

Initial Utility Report

Sunset Road Interstate 10 to River Road

Prepared for:



Submitted by:



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PCDOT Project No. 4SRRIV
CONSOR Project No. 2019-023
AECOM Project No. 60616874



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I. Introduction

Pima County Project 4SRRIV, Sunset Road: Interstate 10 (I-10) to River Road is a roadway improvement project that includes widening existing Sunset Road, raising Sunset Road to traverse over I-10 and the Union Pacific Railroad (UPRR) and the extension of Sunset Road to the north over the Rillito River to connect with River Road.

This project is located in northwest Tucson in eastern Pima County, within Sections 17 and 18 of Township 13 South, Range 13 East. The project lies within the jurisdictions of both unincorporated Pima County and the City of Tucson. Figures 1-1 and 1-2 show the project location and vicinity.

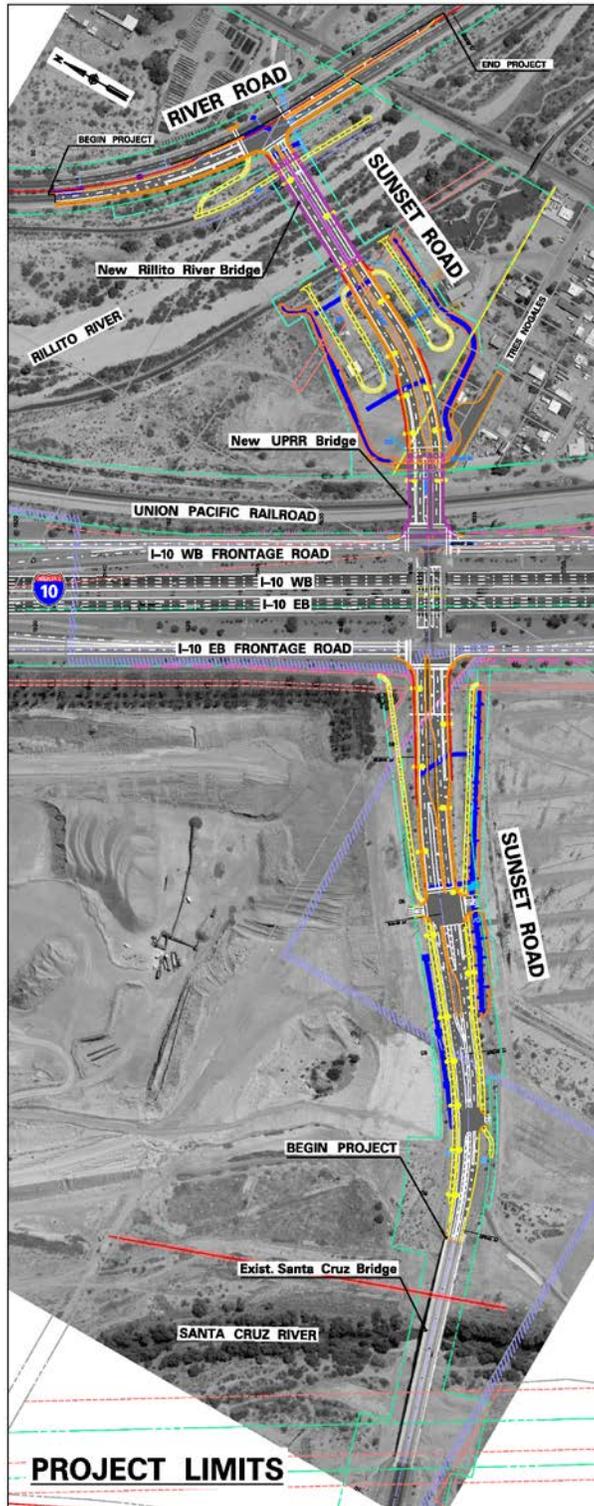
The purpose of this project is to improve traffic operations and increase mobility in eastern Pima County by extending Sunset Road to connect with River Road. This will include Sunset Road traversing over I-10, the UPRR and the Rillito River with new bridges.

This report has been developed to provide the participating public agencies, including ADOT, Pima County and the City of Tucson with pertinent information related to utilities within the project corridor. This information includes project background, a summary of utilities occupying the project corridor, utility contacts, prior rights status, and a summary of the conflict and mitigation evaluation.

Figure 1-1. Project Location in Pima County



Figure 1-2. Project Vicinity



II. Project Description and Background

The proposed Segment II project would reconstruct Sunset Road from the Santa Cruz River Bridge, built as a part of the Segment I improvements completed in 2017, to the I-10 Eastbound Frontage Road (EBFR) as a four-lane roadway with raised medians. The improvements within ADOT right-of-way would be completed as a separate ADOT project by others. A new four-lane divided section of Sunset Road would continue north of the ADOT right-of-way from the I-10 Westbound Frontage Road (WBFR) with a new two-span steel girder bridge (approximately 255 feet in length) to be built over the UPRR and a concrete girder bridge (approximately 390 feet in length) built over the Rillito River. Sunset Road would connect with River Road to create a new signalized T-intersection at current grade. The project also includes drainage improvements and bike/pedestrian accommodations.

In 2006, Pima County voters approved a county-wide sales tax to fund a 20-year program of transportation improvements to be administered by the RTA. These projects include the elimination of existing at-grade crossings of the UPRR mainline tracks which are adjacent to I-10. One of these projects included extending Sunset Road over the UPRR to River Road which the RTA and local jurisdictions recognize will be necessary. The proposed improvements shown for I-10 meet the long-range planning objectives of ADOT, the City of Tucson, Pima County, Pima Association of Governments and the RTA.

The Sunset Road improvements will follow the ADOT improvements of the Ina Road Traffic Interchange (TI) which has been completed and the Ruthrauff Road TI improvements currently under construction.

III. Utility Summary

Utility mapping was utilized from ADOT’s I-10: Ina Road TI to Ruthrauff Road TI Design Concept Report and Stage II (30%) Plans (Project No. 010 PM 247 H7583 01L), ADOT’s I-10/Ruthrauff Road TI Improvements Project (Project No. 010 PM 252 H8480 01C) and PCDOT’s Sunset Road - Silverbell Road to I-10 project (Project No. 4RTSUN) to identify existing utilities within the project limits. All utility companies with facilities within the project limits were sent a preliminary notification for this project to provide their latest facility maps, prior rights documentation and any plans for betterments or expansions of facilities.

During the planning stage, each utility company will receive and can review the preliminary plans for this project. Utility conflicts will be resolved with cooperation from the affected company. Construction plans for the relocation or adjustments of the utilities will be resolved by the responsible parties.

A subsurface utility engineering (SUE) investigation, including potholing is recommended between the 30% and 60% final design phases to verify locations of all utilities and initiate relocation designs if necessary.

COMPANY	FACILITY TYPE
American Telephone & Telegraph (AT&T)	Underground Fiber Optics
Arizona Department of Transportation (ADOT)	Freeway Management System (FMS), Signals, Lighting, Power and Irrigation
CenturyLink Local (CLN)	Underground Copper Cables and Fiber Optics
CenturyLink National (CLN Nat)	Long-haul Fiber Optic System
Kinder Morgan (KM)	Petroleum Lines
Metro Water (MW)	Water Lines
Pima County Regional Wastewater and Reclamation Department (PCRWRD)	Sewer Lines
Pima County Information Technology (IT) (SCADA)	Sewer Monitoring System
Pima County	Intelligent Transportation Systems (ITS), Irrigation
Southwest Gas (SWG)	High Pressure and Distribution Gas Lines
Sprint	Long-haul Fiber Optic System
Tucson Electric Power (TEP)	Local and Transmission Electric Systems (Underground and Overhead)
Tucson Water (TW)	Water Lines
Verizon (MCI)	Long-haul Fiber Optic System
Union Pacific Railroad (UPRR)	Railroad, Power and Communication Systems

Telecommunications

Multiple telecommunication companies have been identified within the project limits that run along both of the ADOT frontage roads, within UPRR right-of-way, and along River Road.

ADOT FMS - Has their FMS systems running along both the EB and WB Frontage roads. The WBFR system will conflict with the UPRR bridge abutment construction. Coordination will be necessary with ADOT Traffic Division to re-establish this system within ADOT right-of-way to their requirements. The EBFR FMS system will require re-establishment as a part of the ADOT interchange improvements.

AT&T - Has an underground fiber optic system that runs along the south side (eastbound side) of River Road and will cross the proposed Sunset Road/River Road T-intersection. There may be potential conflicts with the new signal system at the intersection.

CenturyLink Local (CLN) - Has multiple facilities within the project limits including copper cables and/or fiber optic facilities that run along the EBFR, the westbound (north) side of River Road and Tres Nogales Road. Facilities along the EBFR will be near construction with the raising of the Sunset Road and EBFR profiles. Facilities that run along River Road will be near the new Sunset Road/River Road signal system. CLN's facilities along Tres Nogales Road provides local service to residential properties and would require relocation.

A new industrial complex called the Sunset Innovation Campus is being planned for the southwest corner of Sunset Road and the EBFR. Communication service to this property will come from the CenturyLink facilities running along the EBFR. Sleeves will be installed with this project just south of the EBFR and at the industrial complex entrance for this future telecommunication service. See Exhibit D for future utility service locations.

CenturyLink National (CLN Nat) – Has long-haul fiber optic that runs parallel to the UPRR right-of-way north and south of the tracks. These lines are anticipated to not be in conflict since no bridge construction activities are anticipated to be within UPRR right-of-way.

Pima County IT – This communication system connects between wastewater treatment plants. Adjustments are anticipated to this system due to the grade change of Sunset Road. Adjustments include adjusting access points like handholes to final grade. Additional overburden on this system will be further evaluated during final design.

Pima County ITS – PCDOT installed ITS infrastructure on the north side of Sunset Road as part of the Segment I improvements. The ITS infrastructure north of the Santa Cruz River bridge will need to be reconstructed as part of this project due roadside grading impacts. The ITS infrastructure will be extended to connect with the new traffic signal system at the Sunset Road and River Road intersection.

Sprint – Has a long-haul fiber optic system that runs parallel and east of the UPRR tracks within UPRR right-of-way. These lines are not anticipated to be disturbed due to their location within UPRR right-of-way.

Verizon (MCI) – Has a long-haul fiber optic system that runs parallel and east of the UPRR tracks within UPRR right-of-way. These lines are not anticipated to be disturbed due to their location within UPRR right-of-way.

Electric (Power)

ADOT Power – Has multiple underground electrical facilities running along the frontage roads and at the existing Sunset Road intersection that powers the existing lighting at the intersection and the high mast lighting north and south of the interchange. These ADOT facilities will be re-established as a part of the TI improvements.

Tucson Electric Power (TEP) – Has multiple facilities running within the project limits including overhead and underground local distribution systems, underground feeder systems running along both ADOT frontage roads, and a 138-kV overhead transmission system that runs within an easement through the Rillito River.

The local distribution and underground systems, will require relocation due to the widening and drainage improvements of Sunset Road in some locations. The underground portion of this system just north of the Santa Cruz River will require relocation. The overhead portion of this system is anticipated to remain in-place. Where the overhead transitions to underground to connect to the EBFR feeder system should remain in place; however, a small retaining wall is proposed to be constructed around the pole near Station 95+15 (Left) to prevent the new fill slope from encroaching onto the pole. The guy wire would need to be adjusted to grade for the new fill limits. The final designer will need to coordinate this retaining wall placement with TEP. In accordance with an agreement between Pima County and TEP (Contract Number CT-PW-18*121), Pima County will be responsible for these relocation costs. See Exhibit E for the agreement.

The overhead distribution system at the end of Tres Nogales Road will require relocation due to the proposed cul-de-sac.

The feeder systems along the frontage roads will require relocation due to the re-profiling of Sunset Road, frontage road improvements, and the proposed UPRR Bridge. The feeder systems running along both frontage roads will be the responsibility of TEP for relocation costs.

The transmission system is anticipated to not be in conflict with the Sunset Road extension based on survey data taken on the conductors and coordination with TEP. Construction activities will be near this system which will need to be protected-in-place. See Exhibit I for the approximate clearances to the system.

Maintenance for this transmission system has been coordinated with TEP for two poles north of the Sunset Road extension. An extra span has been added to the UPRR bridge to provide maintenance access to this area. The Segment II improvements will include a graded roadway within a new utility easement to provide access to these poles. TEP has accepted these access accommodations to maintain its system.

Future service to a planned Sunset Innovation Campus on the southwest corner of Sunset Road and the EBFR has been discussed with TEP. The service to this development will come from the existing system that runs adjacent to the north right-of-way line of Sunset Road between the Santa Cruz River Bridge and EBFR. Three sleeves will be installed across Sunset Road to accommodate service to the property. See Exhibit D for future utility services within the project limits.

Irrigation

ADOT – Operates an irrigation system along the I-10 mainline and both frontage roads. These facilities will be re-established as a part of the TI improvements.

Pima County – Flood Control District operates a 6” irrigation line that runs along the south side of the EBFR to service the pecan orchard just north of the project limits. The service comes from a well to the south of the project limits near Curtis Road. This line was repaired and sleeved during the Segment I portion of the Sunset Road improvements. Due to the profile raising of Sunset Road, additional overburden will be placed on this line requiring a settlement analysis during the final design phase of the project. This line is to remain in service after the Segment II improvements are completed.

Natural Gas

SWG - Has local residential services that run along Tres Nogales Road and East Sunset Road north of I-10. These 2" facilities services residents and the Pima County Parks and Recreation (PCPR) facility. Facilities that service the residential property being acquired and the PCPR being relocated will be either abandoned in place or removed as needed.

SWG plans to service the new industrial complex by extending its distribution main that runs along the EBFR from south of the project to the north. Depending on the needs of the development, this main may need to be upgraded to a larger facility. See Exhibit D for future utility services within the project limits.

Petroleum

Kinder Morgan - Has petroleum lines running within the UPRR right-of-way. These include one active 12" line and an abandoned 12" line south of the tracks, and an abandoned 6" line north of the tracks. These lines are not anticipated to be disturbed due to their location within UPRR right-of-way.

Sewer

PCRWRD - Has multiple facilities within the project limits including an interconnect sewer system (HOBAS fiberglass pipe, SM46 stiffness) that varies in size from 60" to 72" and runs parallel to and south of the EBFR. This line will be underneath an additional 23' of overburden due to the raising of Sunset Road over the interstate. See Exhibit F for manufacturer information on the pipe and an overburden exhibit showing the pipe profile in relation to the proposed roadway improvements.

Per the manufacturer's specifications shown in Exhibit F, the maximum overburden on this type of pipe is 30'. The Sunset DCR profile will exceed this overburden limit at approximately 32' which cannot be lowered to meet the vertical clearances over the I-10 mainline and UPRR. PCRWRD have provided a review to the DCR design as provided in Exhibit G. Per the review, PCRWRD has requested a settlement analysis be completed for adverse impacts to the pipe, including impacts to the joints, ring deflection and loading as specified by the HOBAS. This analysis should be completed during the final design phase of the project as required.

To address the HOBAS pipe settlement issue, the project has proposed an ADOT Std 16' x 14' structural equipment pass as a mitigation measure to decrease the overburden on the pipe by 15' due to the height of the box culvert and to protect the sewer line. Access to the sewer line will also be maintained with the equipment pass including the manhole just east of Sunset Road.

A 8" sludge force main that runs along the south side of the EBFR will require a settlement analysis during final design due to the overburden increase on the pipe. The rodding station east of Sunset Road would be protected in place and access maintained. See Exhibit F for the overburden exhibit showing the pipe profile in relation to the proposed roadway improvements. This condition will be further evaluated during final design.

Local sewer services along Tres Nogales Road and East Sunset Road that connect to the 24" sewer main running along Camino de la Tierra should not be disturbed as a part of this project.

Future sewer service to the planned Sunset Innovation Campus has been coordinated with PCRWRD. This service will connect to the existing interconnect system along the EBFR. See Exhibit D for location of service.

Water

Tucson Water (TW) – Has services to properties along Tres Nogales Road and East Sunset Road from a main that runs along Camino De La Tierra. Minor adjustments to facilities may be necessary near the proposed roadway improvements.

Plans to extend future water service to the proposed industrial complex is ongoing with the project team. It is anticipated that the future water service will be obtained from the extension of a water main just north of Ruthrauff Road that will run along the WBFR and then cross the I-10 mainline just east of the Sunset Road improvements. It will cross under Sunset Road and then continue south adjacent to the west right-of-way line of Sunset Road to connect to the existing water main running along Silverbell Road. Two sleeves are being proposed, one just south of the EBFR and another near the industrial complex entrance for this future water service. A 30" steel casing is proposed across I-10 to expand the water service from north of I-10 to the south. See future utility service exhibits shown in Exhibit D.

Metro Water (MW) – MW has a non-potable irrigation line (reclaim water line) and potable facilities that runs along the eastbound side of River Road and the northbound side of Camino De La Tierra to a stub out just to the south of the Rillito River. MW has an agreement with Pima County to maintain the irrigation line that services the Pima County Natural Resources Parks and Recreation athletic fields on the north side of River Road. Minor adjustments of valves boxes to the new roadway finished grade are anticipated.

Prior Rights

Prior rights documentation has been requested from the utility companies and to date no documentation has been provided, with the exception of TEP. TEP and Pima County have an

agreement (Contract Number CT-PW-18*121, effective date 11/21/2017) with a 10-year indemnification clause that requires Pima County to pay for any relocation costs for TEP's facilities along the west side of Sunset Road up to the EBFR. See Appendix E for the agreement.

UPRR

A new bridge structure will be required to span over the UPRR. This will be a new crossing and will require a considerable amount of coordination with UPRR. The entire coordination process can take up to a year or longer. Coordination efforts between Pima County and UPRR are underway. See Exhibit H for the Arizona Corporation Commission (ACC) railroad coordination flowchart.

UPRR power and communication systems that run within UPRR right-of-way should not be disturbed as a part of the project improvements.

Following are the major milestones that need to be accomplished as well as their durations as the project progresses:

- During final design, both the Stage III (60%) and Stage IV (95%) project plans shall be reviewed and approved by UPRR and each approval can take up to sixty (60) days.
- Right-of-way appraisals are needed for the proposed aerial easement and any required temporary construction easements (TCE). An exhibit of the proposed aerial easement was prepared showing a width of 100' on each side of the new UPRR bridge for a total width of 200' within the UPRR right-of-way. Temporary construction easements will be needed from UPRR to construct the south abutment, girder erection and pier. The railroad requires forty-five (45) days for the appraisals. Additionally, review and approval by the agency (either Pima County and/or ADOT) will require an additional forty-five (45) days.
- A Construction and Maintenance agreement will be required which will take three to six (3-6) months for UPRR to approve.
- A hearing will be required with the ACC to approve the new bridge crossing of the railroad. A timeline of five to six (5-6) months is required for the ACC railroad crossing approval process. This process is outlined in the ACC Railroad Crossing Approval Process flowchart included in Exhibit H.
- The Contractor will need to apply for an at-grade crossing agreement with UPRR to cross the tracks during construction. It will take about three (3) months for the agreement to be issued.

Estimated Utility Costs

Costs have been developed for expanding utility services to the new industrial complex called the Sunset Innovation Campus. These approximate costs are included in Exhibit J. Approximate cost breakdowns include expanding water services across I-10 to the west, and gas, telecom and sewer services from existing facilities that runs along the EBFR.

Additional miscellaneous utility costs have also been developed for utilities that may potentially be impacted due to the project improvements. These include costs for re-establishing the irrigation line that services the pecan orchards, the sewer force main that runs along the EBFR and the SCADA communication system that runs within the same corridor as the force main. Further evaluation will be required during final design for these facilities due to the additional overburden. If it is determined that these three utilities will require relocation or mitigation, these costs would be the responsibility of Pima County. See Exhibit K for these approximate costs and location exhibit.

Utility sleeves had been included in the project design to accommodate future utility services to the new development. These include sleeves for future power, water and telecom services. Approximate costs have been included in Exhibit J. Location of these proposed sleeves are shown in Exhibit D.

