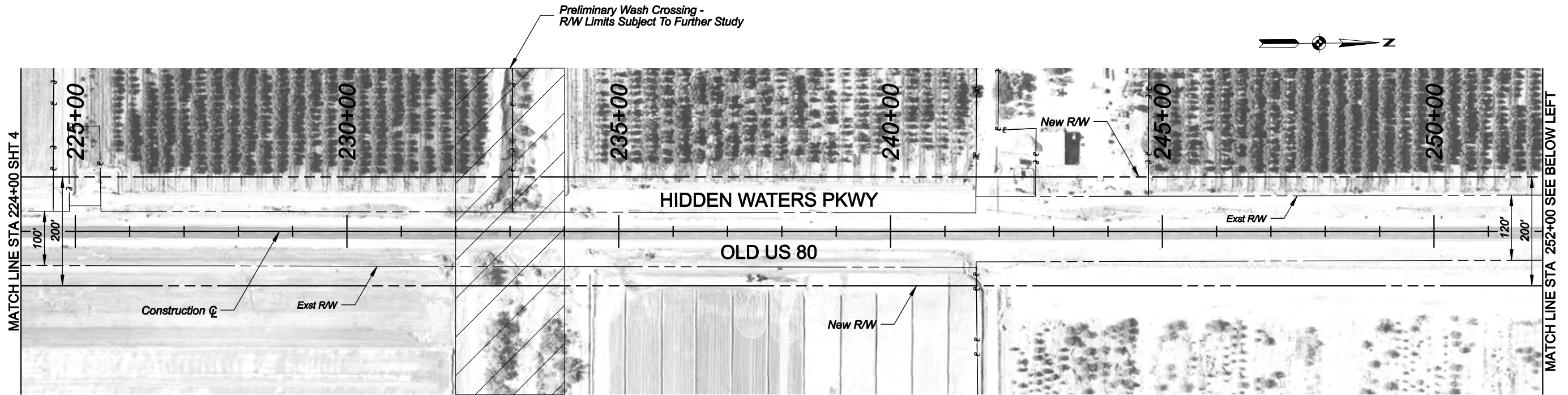
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY
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RIGHT-OF-WAY CORRIDOR

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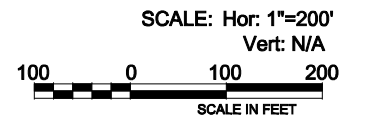
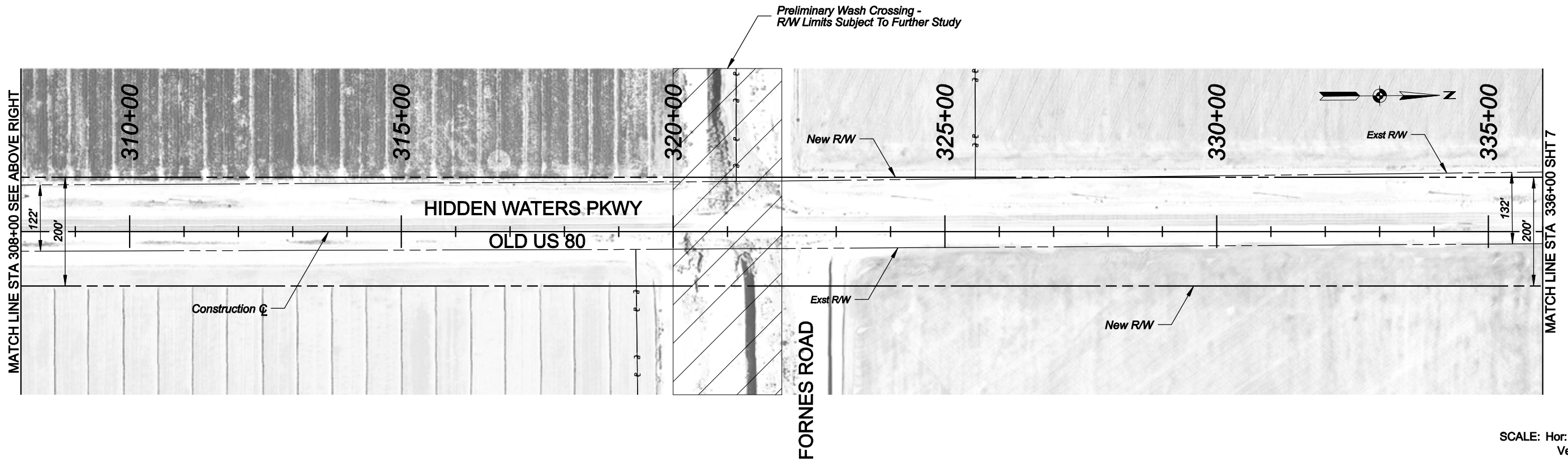
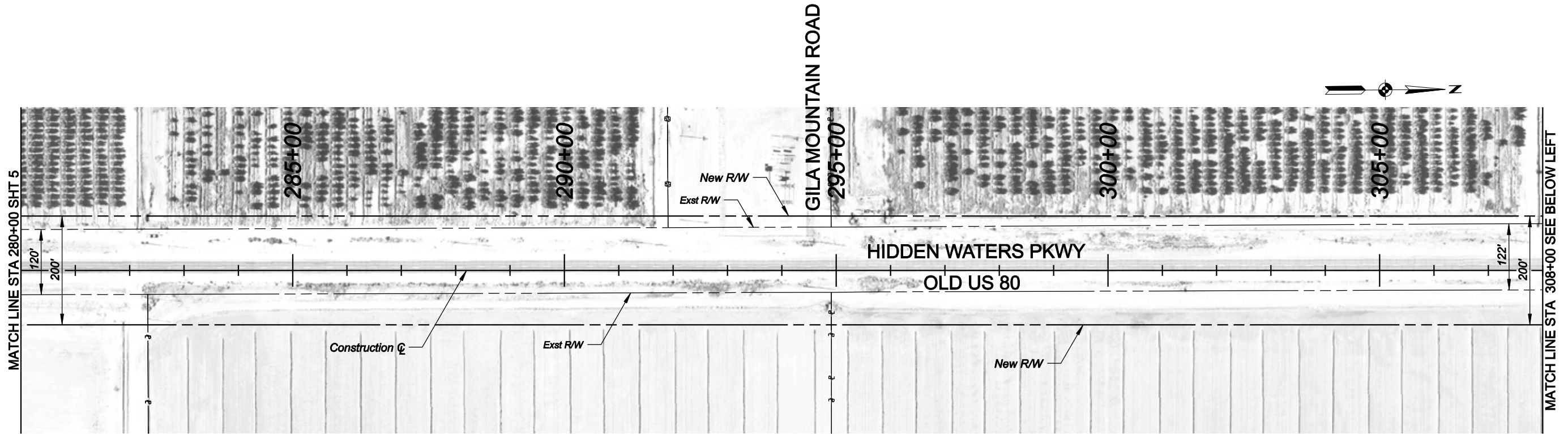
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY
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RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR

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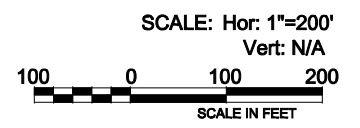
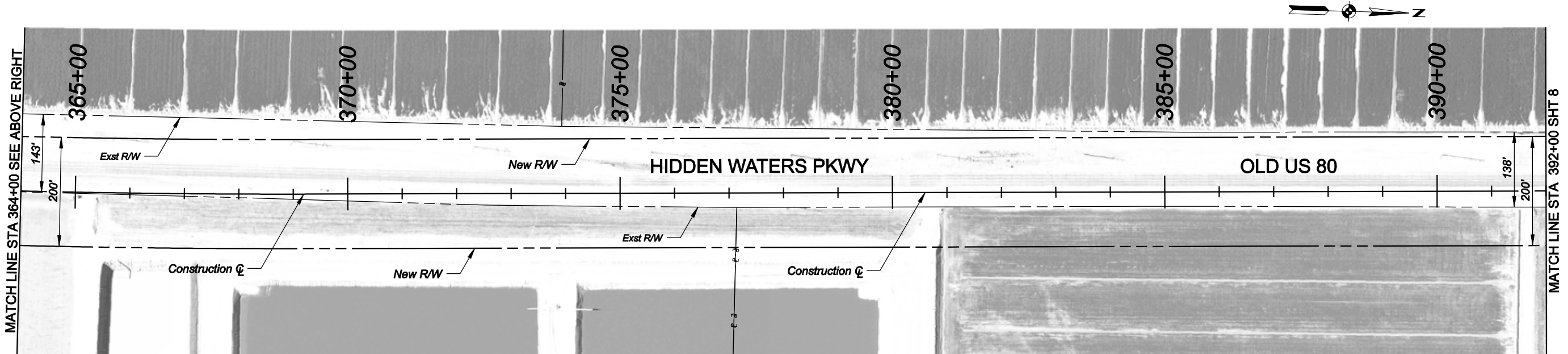
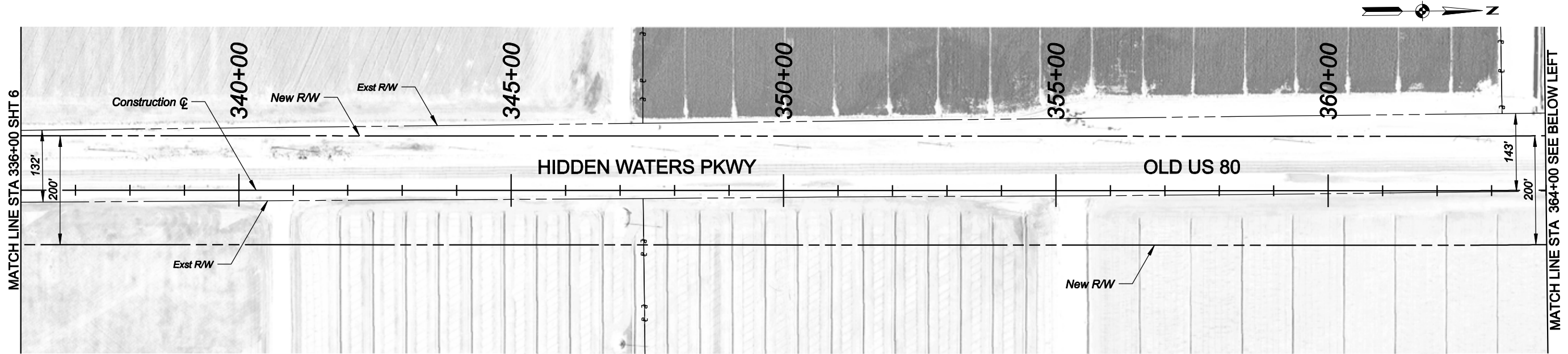
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY
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RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR

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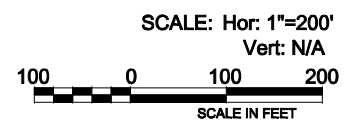
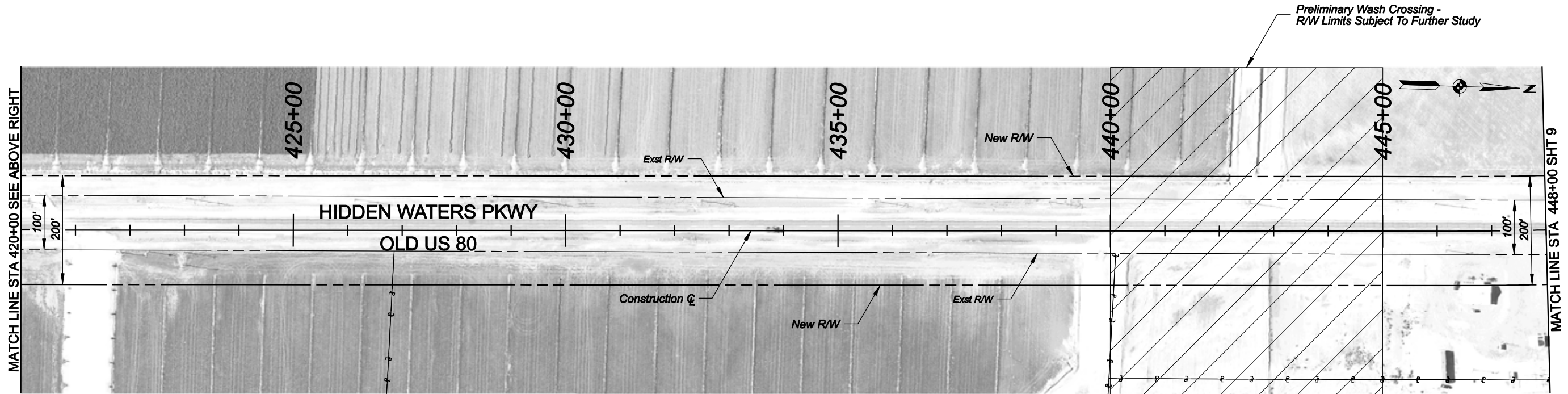
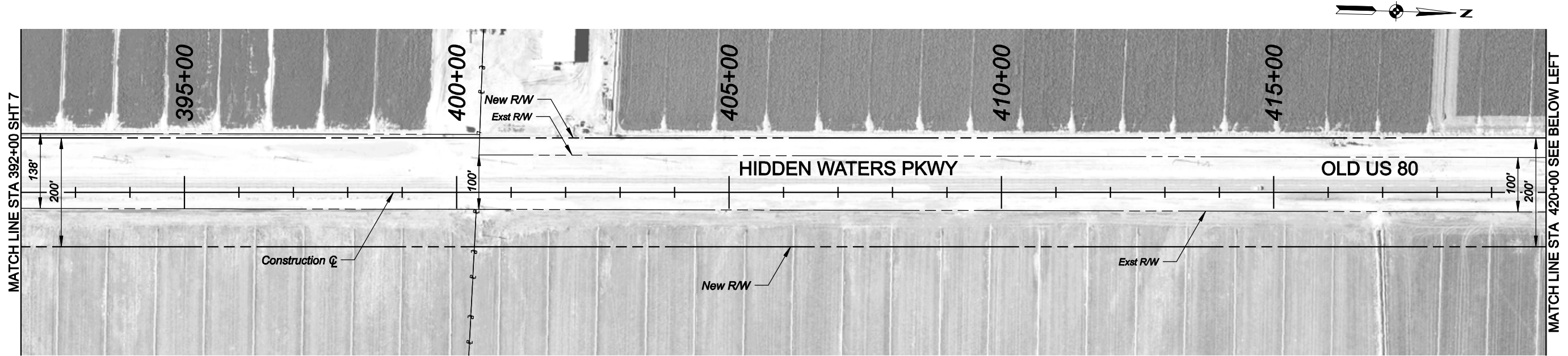
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY
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RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR

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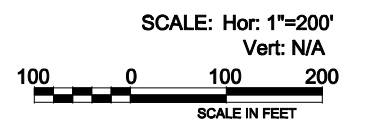
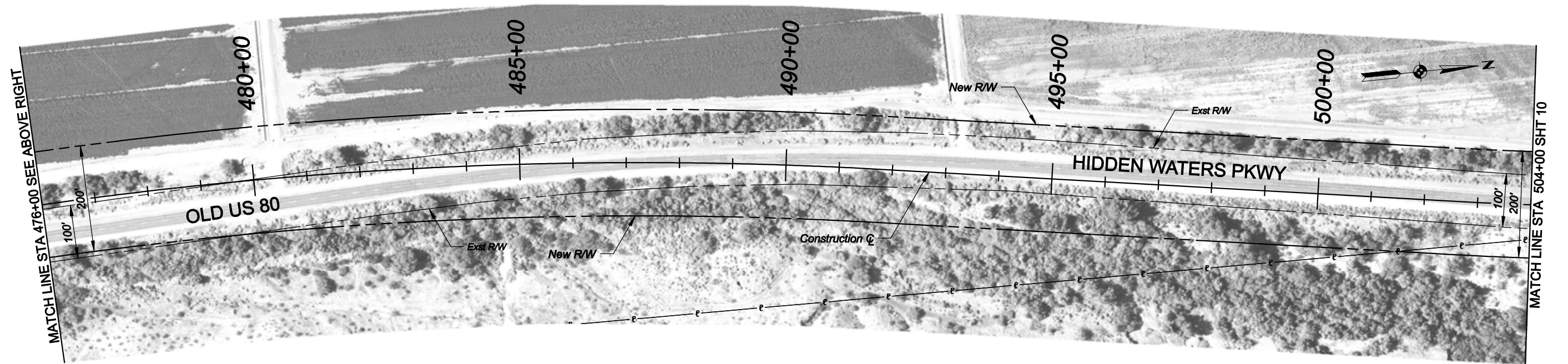
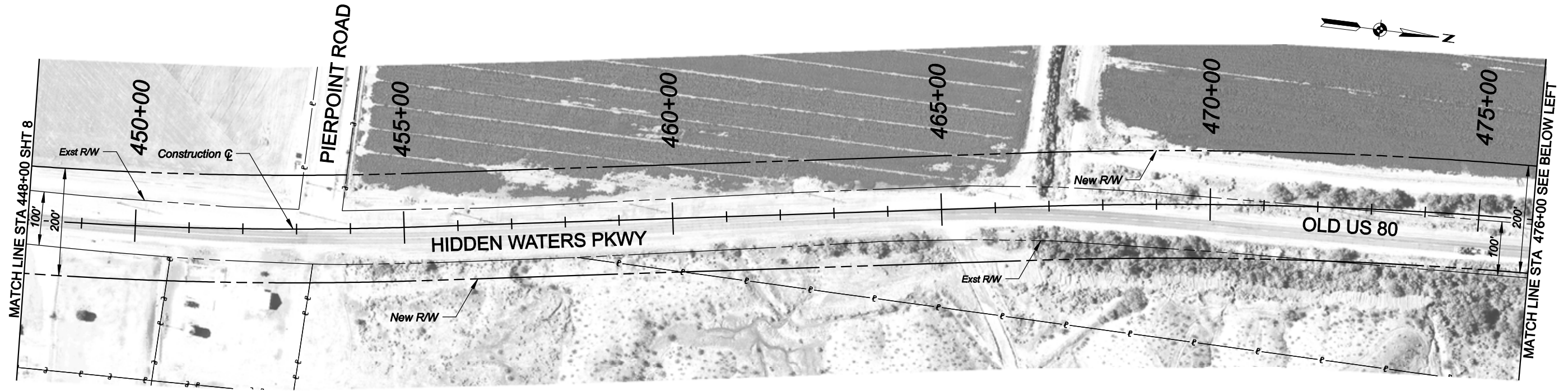
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

**HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY**
MCDOT PROJECT NO. TT005

RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR

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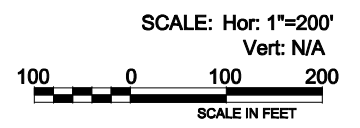
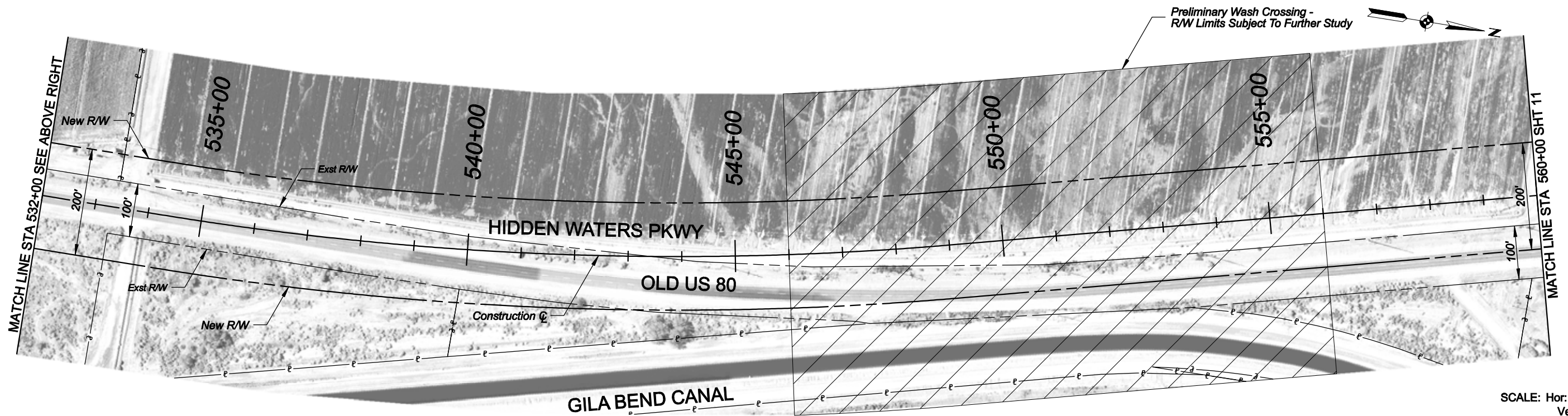
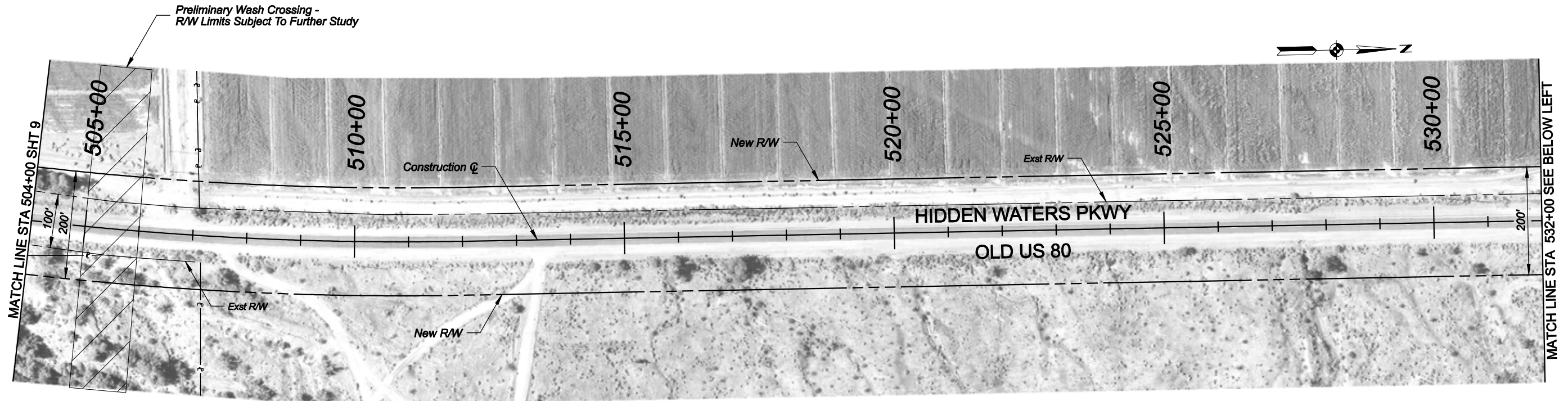
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

**HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY**
MCDOT PROJECT NO. TT005

RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR

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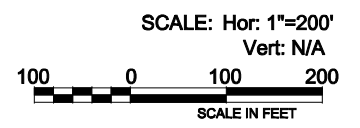
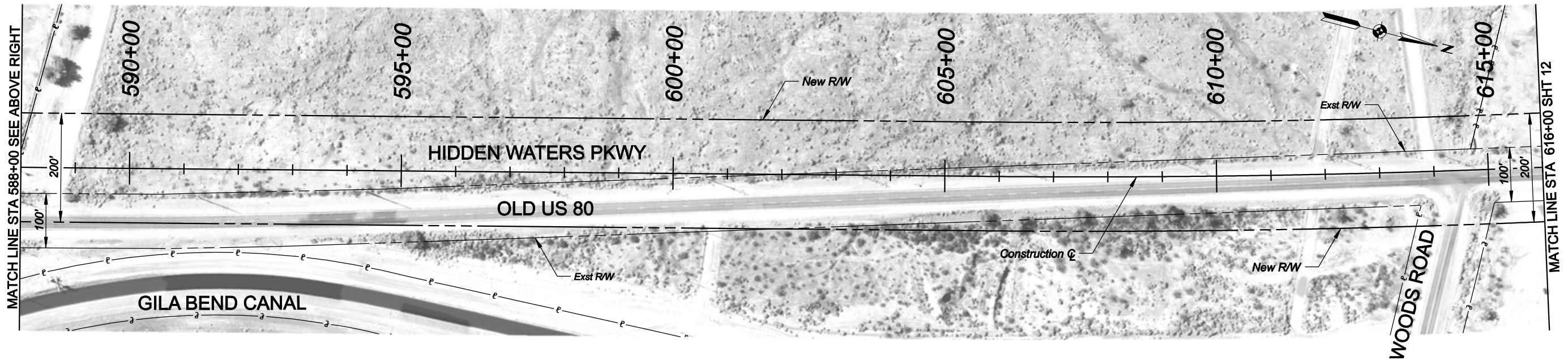
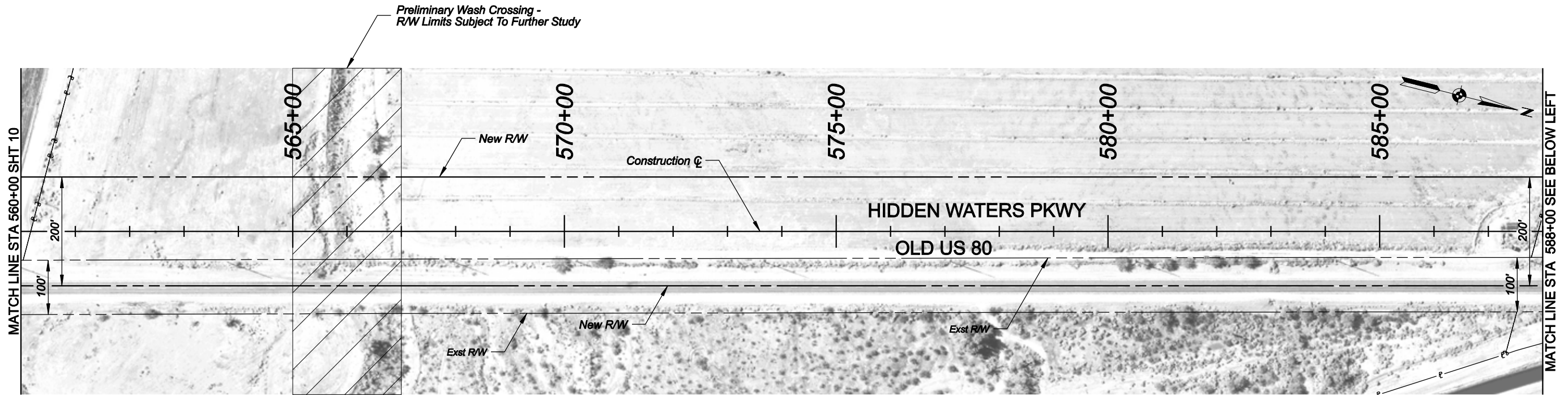
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

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CORRIDOR FEASIBILITY STUDY
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RIGHT-OF-WAY CORRIDOR

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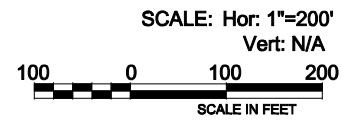
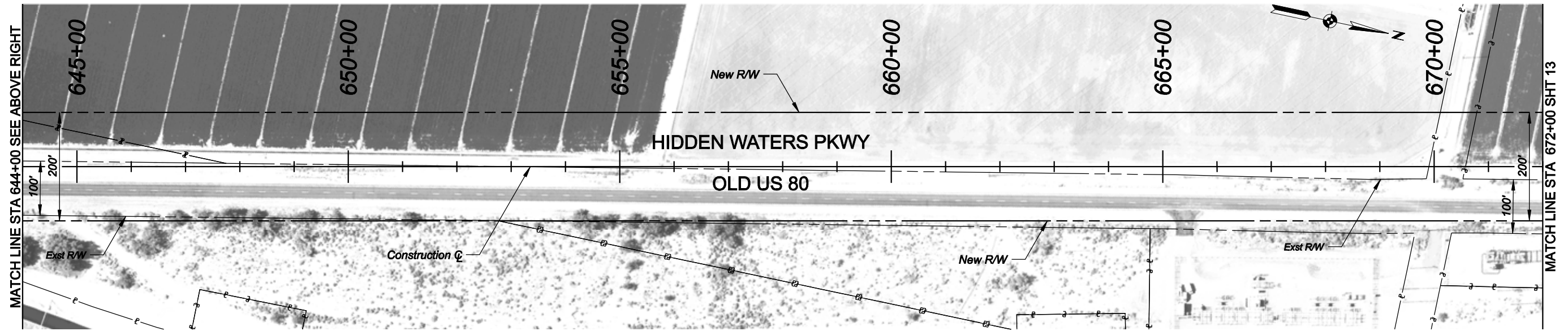
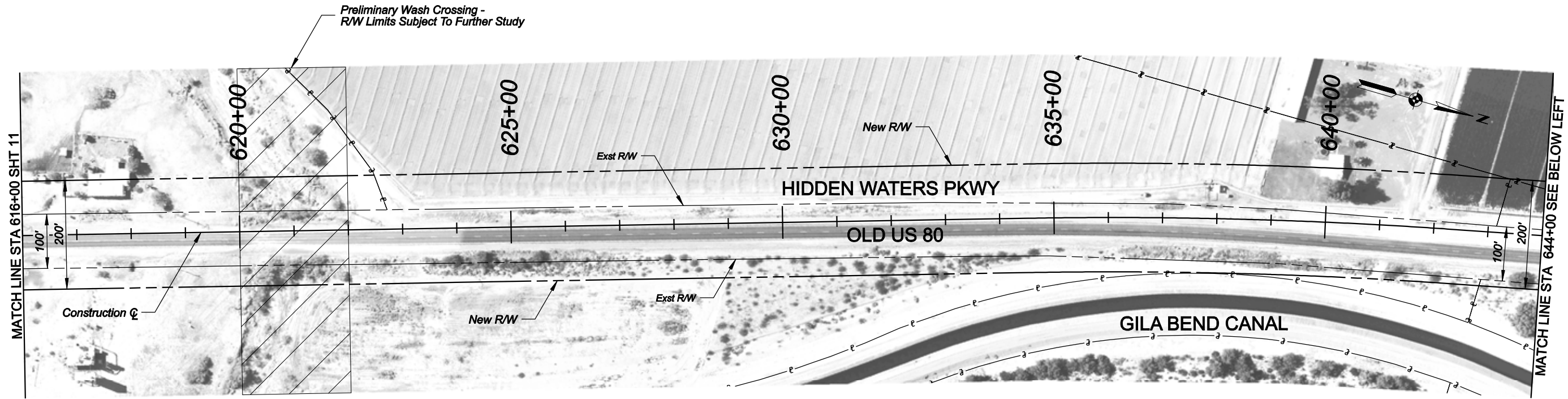
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

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CORRIDOR FEASIBILITY STUDY
MCDOT PROJECT NO. TT005

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RIGHT-OF-WAY CORRIDOR

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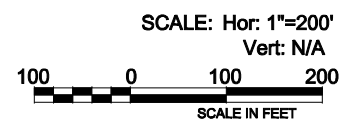
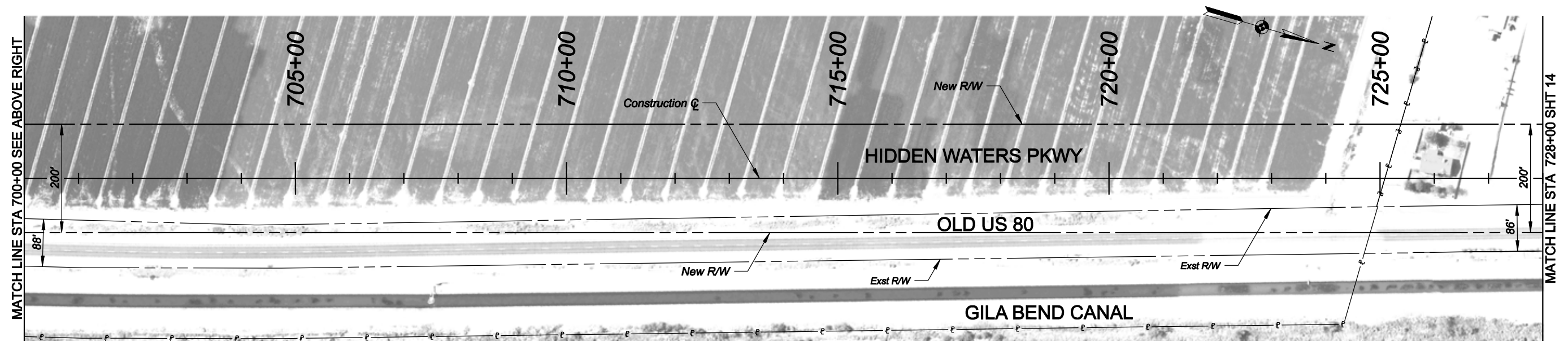
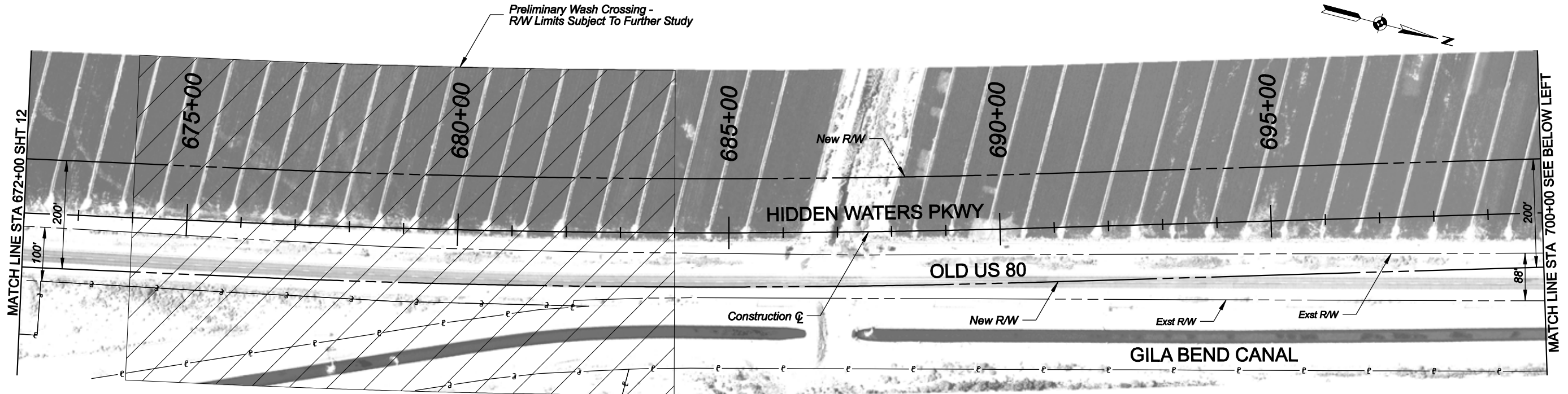
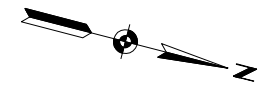
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

