PART A. Introductory Letter

19621 N. 23rd Drive, Suite 150
Phoenix, AZ 85027
www.T2ue.com

August 26, 2026

Email to: ecssoq@azdot.gov

Arizona Department of Transportation (ADOT)
Engineering Consultants Section
205 South 17th Avenue, Mail Drop 361E
Phoenix, AZ 85007



RE: Qualifications for ECS Contract No. 2027-001, On-Call Subsurface Utility Engineering Services, Statewide Locations, Project No.: Various

Dear Members of the Selection Committee:

T2 UES, Inc. d/b/a T2 Utility Engineers (T2ue) appreciates the opportunity to submit our statement of qualifications (SOQ) to ADOT for On-Call Subsurface Utility Engineering Services contract. T2ue's (under previous names TBE Group, divested from Cardno in October 2019) key personnel have provided professional Subsurface Utility Engineering (SUE) services to ADOT through the statewide Subsurface Utility Engineering On-Call Statewide contract since 1998. **T2ue's team is extremely interested in being selected for this new contract (No. 2027-001).**

T2ue confirms the commitment of the Key Personnel listed in this submittal, and below, to the extent necessary to meet ADOT's quality and schedule expectations.

- **Robert Ramsey, PE will serve as Project Principal** and will be responsible for this contract. His Professional Engineer (PE) registration number is AZ #47526.
- **Travis Bix will serve as Project Manager** and will actively manage this contract. He holds T2ue's Arizona Contractors Licenses: Class A-5 (Excavating and Oil Surfacing Contractor) AZ ROC #32645 and A-14 (Asphalt Paving Contractor) AZ ROC #32671.

A summary of **key points regarding T2ue's qualifications** include:

- T2ue has held this contract and provided SUE services to ADOT throughout the State of Arizona for over 28 years. Travis Bix, Project Manager has managed this contract and has been responsible for T2ue providing these services to ADOT since 1999.
- T2ue's understanding of the requirements of CI/ASCE 38-22 for SUE is surpassed by no other provider.
- T2ue operates the largest fleet of utility designating/locating trucks and equipment in Arizona and throughout the United States. We have the biggest and most experienced group of professionals in the SUE industry. Our team has the capacity to complete any size project for ADOT.

If selected, T2ue would rate the Regions in order of preference to provide services during this contract period as **1) Region 1, 2) Region 2** and **3) Region 3**.

T2ue is not a certified DBE. We regularly partner with subconsultants who are certified DBE firms and are pre-qualified within ADOT's UTRACS system for federally-funded contracts and procurement activities.

Completed and signed SOQ Proposal Certification Form, ADOT Participation in Boycott of Israel Consultant Certification Form and Forced Labor of Ethnic Uhghurs Ban Consultant Certification Form are provided on the following pages.

T2ue's team is excited and looks forward to being selected for this contract and continuing our partnership with ADOT. If you have any questions or need additional information, we can be reached at Robert Ramsey, PE at 602-977-8037 (direct), 602-320-8121 (cell) or robert.ramsey@t2ue.com and Travis Bix at 602-977-8013 (direct), 602-550-1781 (cell) or travis.bix@t2ue.com.

Thank you for your time and consideration.

Sincerely,

T2 Utility Engineers

Robert Ramsey, PE, LEED AP
Project Principal

Travis Bix
Project Manager

Engineering Consultants Section
SOQ Proposal Certifications Form

Contract #: 2027-001 Consultant Name: T2 UES, Inc. d/b/a T2 Utility Engineers

Please read the fifteen (15) statements below. The statements are to ensure Consultants are aware and in agreement with Federal, State and ECS guidelines related to the award of this contract. Consultants shall submit the specific Certification form attached to each RFQ advertised, as revisions to the form may occur from time to time. Failure to sign and submit the certification form specified in the RFQ with the SOQ proposal will result in the SOQ proposal being rejected.