EXHIBIT A
Utility and Agency Contact List
Pima County Project No. 4SRRIV

Project Name: Sunset Rd. / Interstate 10 to River Road

ORGANIZATION	CONTACT	CONTACT INFORMATION	MAILING ADDRESS
PCDOT Project Management	Steve Wilson	(520) 724-5912 Primary stephen.wilson@pima.gov	201 N. Stone Ave. 4th Floor Tucson AZ, 85701
City of Tucson Project Management	Austin Wesnitzer	(520) 837-6614 Primary austin.wesnitzer@tucsonaz.gov	201 N. Stone Ave. 5th Floor Tucson AZ, 85701
ADOT URR Utility Coordinator	Priscilla Thompson	(520) 221-0783 Primary pthompson@azdot.gov	1221 S. 2nd Ave. Tucson AZ, 85713
Conzor Project Management	Jim Glock	(520) 320-0156 Primary jglock@structuralgrace.com	1430 E. Fort Lowell Rd. Suite 200 Tucson AZ
AECOM Project Management	Matt Kershner	(520) 407-2856 Primary matthew.kershner@aecom.com	333 E. Wetmore Rd. Suite 400 Tucson AZ, 85705
AECOM Utility Coordination	Tom Wolf	(520) 407-2828 Primary thomas.wolf@aecom.com	333 E. Wetmore Rd. Suite 400 Tucson AZ, 85705
AT&T (Telecom)	Joe Forkert	(714) 963-7964 Primary joef@forkertengineering.com	22311 Brookhurst St. Suite 203 Huntington Beach CA, 92646
CenturyLink (Long Haul FO)	Jordan Adams	(918) 547-0817 Primary jordan.adams@centurylink.com	100 S. Cincinnati Ave. Suite 1200 Tulsa OK, 74103
CenturyLink (Telecom)	Wendell Nelson	(520) 838-3050 Primary Wendell.Nelson@centurylink.com	333 E. Wetmore Rd. Suite 300 Tucson AZ, 85705
CenturyLink (Telecom) (TerraTech)	Kevin Wagner	(815) 245-9640 Primary kwagner@terratechllc.net	NA
Kinder Morgan	Joshua Amador (Design)	(713) 420-3221 Primary Joshua_Amador@kindermorgan.com	NA
Kinder Morgan	Brice Box (Right of Way-Blue Stake)	NA Primary Box_Brice@kindermorgan.com	NA
Verizon	Ray Moreno	(520) 279-1937 Primary ray.moreno@verizon.com	4051 W. Costco Pl. Tucson AZ, 85741
Metro Water	Tim Dinkel	(520) 209-2817 Primary tdinkel@metrowater.com	PO Box 36870 Tucson AZ, 85740

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Utility and Agency Contact List
Pima County Project No. 4SRIV

Project Name: Sunset Rd. / Interstate 10 to River Road

ORGANIZATION	CONTACT	CONTACT INFORMATION	MAILING ADDRESS
PCDOT ITS	Michelle Montagnino	(520) 724-5895 Primary michelle.montagnino@pima.gov	1313 S. Mission Rd. Tucson AZ, 85701
Pima County IT	Chris Garcia	(520) 204-6681 Primary chris.garcia@pima.gov	NA
PCRWRD	Kent McRae	(520) 724-6372 Primary Kent.McRae@pima.gov	201 N. Stone Ave. Tucson AZ, 85701
Southwest Gas (G)	Hector Rivas Cabrera	(520) 794-6234 Primary Randy.Cheney@swgas.com	PO Box 26500 Tucson AZ, 85726
Sprint	David Jeter	(602) 430-3615 Primary david.jeter@sprint.com	NA
Tucson Electric Power (PI Manager)	Frank Mendez	(520) 745-3485 Primary FMendez@tep.com	PO Box 26500 Tucson AZ, 85726
Tucson Electric Power (OHE & UGE Distribution)	Jessica Marchbanks	(520) 917-8737 Primary jessicamarchbanks@tep.com	PO Box 711 Tucson AZ, 85702
Tucson Electric Power (OHE Transmission)	Kenny Varga	(520) 571-4149 Primary kvarga@tep.com	3901 E. Irvington Rd. Tucson AZ, 85714
Tucson Water	Jignesh Patel	(520) 837-2127 Primary Jignesh.Patel@tucsonaz.gov	310 W. Alameda St. Tucson AZ, 85701
Tucson Water	Tom Victory	(520) 837-2224 Primary tom.victory@tucsonaz.gov	310 W. Alameda St. Tucson AZ, 85701

EXHIBIT B
Existing Utilities Inventory
Pima County Project No. 4SRRIV
Project Name: Sunset Road: Interstate 10 to River Road

Alignment	FACILITY TYPE/SIZE	FACILITY OWNER	APPROX PROJECT STATION RANGE	REMARKS
Sunset	60" Sewer	PCRWRD	Sta 97+17.1, 132.3 Rt to 49.5 Rt to 711.3 Lt	Santa Cruz Interceptor
Sunset	72" Sewer	PCRWRD	Sta 97+10.9, 132.3 Rt to 937.4 Rt	Santa Cruz Interceptor
Sunset	8" Sewer	PCRWRD	Sta 97+48.4, 936.3 Rt to 712.7 Lt	Sludge Force Main
River	12" Sewer	PCRWRD	Sta 59+32.5, 434.0 Lt to Sta 65+08.5, 596.7 Rt	Camino De La Tierra
Sunset	12" Petroleum	UPRR	Sta 102+06.0, 937.6 Rt to 626.2 Lt	Abandoned
Sunset	12" Petroleum	Kinder Morgan	Sta 102+11.6, 939.4 Rt to 623.1 Lt	
Sunset	6" Petroleum	UPRR	Sta 103+81.7, 937.0 Rt 627.7 Lt	Abandoned
Sunset	2" PE	SWG	Sta 104+91.7, 97.5 Rt to Sta 108+67.6, 786.2 Rt	Local Service (Tres Nogales Rd)
Sunset	1" PE	SWG	Sta 108+73.9, 291.2 Rt to Sta 108+11.0, 615.9 Rt	Local Service (PC Parks & Rec)
Sunset	2" PE	SWG	Sta 104+87.4, 434.7 Rt to Sta 107+65.8, 920.3 Rt	Local Service (Sunset Rd)
River	4" PE	SWG	Sta 48+97.0, 55.0 Lt to Sta 60+26.7, 292.1 Lt	
Sunset	6" PVC	Tucson Water	Sta 104+58.8, 410.7 Rt to Sta 107+67.1, 922.3 Rt	Local Service (Sunset Rd)
Sunset	6" CA	Tucson Water	Sta 104+05.2, 76.7 Rt to Sta 108+97.8, 802.8 Rt	Local Service (Tres Nogales Rd)
River	16" PVC	Tucson Water	Sta 59+13.3, 422.9 Lt to 64+86.7, 632.8 Rt	Main along Camino De La Tierra
River	8" DI	Metro Water	Sta 48+97.0, 70.0 Rt to Sta 57+0.0, 70.0 Rt	Irrigation Line (County Owned)

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River	6" DI	Metro Water	Sta 57+0.0, 70.0 Rt to Sta 60+43.3, 153.0 Lt	Irrigation Line (County Owned)
River	6" DI	Metro Water	Sta 58+07.0, 71.4 Rt to Sta 65+23.0, 599.0 Rt	Irrigation Line (County Owned) Camino De La Tierra
Sunset	6" PVC	Private Irrigation	Sta 96+58.5 105.2 Rt to 950.2 Rt	Active Line (Flood Control District Operated)
Sunset	NA	ADOT	Sta 99+92.3, 101.2 Rt to 712.3 Lt	Main running down I-10 mainline median
Sunset	Overhead Power	TEP	Sta 85+96.5, 89.2 Lt to Sta 95+49.1, 119.9 Lt	
Sunset	Overhead Power	TEP	Sta 104+76.1, 453.5 Rt to 107+55.0, 925.7 Rt	Local Service (Sunset Rd)
Sunset	Overhead Power	TEP	Sta 105+48.2, 142.3 Rt to Sta 108+91.7, 755.4 Rt	Local Service (Tres Nogales Rd)
River	Overhead Power	TEP	Sta 50+17.2, 611.9 Rt to Sta 70+60.6, 236.7 Rt	138 kV Transmission Line Through Rillito River
Sunset	Underground Power	TEP	Sta 78+65.5, 32.9 Lt to Sta 85+96.5, 89.2 Lt	
Sunset	Underground Power	TEP	Sta 95+16.7, 93.6 Lt to Sta 97+71.2, 31.7 Rt	
Sunset	Underground Power	TEP	Sta 95+49.1, 119.9 Lt to Sta 97+59.8, 717.8 Lt	Service for Well for Pecan Orchard
Sunset	Underground Power	TEP	Sta 97+68.6, 599.3 Rt to 730.8 Lt	EBFR Feeder System
Sunset	Underground Power	TEP	Sta 97+68.6, 21.9 Rt to Sta 101+90.5, 18.8 Rt	Feeder System Crossing Under Interchange
Sunset	Underground Power	TEP	Sta 101+93.2, 625.2 Lt to Sta 101+98.6, 195.0 Rt	WBFR Feeder System
Sunset	Underground Power	TEP	Sta 107+81.0, 244.0 Rt to Sta 108+29.2, 583.9 Rt	
Sunset	Underground Power	UPRR	Sta 102+80.2, 931.3 Rt to Sta 102+84.8, 718.4 Lt	

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Sunset	Underground Signals and Lighting	ADOT	Sta 97+63 to Sta 101+41.4	Existing I-10-Sunset Overpass Lighting System
Sunset	Underground Signals and Lighting	ADOT	Sta 97+80, 712.2 Lt to 589.6 Rt	EBFR ADOT Power System for Lighting and Signals
Sunset	Underground Signals and Lighting	ADOT	Sta 101+17.3, 285.5 Rt to 497.8 Lt	WBFR ADOT Power System for Lighting and Signals
Sunset	Underground Telephone & Fiber	CenturyLink	Sta 96+83.3, 60.9 Rt to 593.3 Rt	
Sunset	Underground Fiber Optic	CenturyLink	Sta 97+46.6, 287.6 Rt to Sta 102+06.7, 284.9 Rt	
Sunset	Underground Fiber Optic	Pima County IT	Sta 97+52.1, 592.9 Rt to Sta 97+72.6, 720.6 Lt	SCADA System
Sunset	Underground Fiber Optic	CenturyLink National	Sta 102+40.3, 932.9 Rt to 625.70 Lt	Long-haul System (West of Tracks)
Sunset	Underground Fiber Optic	MCI (Verizon)	Sta 102+45.9, 931.2 Rt to 631.33 Lt	Long-haul System (West of Tracks)
Sunset	Underground Fiber Optic	Wil-Tel (CLN)	Sta 103+30.0, 930.8 Rt to 630.6 Lt	Long-haul System (East of Tracks)
Sunset	Underground Fiber Optic	Level 3 (CLN)	Sta 103+35.0, 924.3 Rt to 627.7 Lt	Long-haul System (East of Tracks)
River	Underground Fiber Optic	AT&T	Sta 48+96.9, 67.0 Rt to Sta 65+07.2, 67.0 Rt	
River	Underground Fiber Optic	CenturyLink	Sta 48+96.9, 60.0 Lt to Sta 65+07.2, 55.0 Lt	

EXHIBIT B
Existing Utilities Inventory
Pima County Project No. 4SRRIV
Project Name: Sunset Road: Interstate 10 to River Road

Alignment	FACILITY TYPE/SIZE	FACILITY OWNER	APPROX PROJECT STATION RANGE	REMARKS
Sunset	Overhead Fiber	CenturyLink	Sta 102+06.6, 284.9 Rt to Sta 107+55.1, 926.2 Rt	OH Fiber crossing UPRR
Sunset	Overhead Fiber	CenturyLink	Sta 104+02.1, 35.6 Rt to Sta 108+94.1, 753.5 Rt	
Sunset	ITS	PCDOT	Sta 78+62.1, 24.0 Lt to Sta 88+29.6, 62.8 Lt	

Exhibit B - Utility Inventory and Data Origins

Utility Data Search conducted at Stage:	Stage 1 (15%)				
Contact Development Reference:	<u>ADOT</u>	<u>Signal and Lighting. Freeway Management System. (FMS) Irrigation</u>	Utility Mapping from ADOT projects H7583 and H8480 identified ADOT facilities.	SUE QUALITY LEVEL	B
Contact Development Reference:	<u>AT&T</u>	<u>Fiber Optic</u>	As-built Information provided by AT&T.	SUE QUALITY LEVEL	B
Contact Development Reference:	<u>CenturyLink (Local)</u>	<u>Underground Fiber Optic and Copper Cables. Overhead Telecom</u>	Utility Mapping from ADOT projects H7583 and H8480 identified CLN facilities. GIS maps provided by CenturyLink	SUE QUALITY LEVEL	B, D
Contact Development Reference:	<u>CenturyLink (National)</u>	<u>Underground Fiber Optic (Long-haul)</u>	Utility Mapping from ADOT projects H7583 and H8480 identified CLN facilities. GIS maps provided by CenturyLink	SUE QUALITY LEVEL	B, D
Contact Development Reference:	<u>MCI (Verizon)</u>	<u>Underground Fiber Optic (Long-haul)</u>	Utility Mapping from ADOT projects H7583 and H8480 identified MCI facilities. Map provided by Verizon	SUE QUALITY LEVEL	B, D
Contact Development Reference:	<u>Level 3 (CenturyLink)</u>	<u>Underground Fiber Optic (Long-haul)</u>	Utility Mapping from ADOT projects H7583 and H8480 identified L3 facilities. Map provided by CLN National	SUE QUALITY LEVEL	B, D
Contact Development Reference:	<u>Wil-Tel (CenturyLink)</u>	<u>Underground Fiber Optic (Long-haul)</u>	Utility Mapping from ADOT projects H7583 and H8480 identified Wil-Tel facilities. Map provided by CLN National	SUE QUALITY LEVEL	B, D
Contact Development Reference:	<u>PCRWRD</u>	<u>Sewer Facilities</u>	Mapping utilized from projects H7583 and H8480 and PCDOT 4RTSUN. GIS map provided by RWRD. As-built downloaded from Mapguide	SUE QUALITY LEVEL	B,C,D
Contact Development Reference:	<u>Pima County IT</u>	<u>Supervisory Control and Data Acquisition (SCADA)</u>	Utility Mapping from ADOT projects H7583 and H8480 and PCDOT 4RTSUN. identified PC facilities. Field verified with PC.	SUE QUALITY LEVEL	B, D

Exhibit B - Utility Inventory and Data Origins

Contact Development Reference:	<u>Pima County DOT</u>	<u>Intelligent Transportation System (ITS)</u>	As-Built from PCDOT Sunset Phase 1 Project 4RTSUN	SUE QUALITY LEVEL	C, D
Contact Development Reference:	<u>Tucson Electric Power</u>	<u>Overhead Power (Distribution and Transmission) Underground Distribution and Feeder Systems</u>	Mapping utilized from projects H7583 and H8480 PCDOT 4RTSUN. GIS map provided by TEP.	SUE QUALITY LEVEL	B, C
Contact Development Reference:	<u>Kinder Morgan</u>	<u>Long-Haul Petroleum</u>	Utility Mapping from ADOT projects H7583 and H8480 identified KM facilities.	SUE QUALITY LEVEL	B, D
Contact Development Reference:	<u>Tucson Water</u>	<u>Water Facilities</u>	Facility Maps provided by Tucson Water	SUE QUALITY LEVEL	D
Contact Development Reference:	<u>Metro Water</u>	<u>Water Facilities</u>	Facility Maps and As-Built provided by Metro Water	SUE QUALITY LEVEL	C, D
Contact Development Reference:	<u>Southwest Gas</u>	<u>Local Distribution</u>	Facility maps provided by SWG.	SUE QUALITY LEVEL	D
Contact Development Reference:	<u>Kinder Morgan</u>	<u>Long-Haul Petroleum, Power</u>	Utility Mapping from ADOT projects H7583 and H8480 identified UPRR facilities.	SUE QUALITY LEVEL	B, D
Contact Development Reference:	<u>UPRR</u>	<u>Railroad Power and Communications</u>	Utility Mapping from ADOT projects H7583 and H8480 identified UPRR facilities.	SUE QUALITY LEVEL	B, D
Vertical Location Performed	No				
Locating Agency	NA				
Date of Location	NA				
Designation performed in accordance with CI/ASCE Standard 38-02 publication "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data?"				NA	

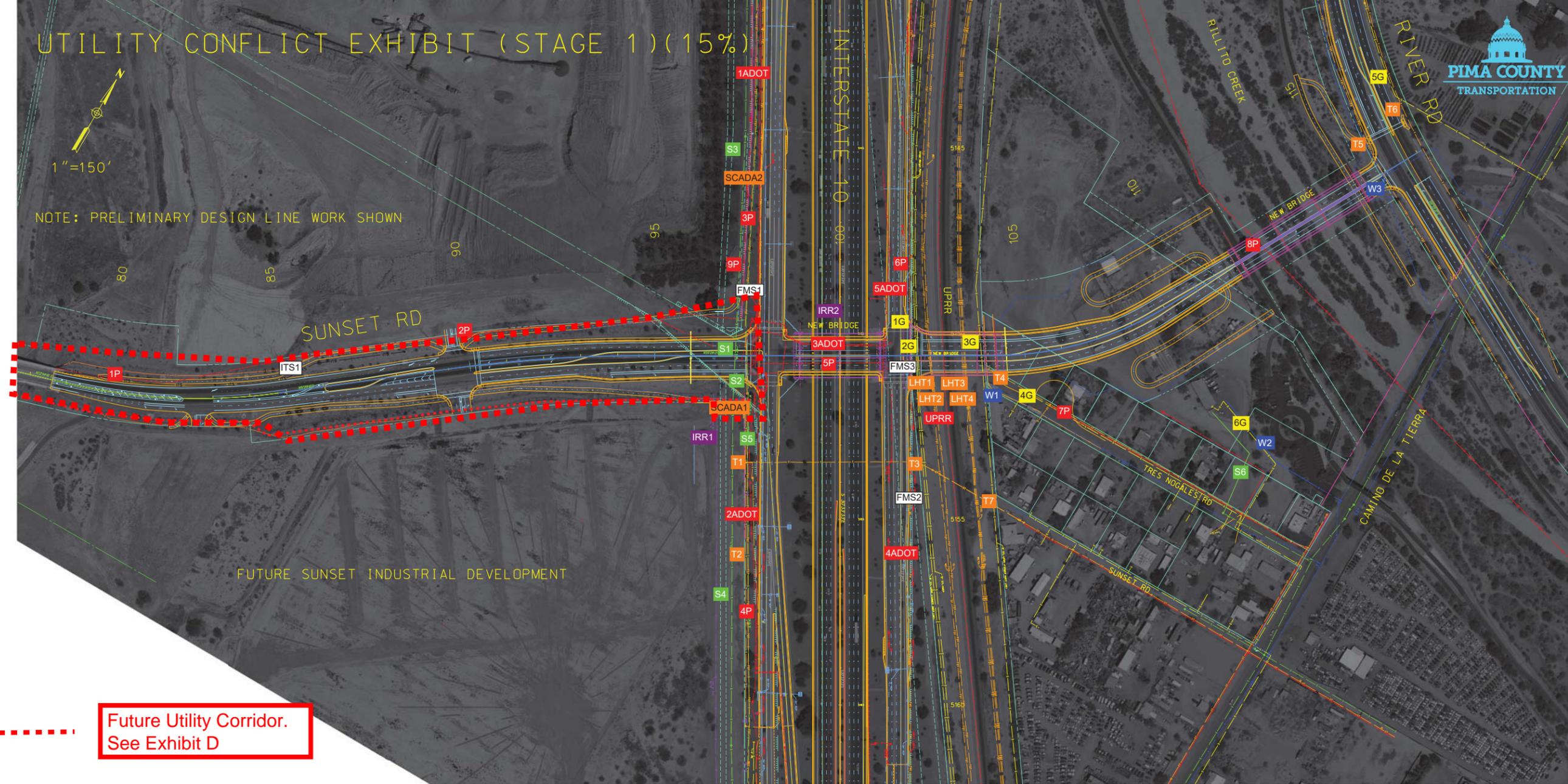
EXHIBIT C
Utility Conflict & Mitigation Matrix
Pima County Project No. 4SRRIV
Project Name: Sunset Rd: Interstate 10 to River Road

PLAN REF #	FACILITY TYPE / SIZE	FACILITY OWNER	OBSERVED ROADWAY	SUE QUALITY LEVEL	CONFLICT STATION RANGE (Sunset Road Stationing and Offset, Typ. or otherwise noted)	OBSERVED ROADWAY/ PRIOR RIGHTS STATION RANGE	REASON FOR CONFLICT	ACTION	REMARKS/NOTES
1G	12" Petroleum	Kinder Morgan	WBFR	B	Sta 102+01.6, 627.8 Lt to Sta 102+16.17 206.8 Rt	Sta 102+01.6, 627.8 Lt to Sta 102+16.17 206.8 Rt	Wall and Bridge Construction	Potential Removal	Abandoned line. Will be in close proximity to Frontage Road wall and UPRR bridge construction. May require removal. Will require further verification of location.
2G	12" Petroleum	Kinder Morgan	WBFR	B	Sta 102+10.1, 626.6 Lt to Sta 102+21.3 199.7 Rt	Sta 102+10.1, 626.6 Lt to Sta 102+21.3 199.7 Rt	NA	Protect In Place	Active line. Will require protection from Bridge construction. Bridge pier construction will need to be coordinated once line location is verified.
3G	6" Petroleum	UPRR	UPRR ROW	D	Sta 103+67.4, 188.9 Lt to Sta 103+97.5, 186.0 Rt	Sta 103+67.4, 188.9 Lt to Sta 103+97.5, 186.0 Rt	NA	To Remain	Abandoned line. Should be clear of UPRR Bridge construction.
4G	2" Service	SWG	Tres Nogales	D	Sta 104+91.7, 97.5 Rt to Sta 106+54.5, 260.8 Rt	NA	New Cul-de-Sac Construction	Protect In Place	Line services properties along Tres Nogales. Line should not be disturbed. Property connections may need to be turned off/abandoned for some services.
5G	4" Distribution	SWG	River	D	Sta 50+46.0, 55.0 Lt to Sta 60+26.7, 292.1 Lt (River Stationing)	NA	NA	Protect In Place	WB River Rd will not be disturbed and line should not be in conflict.
6G	Local Service	SWG	Sunset	D	Sta 108+73.9, 291.2 Rt to Sta 108+11.0, 615.9 Rt	NA	Abandoned Parcel	Remove Existing	Pima County parks and recreation maintenance facility to be acquired for roadway improvements. Utility services to be removed.
W1	6" Water	Tucson Water	Tres Nogales	D	Sta 104+05.2, 76.7 Rt to Sta 106+41.9, 285.6 Rt	NA	New Cul-de-Sac Construction	Protect In Place	Line should remain in place.
W2	Local Service	Tucson Water	Sunset	D	Sta 109+23.3, 300 Rt to Sta 110+35.8, 690.1 Rt	NA	Abandoned Parcel	Remove Existing	Pima County parks and recreation maintenance facility to be acquired for roadway improvements. Utility services to be removed.
W3	6" Water	Metro Water	River	C	Sta 50+66.5, 70.0 Rt to Sta 59+79.4, 111.5 Rt (River Stationing)	NA	Roadway Extension	Adjust to Grade	Pima County-owned water line for the athletic fields. Metro Water maintains line through agreement. Valve adjustments are necessary. Line could be in conflict with construction on south side due to traffic signal installation and other improvements.
IRR1	6" Irrigation	Private	EBFR	D	Sta 96+58.6, 106.0 Rt to Sta 96+67.6, 302.9 Rt	NA	NA	To Remain	Active Line. Operated by Flood Control District. Repaired and sleeved by Pima County During Segment I improvements. Settlement analysis will be required during final design on the line during final design. To remain active after Segment II improvements.
IRR2	NA	ADOT	I-10 Mainline	D	Sta 99+97.8, 714.4 Lt to Sta 99+92.8, 101.2 Rt	NA	Interchange Improvements	Relocate	Irrigation line runs within I-10 mainline median. Will need to be re-established with interchange improvements.
S1	60"-72" Interceptor	PCRWRD	Sunset	B	Sta 97+23.6, 137.3 Lt to Sta 97+11.2, 124.9 Rt	Sta 97+23.6, 137.3 Lt to Sta 97+11.2, 124.9 Rt	Additional Loading on Pipe	Protect In Place	Extra loading on top of pipe due to 22-25' elevation increase. Structural protection measure proposed to decrease overburden on the pipe.
S2	8" Sludge Force Main	PCRWRD	Sunset	B	Sta 97+75.7, 715.4 Lt to Sta 97+52.4, 592.5 Rt	NA	Additional Loading on Pipe	Protect In Place	Settlement analysis will be required on this pipe due to the Sunset Rd. profile and overburden increase.
S3	60" Interceptor	PCRWRD	Sunset	B	Sta 97+23.6, 137.3 Lt to Sta 97+75.7, 714.7, Lt	Sta 97+23.6, 137.3 Lt to Sta 97+75.7, 714.7, Lt	NA	Do Not Disturb	Line further down along frontage road should be outside of construction disturbance.
S4	72" Interceptor	PCRWRD	Sunset	B	Sta 97+11.2, 124.9 Rt to Sta 97+08.6, 598.6 Rt	Sta 97+11.2, 124.9 Rt to Sta 97+08.6, 598.6 Rt	NA	Do Not Disturb	Line further down along frontage road should be outside of construction disturbance.
S5	Rodding Station	PCRWRD	Sunset	B	Sta 97+51.8, 208.2 Rt	NA	NA	Do Not Disturb	Rodding station for 8" sludge force main should be clear of frontage road improvements.
S6	Local Connection	PCRWRD	Sunset	D	Sta 108+51.5, 285.7 Rt to Sta 108+02.8, 559.7 Rt	NA	Abandoned Parcel	Remove Existing	Pima County parks and recreation maintenance facility to be aquired for roadway improvements. Utility services to be removed.
1P	Underground Power	TEP	Sunset	D	Sta 78+65.6, 32.9 Lt to Sta 85+96.5, 89.2 Lt	Sta 78+65.6, 32.9 Lt to Sta 85+96.5, 89.2 Lt	Profile Change and Roadside Grading	Relocate	Underground system may require adjustment due to roadside grading.
2P	Overhead Power	TEP	Sunset	C	Sta 85+96.5, 89.2 Lt to Sta 95+49.2, 119.9 Lt	Sta 85+96.5, 89.2 Lt to Sta 95+49.2, 119.9 Lt	Roadside Grading	Relocate/Adjust	Poles are within grading limits and conflict with the proposed shared-use path. Will require relocation.
3P	Underground Power	TEP	EBFR	D	Sta 97+89.1, 21.3 Rt to Sta 97+83.4, 716.6 Lt	NA	Frontage Road Improvements	Relocate	Feeder system will be in conflict with frontage road improvements. Will need to relocate.
4P	Underground Power	TEP	EBFR	B	Sta 97+71.7, 19.7 Rt to Sta 97+68.0, 596.0 Rt	NA	Frontage Road Improvements	Relocate	Feeder system will be in conflict with frontage road improvements. Will need to relocate.
5P	Underground Power	TEP	Sunset	B	Sta 97+89.1, 21.3 Rt to Sta 101+90.5, 18.4 Rt	NA	I-10 Mainline Bridge Construction	Relocate	Conduit run crossing under mainline to connect to WBFR system will need to relocate due to the interchange improvements.
6P	Underground Power	TEP	WBFR	D	Sta 101+98.6, 194.9 Rt to Sta 101+93.3, 627.4 Lt	NA	Frontage Road Improvements	Relocate	Feeder system will be in conflict with frontage road improvements and potentially UPRR bridge construction.
7P	Overhead Power	TEP	Tres Nogales	D	Sta 104+02.1, 35.6 Rt to Sta 106+70.6, 273.8 Rt	NA	Sunset Extension Construction	Relocate	Overhead system that services multiple properties along Tres Nogales Rd will need to relocate.
8P	Overhead Power	TEP (Transmission)	Rillito River	C	Sta 111+57.7, 238.2 Lt to Sta 112+69.0, 235.2 Rt	Sta 111+57.7, 238.2 Lt to Sta 112+69.0, 235.2	Sunset Extension Construction	Do Not Disturb	Conductor surveyed and confirmed to not be in conflict with improvements. Overhead system will be in close proximity to the bridge construction and to be protected in place.
9P	Underground Power	TEP	EBFR	D	Sta 95+49.1, 119.9 Lt to Sta 97+59.7, 709.3 Lt	NA	NA	Do Not Disturb	Power for well to irrigate orchard north of Sunset. Underground system should be outside construction disturbance.