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CORRIDOR FEASIBILITY STUDY
MCDOT PROJECT NO. TT005

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RIGHT-OF-WAY CORRIDOR

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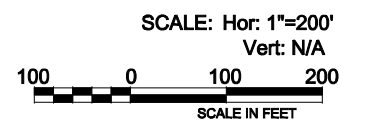
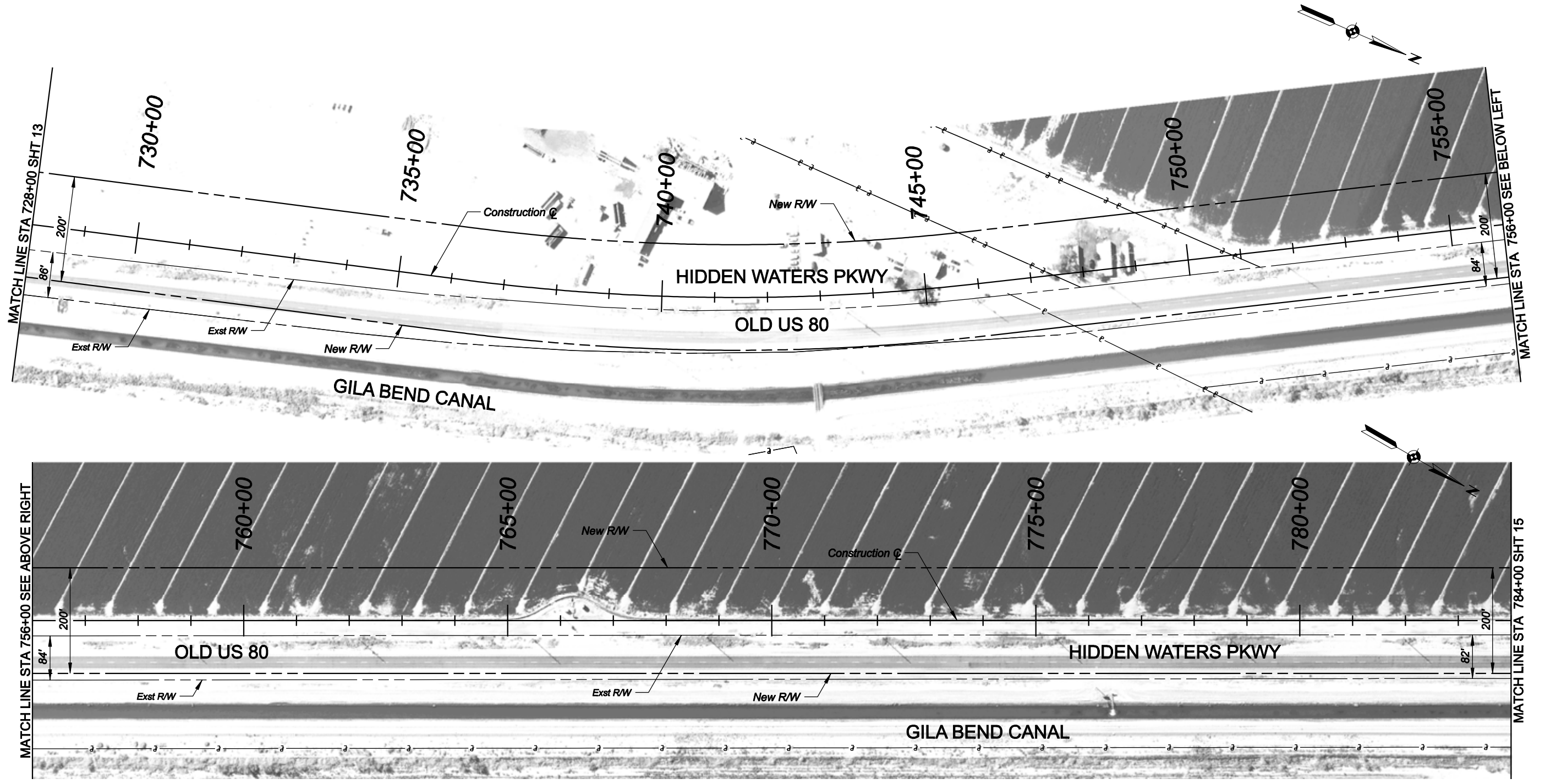
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

HIDDEN WATERS PARKWAY CORRIDOR FEASIBILITY STUDY

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RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR





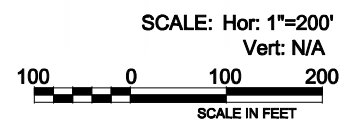
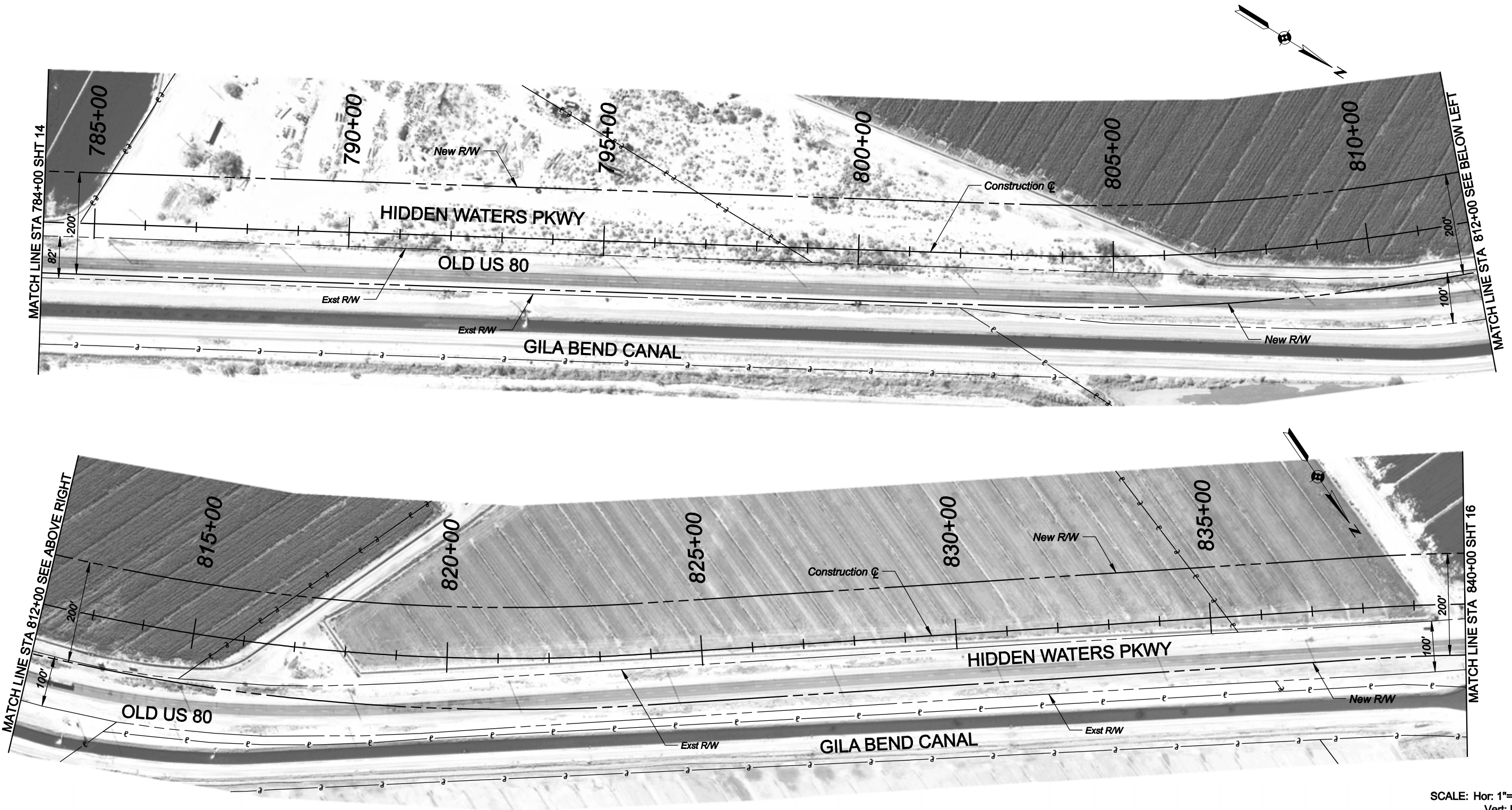
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

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CORRIDOR FEASIBILITY STUDY
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RIGHT-OF-WAY CORRIDOR

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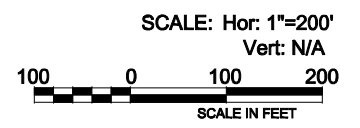
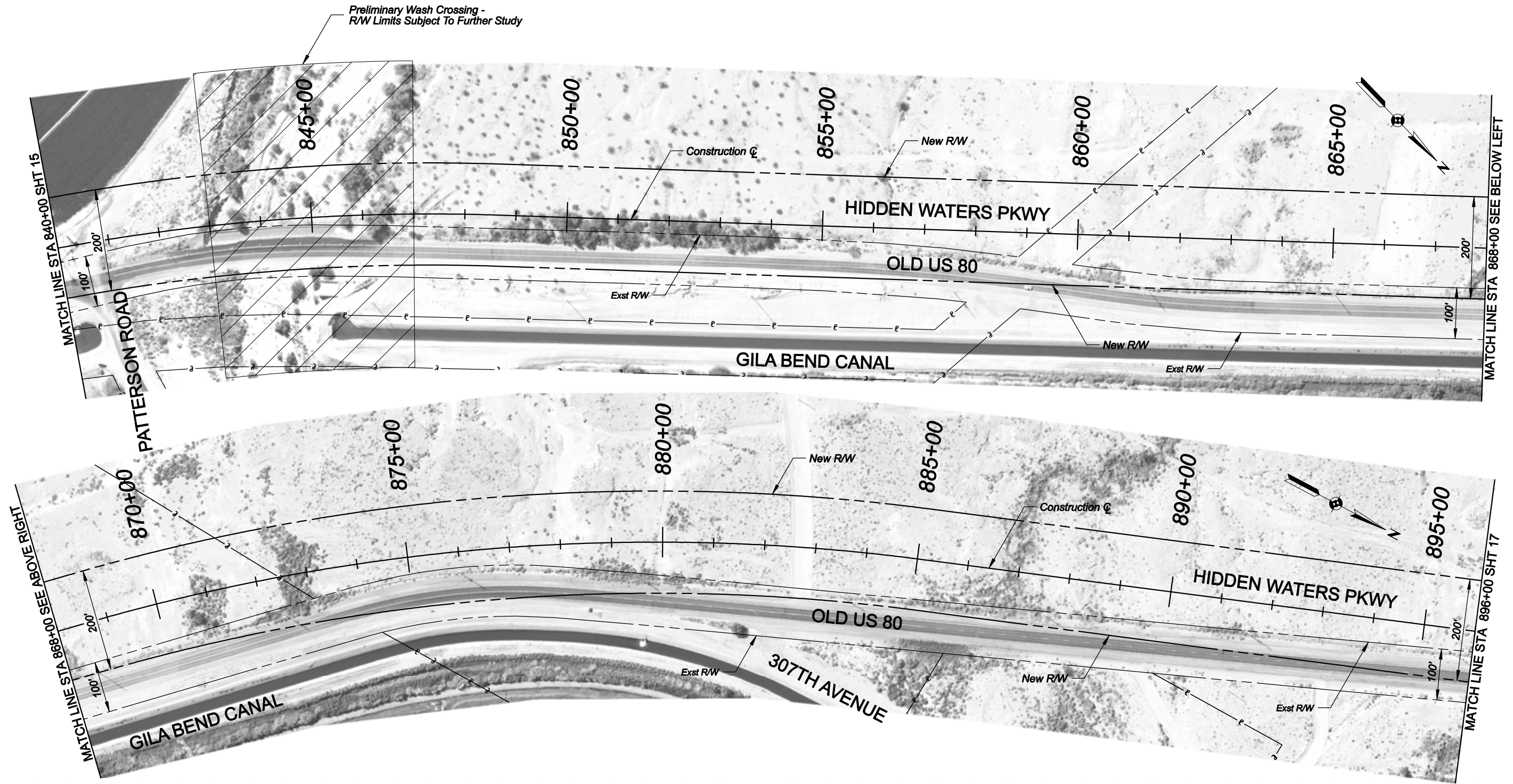
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

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CORRIDOR FEASIBILITY STUDY
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RIGHT-OF-WAY CORRIDOR

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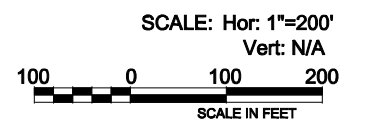
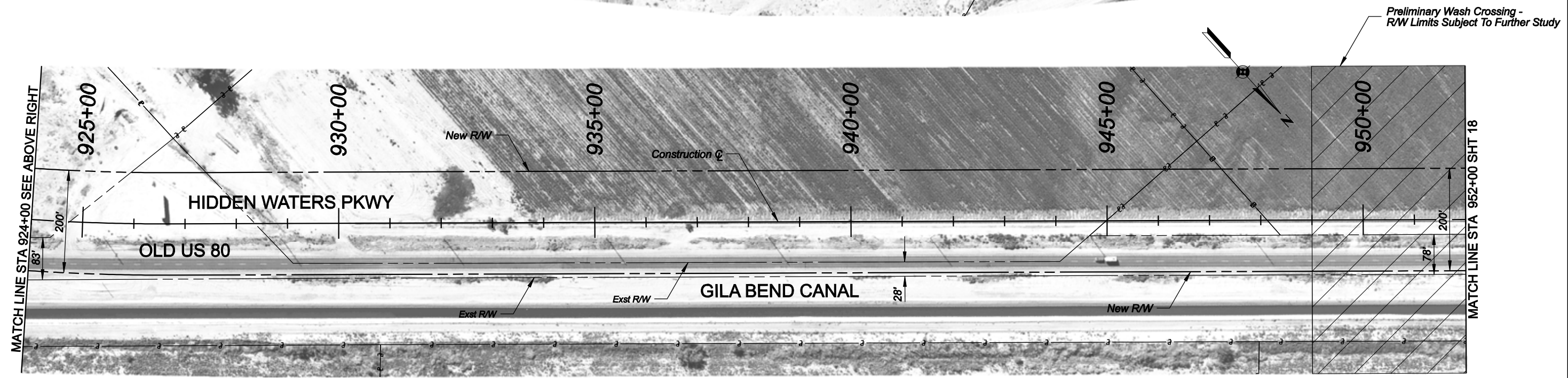
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

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RIGHT-OF-WAY CORRIDOR

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CORRIDOR FEASIBILITY STUDY**
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RIGHT-OF-WAY CORRIDOR