Submission of the SOQ by the Consultant certifies that to the best of its knowledge:

1.	The Consultant and its subconsultants have not engaged in collusion with respect to the contract under consideration.
2.	The Consultant, its principals and subconsultants have not been suspended or debarred from doing business with any government entity.
3.	The Consultant shall have the proper Arizona license(s) and registration(s) for services to be performed under this contract. Furthermore, the Consultant shall ensure that all subconsultants have the proper Arizona license(s) and registration(s) for services to be performed under this contract.
4.	The Consultant's signature on any SOQ proposal, negotiation document or contract constitutes that a responsible officer of the Consultant has read and understands its contents and is empowered any duly authorized on behalf of the Consultant to do so.
5.	The Consultant's Project Team members are employed by the Consultant on the date of submittal.
6.	All information and statements written in the proposal are true and accurate and that ADOT reserves the right to investigate, as deemed appropriate, to verify information contained in proposals.
7.	Key members of the Project Team, including subconsultants, are currently licensed to provide the required services as requested in the RFQ package.
8.	All members of the Project Team who are former ADOT employees did not have or provide information that gives the Consultant a competitive advantage; and either (1) concluded their employment with ADOT at least 12 months before the date of the SOQ or (2) have not made any material decisions about this project while employed by ADOT.
9.	Work, equating **at least 51%** of the contract value, shall be completed by the Consultant unless otherwise specified in the SOQ or contract.
10	No Federally appropriated funds have been paid or shall be paid, by or on behalf of the Consultant for the purpose of lobbying.
11.	The Consultant understands that it is required to have a compliant accounting system, in accordance with Generally Accepted Accounting Principles (GAAP), Federal Acquisition Regulation (FAR) of Title 48, Code of Federal Regulations (CFR)-Part 31, applicable Cost Accounting Standards (CAS), and ADOT Advance Agreement Guideline.
12.	If project is funded with Federal Aid funds, the Consultant affirmatively ensures that in any subcontract entered into pursuant to this advertisement, Disadvantaged Business Enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award, in accordance with Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations.
13.	The Consultant shall utilize all Project Team members, subconsultants and DBE firms, if applicable, submitted in the SOQ, and shall not add other Project Team members or subconsultants, unless the Consultant has received prior written approval from ADOT.
14.	The Consultant shall either meet its DBE goal commitment and any other DBE commitments or make Good Faith Efforts to meet the DBE goal commitments as stated in its SOQ proposal or Cost Proposal and shall report on a timely basis its DBE utilization as detailed in the contract.
15.	If selected, the Consultant is committed to satisfactorily carry out the Consultant's commitments as detailed in the contract and its SOQ proposal.

I hereby certify that I have read and agree to adhere to the fifteen (15) statements above and/or that the statements are true to the best of my knowledge as a condition of award of this contract.

Print Name: Robert Ramsey, PE Title: Project Principal, VP Western US

Signature: Date: August 26, 2026

Revised 2/11/2022

ARIZONA DEPARTMENT OF TRANSPORTATION
ENGINEERING CONSULTANTS SECTION
PARTICIPATION IN BOYCOTT OF ISRAEL - CONSULTANT CERTIFICATION FORM
ADOT ECS Contract No.: 2027-001

This Certification is required in response to legislation enacted to prohibit the State from contracting with companies currently engaged in a boycott of Israel. To ensure compliance with A.R.S. §35-393, this form must be completed and returned with any response to a solicitation (SOQ), Contract Cost Proposals, and Contract Time Extensions. The Consultant understands that this response will become public record and may be subject to public inspection.

Please note that if any of the following apply to this Solicitation, Contract, or Contractor, then the Offeror shall select the "Exempt Solicitation, Contract, or Contractor" option below:

- The Solicitation or Contract has an estimated value of less than $100,000;
- Contractor is a sole proprietorship;
- Contractor has fewer than ten (10) employees; OR
- Contractor is a non-profit organization.

Pursuant to A.R.S. §35-393.01, public entities are prohibited from entering into contracts "unless the contract includes a written certification that the company is not currently engaged in, and agrees for the duration of the contract to not engage in, a boycott of goods or services from Israel."

Under A.R.S. §35-393:

1. "Boycott" means engaging in a refusal to deal, terminating business activities or performing other actions that are intended to limit commercial relations with entities doing business in Israel or in territories controlled by Israel, if those actions are taken either:

   (a) Based in part on the fact that the entity does business in Israel or in territories controlled by Israel.
   (b) In a manner that discriminates on the basis of nationality, national origin or religion and that is not based on a valid business reason.