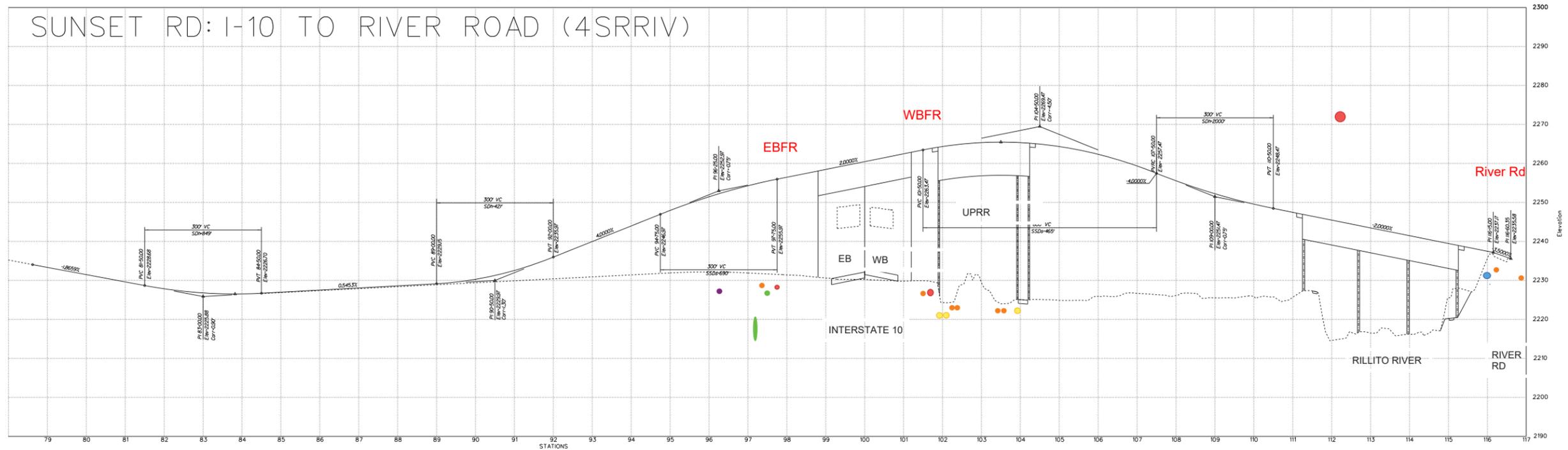
EXHIBIT C
Utility Conflict & Mitigation Matrix
Pima County Project No. 4SRRIV
Project Name: Sunset Rd: Interstate 10 to River Road

PLAN REF #	FACILITY TYPE / SIZE	FACILITY OWNER	OBSERVED ROADWAY	SUE QUALITY LEVEL	CONFLICT STATION RANGE (Sunset Road Stationing and Offset, Typ. or otherwise noted)	OBSERVED ROADWAY/ PRIOR RIGHTS STATION RANGE	REASON FOR CONFLICT	ACTION	REMARKS/NOTES
1ADOT	Traffic Power	ADOT	EBFR	D	Sta 97+80.1, 0.0 Lt to Sta 97+89.8 712.5 Lt	NA	Interchange Improvements	Relocate	ADOT power system will be re-established with interchange improvements.
2ADOT	Traffic Power	ADOT	EBFR	B	Sta 97+80.1, 0.0 Lt to Sta 97+70.1 591.4 Rt	NA	Interchange Improvements	Relocate	ADOT power system will be re-established with interchange improvements.
3ADOT	Lighting	ADOT	Sunset	B	Sta 97+80.1 to Sta 101+41.4	NA	Interchange Improvements	Relocate	ADOT power system will be re-established with interchange improvements.
4ADOT	Traffic Power	ADOT	WBFR	D	Sta 101+15.1, 98.5 Rt to Sta 101+90.6, 940.9 Rt	NA	Interchange Improvements	Relocate	ADOT power system will be re-established with interchange improvements.
5ADOT	Traffic Power	ADOT	WBFR	D	Sta 101+15.1, 98.5 Rt to Sta 101+16.4, 499.0 Lt	NA	Interchange Improvements	Relocate	ADOT power system will be re-established with interchange improvements.
UPRR	Railroad Comm/Power	UPRR	UPRR ROW	D	Sta 102+65.7, 298.1 Lt to Sta 102+89.4, 150.5 Rt	Sta 102+65.7, 298.1 Lt to Sta 102+89.4, 150.5 Rt	NA	To Remain	UPRR communication and power system runs between rail lines and is not anticipated to be disturbed.
T1	Underground Telecom	CenturyLink	EBFR	B	Sta 96+83.3, 60.9 Rt to Sta 97+45.7, 287.4 Rt	NA	NA	To Remain	Fiber system will be in close proximity to construction.
T2	Underground Telecom	CenturyLink	EBFR	B	Sta 97+45.7, 287.4 Rt to Sta 97+45.5, 590.8 Rt	NA	NA	To Remain	System running along EBFR should be outside construction disturbance.
T3	Underground Telecom	CenturyLink	WBFR	B	Sta 97+45.7, 287.4 Rt to Sta 102+06.7, 284.9 Rt	NA	Mainline and Frontage Road	Relocate	Mainline crossing will require relocation due to mainline profile lowering for interchange improvements.
T4	Overhead Telecom	CenturyLink	Tres Nogales	C,D	Sta 104+02.1, 35.6 Rt to Sta 106+70.6, 273.8 Rt	NA	Sunset Extension Construction	Relocate	Overhead system that services multiple properties along Tres Nogales Rd will need to relocate.
T5	Underground Telecom	AT&T	River	D	Sta 54+98.8, 68.4 Rt to Sta 58+62.7, 67.0 Rt (River Stationing)	NA	River Improvements	Relocate	System appears will be in conflict with new traffic signal system and possibly other improvements.
T6	Underground Telecom	CenturyLink	River	D	Sta 52+56.0, 59.5 Lt to Sta 60+93.9, 60.0 Lt (River Stationing)	NA	NA	Relocate	System appears will be in conflict with new traffic signal system and possibly other improvements.
T7	Overhead Telecom	CenturyLink	Sunset	C,D	Sta 102+06.7, 284.9 Rt to Sta 104+07.5, 398.0 Rt	NA	Frontage Road Improvements	Relocate	Overhead system that crosses over UPRR to connect to mainline underground crossing appears to be in conflict with the frontage road construction.
LHT1	Long-haul Telecom	MCI (Verizon)	WBFR	B,D	Sta 102+29.1, 129.1 Lt to Sta 102+52.7, 108.8 Rt	Sta 102+29.1, 129.1 Lt to Sta 102+52.7, 108.8 Rt	UPRR Bridge Construction	To Remain	Should be clear of bridge construction since within UPRR right-of-way (ROW).
LHT2	Long-haul Telecom	CenturyLink National	WBFR	B,D	Sta 102+37.4, 125.7 Lt to Sta 102+59.0, 105.9 Rt	Sta 102+37.4, 125.7 Lt to Sta 102+59.0, 105.9 Rt	UPRR Bridge Construction	To Remain	Should be clear of bridge construction since within UPRR ROW.
LHT3	Long-haul Telecom	Wil-Tel (CenturyLink)	UPRR ROW	B,D	Sta 103+19.5, 182.6 Lt to Sta 103+46.0, 155.5 Rt	Sta 103+19.5, 182.6 Lt to Sta 103+46.0, 155.5 Rt	NA	To Remain	Should be clear of bridge construction since within UPRR ROW.
LHT4	Long-haul Telecom	Level-3 (CenturyLink)	UPRR ROW	B,D	Sta 103+26.2, 184.5 Lt to Sta 103+53.6, 184.0 Rt	Sta 103+26.2, 184.5 Lt to Sta 103+53.6, 184.0 Rt	NA	To Remain	Should be clear of bridge construction since within UPRR ROW.
SCADA1	Underground Telecom	Pima County IT	EBFR	B,D	Sta 97+46.3, 0.0 Lt to Sta 97+51.8, 593.4 Rt	NA	Sunset Profile Change	Adjust to Grade	Communication system for wastewater treatment plants should remain, but vault will need to be adjusted to grade.
SCADA2	Underground Telecom	Pima County IT	EBFR	B,D	Sta 97+46.3, 0.0 Lt to Sta 97+72.6, 713.7 Lt	NA	NA	To Remain	System appears to be clear of construction disturbance.
ITS1	Traffic System	Pima County DOT	Sunset	C	Sta 78+69.9, 36.3 Lt to Sta 88+29.5, 62.8 Lt	NA	Sunset Improvements	Relocate	Underground system may require adjustment due to roadside grading.
FMS1	Freeway Management	ADOT	EBFR	B,D	Sta 97+82.1, 111.7 Rt to Sta 97+89.8, 712.8 Lt	NA	Frontage Road Improvements	Relocate	ADOT system will be re-established with interchange improvements.
FMS2	Freeway Management	ADOT	WBFR	B,D	Sta 101+93.5, 942.4 Rt to Sta 101+93.2, 627.2 Lt	NA	Frontage Road Improvements	Relocate	ADOT system will be re-established with interchange improvements.
FMS3	Freeway Management	ADOT	WBFR	B,D	Sta 101+93.5, 200.0 Lt to Sta 101+90.8, 200.0 Rt	NA	UPRR Bridge Construction	Relocate	ADOT system will require relocation due to the UPRR bridge construction as a part of the PCDOT improvement project.

UTILITY CONFLICT EXHIBIT (STAGE 1)(15%)



Future Utility Corridor.
See Exhibit D



Future Proposed Utility Services for Sunset Innovation Campus

Exhibit D

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.				

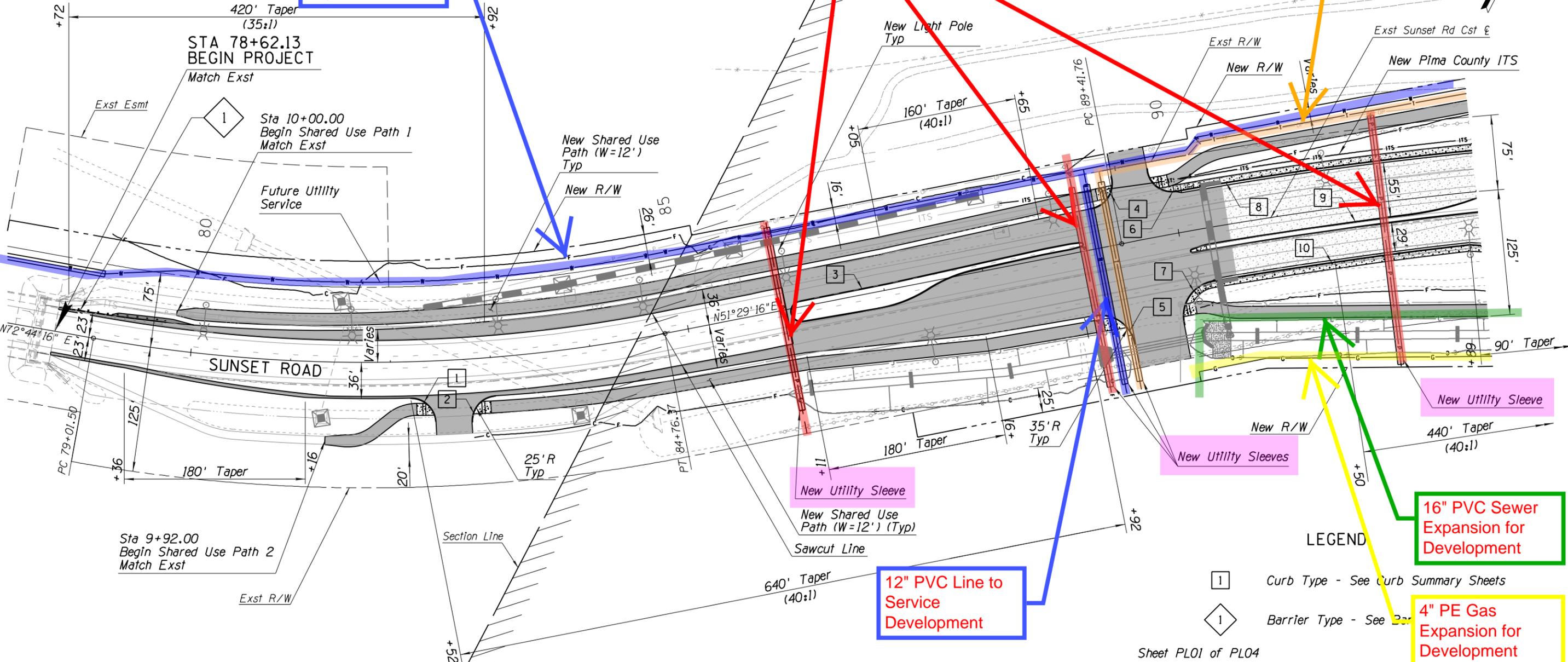
Legend

- Gas Service
- Telecom Service
- Power Service
- Sewer Service
- Water Service Expansion

12" PVC Waterline Expansion

6" PVC Power Expansions for Development

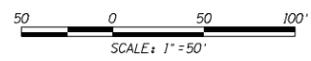
6" PVC Telecom Service Expansion for Development



- LEGEND**
- 1 Curb Type - See Curb Summary Sheets
 - 1 Barrier Type - See Summary Sheets

LEGEND:

- Asphalt Paving
- Concrete Paving



DESIGN	NAME	DATE	PIMA COUNTY DEPARTMENT OF TRANSPORTATION	PRELIMINARY STAGE I Review NOT FOR CONSTRUCTION OR RECORDING
DRAWN	RM	09-20		
CHECKED	TWW	09-20		
TRANSPORTATION			ROADWAY PLAN SHEET STA 78+62 TO 93+00	
ROUTE	LOCATION	SHEET OF		
I-10	SUNSET ROAD: I-10 TO RIVER ROAD	OF		
TRACS NO.				

Pima County Limits
Tucson City Limits

Call at least two full working days before you begin excavation.

ARIZONA 811
Arizona Blue Stake, Inc.

Unit 8-1-1 or 1-800-STAKE-41 (782-6348)
44 Maricopa County: (602)263-1188

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.				

12" PVC Waterline Expansion

6" PVC Telecom Service Expansion for Development

6" DIP Telecom Service Expansion for Development Crossing Sunset Rd

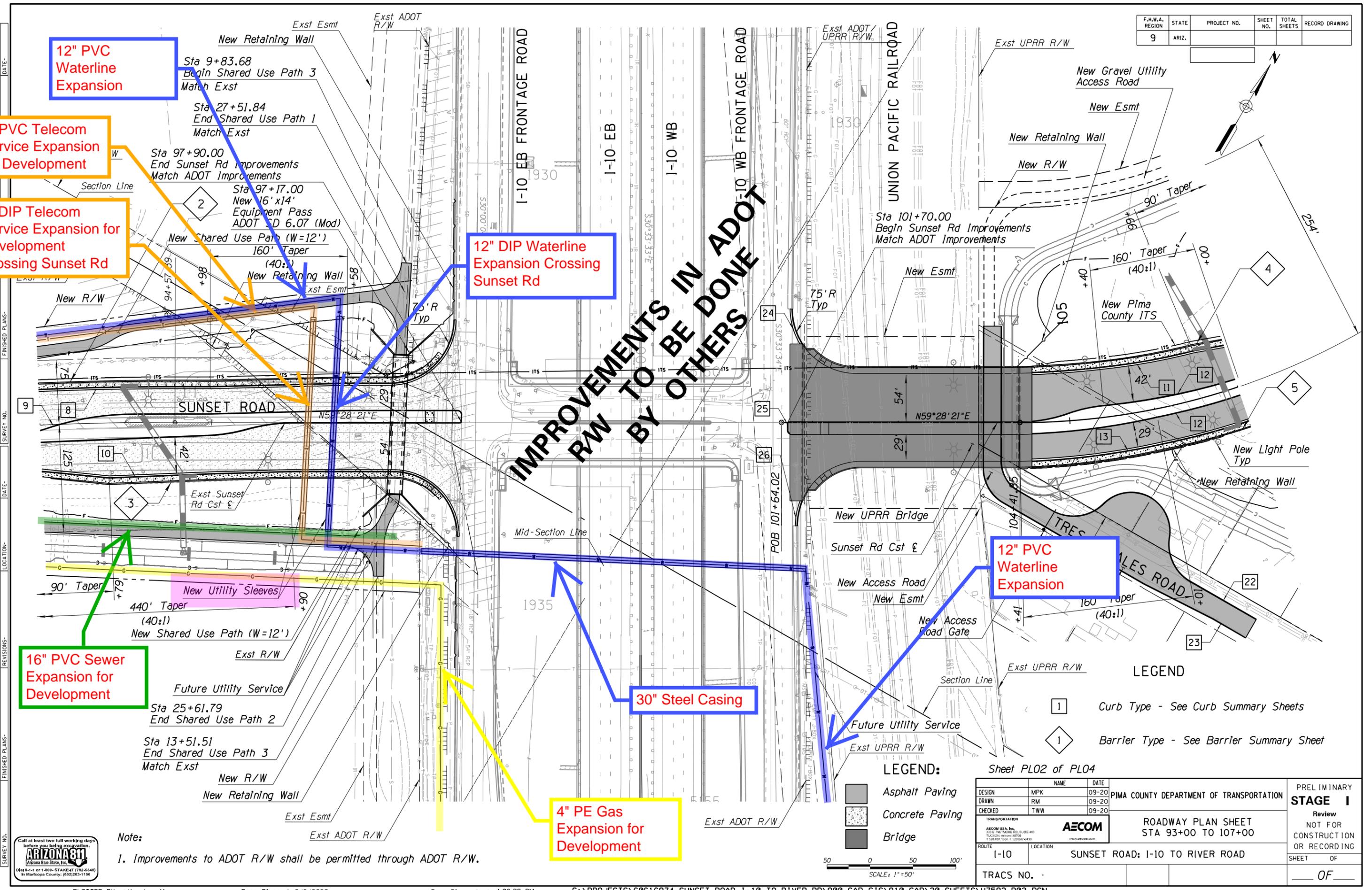
12" DIP Waterline Expansion Crossing Sunset Rd

16" PVC Sewer Expansion for Development

4" PE Gas Expansion for Development

30" Steel Casing

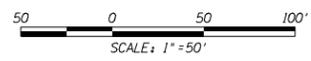
IMPROVEMENTS IN ADOT RW TO BE DONE BY OTHERS



- LEGEND**
- 1 Curb Type - See Curb Summary Sheets
 - 1 Barrier Type - See Barrier Summary Sheet

LEGEND:

- Asphalt Paving
- Concrete Paving
- Bridge



Note:
1. Improvements to ADOT R/W shall be permitted through ADOT R/W.



DESIGN		NAME	DATE	PIMA COUNTY DEPARTMENT OF TRANSPORTATION	PRELIMINARY STAGE I Review NOT FOR CONSTRUCTION OR RECORDING
DESIGN	MPK		09-20		
DRAWN	RM		09-20		
CHECKED	TWW		09-20		
<p>TRANSPORTATION AECOM AECOM USA, Inc. 5015 N. VICTORINE RD., SUITE 400 TUCSON, AZ 85718-8838 T: 520.897.1800 F: 520.897.4439 www.aecom.com</p>				ROADWAY PLAN SHEET STA 93+00 TO 107+00	
ROUTE	LOCATION	SUNSET ROAD: I-10 TO RIVER ROAD			SHEET OF
TRACS NO.					OF

Exhibit E



BOARD OF SUPERVISORS AGENDA ITEM REPORT CONTRACTS / AWARDS / GRANTS

Award Contract Grant

Requested Board Meeting Date: November 21, 2017

* = Mandatory, information must be provided

or Procurement Director Award

***Contractor/Vendor Name/Grantor (DBA):**

Tucson Electric Power Company, an Arizona public service corporation.

***Project Title/Description:**

Agreement between Pima County, Regional Flood Control District (RFCD) and Tucson Electric Power Company (TEP) for Relocation of Sunset Road Utility Line
File E-0001

***Purpose:**

In order to satisfy its obligations under a license agreement with CalPortland Company and CPC Southwest Materials, RFCD desires that TEP remove and relocate existing facilities from the former Sunset Road right-of-way to an easement along new Sunset Road right-of-way (with a portion of the facilities in the new Sunset Road right-of-way).

***Procurement Method:**

EXEMPT PURSUANT TO PIMA COUNTY CODE 11.04.020

***Program Goals/Predicted Outcomes:**

TEP is relocating electric facilities from the recently abandoned Old Sunset Road right-of-way at the request of PCFCD. TEP claimed that its rights to maintain facilities pre-date the establishment as a Pima County highway. In order to fulfill its obligations to CalPortland and CPC Southwest Materials, and to resolve TEP's claim of prior rights, under this agreement RFCD will compensate TEP for the reasonable, actual cost of relocation estimated to be \$641,792.00 and grant TEP a new easement in which to locate the relocated facilities. Additionally, the County will grant TEP a 10-year indemnification of any relocation costs as to the portion of the new facilities within the new right-of-way. As part of the Agreement, TEP has agreed to release its easement interests in the Old Sunset Road right-of-way to RFCD.

***Public Benefit:**

Electric facilities will be available to service needs in the area. RFCD will receive a release of property rights encumbering the property.