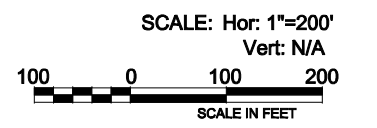
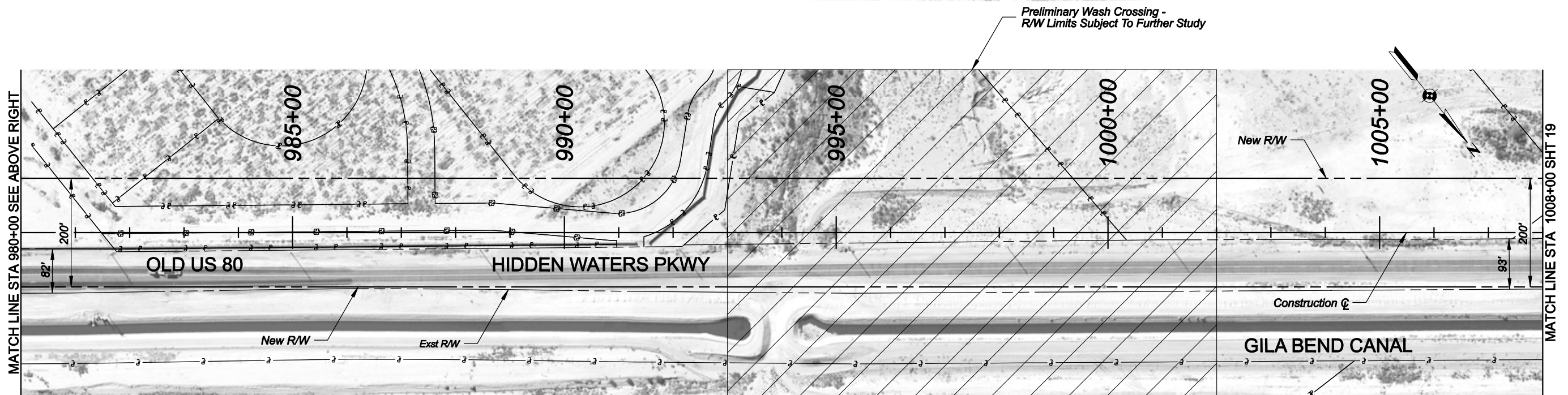
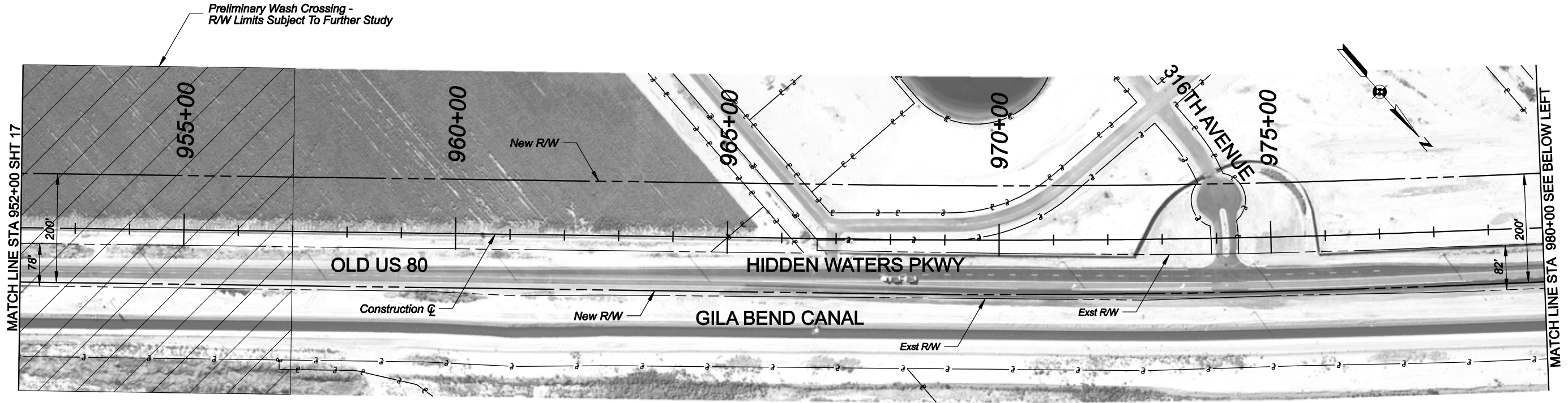
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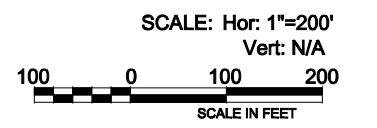
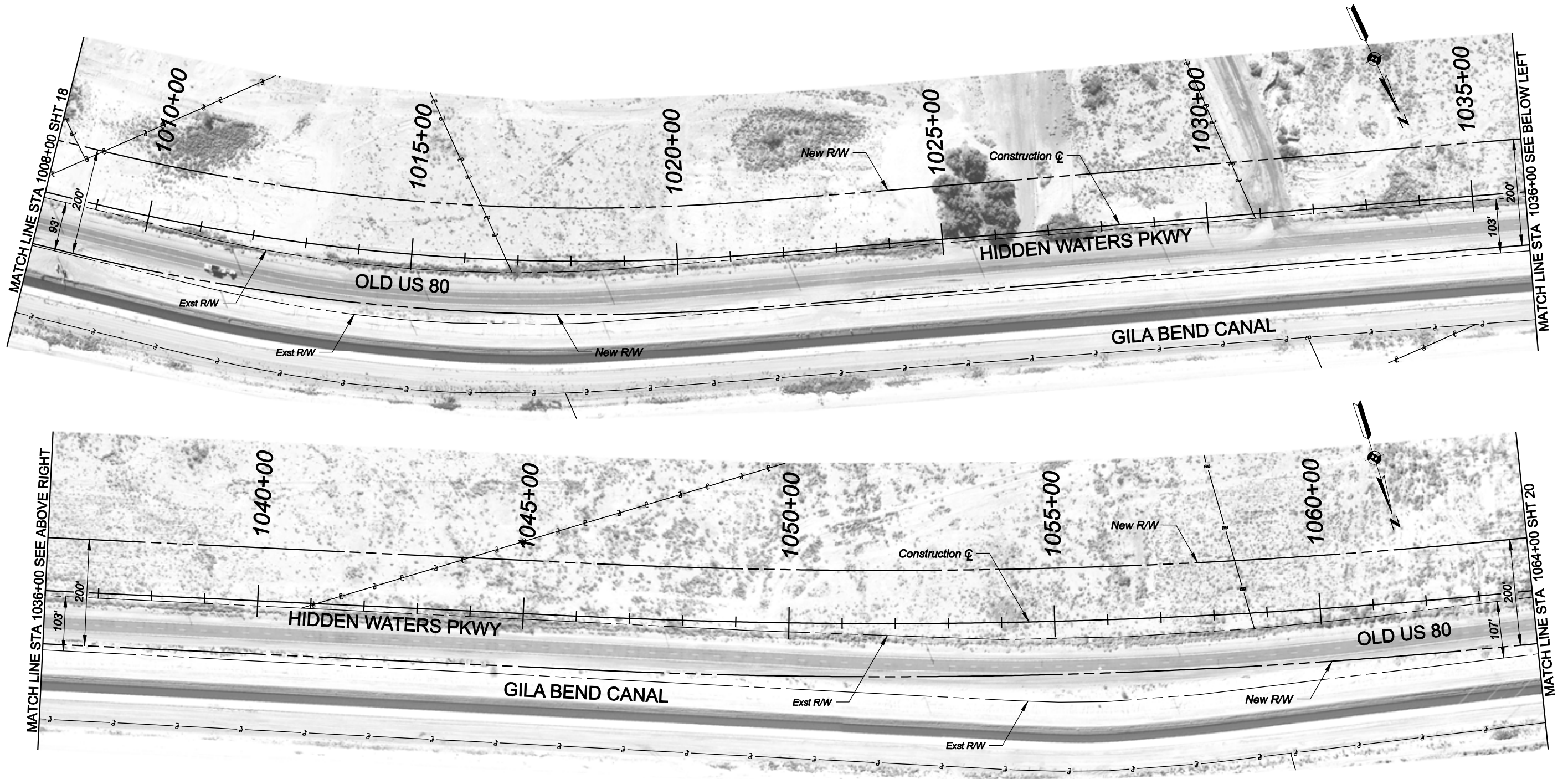
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

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CORRIDOR FEASIBILITY STUDY
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RIGHT-OF-WAY CORRIDOR

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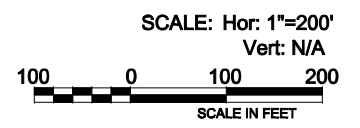
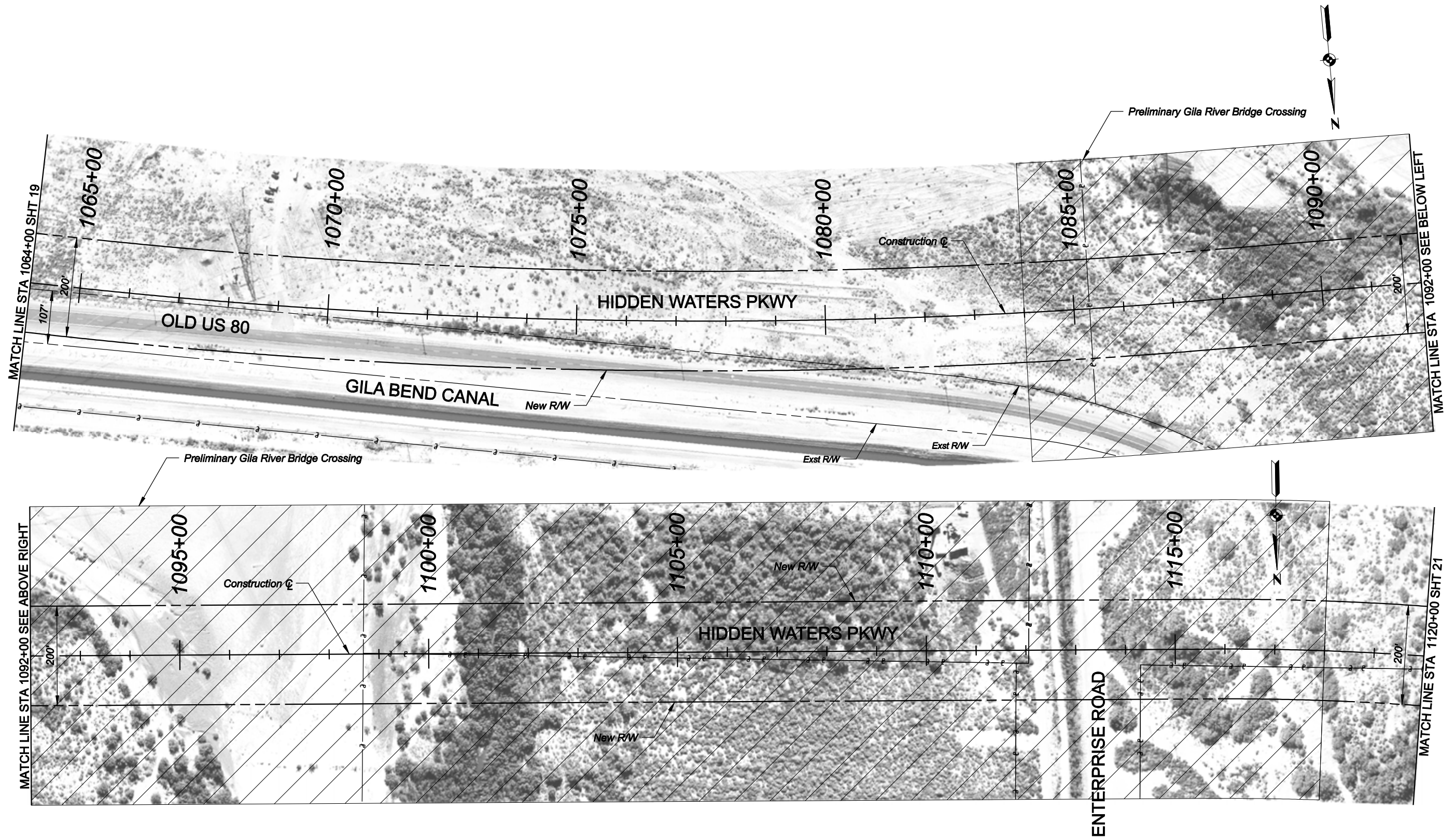
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

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CORRIDOR FEASIBILITY STUDY
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RIGHT-OF-WAY CORRIDOR

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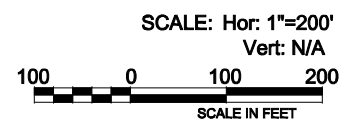
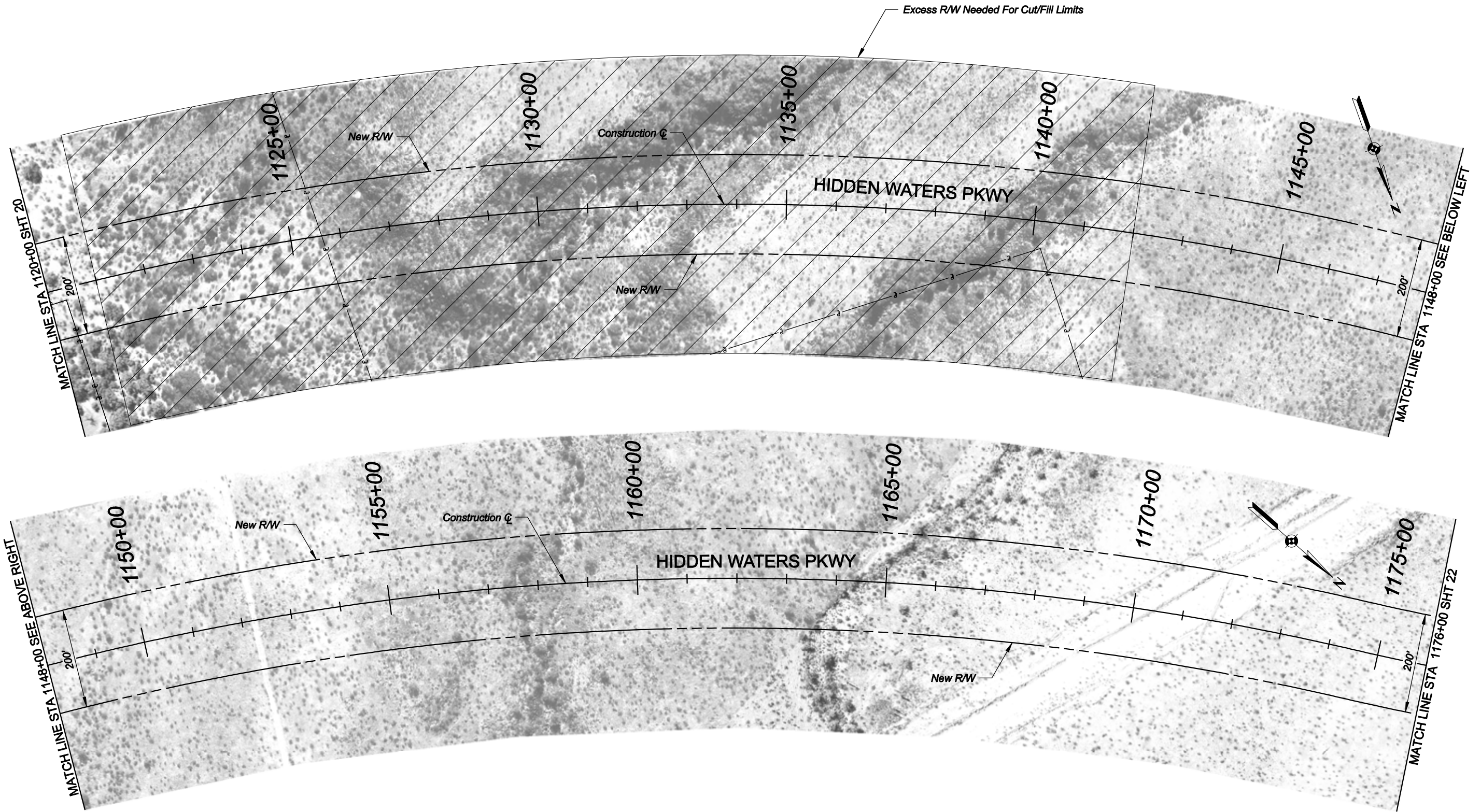
MARICOPA COUNTY
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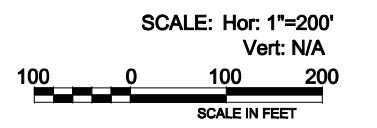
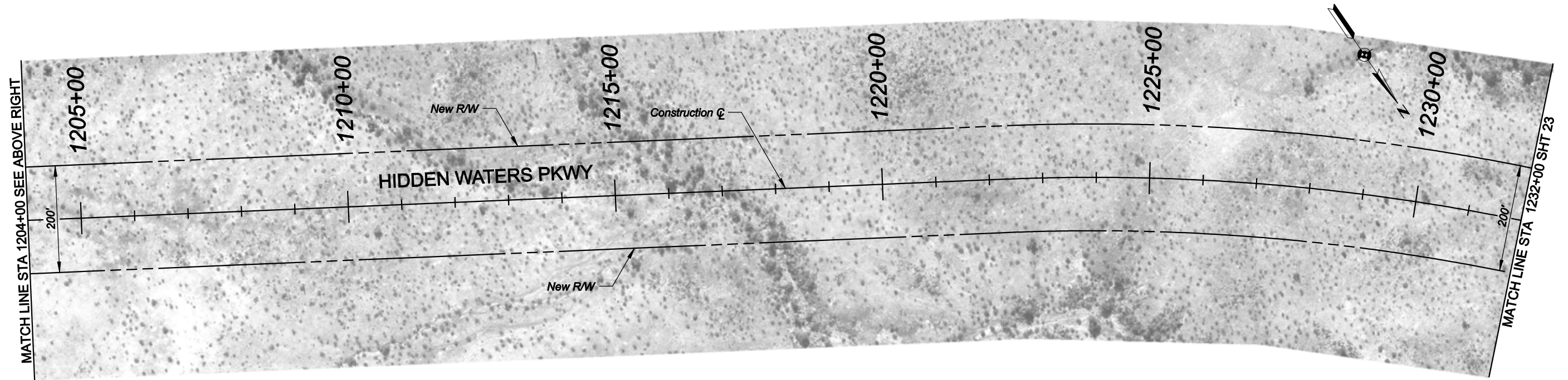
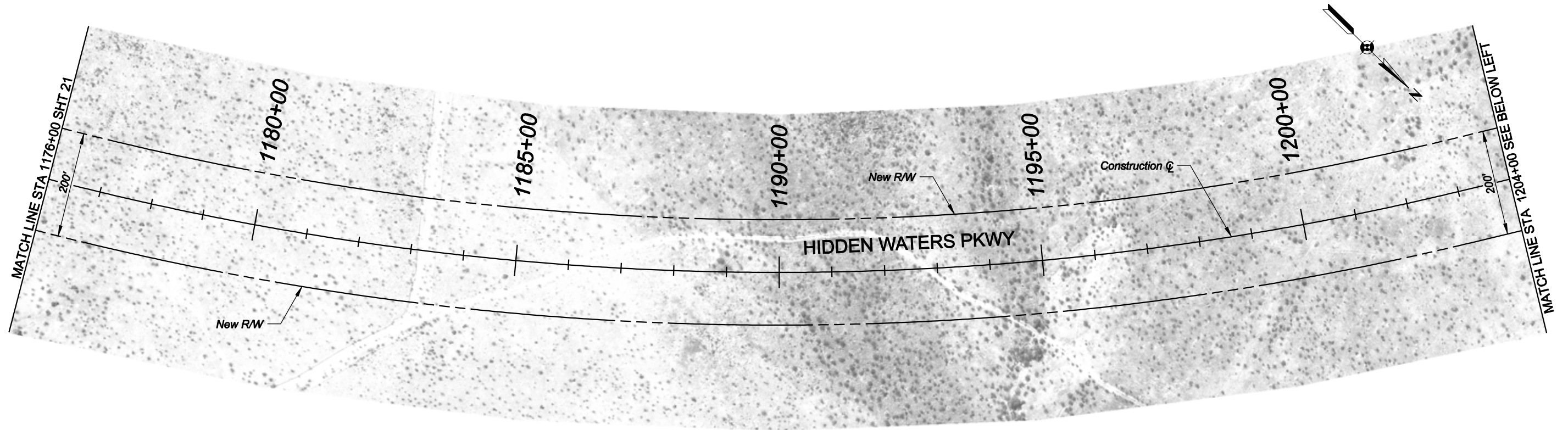
RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR

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HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY
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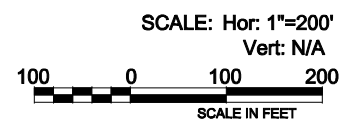
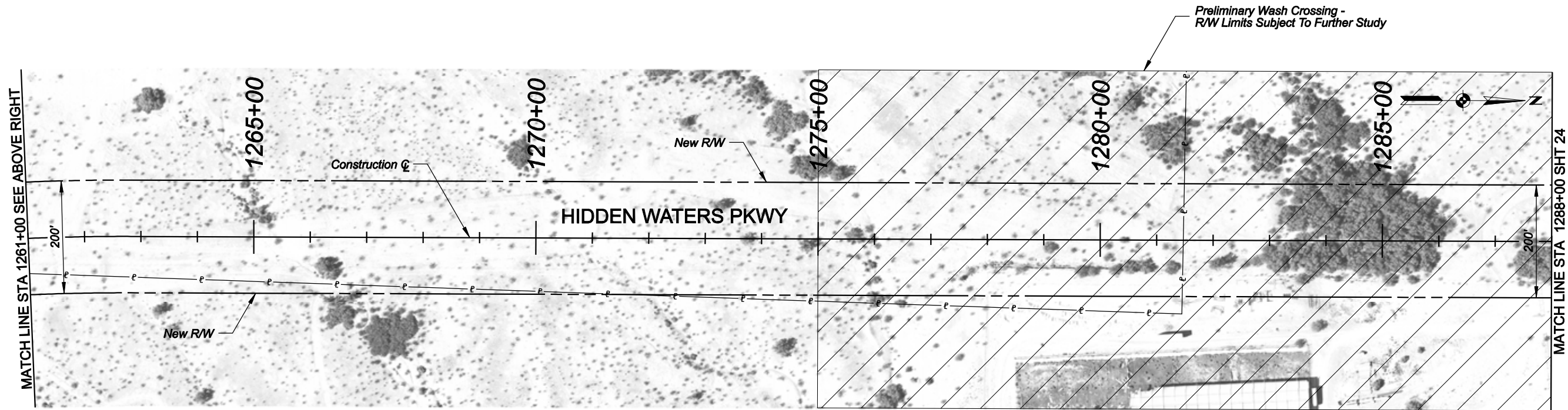
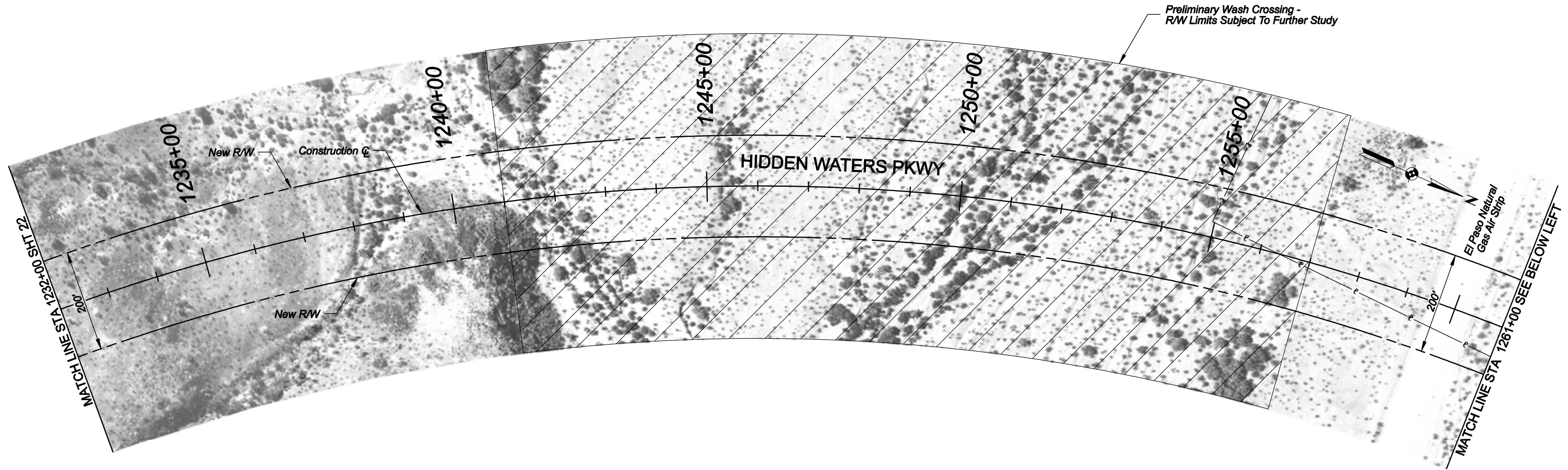
RECOMMENDED FUTURE
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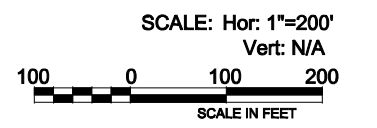
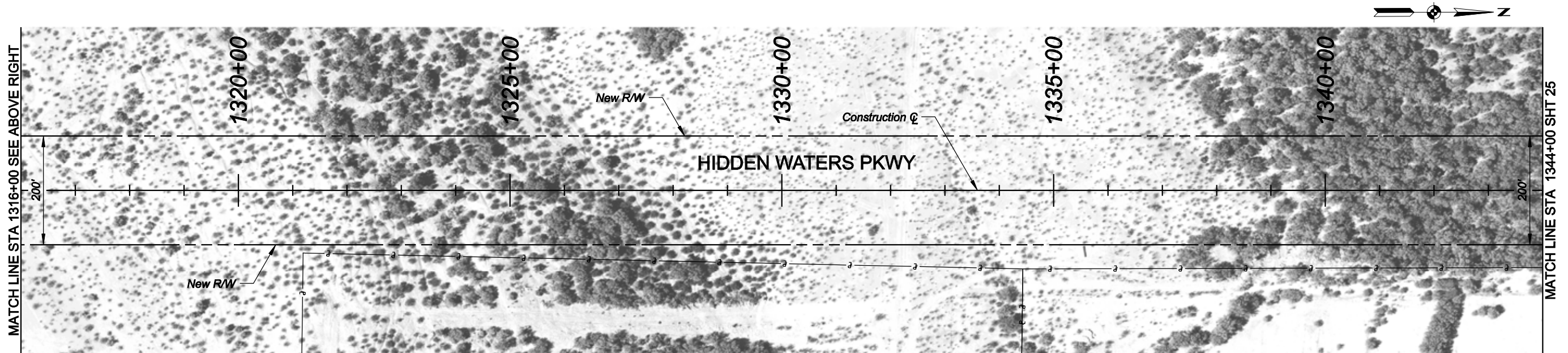
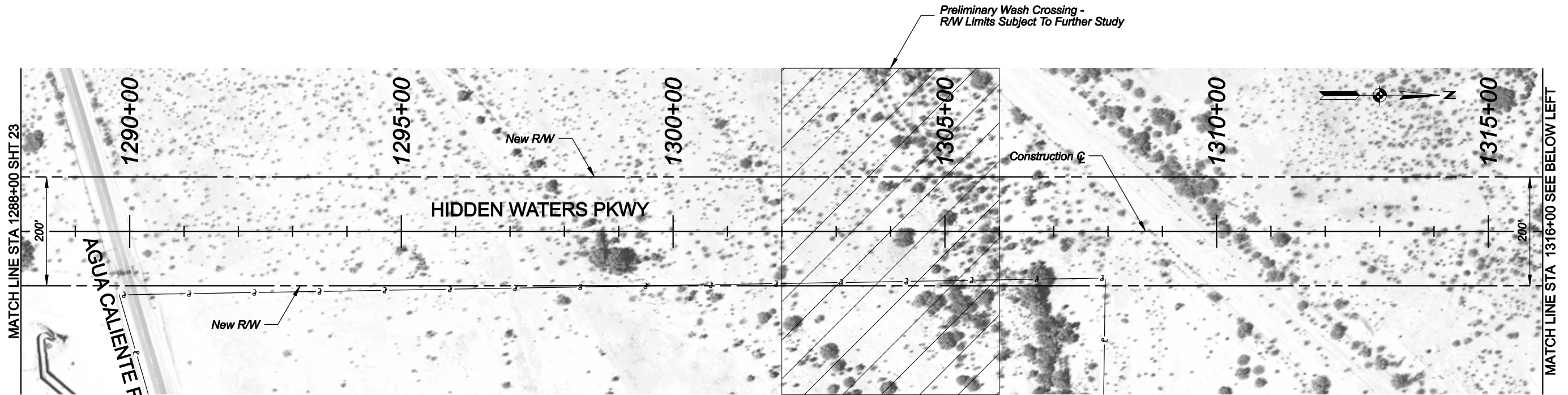
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

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CORRIDOR FEASIBILITY STUDY**
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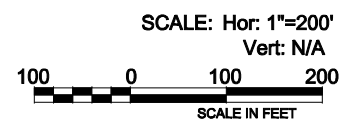
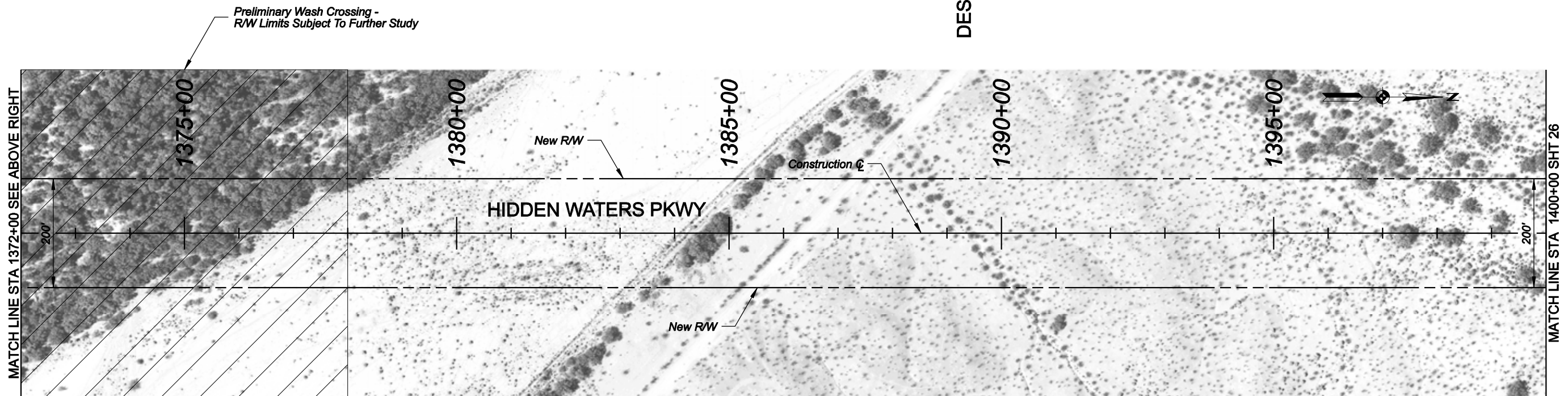
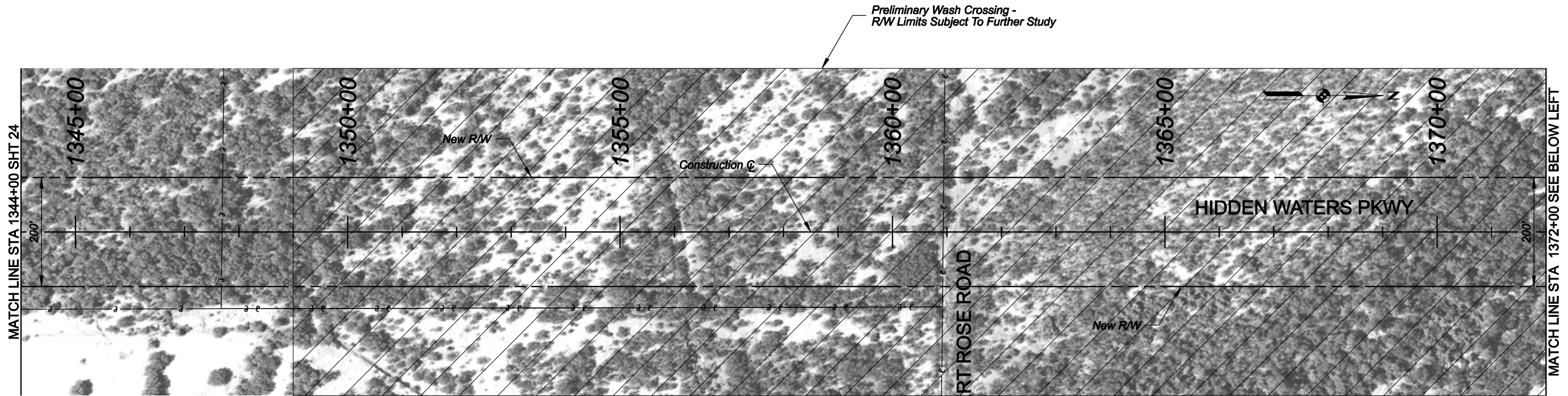
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