2. "Company" means an organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, limited liability company or other entity or business association, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate, that engages in for-profit activity and that has ten or more full-time employees.

...

5. "Public entity" means this State, a political subdivision of this State or an agency, board, commission or department of this State or a political subdivision of this State.

The certification below does not include boycotts prohibited by 50 United States Code Section 4842 or a regulation issued pursuant to that section. *See* A.R.S. §35-393.03.

In compliance with A.R.S. §§35-393 *et seq*., all offerors must select one of the following:

☒ The Company submitting this Offer **does not** participate in, and agrees not to participate in during the term of the contract, a boycott of Israel in accordance with A.R.S. §§35-393 *et seq*. I understand that my entire response will become public record in accordance with A.A.C. R2-7-C317.

☐ The Company submitting this Offer **does** participate in a boycott of Israel as described in A.R.S. §§35-393 *et seq*.

☐ **Exempt Solicitation, Contract, or Contractor.**
Indicate which of the following statements applies to this Contract:
- ☐ Solicitation or Contract has an estimated value of less than $100,000;
- ☐ Contractor is a sole proprietorship;
- ☐ Contractor has fewer than ten (10) employees; and/or
- ☐ Contractor is a non-profit organization.

T2 UES, Inc. d/b/a T2 Utility Engineers Company Name	 Signature of Person Authorized to Sign
19621 N 23rd Drive, Suite 150 Address	Robert Ramsey, PE Printed Name
Phoenix AZ 85027 City State Zip	Project Principal, VP Western US 08/26/2026 Title Date

Participation in Boycott of Israel – Consultant Certification
Form Revised - 4/28/2020

ARIZONA DEPARTMENT OF TRANSPORTATION

FORCED LABOR OF ETHNIC UYGHURS BAN
Certification Form

Forced Labor of Ethnic Uyghurs Ban

Please note that if any of the following apply to the Consultant, then the Offeror shall select the "Exempt Consultant" option below:

- Consultant is a sole proprietorship;
- Consultant has fewer than ten (10) employees; OR
- Consultant is a non-profit organization.

Pursuant to A.R.S. § 35-394, the State of Arizona prohibits a public entity from entering into or renewing a contract with a company unless the contract includes written certification that the company does not use the forced labor, or any goods or services produced by the forced labor, or use any consultants, subconsultants, or suppliers that use the forced labor or any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China.

Under A.R.S. §35-394:

1. "Company" means an organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, limited liability company or other entity or business association, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate, that engages in for-profit activity and that has ten or more full-time employees.

   (a) Based in part on the fact that the entity does business in Israel or in territories controlled by Israel.
   (b) In a manner that discriminates on the basis of nationality, national origin or religion and that is not based on a valid business reason.

2. "Public entity" means this State, a political subdivision of this State or an agency, board, commission or department of this State or a political subdivision of this State.

In compliance with A.R.S. §§ 35-394 et seq., all offerors must select one of the following:

☒	The Company submitting this Offer does not use, and agrees not to use during the term of the contract, any of the following: • Forced labor of ethnic Uyghurs in the People's Republic of China; • Any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China; or • Any Consultants, Subconsultants, or suppliers that use the forced labor or any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China.
☐	The Company submitting this Offer **does** participate in use of Forced Uyghurs Labor as described in A.R.S. § 35-394.
☐	**Exempt Consultant.** Indicate which of the following statements applies to this Consultant (may be more than one): ☐ Consultant is a sole proprietorship; ☐ Consultant has fewer than ten (10) employees; and/or ☐ Consultant is a non-profit organization.

T2 UES, Inc. d/b/a T2 Utility Engineers
Company Name

19621 N 23rd Drive, Suite 150
Address

Phoenix | AZ | 85027
City | State | Zip

Signature of Person Authorized to Sign

Robert Ramsey, PE
Printed Name

Project Principal, VP Western US
Title

PART C. Evaluation Criteria

1. Contract Understanding and Approach

1a. Discuss generally the tasks involved in a SUE project. Identify special issues or problems likely to be encountered. Demonstrate clearly and concisely your understanding of the technical and institutional elements Firm must deal with in this project.