***Metrics Available to Measure Performance:**

The terms and conditions of the Agreement will provide for timely relocation of electric facilities.

***Retroactive:**

No

To: CoB. 11-3-17
Ver. - 1
Pgs. - 35

Contract / Award Information

Document Type: CT Department Code: PW Contract Number (i.e., 15-123): 18*121
Effective Date: 11/21/2017 Termination Date: 11/20/2018 Prior Contract Number (Synergen/CMS): _____
 Expense Amount: \$ 641,792.00 Revenue Amount: \$ _____

***Funding Source(s) required:** RFCU Unit 4019/Fund 4019 CFC.5CORZN

Funding from General Fund? Yes No If Yes \$ _____ % _____

Contract is fully or partially funded with Federal Funds? Yes No

***Is the Contract to a vendor or subrecipient?** _____

Were insurance or indemnity clauses modified? Yes No

If Yes, attach Risk's approval

Vendor is using a Social Security Number? Yes No

If Yes, attach the required form per Administrative Procedure 22-73.

Amendment / Revised Award Information

Document Type: _____ Department Code: _____ Contract Number (i.e., 15-123): _____
Amendment No.: _____ AMS Version No.: _____
Effective Date: _____ New Termination Date: _____
Prior Contract No. (Synergen/CMS): _____

Expense or Revenue Increase Decrease Amount This Amendment: \$ _____

Is there revenue included? Yes No If Yes \$ _____

***Funding Source(s) required:** _____

Funding from General Fund? Yes No If Yes \$ _____ % _____

Grant/Amendment Information (for grants acceptance and awards) Award Amendment

Document Type: _____ Department Code: _____ Grant Number (i.e., 15-123): _____
Effective Date: _____ Termination Date: _____ Amendment Number: _____
 Match Amount: \$ _____ Revenue Amount: \$ _____

***All Funding Source(s) required:** _____

***Match funding from General Fund?** Yes No If Yes \$ _____ % _____

***Match funding from other sources?** Yes No If Yes \$ _____ % _____

***Funding Source:** _____

***If Federal funds are received, is funding coming directly from the Federal government or passed through other organization(s)?** _____

Contact: Tim Murphy
Department: RPS Telephone: 724-6379
Department Director Signature/Date: [Signature] 10/24/17
Deputy County Administrator Signature/Date: [Signature] 10/30/17
County Administrator Signature/Date: [Signature] 10/30/17
(Required for Board Agenda/Addendum Items)

Contract No: CT-PW-18-12 Amendment No: _____

This number must appear on all correspondence and documents pertaining to this contract

AGREEMENT AMONG PIMA COUNTY,
PIMA COUNTY FLOOD CONTROL DISTRICT,
AND TUCSON ELECTRIC POWER
FOR RELOCATION OF SUNSET RD. UTILITY LINE

This Agreement is among Pima County, a political subdivision of the State of Arizona ("County"), Pima County Flood Control District, a political taxing subdivision of the State of Arizona ("District") and Tucson Electric Power Company, an Arizona public service corporation ("TEP").

Recitals

- A. District owns the real property described and depicted in the attached **Exhibit A** ("the Property").
- B. Right-of-way for former Sunset Road runs between two portions of the Property, as described and depicted on the attached **Exhibit B** ("Former Sunset ROW").
- C. Pima County has constructed an extension of Sunset Road, in a new location south of the Former Sunset ROW, as depicted on attached **Exhibit C** ("New Sunset ROW").
- D. TEP has maintained electrical facilities in the Former Sunset ROW ("Existing Facilities"), and has asserted that its right to install and maintain electrical facilities in the Former Sunset ROW pre-dates its establishment as a Pima County highway. TEP has also asserted easement rights to maintain electrical facilities in other locations on the Property.
- E. As part of its acquisition of the Property, District agreed to allow the seller of the Property to excavate material from the Property and the Former Sunset ROW.
- F. In order to fulfill its obligations to the seller of the Property, District desires that TEP remove the Existing Facilities and construct comparable facilities in the New Sunset ROW ("New Facilities"), and also that TEP release all easement rights in the Property.
- G. TEP staff previously provided County staff with an index dated August 19, 2017 ("Prior Rights Document") listing purported easement interests in favor of TEP within the Former Sunset ROW.
- H. TEP asserts that it is not legally obligated to relocate its facilities in the absence of compensation for relocation cost and easement rights in the new location.
- I. District is willing to compensate TEP for the reasonable, actual cost of relocation (currently estimated to be \$641,792.00), and grant to TEP an easement on the Property in which to locate the New Facilities. County is willing to provide a 10-year indemnification to TEP for the portion of the New Facilities that will be located within the New Sunset ROW along the new Sunset bridge.

Agreement

1. **Scope.** This project generally consists of the removal of the Existing Facilities and construction of comparable New Facilities (“the Work”) partially within an easement to be granted under this Agreement and partially within the New Sunset ROW. The New Facilities will be located generally adjacent to and on the north side of the New Sunset ROW, except in the area of the new Sunset bridge, at which point the New Facilities will be located within the New Sunset ROW.

2. **Term.** This Agreement becomes effective upon approval and execution of this Agreement by all Parties and, unless earlier terminated as authorized in this Section 2, continues in effect until the Work has been completed, accepted, and all other obligations set forth in this Agreement have been fully satisfied, including, but not limited to, District conveying to TEP the easement under this Agreement and making final payment to TEP. County or District may terminate this Agreement for material breach by TEP, and TEP may terminate this Agreement for material breach by County or District. Prior to any termination under this paragraph, the Party allegedly in default shall be given written notice by the Party alleging default of the nature of the alleged default. The Party said to be in default shall have forty-five days to cure the default. If the default is not cured within that time, the Party alleging default may terminate this Agreement. Any such termination shall not relieve a Party from liabilities or costs already incurred under this Agreement.

3. **TEP Responsibilities.** TEP will:
 - 3.1. Prepare engineering drawings and construction specifications (“Documents”) detailing the Work and will allow County a reasonable opportunity to review and comment on the Documents.

 - 3.2. Construct the Work in accordance with the Documents and with applicable County regulations. Provided, however, that the Work and the Documents may be revised in response to permitting, clearance or other technical issues that arise during the course of the Work’s performance.

 - 3.3. Comply with all applicable federal, state, and local laws, rules, and regulations, including Arizona’s “Blue Stake” Laws (A.R.S. Title 40, Chapter 2, Article 6.3).

 - 3.4. Obtain all necessary permits for the Work, including right-of-way use permits for work in County right-of-way.

 - 3.5. Remove its Existing Facilities and leave the Former Sunset ROW in a clean and graded condition.

- 3.6. Execute Release of Easement, in the form attached as **Exhibit D**, as to any easement in favor of TEP that substantially burdens any portion of the Property east of the Santa Cruz River or the Former Sunset ROW.
 - 3.7. By executing this Agreement, acknowledge that, other than the easements released as required by Section 3.6 of this Agreement, no other easement (including any listed in the Prior Rights Document but not included in the Release of Easement) in favor of TEP substantially burdens any portion of the Property east of the Santa Cruz River or the Former Sunset ROW.
 - 3.8. Within 60 days after completing the Work, invoice District for the reasonable, actual cost of the Work. In the event that District does not approve the invoice submitted under Section 4.1, TEP shall have the right to re-submit an invoice for the reasonable actual costs of the Work.
4. **District Responsibilities.** District will:
- 4.1. Within 60 days after receiving an invoice submitted by TEP under Section 3.8, review and either approve the invoice or respond to TEP with an explanation of why it cannot be approved.
 - 4.2. Within 180 days after approving TEP's invoice, pay to TEP, in a single lump sum, the reasonable, actual cost of the Work.
 - 4.3. Permit TEP to enter the Property for purposes of construction activities in connection with the Work.
 - 4.4. After completion of the Work, convey to TEP a permanent easement in the form attached as **Exhibit E**.
5. **County Indemnification.** By executing this Agreement, County hereby agrees that, if, at any time within ten (10) years after completion of construction activities associated with the New Sunset ROW, County requests that TEP relocate any portion of the New Facilities within the New Sunset ROW, County will pay the reasonable, actual cost of that relocation. This paragraph survives termination of this Agreement.
6. **TEP Indemnification.** TEP agrees to indemnify, defend, and hold harmless County and District, their officers, directors, employees and agents from and against all liabilities arising from or in connection with (a) any personal injuries or property damage received or sustained by any person or property arising in whole or in part in connection with the Work; and (b) any act or omission, neglect, negligence, gross negligence or willful misconduct of any TEP contractor or any subcontractor employed by TEP or TEP's contractors in connection with the Work, and agrees to require in writing a limitation of liability provision substantially similar to the "Limitation of Liability" section set forth below.
7. **Limitation of Liability.** Neither Party is liable to the other for consequential, incidental, indirect, punitive or special damages, including commercial loss and lost profits, however caused, and regardless of legal theory or foreseeability, directly or indirectly arising under any

of the documents and agreements associated with the Work, even if such Party has been apprised of the possibility of the damages. Notwithstanding the foregoing, there shall be no limitation on a Party's liability to the other for any fines or penalties imposed on the other Party by any court of competent jurisdiction or federal, state or local administrative agency resulting from the failure of such failing Party to comply with any term or condition of this Agreement or any valid and applicable law, rule or regulation.

8. **Dispute Resolution.** In the event of any dispute arising between either District or County and TEP regarding any part of this Agreement or the Parties' obligations or performance thereunder, any Party may initiate these dispute resolution procedures. A dispute will be deemed to be moot if a dispute resolution process is not initiated by a Party within ten (10) working days of that Party's written notification to the other that a dispute exists. The Parties shall continue performance of their respective obligations hereunder notwithstanding the existence of a dispute.

8.1. *Informal Dispute Resolution.* Any Party may, within ten (10) working days of a Party's written notification that a dispute exists, request in writing a special meeting for the resolution of any dispute arising out of any term or condition of this Agreement or the performance or lack of performance thereof. Such meeting shall be held within three (3) working days of the date of the written request at a mutually agreed location. Each request must specify in reasonable detail the nature of the dispute and the recommended remedy. The Parties' authorized representatives must participate in the dispute resolution process, along with any other person or party who a Party considers to be essential to the resolution of the dispute and who agrees to participate in the informal dispute resolution. The authorized representatives for the Parties shall be individuals which have the authority to settle the dispute and shall act in good faith to resolve the dispute at the informal level.

8.2. *Mediation.* If a dispute has not been resolved within five (5) working days after the special meeting is held, the designated representatives may hold an additional special meeting or a Party may declare an impasse. If an impasse is declared, the Parties shall select a mutually agreed Mediator experienced in design and construction matters to facilitate a resolution of the dispute. The Parties shall share equally the cost of the selected Mediator. Each party shall provide the Mediator a written summary of the dispute within five (5) working days of the Mediator's selection. The Mediator shall schedule the time and place for a meeting with the Parties within five (5) working days after receipt of dispute summaries from the Parties. The Parties may review the Work site and any relevant documents with the Mediator prior to the scheduled meeting. The authorized representatives for the Parties shall be individuals with the authority to settle the dispute and shall act in good faith to resolve the dispute. No minutes shall be kept with respect to any Mediation proceedings, and the comments and/or findings of the Mediator, together with any written statements prepared, shall be non-binding, confidential and without prejudice to the rights and remedies of any Party. The entire Mediation process shall be completed within twenty (20) working days of the date of the special meeting unless the Parties agree otherwise in writing. If the dispute is settled through the Mediation process, the decision will be implemented by written agreement signed by the Parties.

8.3. *Litigation.* If a dispute cannot be resolved pursuant to the informal settlement procedures set forth above, or if the Parties are unable to agree upon a Mediator at the Mediation stage, the dispute may be submitted to the appropriate court of jurisdiction within the State of Arizona. Notwithstanding any other provision contained in this Agreement, a Party may pursue any remedies provided by law for the breach of this Agreement. No right or remedy is intended to be exclusive of any other right or remedy and each shall be cumulative and in addition to any other right or remedy existing at law or at equity or by virtue of this Agreement.

9. Insurance.

9.1. The Parties acknowledge that they are self-insured or maintain a sufficient level of insurance coverage and ancillary insurance coverage to satisfy their respective liabilities and obligations under this Agreement. The Parties shall at all times during the term of this Agreement maintain adequate insurance coverage or adequately self-insure to cover the full amount of their material and financial responsibility under this Agreement.

9.2. TEP shall require its contractors for the Work to procure and maintain insurance coverage for the term of this Agreement.

10. **Records and Audits.** TEP will maintain complete and accurate records with respect to the Work, invoicing, and payment. The records will, to the extent applicable, be kept in accordance with generally accepted accounting principles and will be kept for a period of three (3) years after termination of the Agreement. County or its designee may audit, copy, and inspect the records and accounts at all reasonable times during this period.

11. **Notices.** Notices required under the Agreement will be sent to the addresses below, as revised by the Parties from time to time by written notice. Notice will be deemed given (i) on the first day after deposit with an overnight courier, charges prepaid (ii) as of the day of receipt, if sent via first class U.S. Mail, charges prepaid, return receipt requested and (iii) as of the day of receipt, if hand-delivered.

TEP

Tucson Electric Power Co.
Attn: Corporate Secretary
88 E. Broadway Blvd.
Tucson, AZ 85701

County

Pima County Department of Transportation
Attn: Ana Olivares, P.E., Interim Director
201 N. Stone Avenue, 4th Floor
Tucson, AZ 85701

District

Pima County Flood Control District
Attn: Suzanne Shields, P.E., Director and Chief Engineer

201 N. Stone Avenue, 9th Floor
Tucson, AZ 85701

12. **No Waiver of Rights.** Except as expressly provided in this Agreement, by entering into this Agreement, no Party waives any rights it may have under law with respect to this Agreement or future projects. Each Party expressly reserves any such rights. TEP's agreement to perform the Work pursuant to this Agreement shall not be construed as agreement to participate in any future projects.

13. Miscellaneous.

13.1. *Entire Agreement.* This Agreement, including all exhibits, contains the entire agreement among the Parties and supersedes all prior oral or written agreements with respect to the subject matter hereof.

13.2. *No Joint Venture.* This Agreement does not create a partnership, joint venture or similar relationship between the Parties, and no Party will have the power to obligate the other in any manner whatsoever. TEP and any contractor used for the Work are independent contractors and not agents or employees of County or District. TEP and any contractor used for the Work are solely responsible for providing workers' compensation, unemployment, disability insurance, and social security withholding for their employees and agents and will comply with all other federal, state and local, rules and regulations.

13.3. *No Assignment Without Consent.* No Party may assign its rights or obligations under this Agreement without the prior written consent of the other Parties, which consent will not be unreasonably withheld, except that a Party may assign the Agreement without the consent of the other Parties (i) in connection with the sale of all or substantially all of its assets; (ii) to the surviving entity in any merger or consolidation; (iii) to an entity that it controls, is controlled by, or is commonly controlled by that Party; or (iv) to satisfy a regulatory requirement imposed by a governmental body with appropriate authority.

13.4. *Uncontrollable Forces.* No Party is liable to any other Party for any delay, error, failure in performance or interruption of performance resulting from causes beyond its control, including permitting and governmental approvals.

13.5. *Arizona Law Applies.* This Agreement shall be governed by and interpreted in accordance with the substantive laws of the State of Arizona, without reference to its conflicts of laws principles.

13.6. *Successors.* The terms, covenants and conditions contained in this Agreement shall be binding on and inure to the benefit of the Parties and their respective successors and assigns.

13.7. *Counterparts.* This Agreement may be executed in one or more counterparts, each of which shall be deemed an original and all of which together shall constitute one agreement.

- 13.8. *Warranty of Authority.* Each Party represents and warrants that it has the authority to execute, deliver and perform under this Agreement.
- 13.9. *Intellectual Property.* No Party will use any other Party's name, mark, code, drawing or specification in any advertising, press release, promotional effort or public announcement of any kind without the prior written permission of that Party.
- 13.10. *No Waiver.* Any waiver by either Party of a breach of any provision of the Agreement will not operate as or be construed to be a waiver of any other breach of that or any other provision of the Agreement. Any waiver must be in writing. Failure by any Party to insist upon strict adherence to any provision of the Agreement on one or more occasions will not deprive such Party of the right to insist upon strict adherence to that or any other provision of the Agreement.
- 13.11. *Amendments.* Any modifications or amendments to this Agreement must be in writing and signed by all Parties.
- 13.12. *Severability.* The determination that any provision of this Agreement is invalid, illegal, or unenforceable will not invalidate this Agreement, and this Agreement will be construed and performed in all respects as if such invalid or unenforceable provision was omitted insofar as the primary purpose of this Agreement is not frustrated.
- 13.13. *Headings.* Headings in this Agreement are included for convenience only and will not affect the meaning or interpretation of this Agreement.
- 13.14. *Conflict of Interest.* This Agreement is subject to the provisions of A.R.S. § 38-511.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement.

PIMA COUNTY:

TUCSON ELECTRIC POWER CO.:



Chair, Board of Supervisors

NOV 21 2017

Date



Authorized Signature

Susan Gray

Print name

VP Energy Delivery

Title

10/12/17

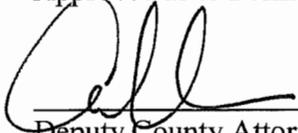
Date

ATTEST:



Clerk of the Board

Approved as to Form:

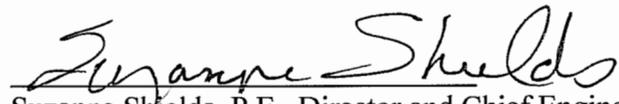


Deputy County Attorney
ANDREW FLAGG

Approved as to Content:

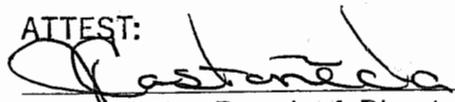


Ana Olivares, P.E., Interim Director
Pima County Department of Transportation



Suzanne Shields, P.E., Director and Chief Engineer
Pima County Flood Control District

ATTEST:



Clerk of the Board of Directors
of Pima County Flood Control
District



NOV 21 2017
Chair, Pima County Flood Control District
Board of Directors

EXHIBIT A
LEGAL DESCRIPTION PCFCD PROPERTY

PARCEL NO. 1:

SOUTH PARCEL

ALL THAT PORTION OF SECTION 17 AND SECTION 18, TOWNSHIP 13 SOUTH, RANGE 13 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PIMA COUNTY, ARIZONA; SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS, TO-WIT:

BEGINNING AT THE NORTHWEST CORNER OF SAID SECTION 17;

THENCE SOUTH 00 DEGREES 43 MINUTES 18 SECONDS WEST, A DISTANCE OF 30.00 FEET TO A POINT IN THE SOUTH RIGHT-OF-WAY LINE OF SUNSET ROAD AS RECORDED IN BOOK 3, PAGE 39 OF ROAD MAPS IN THE OFFICE OF THE PIMA COUNTY, ARIZONA RECORDER; SAID POINT ALSO BEING THE TRUE POINT OF BEGINNING;

THENCE NORTH 89 DEGREES 48 MINUTES 13 SECONDS EAST, A DISTANCE OF 814.81 FEET;

THENCE SOUTH 00 DEGREES 00 MINUTES 00 SECONDS EAST, A DISTANCE OF 5.76 FEET;

THENCE SOUTH 78 DEGREES 34 MINUTES 20 SECONDS EAST, A DISTANCE OF 395.44 FEET TO A POINT IN THE WEST RIGHT-OF-WAY OF INTERSTATE 10 AS IT NOW EXISTS (JULY, 1997);

THENCE SOUTH 30 DEGREES 03 MINUTES 04 SECONDS EAST, ALONG SAID RIGHT-OF-WAY LINE, A DISTANCE OF 233.43 FEET; SAID POINT BEING A POINT OF INTERSECTION WITH THE EAST LINE OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 17;

THENCE CONTINUE SOUTH 30 DEGREES 03 MINUTES 04 SECONDS EAST, A DISTANCE OF 591.00 FEET;

THENCE CONTINUE ALONG SAID RIGHT-OF-WAY LINE SOUTH 32 DEGREES 23 MINUTES 05 SECONDS EAST, A DISTANCE OF 1354.22 FEET TO A POINT OF CURVATURE;

THENCE CONTINUE ALONG SAID RIGHT-OF-WAY LINE ALONG THE ARC OF A CIRCULAR CURVE CONCAVE TO THE NORTHEAST HAVING A RADIUS OF 23018.31 FEET, A CENTRAL ANGLE OF 01 DEGREES 14 MINUTES 49 SECONDS AN ARC DISTANCE OF 500.92 FEET TO A POINT OF INTERSECTION WITH THE EAST LINE OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 17;

THENCE SOUTH 00 DEGREES 49 MINUTES 42 SECONDS WEST ALONG SAID EAST LINE, A DISTANCE OF 239.33 FEET TO THE CENTER OF SAID SECTION 17; SAID POINT ALSO BEING ON THE NORTH LINE OF A STRIP OF LAND (NKA) CURTIS ROAD CONVEYED PIMA COUNTY BY DEED RECORDED IN DOCKET 3688 AT PAGE 855 IN THE OFFICE OF THE PIMA COUNTY, ARIZONA RECORDER;

THENCE SOUTH 89 DEGREES 54 MINUTES 40 SECONDS WEST, ALONG THE SOUTH LINE OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 17, A DISTANCE OF 1320.67 FEET TO THE SOUTHEAST CORNER OF SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 17;

THENCE CONTINUING SOUTH 89 DEGREES 54 MINUTES 40 SECONDS WEST, A DISTANCE OF 1320.67 FEET TO THE COMMON QUARTER SECTION CORNER OF SAID SECTION 17 AND SECTION 18;

THENCE NORTH 00 DEGREES 42 MINUTES 59 SECONDS EAST ALONG SAID QUARTER SECTION LINE, A DISTANCE OF 1316.39 FEET TO THE SOUTHWEST CORNER OF THE NORTHWEST QUARTER OF THE

NORTHWEST QUARTER OF SAID SECTION 17;

THENCE NORTH 89 DEGREES 51 MINUTES 30 SECONDS WEST ALONG THE SOUTH LINE OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 18, A DISTANCE OF 1325.39 FEET TO THE SOUTHEAST CORNER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 18;

THENCE NORTH 89 DEGREES 52 MINUTES 28 SECONDS WEST ALONG THE SOUTH LINE OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER, A DISTANCE OF 170.15 FEET TO A POINT IN THE EAST RIGHT-OF-WAY LINE OF SILVERBELL ROAD AS RECORDED IN BOOK 3 AT PAGE(S) 9 AND 10 OF ROAD MAPS IN THE OFFICE OF THE PIMA COUNTY, ARIZONA RECORDER;

THENCE NORTH 19 DEGREES 15 MINUTES 29 SECONDS WEST ALONG AFORESAID EAST RIGHT-OF-WAY, A DISTANCE OF 710.46 FEET TO A POINT OF CURVATURE;

THENCE NORTHERLY ALONG A CIRCULAR CURVE CONCAVE TO THE WEST, HAVING A RADIUS OF 2894.79 FEET, CENTRAL ANGLE OF 06 DEGREES 39 MINUTES 32 SECONDS, AN ARC DISTANCE OF 336.43 FEET TO A POINT OF TANGENCY;

THENCE NORTH 25 DEGREES 55 MINUTES 01 SECONDS WEST, A DISTANCE OF 284.57 FEET TO A POINT OF CURVATURE;

THENCE NORTHERLY ALONG A CIRCULAR CURVE CONCAVE TO THE WEST HAVING A RADIUS OF 1462.40 FEET, A CENTRAL ANGLE OF 02 DEGREES 19 MINUTES 11 SECONDS, AN ARC DISTANCE OF 59.21 FEET TO A POINT OF INTERSECTION WITH THE SOUTHERLY RIGHT-OF-WAY OF AFORESAID SUNSET ROAD;

THENCE SOUTH 89 DEGREES 48 MINUTES 15 SECONDS EAST, A DISTANCE OF 703.29 FEET TO THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 18;

THENCE CONTINUE ALONG THE SOUTH RIGHT-OF-WAY LINE OF AFORESAID SUNSET ROAD, SOUTH 89 DEGREES 48 MINUTES 15 SECONDS EAST, A DISTANCE OF 1323.22 FEET TO THE TRUE POINT OF BEGINNING.