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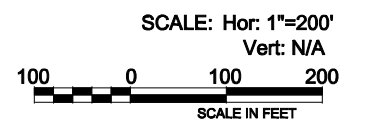
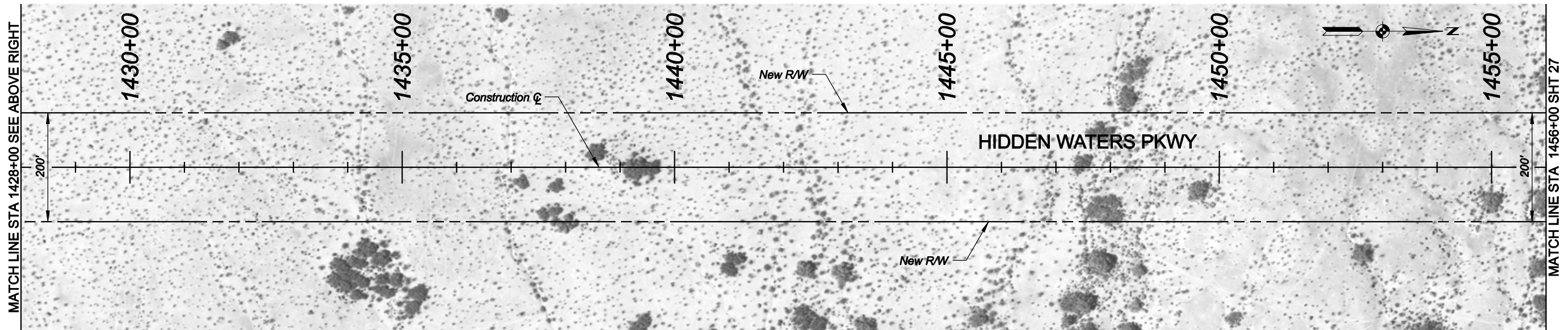
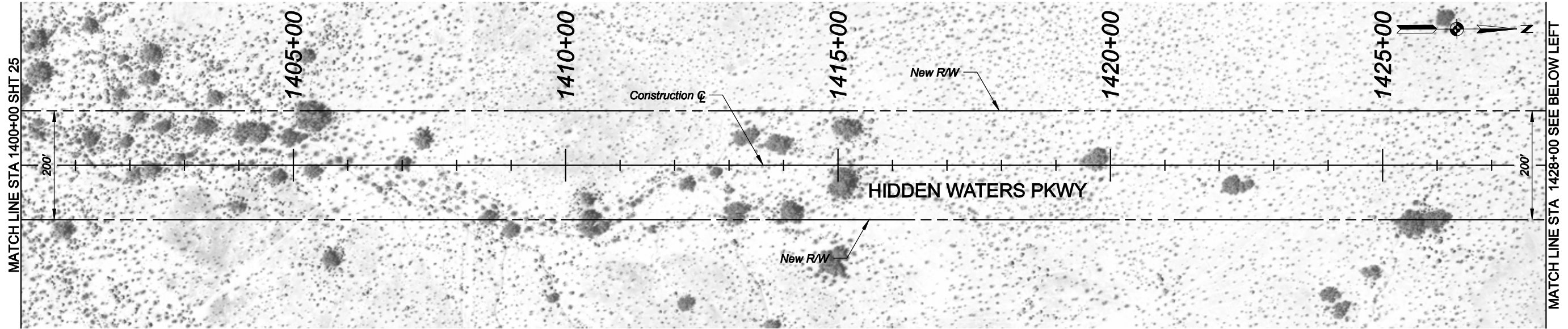
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CORRIDOR FEASIBILITY STUDY
MCDOT PROJECT NO. TT005

RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR

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MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY
MCDOT PROJECT NO. TT005

RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR

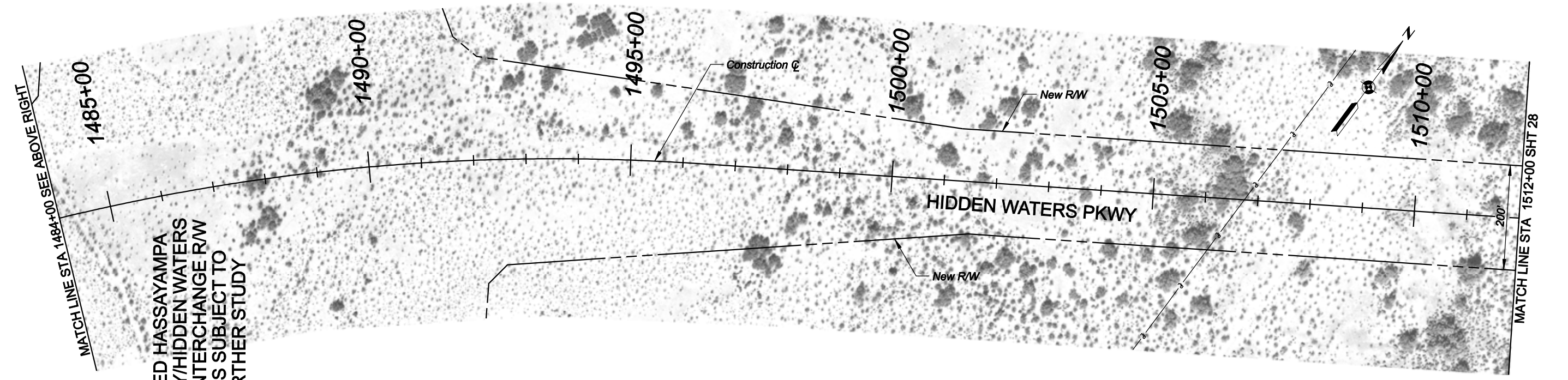
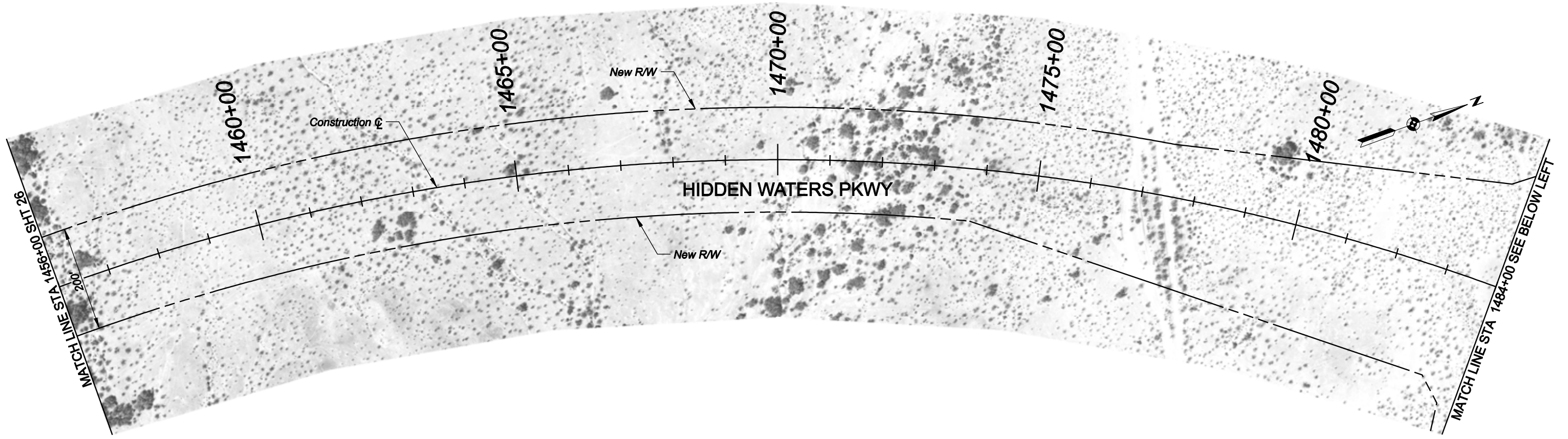
SHEET 26 OF 37



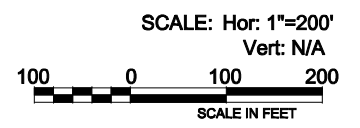
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PLANNED HASSAYAMPA
 FREEWAY/HIDDEN WATERS
 PKWY INTERCHANGE R/W
 LIMITS SUBJECT TO
 FURTHER STUDY



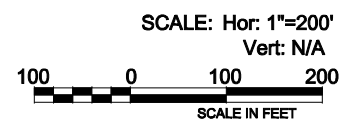
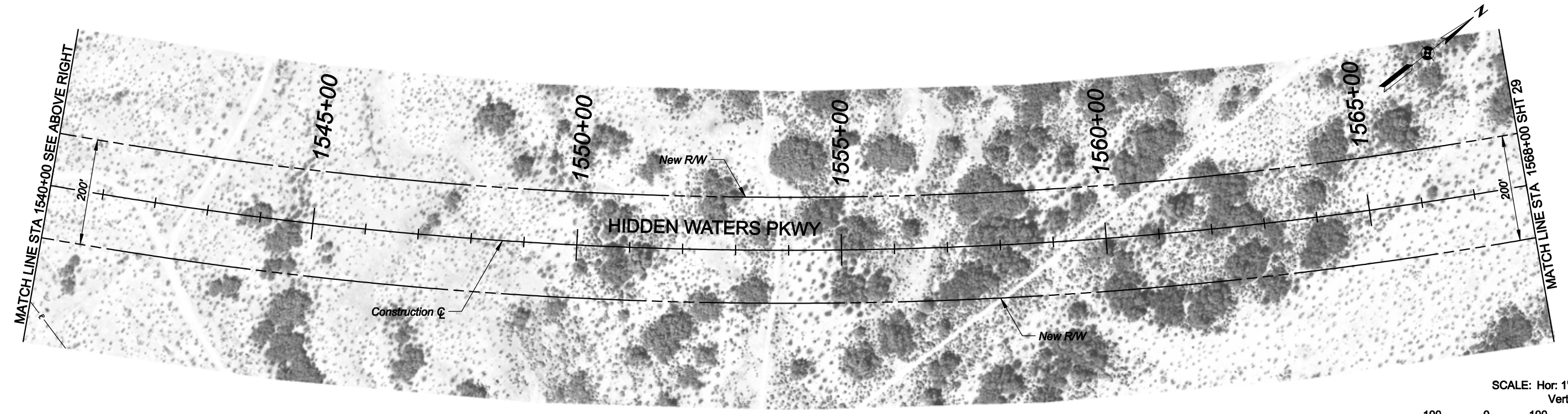
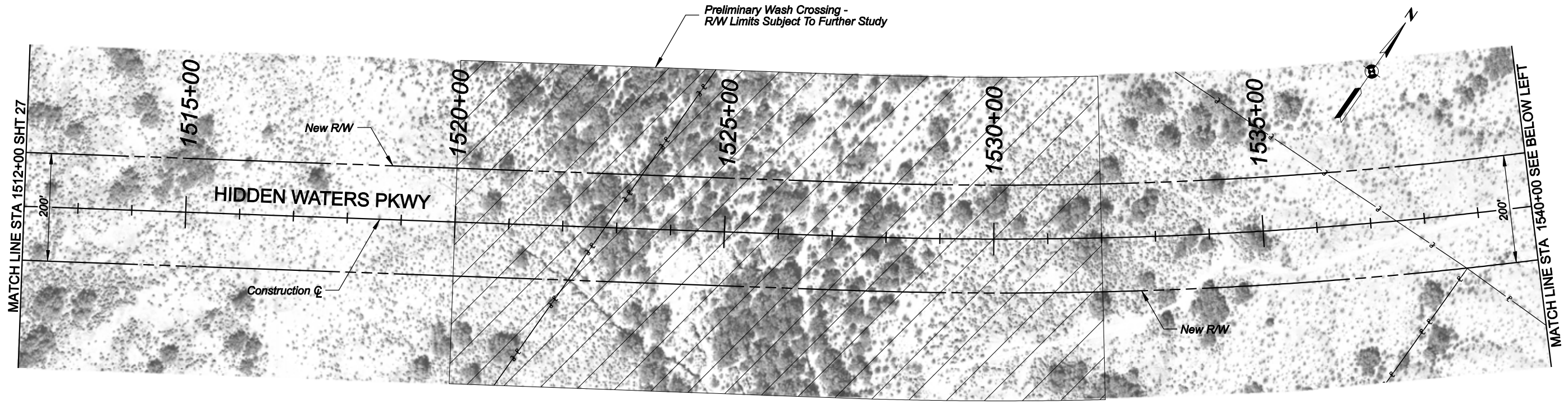
MARICOPA COUNTY
 DEPARTMENT OF TRANSPORTATION

HIDDEN WATERS PARKWAY
 CORRIDOR FEASIBILITY STUDY
 MCDOT PROJECT NO. TT005

RECOMMENDED FUTURE
 RIGHT-OF-WAY CORRIDOR

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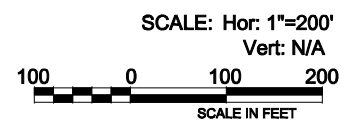
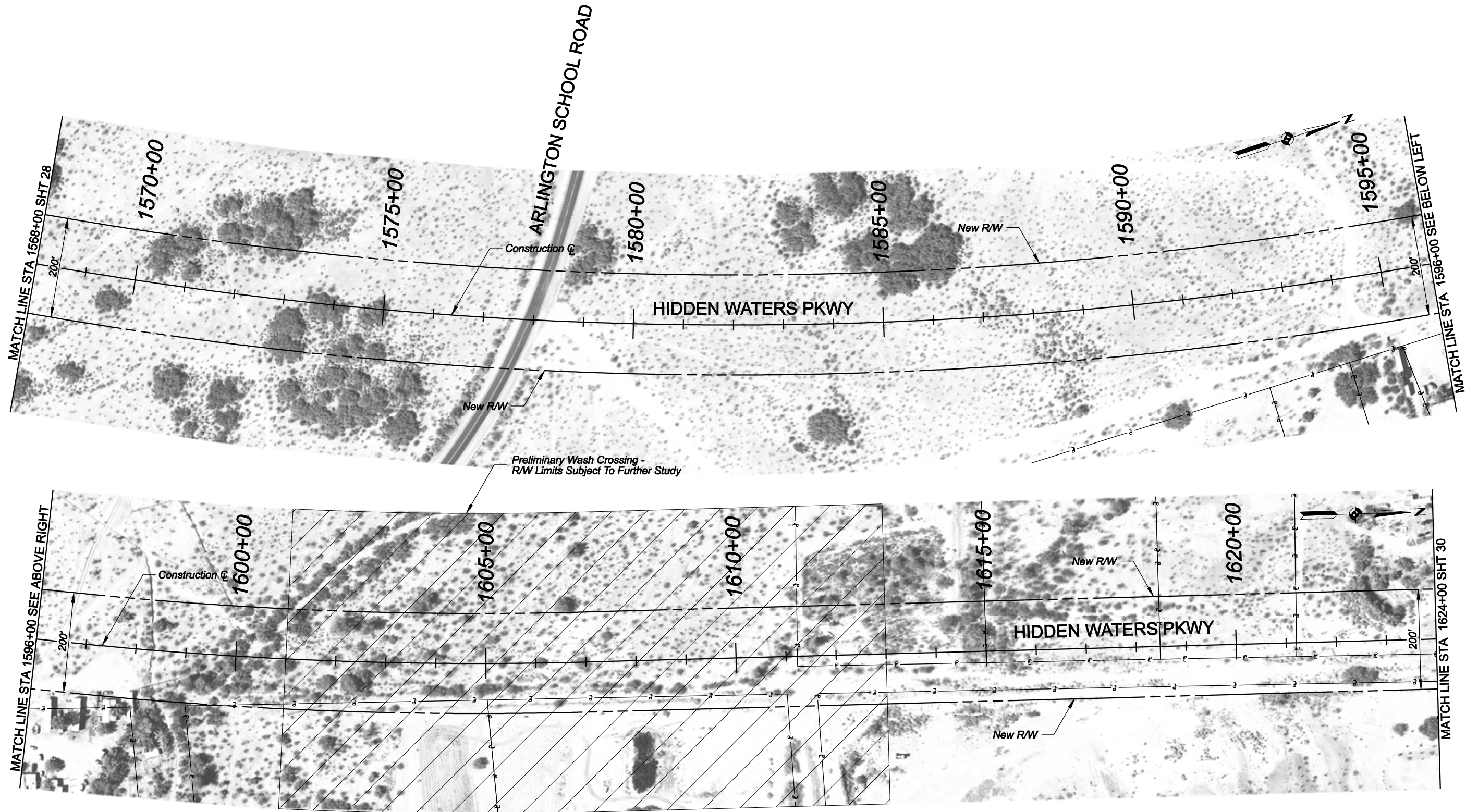
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY
MCDOT PROJECT NO. TT005

RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR

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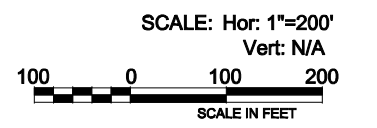
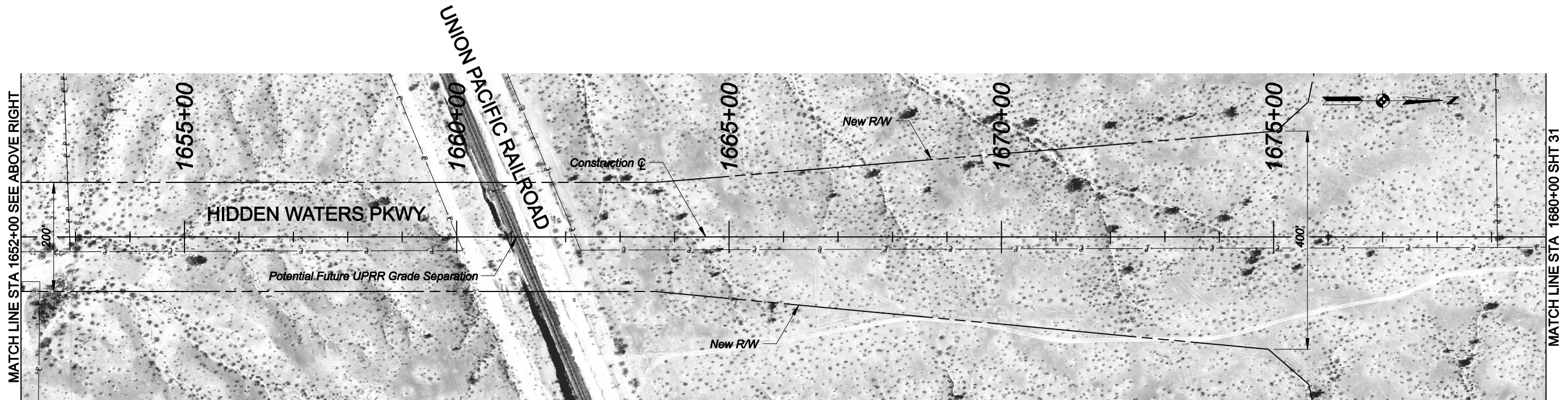
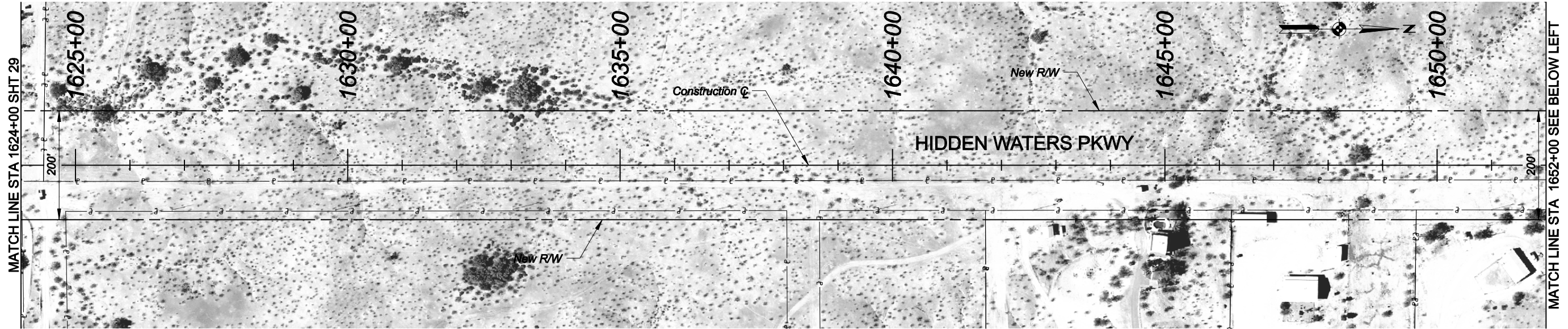
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY
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RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR

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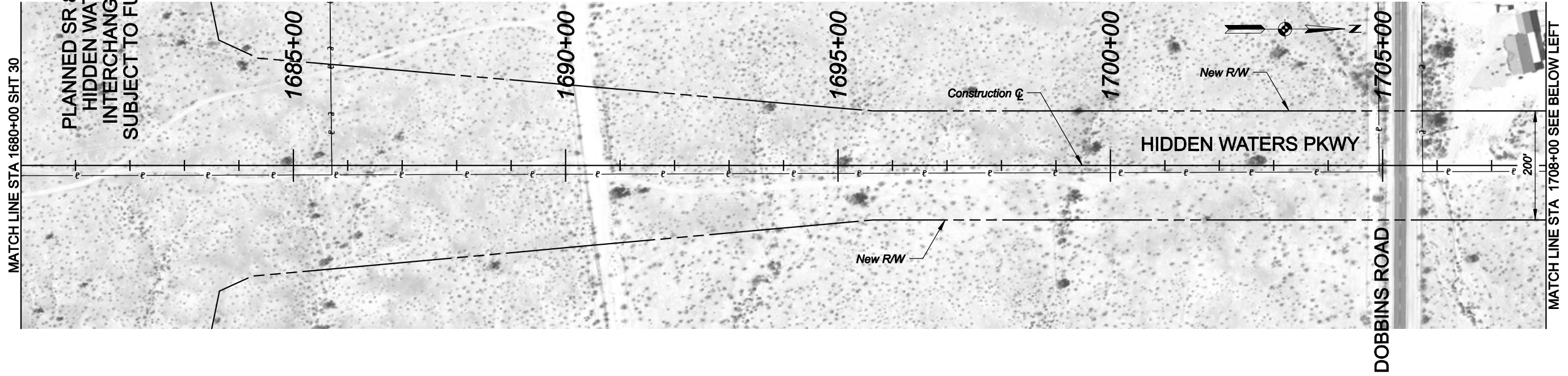
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY
MCDOT PROJECT NO. TT005

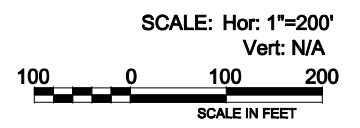
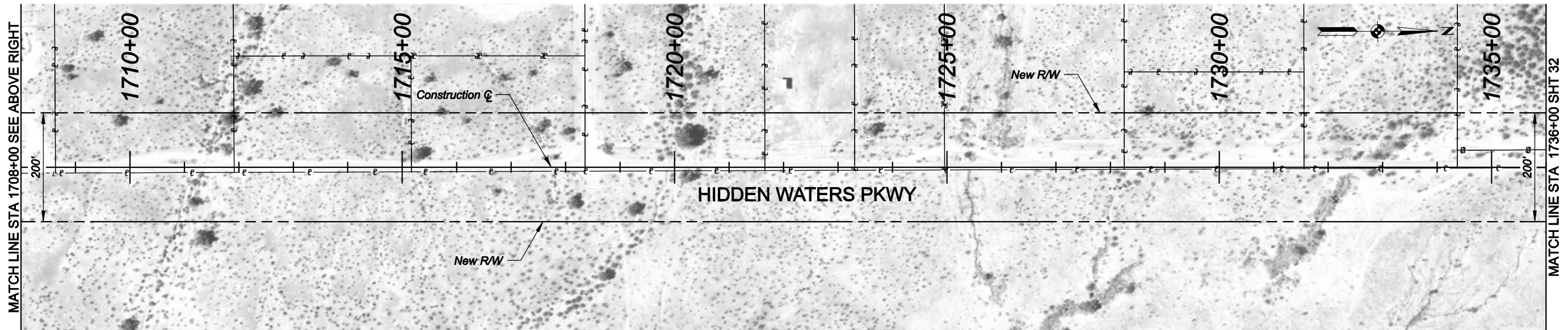
RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR

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PLANNED SR 801 FREEWAY/
HIDDEN WATERS PKWY
INTERCHANGE RW LIMITS
SUBJECT TO FURTHER STUDY



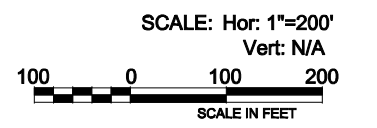
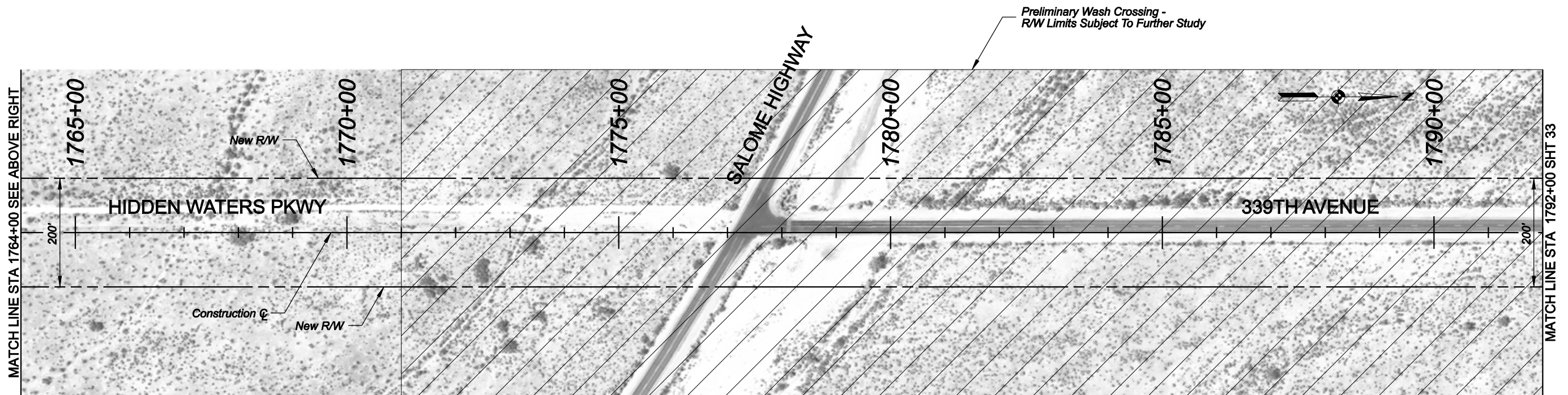
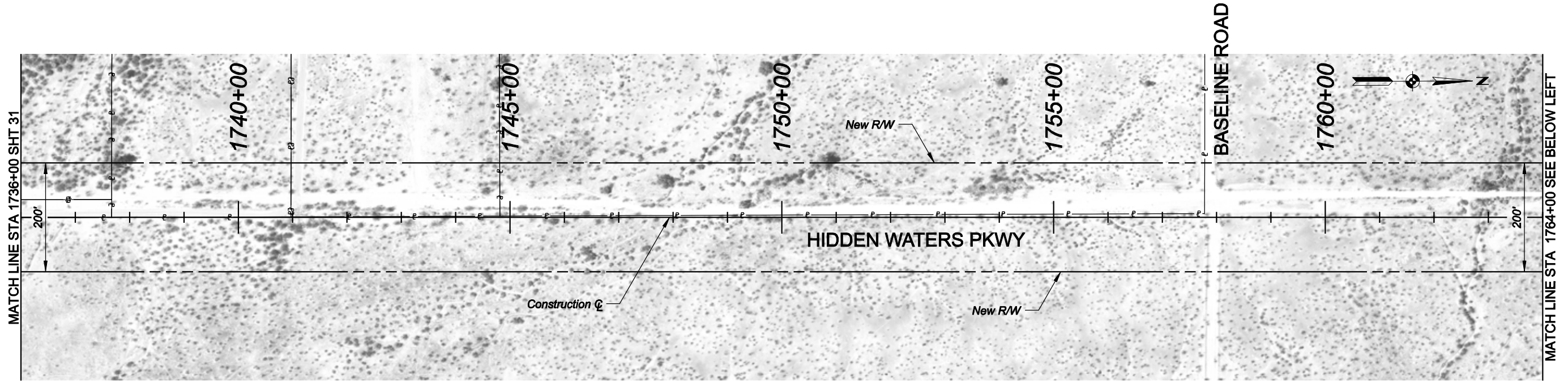
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY
MCDOT PROJECT NO. TT005

RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR

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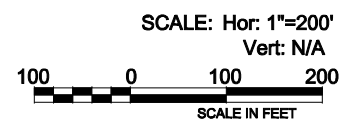
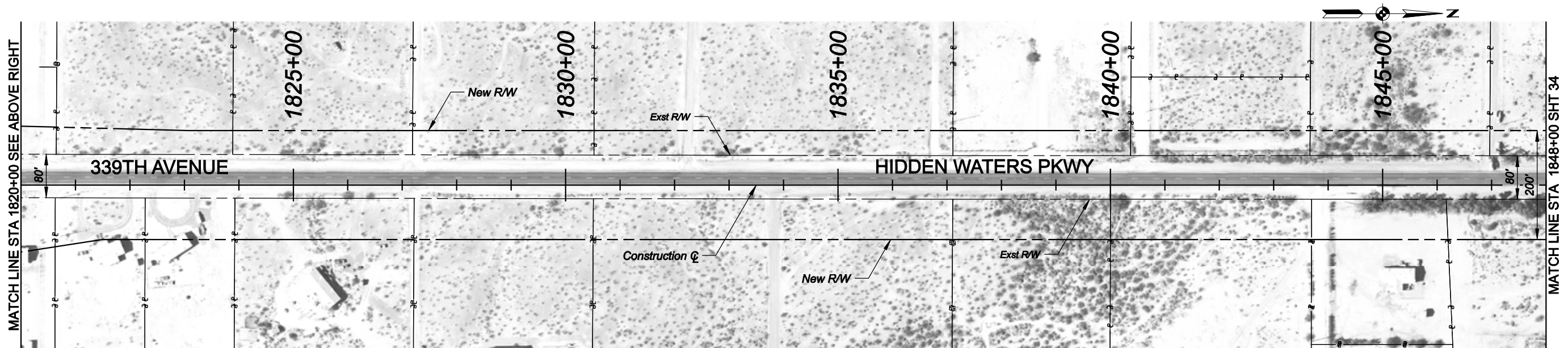
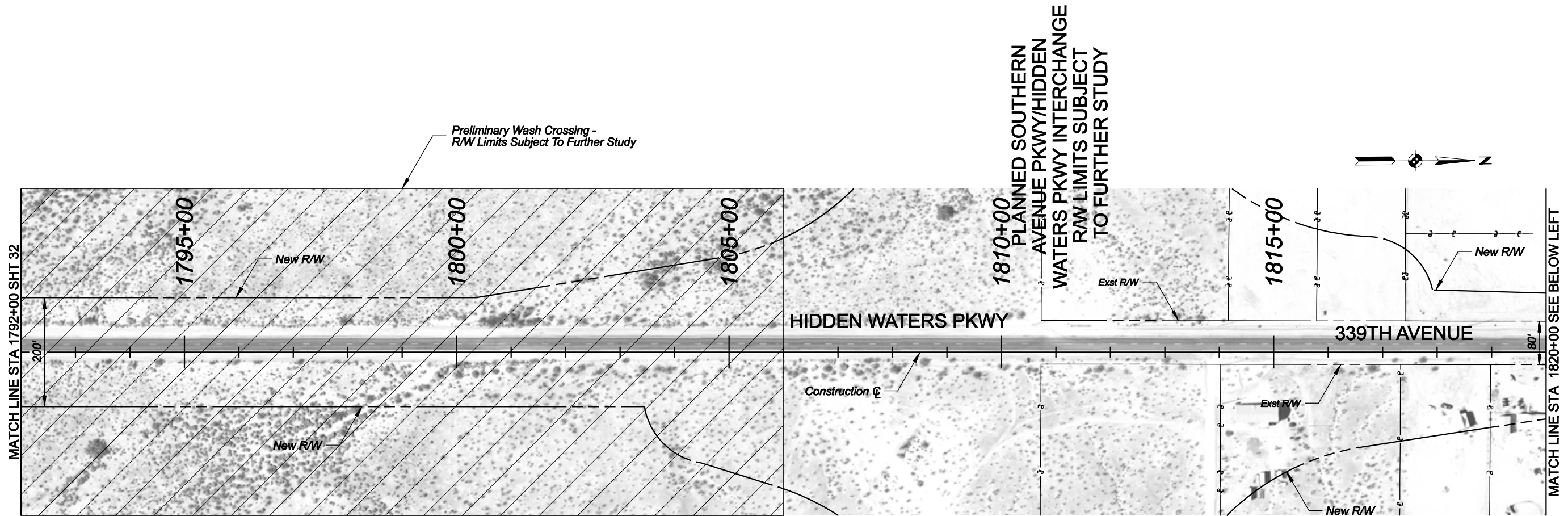
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY
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RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR

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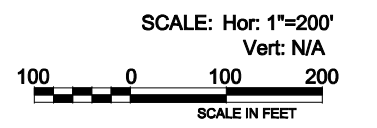
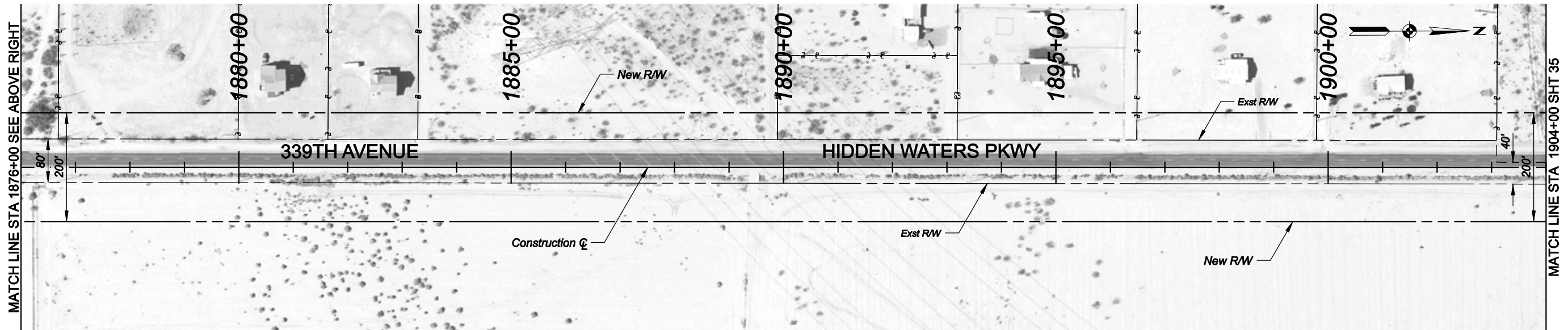
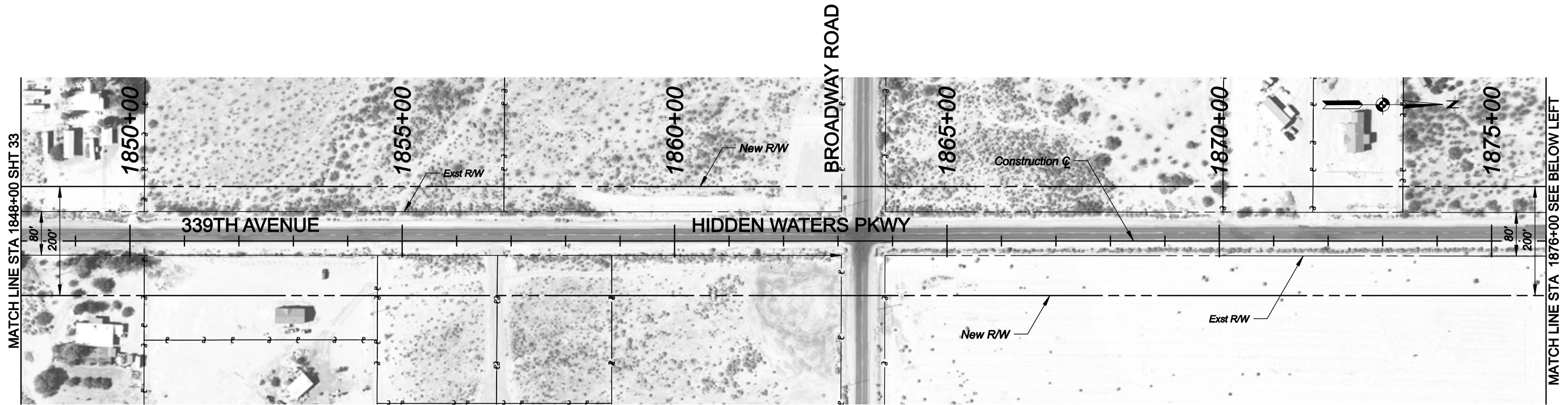
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

**HIDDEN WATERS PARKWAY
CORRIDOR FEASIBILITY STUDY**
MCDOT PROJECT NO. TT005

RECOMMENDED FUTURE
RIGHT-OF-WAY CORRIDOR

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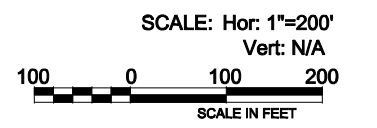
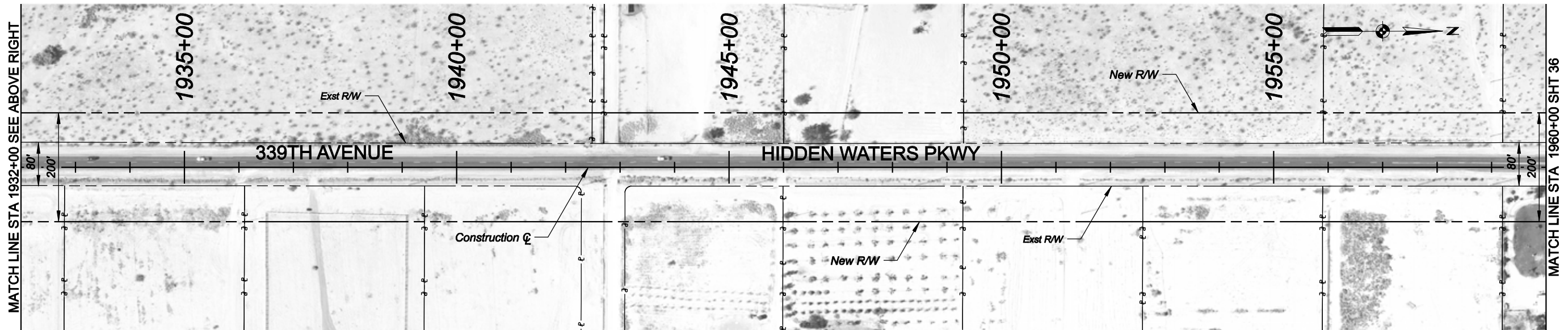
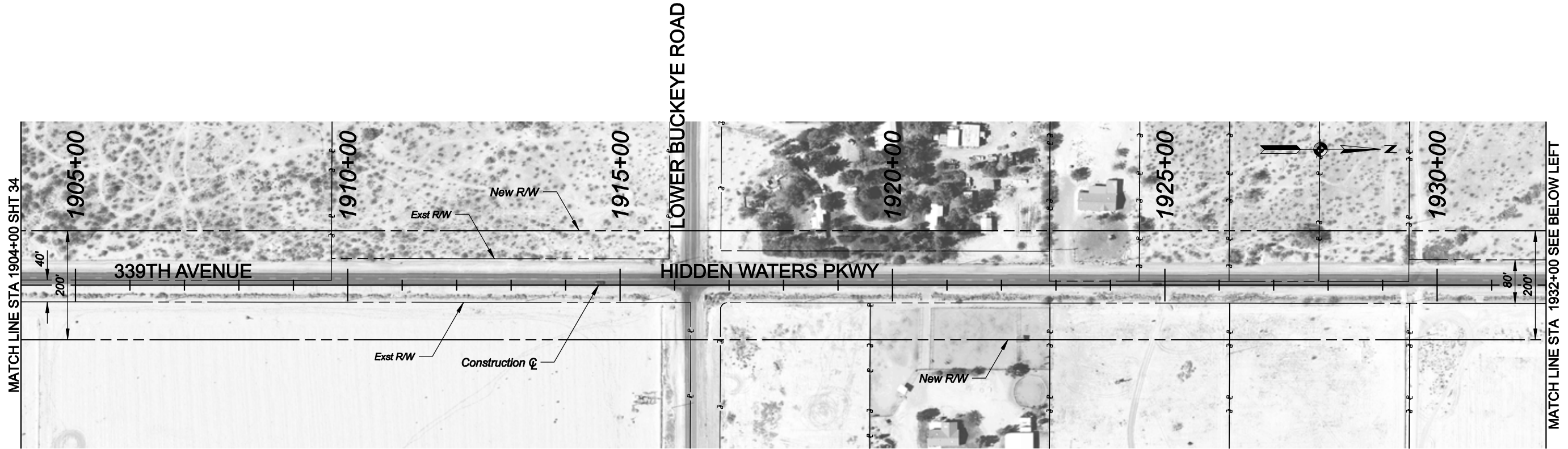
MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION

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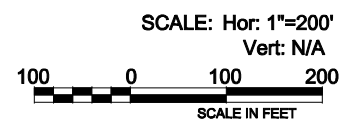
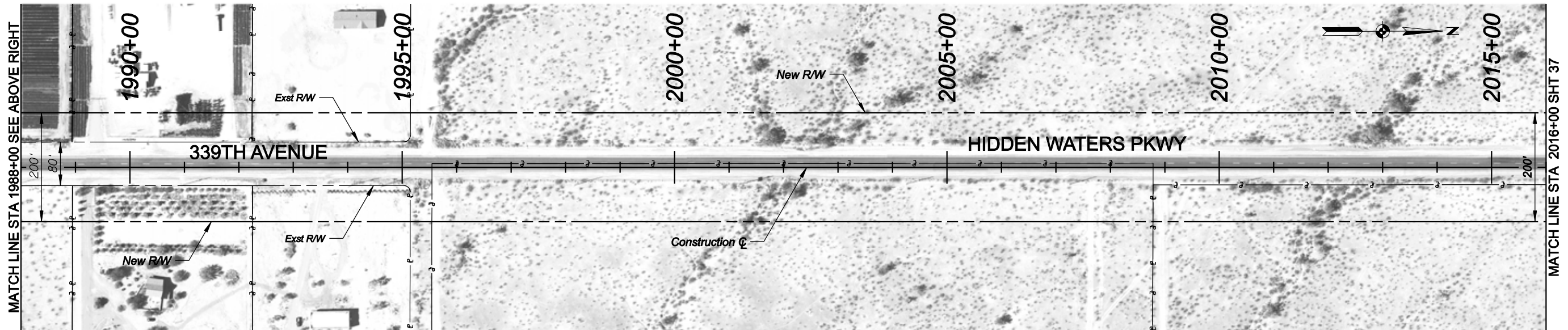
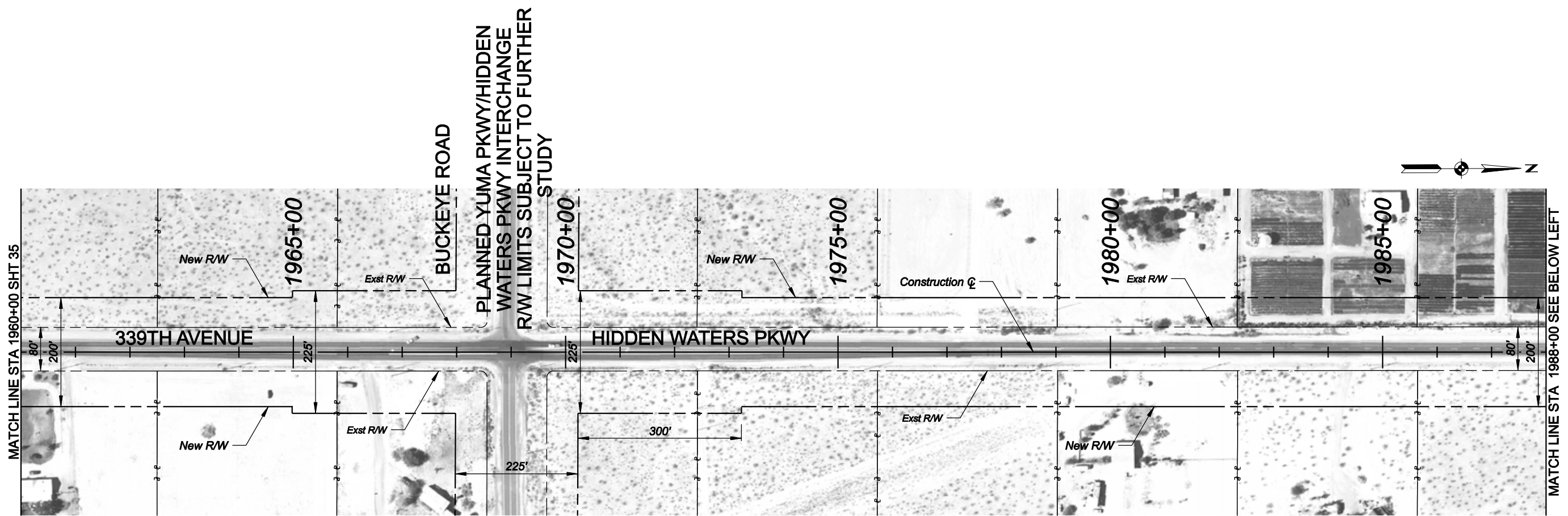
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CORRIDOR FEASIBILITY STUDY
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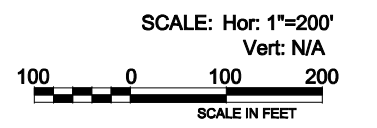
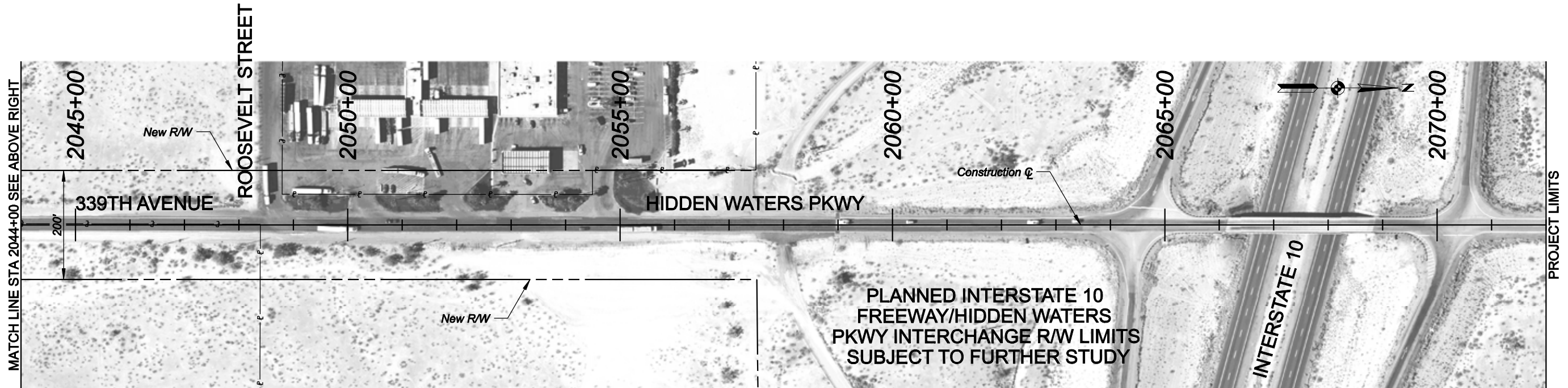
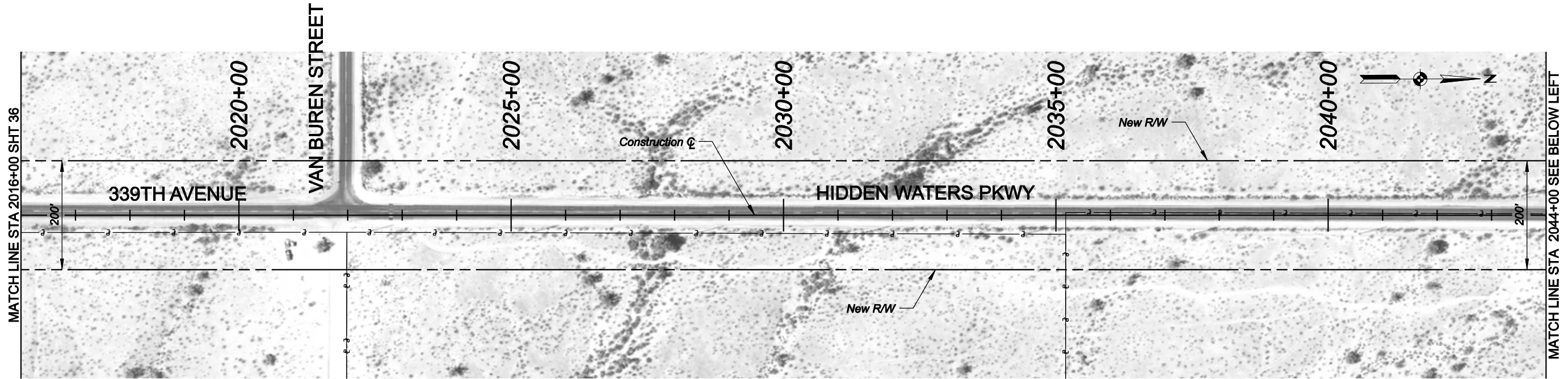
MARICOPA COUNTY
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