EXCEPTING THEREFROM, ANY PORTION TAKEN BY THE STATE OF ARIZONA IN FINAL ORDER OF CONDEMNATION RECORDED DECEMBER 14, 2004 AS DOCKET 12448, PAGE 797.

PARCEL NO. 2:

NORTH PARCEL

ALL THAT PORTION OF SECTION 7 AND SECTION 8, TOWNSHIP 13 SOUTH, RANGE 13 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PIMA COUNTY, ARIZONA, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS, TO-WIT:

BEGINNING AT THE SOUTHEAST CORNER OF SAID SECTION 7;

THENCE NORTH 00 DEGREES 26 MINUTES 26 SECONDS EAST ALONG THE EAST LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 7, A DISTANCE OF 30.00 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SUNSET ROAD AS RECORDED IN BOOK 3 AT PAGE 39 OF ROAD MAPS THEREOF IN THE OFFICE OF THE PIMA COUNTY, ARIZONA RECORDER, SAID POINT ALSO BEING THE TRUE POINT OF BEGINNING;

THENCE NORTH 89 DEGREES 48 MINUTES 15 SECONDS WEST, A DISTANCE OF 1322.97 FEET TO A POINT ON THE WEST LINE OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SAID

SECTION 7;

THENCE CONTINUE ALONG THE NORTH RIGHT-OF-WAY LINE OF AFORESAID SUNSET ROAD, NORTH 89 DEGREES 48 MINUTES 15 SECONDS WEST, A DISTANCE OF 738.06 FEET TO A POINT OF INTERSECTION WITH THE EAST RIGHT-OF-WAY LINE OF SILVERBELL ROAD AS RECORDED IN BOOK 3 AT PAGE(S) 9 AND 10 OF ROAD MAPS, IN THE OFFICE OF THE PIMA COUNTY, ARIZONA RECORDER;

THENCE NORTHWESTERLY ALONG THE ARC OF CIRCULAR CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 1462.40 FEET, A CENTRAL ANGLE OF 06 DEGREES 51 MINUTES 15 SECONDS, AN ARC DISTANCE OF 174.94 FEET TO A POINT OF TANGENCY;

THENCE CONTINUE ALONG SAID RIGHT-OF-WAY LINE NORTH 37 DEGREES 47 MINUTES 34 SECONDS WEST, A DISTANCE OF 786.23 FEET TO A POINT OF INTERSECTION WITH THE WEST LINE OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 7;

THENCE NORTH 00 DEGREES 20 MINUTES 49 SECONDS EAST, ALONG SAID WEST LINE, A DISTANCE OF 527.80 FEET TO THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 7;

THENCE ALONG THE NORTH LINE OF SAID QUARTER, SOUTH 89 DEGREES 58 MINUTES 16 SECONDS EAST, A DISTANCE OF 648.56 FEET TO A POINT IN THE SOUTHWEST CORNER OF LAND DESCRIBED IN BOOK 304 OF DEEDS, AT PAGE 197 AS RECORDED OF RECORD IN THE OFFICE OF THE PIMA COUNTY, ARIZONA RECORDER;

THENCE NORTH 00 DEGREES 26 MINUTES 26 SECONDS EAST ALONG THE WEST LINE OF LAND DESCRIBED IN AFORESAID BOOK 304 OF DEEDS AT PAGE 197, A DISTANCE OF 350.00 FEET;

THENCE SOUTH 89 DEGREES 58 MINUTES 16 SECONDS EAST (SOUTH 89 DEGREES 31 MINUTES 09 SECONDS EAST, RECORDED), A DISTANCE OF 106.56 FEET TO A POINT IN THE NORTHWEST CORNER OF LAND TAKEN BY FINAL ORDER OF CONDEMNATION RECORDED IN DOCKET 9843 AT PAGE 2492 IN THE OFFICE OF THE PIMA COUNTY, ARIZONA RECORDER;

THENCE SOUTH 66 DEGREES 30 MINUTES 06 SECONDS EAST (SOUTH 67 DEGREES 00 MINUTES 31 SECONDS EAST, RECORDED), A DISTANCE OF 561.28 FEET;

THENCE NORTH 61 DEGREES 49 MINUTES 56 SECONDS EAST (NORTH 61 DEGREES 19 MINUTES 32 SECONDS EAST, RECORDED), A DISTANCE OF 90.02 FEET;

THENCE NORTH 28 DEGREES 10 MINUTES 03 SECONDS WEST (NORTH 28 DEGREES 40 MINUTES 28 SECONDS EAST, RECORDED), A DISTANCE OF 67.99 FEET TO A POINT ON A CURVE FROM WHICH THE RADIUS BEARS SOUTH 39 DEGREES 23 MINUTES 41 SECONDS EAST, A DISTANCE OF 614.58 FEET;

THENCE CONTINUE ALONG THE ARC OF SAID CURVE NORTHEASTERLY CONCAVE TO THE SOUTHEAST HAVING A RADIUS OF 614.58 FEET, A CENTRAL ANGLE OF 25 DEGREES 14 MINUTES 35 SECONDS, AN ARC DISTANCE OF 270.77 FEET TO A POINT IN THE NORTHEAST CORNER OF LAND TAKEN BY AFORESAID DOCKET 9843 AT PAGE 2492; AND ALSO BEING A POINT OF INTERSECTION WITH A LINE 350.00 FEET NORTH AND PARALLEL WITH THE NORTH LINE OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 7;

THENCE CONTINUE ALONG SAID LINE SOUTH 89 DEGREES 58 MINUTES 16 SECONDS EAST (NORTH 89 DEGREES 31 MINUTES 21 SECONDS EAST, RECORDED), A DISTANCE OF 1091.65 FEET TO A POINT ON THE EAST LINE OF SAID SECTION 7;

THENCE NORTH ALONG SAID SECTION LINE, NORTH 00 DEGREES 26 MINUTES 26 SECONDS EAST, A DISTANCE OF 338.67 FEET TO A POINT OF INTERSECTION WITH THE WEST RIGHT-OF-WAY LINE OF INTERSTATE 10 AS IT NOW EXISTS (JULY 1997);

THENCE ALONG SAID RIGHT-OF-WAY LINE SOUTH 30 DEGREES 02 MINUTES 19 SECONDS EAST, A DISTANCE OF 1061.27 FEET;

THENCE CONTINUE ALONG SAID RIGHT-OF-WAY LINE SOUTH 25 DEGREES 16 MINUTES 29 SECONDS EAST, A DISTANCE OF 602.07 FEET;

THENCE CONTINUE ALONG SAID RIGHT-OF-WAY LINE SOUTH 28 DEGREES 08 MINUTES 09 SECONDS EAST, A DISTANCE OF 572.32 FEET;

THENCE SOUTH 74 DEGREES 59 MINUTES 32 SECONDS WEST, A DISTANCE OF 63.46 FEET TO A POINT OF INTERSECTION WITH THE NORTH LINE OF AFORESAID SUNSET ROAD;

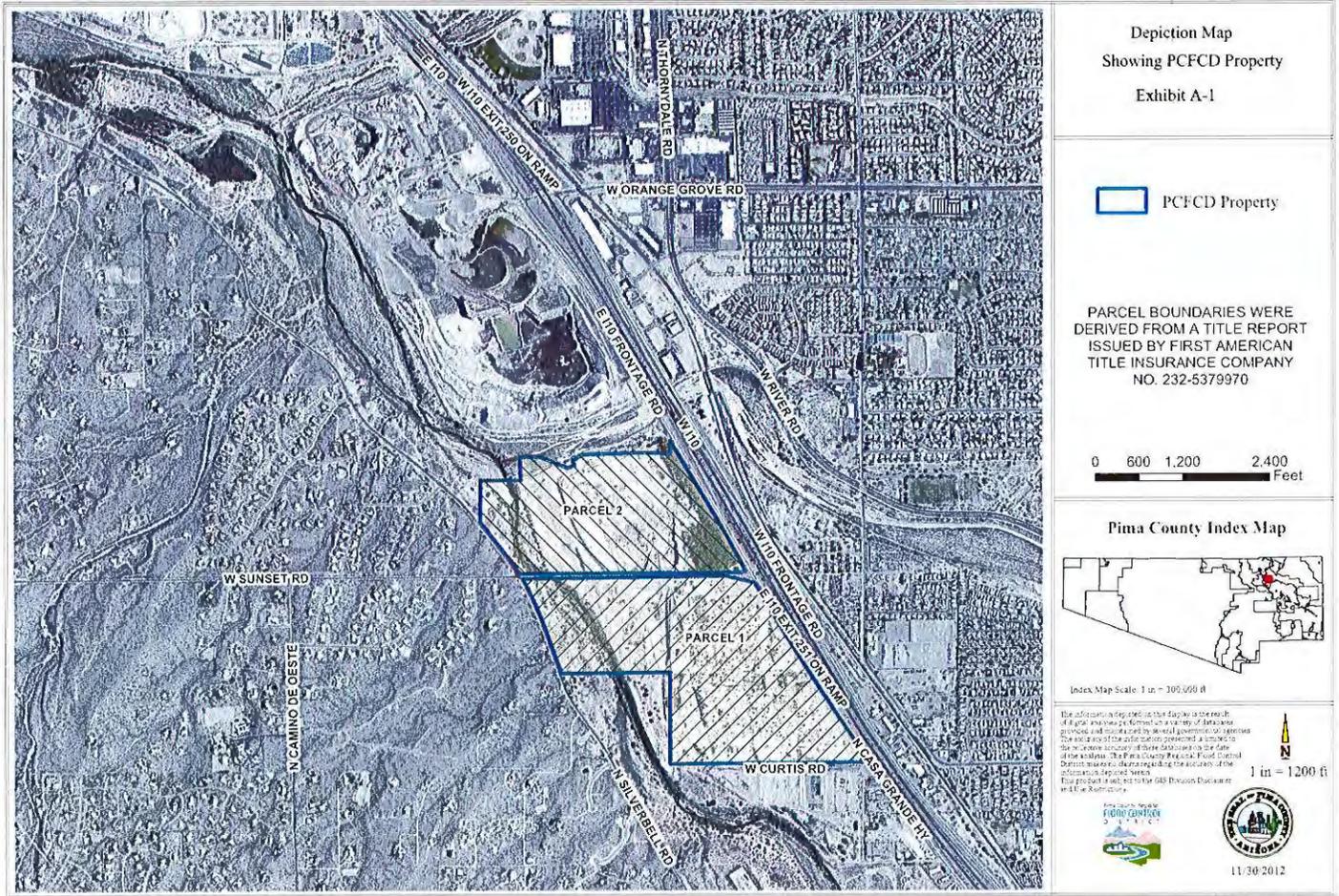
THENCE SOUTH 89 DEGREES 48 MINUTES 13 SECONDS WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE A DISTANCE OF 1012.42 FEET TO THE TRUE POINT OF BEGINNING.

EXCEPTING THEREFROM ANY PORTION TAKEN BY THE STATE OF ARIZONA IN FINAL ORDER OF CONDEMNATION RECORDED DECEMBER 14, 2004 AS DOCKET 12448, PAGE 797.

PARCEL NO. 3:

ACCESS EASEMENTS AS MORE FULLY SET FORTH AND RESERVED BY DEED(S) RECORDED IN DOCKET 1986 AT PAGE(S) 235 AND 238; AND IN DOCKET 2019 AT PAGE 87; AND IN DOCKET 2062 AT PAGE 128; AND IN DOCKET 2167 AT PAGE 242; AND IN DOCKET 2273 AT PAGE 13 IN THE OFFICE OF THE PIMA COUNTY, ARIZONA RECORDER.

EXHIBIT A-1



2: \\pdc\dev\Area\Barr\Area\Low\1011\Map\1011\PCFD\Display\Cartesian\Cartesian_GIS_Preview_Sm_Ar_11/30/2012.txd



EXHIBIT B - 1 of 2

09/13/2016
EEC No. 13039
Sunset ROW Abandonment_Rev4
Page 1 of 3

EXHIBIT "B"
LEGAL DESCRIPTION
SUNSET ROAD RIGHT-OF-WAY ABANDONMENT

ALL THAT PORTION OF SUNSET ROAD, AS ESTABLISHED IN ROAD PROCEEDING NUMBER 243A, RECORDED IN BOOK 3 OF ROAD MAPS AT PAGE 39, IN THE PIMA COUNTY RECORDER'S OFFICE, AND BEING A STRIP OF LAND 60.00 FEET WIDE WITHIN A PORTION OF SECTIONS 7, 8, 17 AND 18, ALL IN TOWNSHIP 13 SOUTH, RANGE 13 EAST, GILA AND SALT RIVER MERIDIAN, PIMA COUNTY, ARIZONA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A BRASS STEM AT THE COMMON CORNER OF SAID SECTIONS 7, 8, 17, 18, FROM SAID CORNER A 2-INCH BRASS CAP SURVEY MONUMENT AT THE NORTH 1/4 CORNER OF SAID SECTION 18 BEARS SOUTH 89 DEGREES 41 MINUTES 06 SECONDS WEST, A DISTANCE OF 2,646.48 FEET;

THENCE SOUTH 00 DEGREES 30 MINUTES 36 SECONDS WEST A DISTANCE OF 30.00 FEET TO A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF SAID SUNSET ROAD, SAID POINT BEING THE POINT OF BEGINNING;

THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE OF SUNSET ROAD PARALLEL TO SAID COMMON LINE BETWEEN SECTIONS 17 AND 8, NORTH 89 DEGREES 17 MINUTES 42 SECONDS EAST A DISTANCE OF 795.01 FEET;

THENCE DEPARTING SAID SOUTHERLY RIGHT-OF-WAY LINE OF SUNSET ROAD NORTH 00 DEGREES 42 MINUTES 18 SECONDS WEST A DISTANCE OF 60.00 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF SAID SUNSET ROAD;

THENCE ALONG SAID NORTHERLY RIGHT-OF-WAY LINE OF SUNSET ROAD PARALLEL WITH SAID COMMON LINE BETWEEN SECTIONS 17 AND 8, SOUTH 89 DEGREES 17 MINUTES 42 SECONDS WEST A DISTANCE OF 794.80 FEET;

THENCE ALONG SAID NORTHERLY RIGHT-OF-WAY LINE OF SUNSET ROAD PARALLEL WITH SAID COMMON LINE BETWEEN SECTIONS 18 AND 7, SOUTH 89 DEGREES 41 MINUTES 06 SECONDS WEST A DISTANCE OF 1995.36 FEET TO A POINT ON THE NORTHEASTERLY RIGHT-OF-WAY LINE OF SILVERBELL ROAD, SAID POINT BEING THE BEGINNING OF A NON-TANGENTIAL CURVE CONCAVE SOUTHWEST WHOSE RADIUS POINT BEARS SOUTH 59 DEGREES 01 MINUTES 29 SECONDS WEST A DISTANCE OF 5240.00 FEET;

THENCE SOUTHEASTERLY ALONG SAID RIGHT-OF-WAY LINE OF SILVERBELL ROAD, THROUGH A CENTRAL ANGLE OF 00 DEGREES 45 MINUTES 35 SECONDS FOR AN ARC DISTANCE OF 69.48 FEET TO A POINT ON THE NON-TANGENTIAL SOUTHERLY RIGHT-OF-WAY LINE OF SAID SUNSET ROAD;

THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY-LINE OF SUNSET ROAD PARALLEL WITH SAID COMMON LINE BETWEEN SECTIONS 18 AND 7 NORTH 89 DEGREES 41 MINUTES 06 SECONDS EAST A DISTANCE OF 1960.53 FEET TO THE POINT OF BEGINNING.

Prepared by:

ENGINEERING AND ENVIRONMENTAL CONSULTANTS, INC.

Bruce Brown, RLS

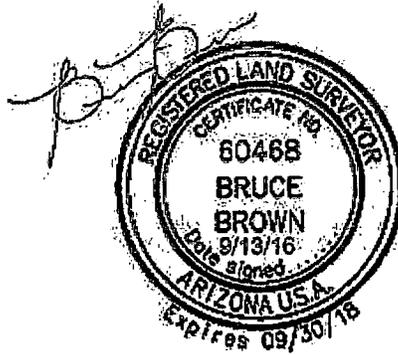
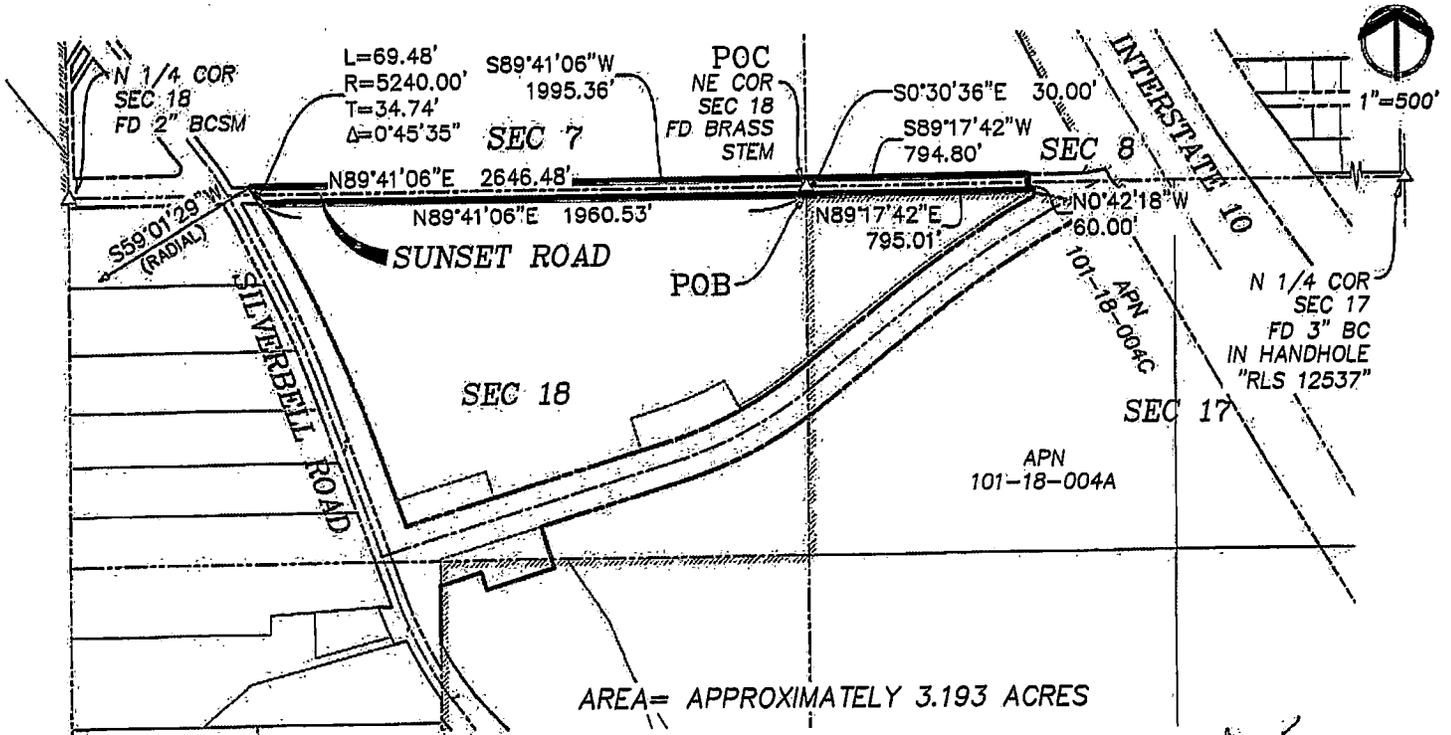


EXHIBIT B-1



AREA = APPROXIMATELY 3.193 ACRES

Basis of Bearings:

The bearing being N55°56'26"E as measured between Pima County DOT-City of Tucson DOT Geodetic Control Point AG09 and Pima County DOT-City of Tucson DOT Geodetic Control Point AL03.

EXHIBIT B-1
**RIGHT-OF-WAY ABANDONMENT OF A
 PORTION OF SUNSET ROAD**

SECTIONS 7,8,17,18, T13S, R13E, G&SRM
 PIMA COUNTY, ARIZONA

Engineering and Environmental Consultants, Inc.

4625 E. FT. LOWELL RD.

TUCSON, ARIZONA 85712 520-321-4625

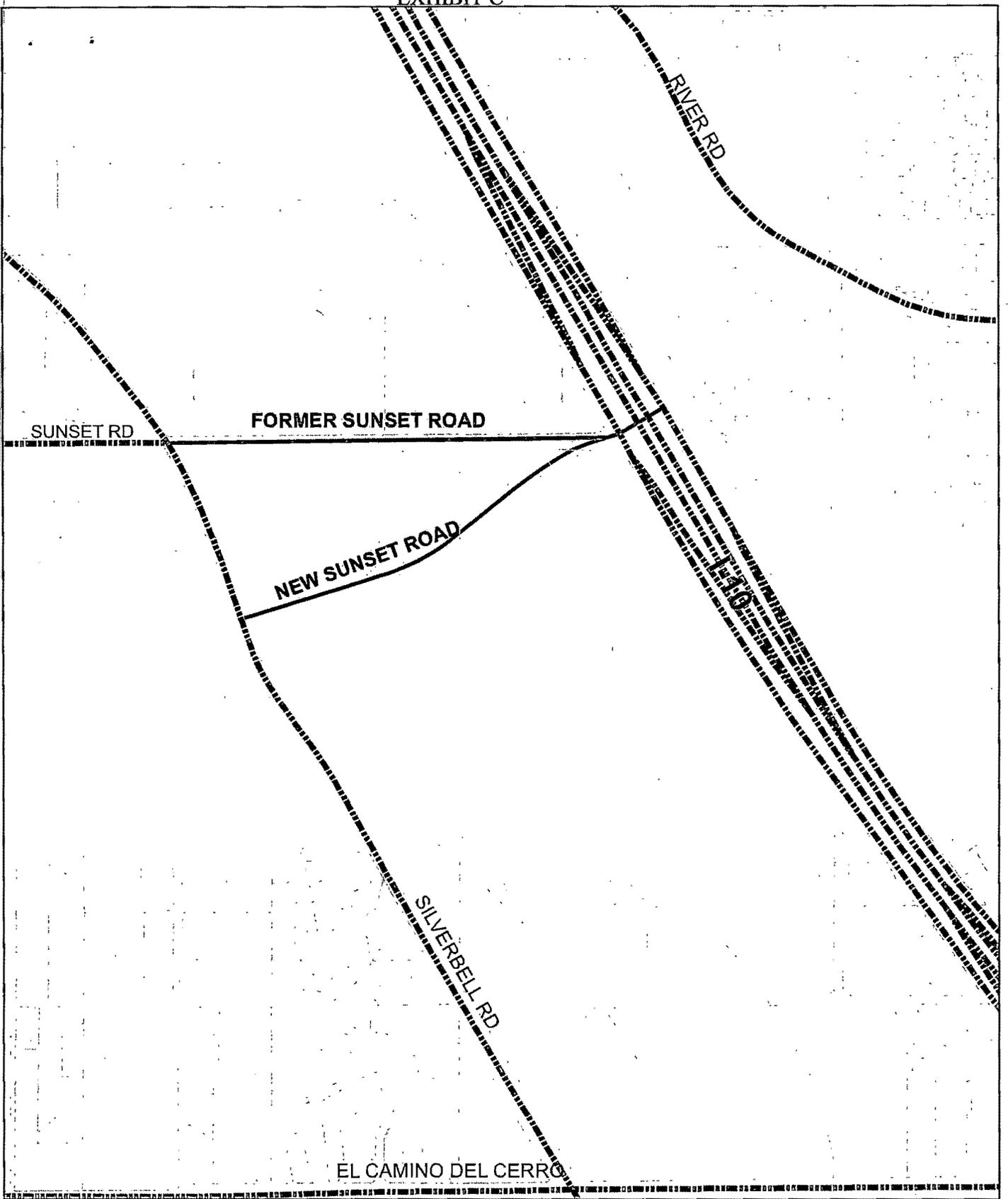
09/13/2016



EEC No. 13039
 PAGE 3 OF 3



EXHIBIT C



Legend

-  MAJOR ROADS
-  PARCELS



**TEP RELOCATION
EXHIBIT C**

DRAWN BY: CPEREZ

Date: 4/12/2017

DRAWING NOT TO SCALE

**EXHIBIT D TO
Agreement among Pima County,
Pima County Flood Control District,
and Tucson Electric Power
for Relocation of Sunset Rd. Utility Line**

RELEASE OF EASEMENT

Tucson Electric Power Company, an Arizona public service corporation, hereby relinquishes all right, title, and interest in and to any portion of the following described easements, whether express or implied, situated within Sections 7, 8, 17 and 18 of T. 13S., R. 13E., G&SRM in Pima County, Arizona and any other interest in or right to use or restrict the use of any portion of such properties embraced by said easements:

- That certain Right-of-Way Easement dated March 18, 1954, recorded at 699/166 of Pima Co. Records;
- That certain Right-of-Way Easement dated October 15, 1963, recorded at 2171/412 of Pima Co. records;
- That certain Right-of-Way Easement dated June 10, 1969, recorded at 3515/295 of Pima County records;
- That certain right of Way Easement dated January 26, 1976, recorded at 5198/106 of Pima County Records; and,
- Any easement rights pursuant to A.R.S. § 28-7210 lying east of the Santa Cruz River channel, as a result of the formal abandonment of Sunset Road by the Pima County Board of Supervisors in Resolution 2016-81, dated November 22, 2016.

Dated this _____ day of _____, 2017.

TUCSON ELECTRIC POWER COMPANY

By: _____

Print Name: _____

Title: _____

STATE OF ARIZONA)
) ss
COUNTY OF PIMA)

The foregoing instrument was acknowledged before me on the ____ day of _____, 2017, by _____, as the _____ of Tucson Electric Power Company, an Arizona corporation, on behalf of the corporation.

Notary Public

ATTACH LEGAL DESCRIPTIONS AND DEPICTIONS OF THE "PROPERTY" AND THE "FORMER SUNSET ROW" AS DEFINED IN THE AGREEMENT

Exhibit Only

RIGHT OF WAY EASEMENT

PIMA COUNTY FLOOD CONTROL DISTRICT, a political taxing subdivision of the State of Arizona

(hereinafter referred to as "Grantor"), hereby grants to **Tucson Electric Power Company**, an Arizona corporation, its successors and assigns (hereinafter referred to as "Grantee"), for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, a perpetual non-exclusive easement and right-of-way to construct, use, maintain, operate, alter, add to, repair, replace, reconstruct, inspect and remove at any time and from time to time electric lines and appurtenant facilities for the transmission and distribution of electricity, consisting of wires, underground conduits, cables, vaults, manholes, handholes, and including above-ground enclosures, markers, concrete pads, risers, poles, anchors, guy wires and other appurtenant fixtures and equipment necessary or useful for distributing electrical energy and for communication facilities of other entities (taken together, the "Facilities"), in, over, under, across and along that certain real property described as follows (the "Easement"):

SEE EXHIBIT "A" ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF.

Grantor further conveys to Grantee, for purposes of ingress and egress to the Easement, a right of access over, upon or along Grantor's property as is reasonably necessary to access the Easement. Grantee shall repair any damage to Grantor's property that results from any such ingress or egress.

Grantor agrees for itself, its successors and assigns, not to erect, place or maintain, nor to permit the erection, placement or maintenance of any building, landscaping, earth fill, walls or fences upon the Easement that would impair the repair, maintenance or removal of any or all of the Facilities. All Facilities, including electrical and communication structures installed by Grantee in and upon the Easement, shall remain the personal property of the Grantee and shall not be deemed a part of the realty.

Grantee and its contractors, agents and employees shall have the right to trim or top such trees and to cut such roots and remove such obstacles that could endanger or interfere with the Facilities, and shall have free access to the Facilities at all times for the purpose of exercising the rights herein granted.

Grantee shall have the right during initial construction of the Facilities, to use for the purposes incidental to said construction, a strip of land 10 feet in width adjacent and contiguous to the Easement, said strip to be in whole or in part on each side of the Easement, said right to use said strip of land ceasing and being terminated at such time as said initial construction is completed.

Grantor shall not increase or decrease the ground surface elevation within the boundaries of the Easement after approved final grade is established and meets Grantee's construction standards. Subsequent to the construction, the ground surface shall not be penetrated to a depth in excess of 12 inches by any tool or implement, without having the underground facilities located and taking all necessary precautions to protect them. If subsequent to construction Grantor changes the grade in such a way as to require relocation or alteration of the Facilities, the cost shall be borne by Grantor or subsequent owners.

Grantor hereby agrees that these covenants are made for the herein-described real property which is the subject of this Easement. Grantor hereby warrants and represents, and acknowledges Grantee's reliance upon said warranty and representation, that Grantor has good and sufficient title to the real property in order to grant this Easement.

Attached "Addendum to Easement" incorporated by reference.

EXHIBIT E - 2 of 8

In consideration of the mutual terms, covenants and conditions herein contained, this easement shall be binding upon and inure to benefit of any heirs, executors, administrators, permittees, licensees, agents, or assigns of Grantor and any successors and assigns of Grantee.

In witness hereof, the Grantor has executed these presents this _____ day of _____, 201~~6~~⁷

ATTEST:

GRANTOR: Pima County Flood Control District, a political taxing subdivision of the State of Arizona

Clerk of the Board of Directors

By: _____
Chair, Board of Directors

STATE OF ARIZONA)
) §
COUNTY OF PIMA)

This foregoing instrument was acknowledged before me this _____ day of _____, 201~~6~~⁷,
by _____ as Chair of the Board of Directors of the Pima County Flood Control District, a political taxing subdivision of the State of Arizona.

Notary Public

Addendum to Easement

Cultural Resources Compliance. Consistent with Pima County Board of Supervisors Policy No. C 3.17, Grantee, its employees, contractors and agents shall comply with all applicable federal, state and local cultural resources and historic preservation statutes; regulations, ordinances, policies and guidelines prior to and during any ground disturbance within the Easement area. Grantee shall coordinate with the Pima County Office of Cultural Resources and Historic Preservation when planning and designing construction and when implementing cultural resource compliance activities. Grantee is solely responsible for all costs related to cultural resource compliance activities arising from Grantee's activities within the Easement area.

Indemnity. Grantee shall indemnify, defend and hold harmless from any and all present or future claims, demands and causes of action in law or equity caused by the negligent or intentionally wrongful acts of Grantee's agents, employees or contractors in connection with Grantee's use of the Easement area.



EXHIBIT E - 4 of 8

11/07/2016
EEC No. 13039
13039 PCRFCD.UTIL-ESMT-16FT-120FT
Page 1 of 5

EXHIBIT "A"
LEGAL DESCRIPTION
UTILITY EASEMENT

THAT PORTION OF THE NORTHEAST QUARTER OF SECTION EIGHTEEN AND THE NORTHWEST QUARTER OF SECTION SEVENTEEN, TOWNSHIP THIRTEEN SOUTH, RANGE THIRTEEN EAST, GILA AND SALT RIVER MERIDIAN, PIMA COUNTY, ARIZONA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A BRASS STEM AT THE NORTHEAST CORNER OF SAID SECTION EIGHTEEN, FROM SAID POINT A 2-INCH BRASS CAP SURVEY MONUMENT AT THE NORTH QUARTER CORNER OF SAID SECTION EIGHTEEN BEARS SOUTH 89 DEGREES 41 MINUTES 06 SECONDS WEST A DISTANCE OF 2,646.48 FEET;

THENCE ALONG THE NORTH LINE OF SAID SECTION EIGHTEEN, SOUTH 89 DEGREES 41 MINUTES 06 SECONDS WEST A DISTANCE OF 1,960.42 FEET;

THENCE DEPARTING SAID NORTH LINE, SOUTH 00 DEGREES 18 MINUTES 54 SECONDS EAST A DISTANCE OF 30.00 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF SUNSET ROAD AS SHOWN IN BOOK 3, PAGE 39 OF ROAD MAPS, ON FILE IN THE PIMA COUNTY RECORDER'S OFFICE, PIMA COUNTY, ARIZONA, BEING THE BEGINNING OF A NON-TANGENT CURVE CONCAVE SOUTHWESTERLY, WHOSE RADIUS POINT BEARS SOUTH 59 DEGREES 47 MINUTES 04 SECONDS WEST A DISTANCE OF 5240.00 FEET;

THENCE SOUTHEASTERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 10 DEGREES 27 MINUTES 08 SECONDS AN ARC LENGTH OF 955.91 FEET;

THENCE SOUTH 19 DEGREES 45 MINUTES 48 SECONDS EAST A DISTANCE OF 211.99 FEET TO THE POINT OF BEGINNING;

THENCE SOUTH 19 DEGREES 45 MINUTES 48 SECONDS EAST A DISTANCE OF 100.10 FEET;

THENCE NORTH 72 DEGREES 44 MINUTES 12 SECONDS EAST A DISTANCE OF 987.86 FEET TO THE BEGINNING OF A CURVE CONCAVE NORTHWESTERLY WHOSE RADIUS POINT BEARS NORTH 17 DEGREES 15 MINUTES 48 SECONDS WEST A DISTANCE OF 1,475.00 FEET;

THENCE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 21 DEGREES 15 MINUTES 18 SECONDS, AN ARC LENGTH OF 547.18 FEET;

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Environmental Services | Flood Control & Drainage | Land Development
Land Surveying | Transportation | Water & Wastewater

Tucson • Phoenix

THENCE NORTH 51 DEGREES 28 MINUTES 55 SECONDS EAST, A DISTANCE OF 464.53 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTHEASTERLY WHOSE RADIUS POINT BEARS SOUTH 38 DEGREES 31 MINUTES 05 SECONDS EAST A DISTANCE OF 3,775.00 FEET;

THENCE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 07 DEGREES 59 MINUTES 27 SECONDS, AN ARC LENGTH OF 526.48 FEET;

THENCE NORTH 59 DEGREES 28 MINUTES 21 SECONDS EAST, A DISTANCE OF 52.60 FEET;

THENCE NORTH 00 DEGREES 42 MINUTES 12 SECONDS WEST, A DISTANCE OF 10.17 FEET TO THE SOUTHERLY RIGHT-OF-WAY LINE OF SUNSET ROAD AS ESTABLISHED PER DOCKET 10050, PAGE 1144 OF OFFICIAL RECORDS, ON FILE IN THE OFFICE OF PIMA COUNTY RECORDER'S OFFICE, PIMA COUNTY, ARIZONA;

THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, NORTH 00 DEGREES 42 MINUTES 12 SECONDS WEST, A DISTANCE OF 7.76 FEET;

THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, SOUTH 89 DEGREES 17 MINUTES 42 SECONDS WEST, A DISTANCE OF 19.52 FEET;

THENCE DEPARTING SAID SOUTHERLY RIGHT-OF-WAY LINE SOUTH 55 DEGREES 56 MINUTES 49 SECONDS WEST, A DISTANCE OF 349.58 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE SOUTHEAST WHOSE RADIUS POINT BEARS SOUTH 35 DEGREES 07 MINUTES 55 SECONDS EAST A DISTANCE OF 3,791.00 FEET;

THENCE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 03 DEGREES 23 MINUTES 10 SECONDS, AN ARC LENGTH OF 224.04 FEET;

THENCE SOUTH 51 DEGREES 28 MINUTES 55 SECONDS WEST, A DISTANCE OF 464.53 FEET TO THE BEGINNING OF A CURVE CONCAVE NORTHWESTERLY WHOSE RADIUS POINT BEARS NORTH 38 DEGREES 31 MINUTES 05 SECONDS WEST A DISTANCE OF 1,459.00 FEET;

THENCE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 10 DEGREES 13 MINUTES 55 SECONDS, AN ARC LENGTH OF 260.55 FEET;

THENCE NORTH 28 DEGREES 17 MINUTES 10 SECONDS WEST A DISTANCE OF 104.00 FEET TO THE BEGINNING OF A CURVE CONCAVE NORTHWESTERLY WHOSE RADIUS POINT BEARS NORTH 28 DEGREES 17 MINUTES 10 SECONDS WEST A DISTANCE OF 1,355.00 FEET;

THENCE NORTHEASTERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 11 DEGREES 01 MINUTES 23 SECONDS AN ARC LENGTH OF 260.68 FEET;

THENCE SOUTH 72 DEGREES 44 MINUTES 12 SECONDS WEST A DISTANCE OF 101.80 FEET;

THENCE SOUTH 17 DEGREES 15 MINUTES 48 SECONDS EAST A DISTANCE OF 104.00 FEET;

THENCE SOUTH 72 DEGREES 44 MINUTES 12 SECONDS WEST A DISTANCE OF 555.00 FEET;

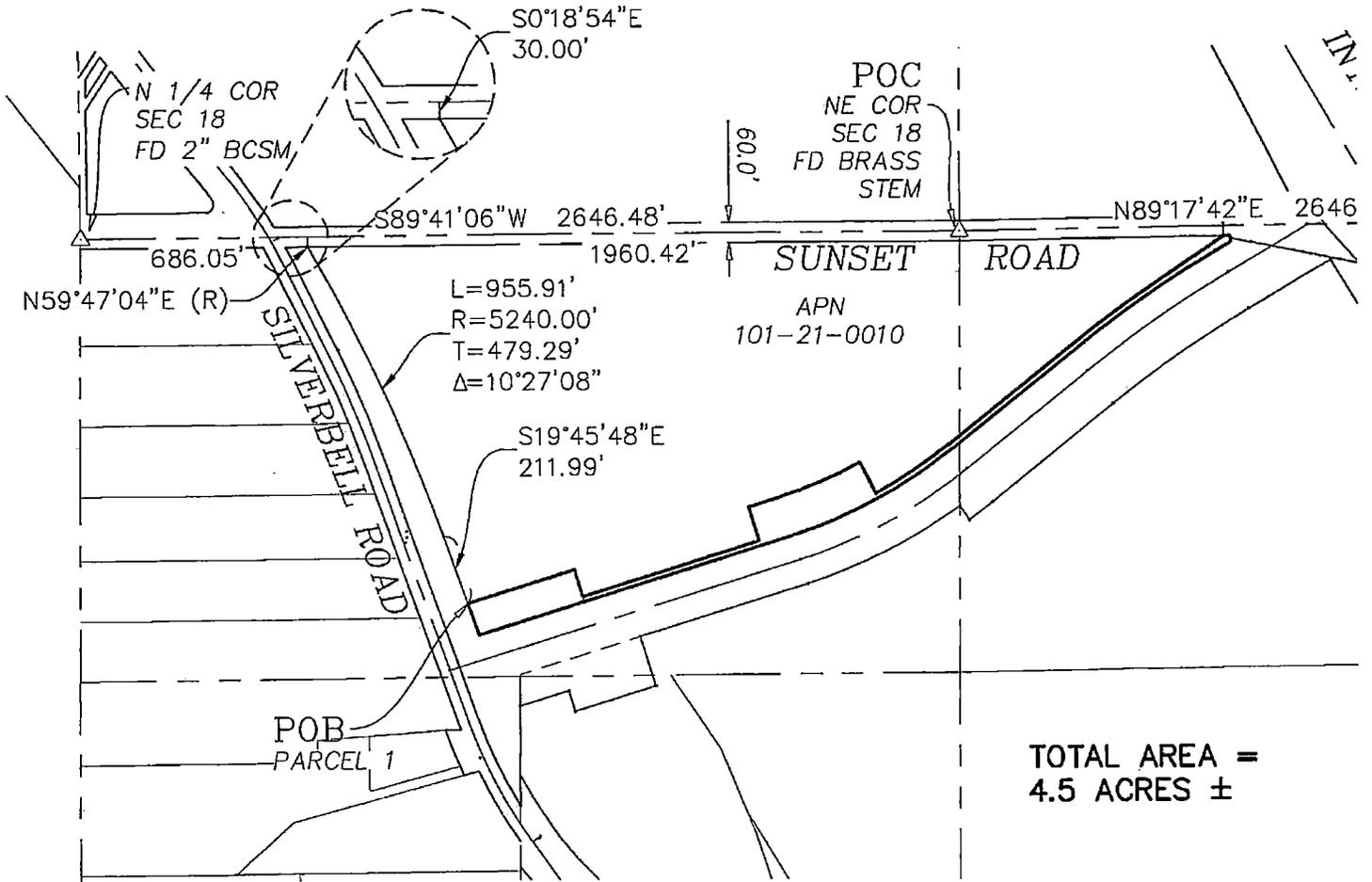
THENCE NORTH 17 DEGREES 15 MINUTES 48 SECONDS WEST A DISTANCE OF 84.00 FEET;

THENCE SOUTH 72 DEGREES 44 MINUTES 12 SECONDS WEST A DISTANCE OF 335.43 FEET TO THE **POINT OF BEGINNING.**

Prepared by:
ENGINEERING AND ENVIRONMENTAL CONSULTANTS, INC.

BRUCE BROWN, RLS





TOTAL AREA =
4.5 ACRES ±

Basis of Bearings:

The bearing being $N55^{\circ}56'26''E$ as measured between Pima County DOT-City of Tucson DOT Geodetic Control Point AG09 and Pima County DOT-City of Tucson DOT Geodetic Control Point AL03.

**DEPICTION OF EXHIBIT "A"
UTILITY EASEMENT**

SEC. 17 & 18, T-13-S, R-13-E, G&SRM
PIMA COUNTY, ARIZONA

Engineering and Environmental Consultants, Inc.



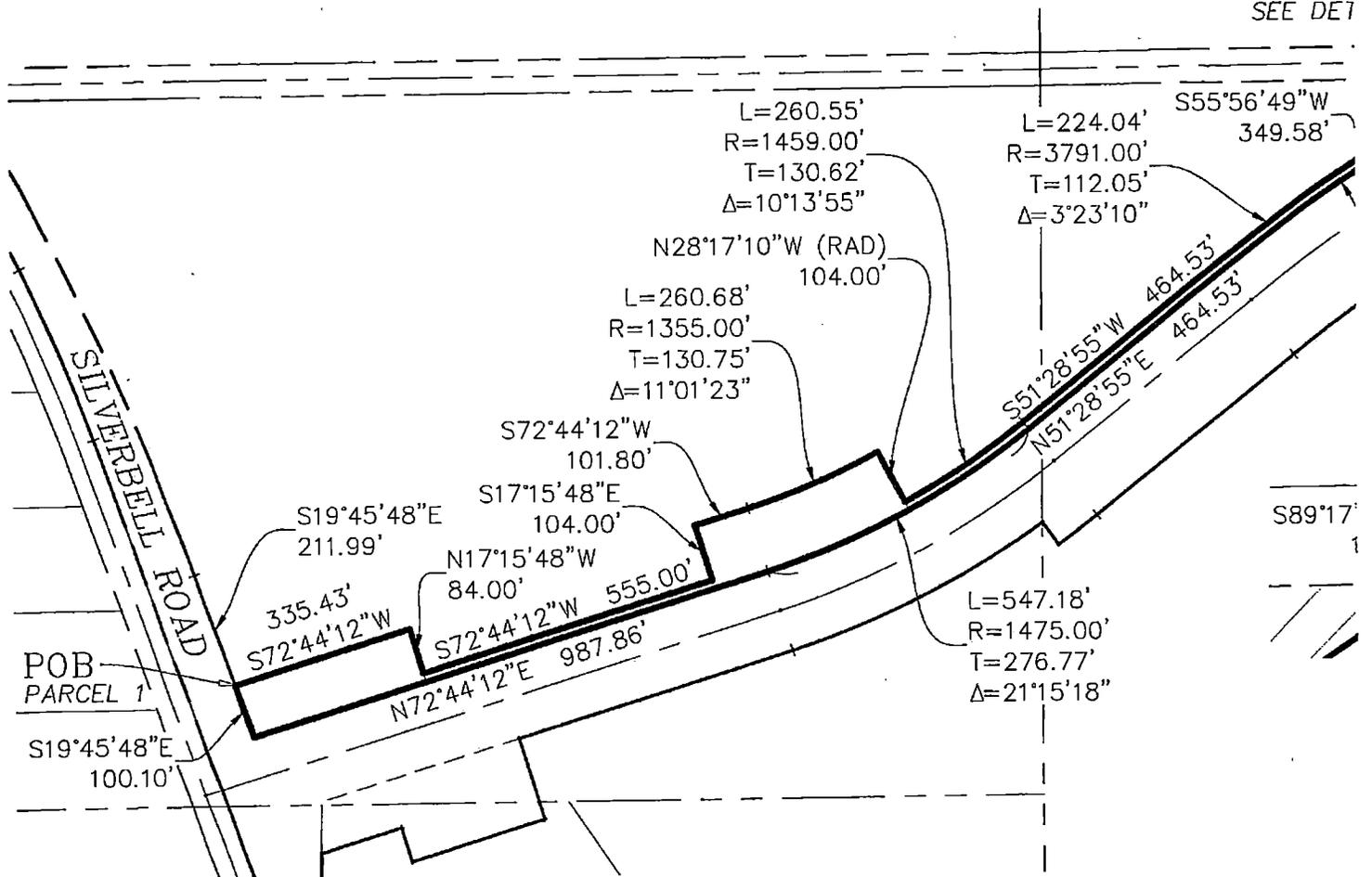
4625 E. FT. LOWELL RD.

TUCSON, ARIZONA 85712 520-321-4625

11/07/16

PIMA COUNTY REGIONAL
FLOOD CONTROL DISTRICT
APN 101-21-0010

SEE DET



DEPICTION OF EXHIBIT "A"
UTILITY & DRAINAGE EASEMENT
SEC. 17 & 18, T-13-S, R-13-E, G&SRM
PIMA COUNTY, ARIZONA

Engineering and Environmental Consultants, Inc.



4625 E. FT. LOWELL RD.

TUCSON, ARIZONA 85712 520-321-4625

RIGHT OF WAY EASEMENT

PIMA COUNTY FLOOD CONTROL DISTRICT, a political taxing subdivision of the State of Arizona

(hereinafter referred to as "Grantor"), hereby grants to **Tucson Electric Power Company**, an Arizona corporation, its successors and assigns (hereinafter referred to as "Grantee"), for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, a perpetual non-exclusive easement and right-of-way to construct, use, maintain, operate, alter, add to, repair, replace, reconstruct, inspect and remove at any time and from time to time electric lines and appurtenant facilities for the transmission and distribution of electricity, consisting of wires, underground conduits, cables, vaults, manholes, handholes, and including above-ground enclosures, markers, concrete pads, risers, poles, anchors, guy wires and other appurtenant fixtures and equipment necessary or useful for distributing electrical energy and for communication facilities of other entities (taken together, the "Facilities"), in, over, under, across and along that certain real property described as follows (the "Easement"):

SEE EXHIBIT "A" ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF.

Grantor further conveys to Grantee, for purposes of ingress and egress to the Easement, a right of access over, upon or along Grantor's property as is reasonably necessary to access the Easement. Grantee shall repair any damage to Grantor's property that results from any such ingress or egress.

Grantor agrees for itself, its successors and assigns, not to erect, place or maintain, nor to permit the erection, placement or maintenance of any building, landscaping, earth fill, walls or fences upon the Easement that would impair the repair, maintenance or removal of any or all of the Facilities. All Facilities, including electrical and communication structures installed by Grantee in and upon the Easement, shall remain the personal property of the Grantee and shall not be deemed a part of the realty.

Grantee and its contractors, agents and employees shall have the right to trim or top such trees and to cut such roots and remove such obstacles that could endanger or interfere with the Facilities, and shall have free access to the Facilities at all times for the purpose of exercising the rights herein granted.

Grantee shall have the right during initial construction of the Facilities, to use for the purposes incidental to said construction, a strip of land 10 feet in width adjacent and contiguous to the Easement, said strip to be in whole or in part on each side of the Easement, said right to use said strip of land ceasing and being terminated at such time as said initial construction is completed.

Grantor shall not increase or decrease the ground surface elevation within the boundaries of the Easement after approved final grade is established and meets Grantee's construction standards. Subsequent to the construction, the ground surface shall not be penetrated to a depth in excess of 12 inches by any tool or implement, without having the underground facilities located and taking all necessary precautions to protect them. If subsequent to construction Grantor changes the grade in such a way as to require relocation or alteration of the Facilities, the cost shall be borne by Grantor or subsequent owners.

Grantor hereby agrees that these covenants are made for the herein-described real property which is the subject of this Easement. Grantor hereby warrants and represents, and acknowledges Grantee's reliance upon said warranty and representation, that Grantor has good and sufficient title to the real property in order to grant this Easement.

Attached "Addendum to Easement" incorporated by reference.

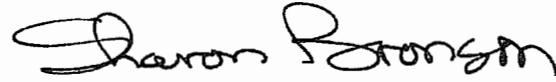
In consideration of the mutual terms, covenants and conditions herein contained, this easement shall be binding upon and inure to benefit of any heirs, executors, administrators, permittees, licensees, agents, or assigns of Grantor and any successors and assigns of Grantee.

In witness hereof, the Grantor has executed these presents this 21st day of November, 2017.

ATTEST:

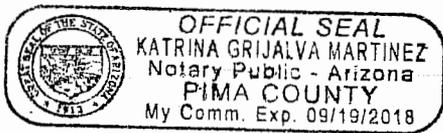

Clerk of the Board of Directors

GRANTOR: Pima County Flood Control District, a political taxing subdivision of the State of Arizona

By: 
Chair, Board of Directors

STATE OF ARIZONA)
) §
COUNTY OF PIMA)

This foregoing instrument was acknowledged before me this 21st day of November, 2017, by Sharon Bronson as Chair of the Board of Directors of the Pima County Flood Control District, a political taxing subdivision of the State of Arizona.




Notary Public

Addendum to Easement

Cultural Resources Compliance. Consistent with Pima County Board of Supervisors Policy No. C 3.17, Grantee, its employees, contractors and agents shall comply with all applicable federal, state and local cultural resources and historic preservation statutes, regulations, ordinances, policies and guidelines prior to and during any ground disturbance within the Easement area. Grantee shall coordinate with the Pima County Office of Cultural Resources and Historic Preservation when planning and designing construction and when implementing cultural resource compliance activities. Grantee is solely responsible for all costs related to cultural resource compliance activities arising from Grantee's activities within the Easement area.

Indemnity. Grantee shall indemnify, defend and hold harmless from any and all present or future claims, demands and causes of action in law or equity caused by the negligent or intentionally wrongful acts of Grantee's agents, employees or contractors in connection with Grantee's use of the Easement area.



11/07/2016

EEC No. 13039

13039 PCRFCD.UTIL-ESMT-16FT-120FT

Page 1 of 5

EXHIBIT "A"
LEGAL DESCRIPTION
UTILITY EASEMENT

THAT PORTION OF THE NORTHEAST QUARTER OF SECTION EIGHTEEN AND THE NORTHWEST QUARTER OF SECTION SEVENTEEN, TOWNSHIP THIRTEEN SOUTH, RANGE THIRTEEN EAST, GILA AND SALT RIVER MERIDIAN, PIMA COUNTY, ARIZONA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A BRASS STEM AT THE NORTHEAST CORNER OF SAID SECTION EIGHTEEN, FROM SAID POINT A 2-INCH BRASS CAP SURVEY MONUMENT AT THE NORTH QUARTER CORNER OF SAID SECTION EIGHTEEN BEARS SOUTH 89 DEGREES 41 MINUTES 06 SECONDS WEST A DISTANCE OF 2,646.48 FEET;

THENCE ALONG THE NORTH LINE OF SAID SECTION EIGHTEEN, SOUTH 89 DEGREES 41 MINUTES 06 SECONDS WEST A DISTANCE OF 1,960.42 FEET;

THENCE DEPARTING SAID NORTH LINE, SOUTH 00 DEGREES 18 MINUTES 54 SECONDS EAST A DISTANCE OF 30.00 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF SUNSET ROAD AS SHOWN IN BOOK 3, PAGE 39 OF ROAD MAPS, ON FILE IN THE PIMA COUNTY RECORDER'S OFFICE, PIMA COUNTY, ARIZONA, BEING THE BEGINNING OF A NON-TANGENT CURVE CONCAVE SOUTHWESTERLY, WHOSE RADIUS POINT BEARS SOUTH 59 DEGREES 47 MINUTES 04 SECONDS WEST A DISTANCE OF 5240.00 FEET;

THENCE SOUTHEASTERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 10 DEGREES 27 MINUTES 08 SECONDS AN ARC LENGTH OF 955.91 FEET;

THENCE SOUTH 19 DEGREES 45 MINUTES 48 SECONDS EAST A DISTANCE OF 211.99 FEET TO THE **POINT OF BEGINNING**;

THENCE SOUTH 19 DEGREES 45 MINUTES 48 SECONDS EAST A DISTANCE OF 100.10 FEET;

THENCE NORTH 72 DEGREES 44 MINUTES 12 SECONDS EAST A DISTANCE OF 987.86 FEET TO THE BEGINNING OF A CURVE CONCAVE NORTHWESTERLY WHOSE RADIUS POINT BEARS NORTH 17 DEGREES 15 MINUTES 48 SECONDS WEST A DISTANCE OF 1,475.00 FEET;

THENCE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 21 DEGREES 15 MINUTES 18 SECONDS, AN ARC LENGTH OF 547.18 FEET;

THENCE NORTH 51 DEGREES 28 MINUTES 55 SECONDS EAST, A DISTANCE OF 464.53 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTHEASTERLY WHOSE RADIUS POINT BEARS SOUTH 38 DEGREES 31 MINUTES 05 SECONDS EAST A DISTANCE OF 3,775.00 FEET;

THENCE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 07 DEGREES 59 MINUTES 27 SECONDS, AN ARC LENGTH OF 526.48 FEET;

THENCE NORTH 59 DEGREES 28 MINUTES 21 SECONDS EAST, A DISTANCE OF 52.60 FEET;

THENCE NORTH 00 DEGREES 42 MINUTES 12 SECONDS WEST, A DISTANCE OF 10.17 FEET TO THE SOUTHERLY RIGHT-OF-WAY LINE OF SUNSET ROAD AS ESTABLISHED PER DOCKET 10050, PAGE 1144 OF OFFICIAL RECORDS, ON FILE IN THE OFFICE OF PIMA COUNTY RECORDER'S OFFICE, PIMA COUNTY, ARIZONA;

THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, NORTH 00 DEGREES 42 MINUTES 12 SECONDS WEST, A DISTANCE OF 7.76 FEET;

THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, SOUTH 89 DEGREES 17 MINUTES 42 SECONDS WEST, A DISTANCE OF 19.52 FEET;

THENCE DEPARTING SAID SOUTHERLY RIGHT-OF-WAY LINE SOUTH 55 DEGREES 56 MINUTES 49 SECONDS WEST, A DISTANCE OF 349.58 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE SOUTHEAST WHOSE RADIUS POINT BEARS SOUTH 35 DEGREES 07 MINUTES 55 SECONDS EAST A DISTANCE OF 3,791.00 FEET;

THENCE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 03 DEGREES 23 MINUTES 10 SECONDS, AN ARC LENGTH OF 224.04 FEET;

THENCE SOUTH 51 DEGREES 28 MINUTES 55 SECONDS WEST, A DISTANCE OF 464.53 FEET TO THE BEGINNING OF A CURVE CONCAVE NORTHWESTERLY WHOSE RADIUS POINT BEARS NORTH 38 DEGREES 31 MINUTES 05 SECONDS WEST A DISTANCE OF 1,459.00 FEET;

THENCE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 10 DEGREES 13 MINUTES 55 SECONDS, AN ARC LENGTH OF 260.55 FEET;

THENCE NORTH 28 DEGREES 17 MINUTES 10 SECONDS WEST A DISTANCE OF 104.00 FEET TO THE BEGINNING OF A CURVE CONCAVE NORTHWESTERLY WHOSE RADIUS POINT BEARS NORTH 28 DEGREES 17 MINUTES 10 SECONDS WEST A DISTANCE OF 1,355.00 FEET;

THENCE NORTHEASTERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 11 DEGREES 01 MINUTES 23 SECONDS AN ARC LENGTH OF 260.68 FEET;

THENCE SOUTH 72 DEGREES 44 MINUTES 12 SECONDS WEST A DISTANCE OF 101.80 FEET;

THENCE SOUTH 17 DEGREES 15 MINUTES 48 SECONDS EAST A DISTANCE OF 104.00 FEET;

THENCE SOUTH 72 DEGREES 44 MINUTES 12 SECONDS WEST A DISTANCE OF 555.00 FEET;

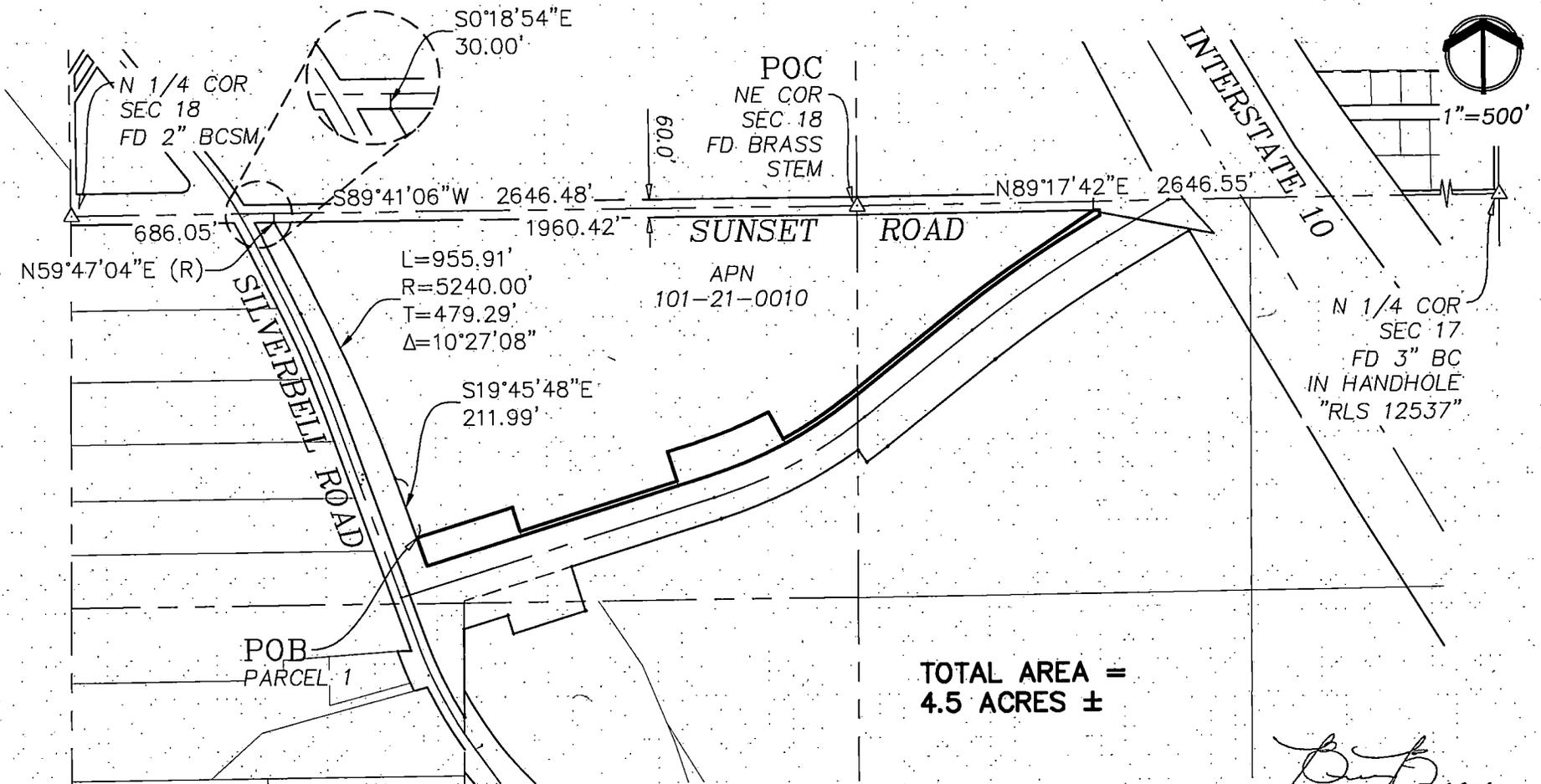
THENCE NORTH 17 DEGREES 15 MINUTES 48 SECONDS WEST A DISTANCE OF 84.00 FEET;

THENCE SOUTH 72 DEGREES 44 MINUTES 12 SECONDS WEST A DISTANCE OF 335.43 FEET TO THE **POINT OF BEGINNING.**

Prepared by:
ENGINEERING AND ENVIRONMENTAL CONSULTANTS, INC.

BRUCE BROWN, RLS





Basis of Bearings:

The bearing being N55°56'26"E as measured between Pima County DOT-City of Tucson DOT Geodetic Control Point AG09 and Pima County DOT-City of Tucson DOT Geodetic Control Point AL03.

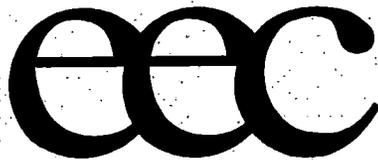
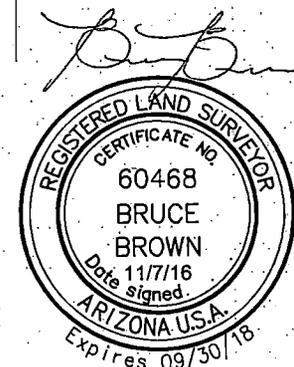
**DEPICTION OF EXHIBIT "A"
UTILITY EASEMENT**

SEC. 17 & 18, T-13-S, R-13-E, G&SRM
PIMA COUNTY, ARIZONA

Engineering and Environmental Consultants, Inc.

4625 E. FT. LOWELL RD.
TUCSON, ARIZONA 85712 520-321-4625

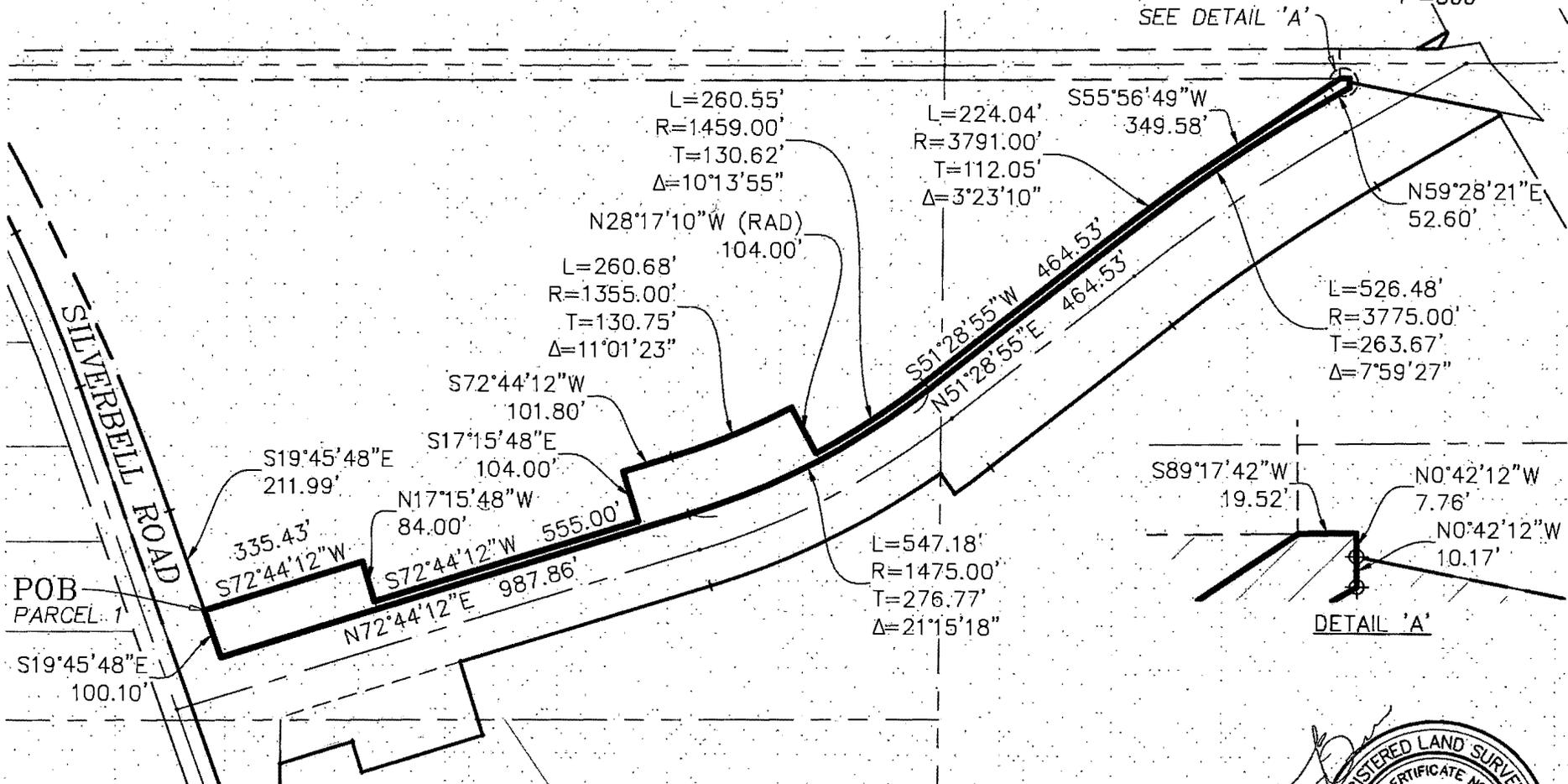
11/07/16



PIMA COUNTY REGIONAL
FLOOD CONTROL DISTRICT
APN 101-21-0010



1"=300'



DEPICTION OF EXHIBIT "A"
UTILITY & DRAINAGE EASEMENT
SEC. 17 & 18, T-13-S, R-13-E, G&SRM
PIMA COUNTY, ARIZONA

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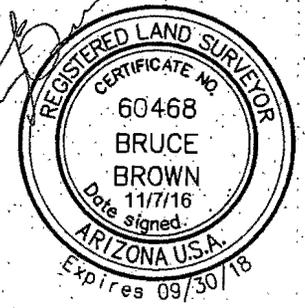


Exhibit F

Direct Bury Applications

Appropriate pipe stiffness is a function of native soil characteristics, trench construction, cover depth, embedment conditions, and haunching. Figure 1 (See below) relates these parameters assuming a minimum width trench as defined in Figure 11 (pg. 39). (Under certain circumstances, pipe stiffness less than 36 psi may be suitable.)

For pipes with vacuum operating conditions, see Allowable Negative Pressure in Section 6 (pg. 19) for appropriate pipe stiffness for various installations and negative pressures.

For shallow buried pipes with surface loads, see Traffic Loads in Section 6 (pg. 20) for appropriate pipe stiffness for various installations and cover depths.

High stiffness HOBAS pipes may be buried safely at depths exceeding 50 ft.



NATIVE SOIL ^{2,5}	COVER DEPTH ¹ (ft.)	EMBEDMENT CONDITION ³			
		1	2	3	4
ROCK Stiff to V. Hard Cohesive ($Q_u \geq 1 \text{ Tsf}$) Compact to V. Dense Granular (SPT $N \geq 8 \text{ bpf}$)	10 & <	SN ⁵ 36			SN ⁵ 72
	>10 to 20				
	>20 to 30	SN 46			SN 72
	>30 to 40	SN 72			ALTERNATE INSTALLATION ⁶
	>40 to 50	SN 90			
	>50 to 60	SN 120			
	>60 to 70				
Medium Cohesive ($Q_u \geq 0.5 \text{ Tsf}$) Loose Granular (SPT $N = 4 \text{ to } 7 \text{ bpf}$)	10 & <	SN 36			SN 72
	>10 to 20	SN 46			SN 72
	>20 to 30	SN 72			ALTERNATE INSTALLATION ⁶
	>30 to 40				
Soft Cohesive ($Q_u \geq 0.25 \text{ Tsf}$) V. Loose Granular (SPT $N = 2 \text{ to } 3 \text{ bpf}$)	10 & <	SN 36			SN 72
	>10 to 20	SN 46			ALTERNATE INSTALLATION ⁶
	>20 to 30	SN 72			
V. Soft Cohesive ($Q_u \geq 0.125 \text{ Tsf}$) V.V. Loose Granular (SPT $N \sim 1 \text{ bpf}$)	10 & <	SN 72			ALTERNATE INSTALLATION ⁶
	>10 to 20				

¹ Assuming typ. 1.5 x OD Trench Width (or as in Figure 11)

² Soils adjacent to pipe (pipe zone elevation)

³ Defined in Figure 13

⁴ For zero blow (weight of hammer) soils, use Alternate Installation & SN 72

⁵ SN is nominal stiffness in PSI

⁶ Alternate Installation per section 14, A8-Typ. SN 72 min.

STIFFNESS CLASS KEY

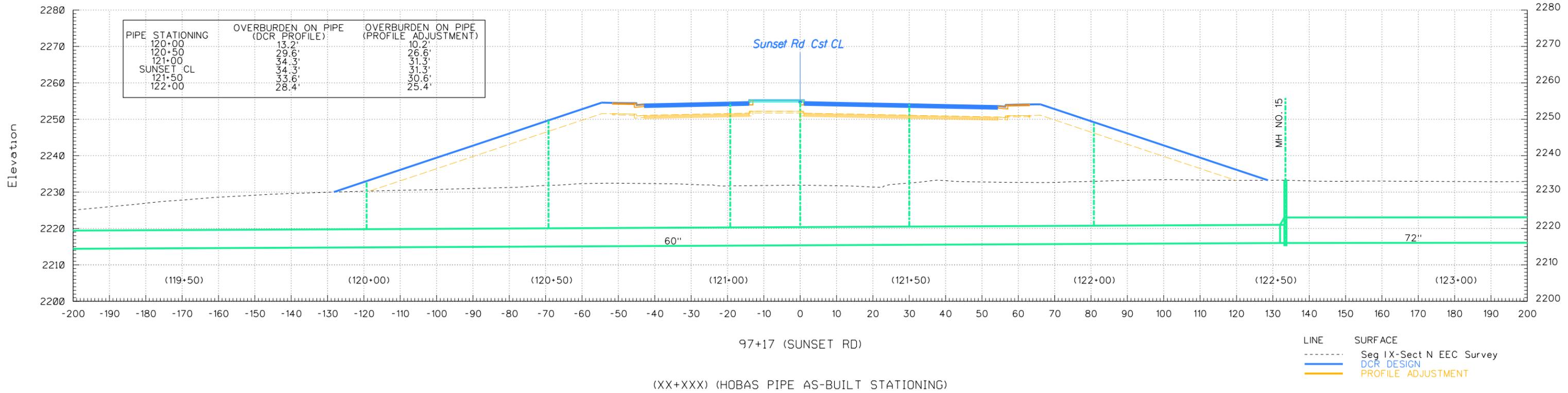
SN 36	SN 90
SN 46	SN 120
SN 72	Alternate Installation

FIGURE 1 - Pipe Stiffness Selection for Standard Installations¹

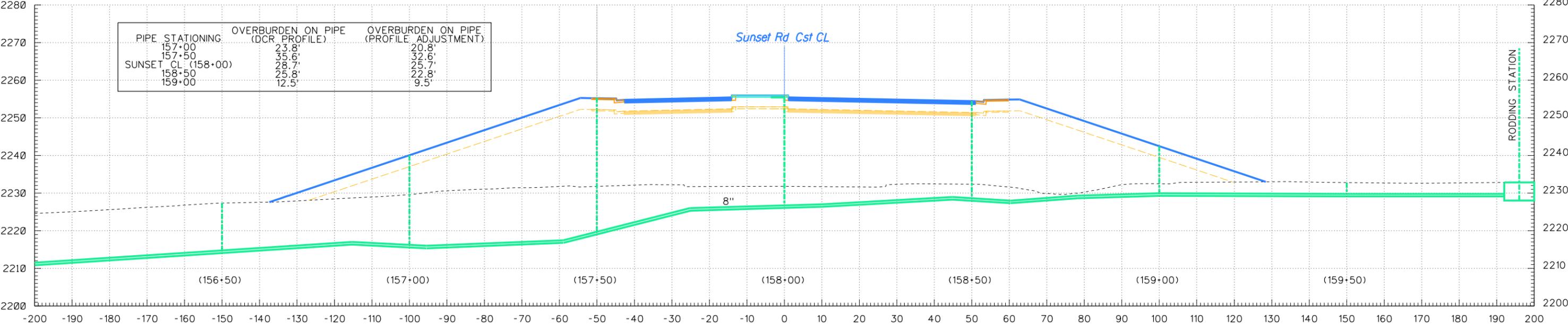
HOBAS pipes easily withstand a full vacuum service condition due to the high stiffness design.



HOBAS Overburden Profile Exhibit



Sludge Force Main Overburden Profile Exhibit



97+48 (SUNSET RD)

(XXX+XX) SLUDGE LINE AS-BUILT STATIONING

LINE	SURFACE
-----	Seg IX-Sect N EEC Survey
-----	DCR DESIGN
-----	PROFILE ADJUSTMENT



JACKSON JENKINS
DIRECTOR

201 NORTH STONE AVENUE
TUCSON, ARIZONA 85701-1207

PH: (520) 724-6500
FAX: (520) 724-9635

Review Comment Letter

June 8, 2020

Stephen Wilson, P.E.
Pima County Department of Transportation
201 N. Stone Ave., 4th Floor
Tucson, AZ 85701

RE: Utility Coordination Review Comments for Sunset Road: I-10 to River Road Initial Design Concept Report

Agency Tracking No.: 4SRRIV
PCRWRD UPC Tracking No.: UPC-2019-100

In accordance with Pima County, AZ Code of Ordinances §13.20.450 - Protection of the Existing PSCS, Pima County Regional Wastewater Reclamation Department's (PCRWRD) Utility Coordination group has reviewed the above-referenced submittal for conformance with the PCRWRD Engineering Design Standards and PCRWRD Standard Specifications and Details for Construction (current adopted editions). Comments have been generated from the review of your project, which are offered below.

PCRWRD acknowledges the report and clarifying email dated 04/30/2020 provided by Thomas Wolf / AECOM and Randy Post / Golder. The report addresses an increase in loading above the 60-inch HOBAS pipe resulting from built up embankment. RWRD takes no exception to what has been presented. RWRD also acknowledges contributions by Rene Garcia with HOBAS®.

Please provide the following in order to assure long-term performance of this gravity main:

- Formalize the anticipated settlement along the pipeline, and analyze any adverse impact to pipe performance with a flow line or slope that will now be irregular.
- Analyze any adverse impact to the pipe resulting from ring deflection.
- Analyze any adverse shear forces along pipeline, including at transitions or structures.
- Analyze any adverse effect at joints, including deflection and loading.
- Reconcile all items identified by HOBAS's engineer not mentioned in the numbered items above.

Provide options and recommendations for mitigation, if warranted, for each of the items mentioned above. Identify any other items that affect maintenance or operation of the gravity main.

Are right-of-way takes anticipated that would affect PCRWRD facilities? Please identify any changes to access control fence near the PCRWRD facilities that may affect access to the system.

Other Design Consideration:

- Avoid or minimize M.S.E. or concrete retaining wall impact on the RWRD force main and 60-inch HOBAS Interconnect.
- Maintain PCRWRD access to MH #3190-15 and the force main rodding station at Sunset Rd. Sta. 97+52, 208' Rt.
- Consider pothole locating angle points in the public sewers (ductile iron force main and 60-inch HOBAS pipe) to physically locate and survey the locations for the contractor to mark and monument at the future finished grades.

Address the attached comments as part of your next submittal. Send your next submittal either by email with all files attached (20 megabytes maximum) or on a digital media (e.g. cd, dvd, or jump drive) to RWRDUtilityCoord@pima.gov or deliver your digital media to my attention at PCRWRD, 201 N. Stone Ave, 3rd Floor, Tucson, AZ 85701. In your email or transmittal, include the name of the project, any agency-specific designations, and the assigned PCRWRD UPC number.

If you have any additional questions, please feel free to contact me at either (520) 724-6372 or Kent.McRae@pima.gov.

Respectfully Submitted,

Kent McRae, P.E.
Technical Services and Engineering/Utility Coordination

Attached: --

Cc: RWRD Utility Coordination

Exhibit H

Arizona Corporation Commission (ACC) Railroad (RR) Crossing Approval Process by Sayeed M. Hani

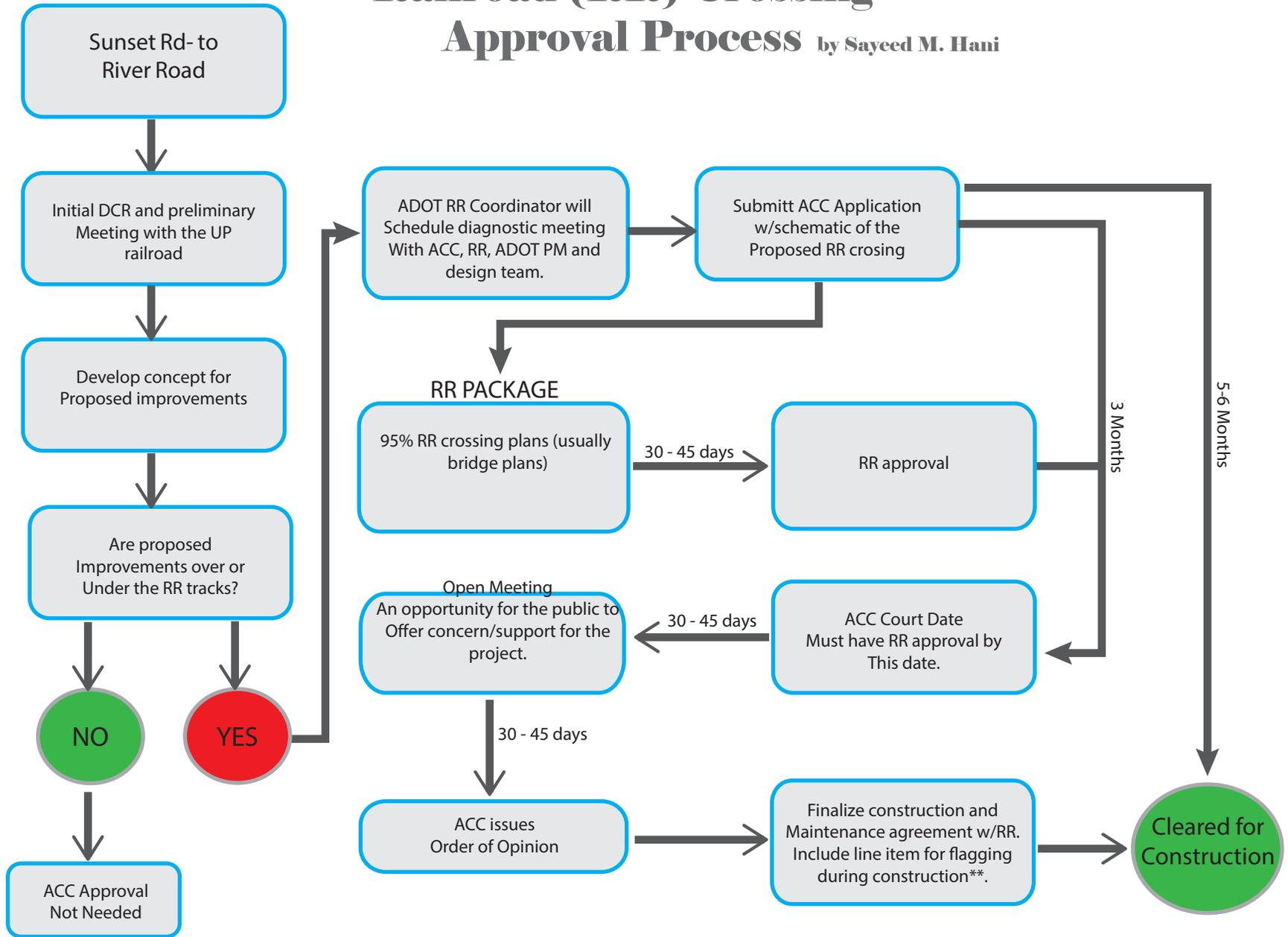
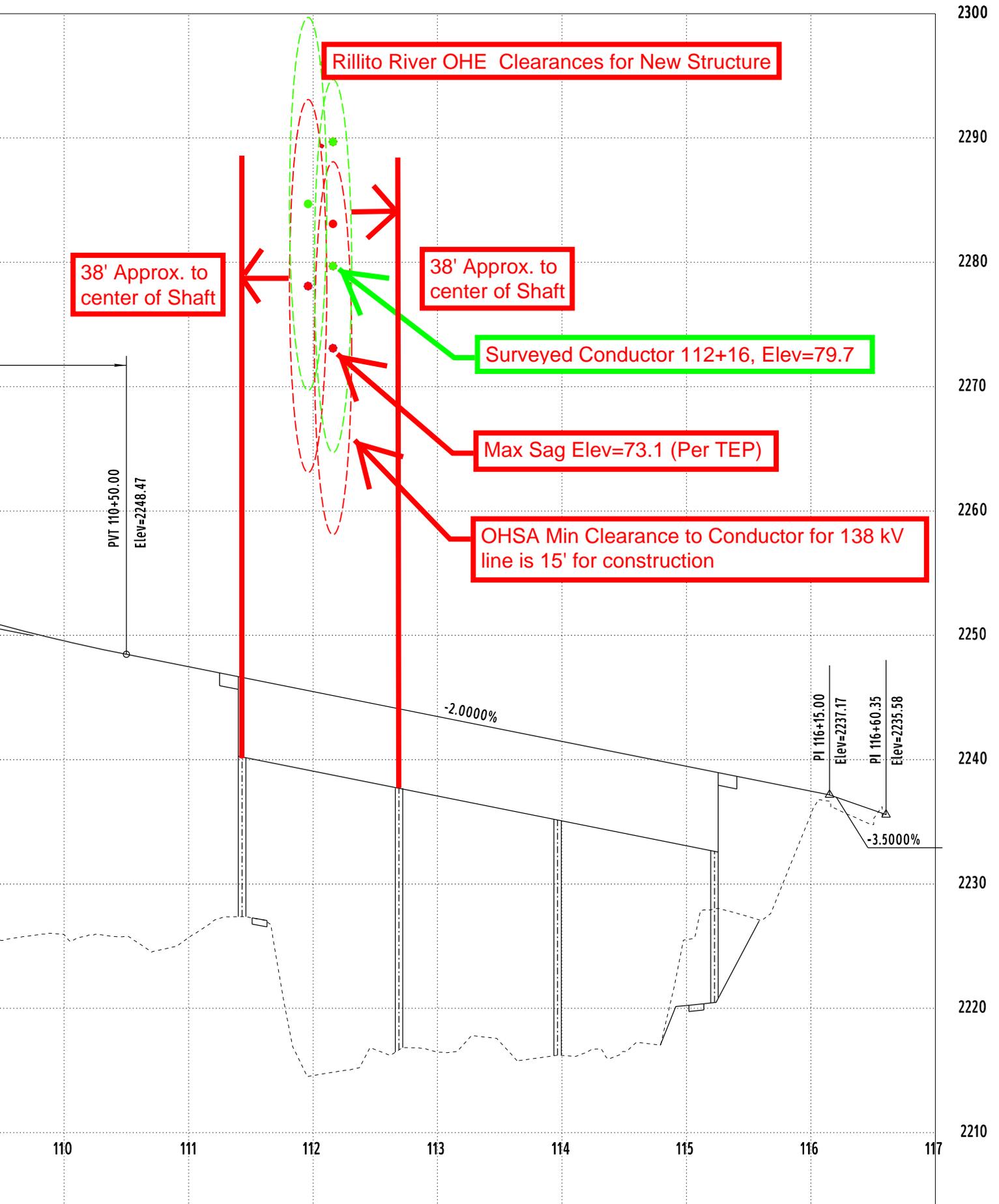


Exhibit I- TEP Transmission Line Vertical Clearances @ Rillito River



Pima County Project Number 4SRRIV: Sunset Road- I-10 to River Road Proposed Utility Sleeves for Sunset Innovation Campus
Approximate Costs

Water

<u>Item</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Cost</u>	<u>Notes</u>
30" Steel Casing	450 LF	\$500 / LF	\$225,000	Open Trench Sleeve Crossing Mainline to be Constructed as a Part of the I-10 Improvement Project
12" DIP Pipe Sleeve	250 LF	\$375 / LF	\$93,750	Open Trench Sleeve to be Constructed Across Sunset Improvements Near Frontage Road
12" PVC Pipe Sleeve	200 LF	\$130 / LF	\$26,000	Open Trench Sleeve to be Constructed Near Sunset Innovation Campus Entrance
Total			\$344,750	

Power

<u>Item</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Cost</u>	<u>Notes</u>
6" PVC Sleeves	650 LF	\$35 / LF	\$22,750	Sleeves (3) installed crossing Sunset from existing power system running on north side of Sunset
Total			\$22,750	

Telecom

<u>Item</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Cost</u>	<u>Notes</u>
6" Steel Sleeve	250 LF	\$100 / LF	\$25,000	Sleeve to be Constructed Across Sunset Near Frontage Road
6" PVC Sleeve	200 LF	\$35 / LF	\$7,000	Sleeve to be Constructed Near Sunset Innovation Campus Entrance
Total			\$32,000	

SubTotal Utility Sleeves \$399,500
30% Contingency \$119,850

Approximate Total Cost for Utility Sleeves for Sunset Innovation Campus	\$519,350
--	------------------

Exhibit K

**Pima County Project Number 4SRRIV: Sunset Road- I-10 to River Road Miscellaneous Additional Utility Costs
Approximate Costs**

Irrigation

<u>Item</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Cost</u>	<u>Notes</u>
6" DI Pipe	300 LF	\$140 / LF	\$42,000	Re-establish Irrigation Line to Service Pecan Orchard (Maintained by PC Flood Control Dist.). Add't Overburden on Pipe to be Analyzed During Final Design.
or Protection Slab	1 EA	\$50,000 LS	\$50,000	Possible Mitigation Measure for Pipe if Overburden is an issue.

Force Main Sewer

<u>Item</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Cost</u>	<u>Notes</u>
8" DI Pipe	200 LF	\$175 / LF	\$35,000	Potential Overburden Impacts to Pipe. To be evaluated during final design.
Incidentals	1 LS	\$20,000	\$20,000	Add't items associated to construct forcemain
Temp. Sewer Bypass	1 LS	\$50,000	\$50,000	To install new pipe
Total			\$105,000	
or Protection Slab	1 EA	\$50,000 LS	\$50,000	Possible Mitigation Measure for Pipe if Overburden is an issue.

PC SCADA Comm

<u>Item</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Cost</u>	<u>Notes</u>
2-4" Conduits	300 LF	\$24 / LF	\$7,200	Communication and Monitoring System for Sewer System
Fiber Cable Re-establishment	1 LS	\$10,000 LS	\$10,000	Re-establish Fiber connection, new pull boxes
Total			\$17,200	

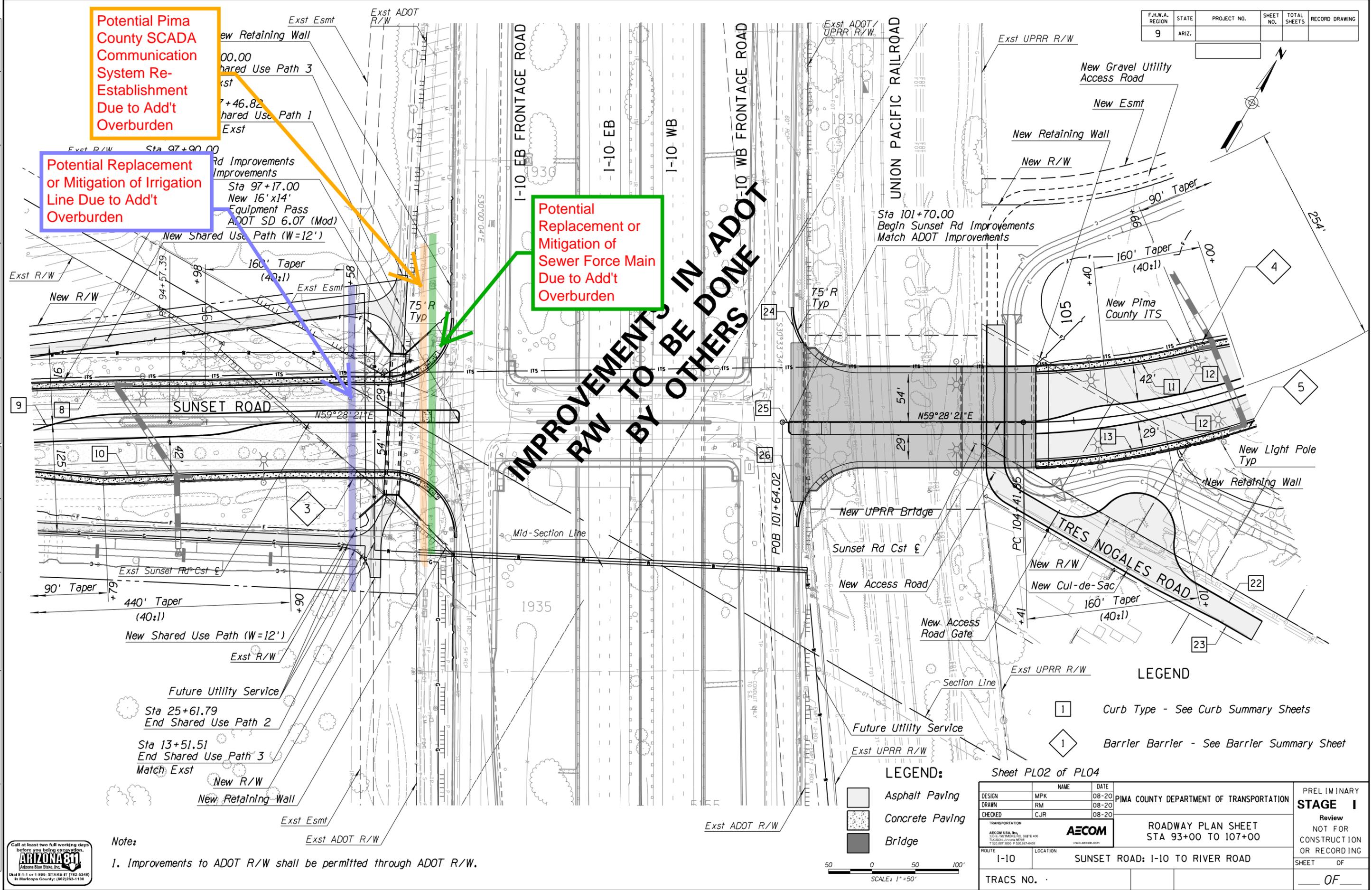
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.				

Potential Pima County SCADA Communication System Re-Establishment Due to Add't Overburden

Potential Replacement or Mitigation of Irrigation Line Due to Add't Overburden

Potential Replacement or Mitigation of Sewer Force Main Due to Add't Overburden

IMPROVEMENTS IN ADOT RW TO BE DONE BY OTHERS

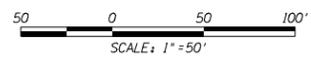


LEGEND

	Curb Type - See Curb Summary Sheets
	Barrier Barrier - See Barrier Summary Sheet

LEGEND:

	Asphalt Paving
	Concrete Paving
	Bridge



Note:
1. Improvements to ADOT R/W shall be permitted through ADOT R/W.



Sheet PLO2 of PLO4

DESIGN	MPK	DATE	08-20	PIMA COUNTY DEPARTMENT OF TRANSPORTATION	PRELIMINARY STAGE I Review NOT FOR CONSTRUCTION OR RECORDING
DRAWN	RM	DATE	08-20		
CHECKED	CJR	DATE	08-20		
TRANSPORTATION		AECOM		ROADWAY PLAN SHEET STA 93+00 TO 107+00	
ROUTE	1-10	LOCATION	SUNSET ROAD: I-10 TO RIVER ROAD		
TRACS NO.				SHEET	OF