T2ue is a leader in providing SUE and utility coordination and has contributed significantly in setting the industry ASCE 38-22 Standard.

T2 Utility Engineers (T2ue) is an experienced Subsurface Utility Engineering (SUE) provider for over 33 years. Our team is familiar with tasking required for this On-Call contract as we are currently the Region 1 On-Call SUE provider and have performed numerous SUE investigations on other ADOT projects as a subconsultant to prime providers on various GEC and Project Development contracts in Arizona.

T2ue team members were part of the committee that developed the ASCE 38-22 Standard Guideline for Investigating and Documenting Existing Utilities. T2ue draws from this personal knowledge, and our history with ADOT, to assure proper application of the ASCE 38-22 Standard for ADOT projects assigned under this contract. T2ue's understanding of the requirements of CI/ASCE 38-22 for SUE is surpassed by no other SUE provider.

T2ue provides the best quality SUE services and are always refining and improving our processes and procedures. Our project managers and field supervisors meet regularly to share and refine best practices, and continually strive to provide our clients with cost-effective and innovative solutions to benefit ADOT. While SUE is tailored for each specific project, the tasks generally involve:

I. Initial Investigation (Records Research)



This phase is limited in scope and involves investigation of "record" information. During this phase, the following tasks are completed; contact is made and documented with appropriate utility representatives; District permit logs are reviewed; utility "as-builts" or other available records are obtained; field reviews are conducted; a contact list of utility owners within project limits is prepared.

By making contact with utility owners, an overview of active and abandoned facilities can be obtained. Appropriate utilities will be notified through the "AZ811" notification center (Arizona Blue Stake) and/or by direct calling. As with every project, record information is always an area of concern. Most utility companies or agencies have limited record information on file; in some cases they are non existent. As part of the Quality Level (QL) D process our team understands these issues and field reviews are conducted to assure utilities with visible surface evidence are accounted for (QLC). After a notice to proceed date is established, T2ue will schedule SUE and survey crews concurrently.

Throughout the years, T2ue has learned there are often several utilities in the project scope that are not on the permit log. T2ue will contact each utility owner in the project scope and request current records for each utility. Unfortunately, records are not always accurate. T2ue utilizes various electromagnetic utility locating equipment, including GPR (Ground Penetrating Radar) to "sweep" the project area to find additional underground facilities not shown on records. This process is described in further detail below.

II. Phase I: Utility Designating (Geophysical Investigation and ASCE 38-22 QLs D-B Depictions)

During this phase, T2ue provides designating service for all existing below-ground utilities to support the engineering design requirements and construction plans on each project. Utilizing a wide variety of geophysical prospecting techniques, T2ue provides approximate horizontal locations of all subsurface utilities. The following services are completed during the designating phase:

1. Obtain all necessary permits from city, county, municipality or jurisdictions allowing T2ue to work on existing streets/roads to mark, measure and record the location of existing utilities. Coordinate with utility owners for access to facilities.
2. Designate, record and mark the approximate horizontal location within one-half foot on either side of the existing underground utilities and major laterals to existing buildings methods approved by ADOT. Task includes field preparation of electronic sketch.
3. Furnish ADOT with all data recorded in Bentley ORD electronic format. Data will also be provided in plotted plan format and stamped by one of our professional engineers (PEs).
4. Utility records can be scanned and provided in electronic or hard copy format, as needed.

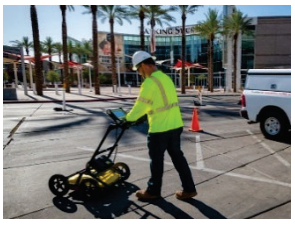
III. Phase II: Utility Locating (Test Holes)

T2ue provides an underground locating service for determining the exact horizontal and vertical location of existing utilities. This is extremely beneficial during the engineering design stage to eliminate potentially costly construction conflicts. T2ue recommendeds this service for planned underground installations in highly congested areas.

1. Pick-up and review plans with ADOT.
2. Obtain all necessary permits from city, county, municipality or other jurisdiction to allow T2ue to work on existing streets/roads to locate, measure and record the location of subsurface utilities.
3. Coordinate with utility owners, as required by the contract and by law.
4. Provide survey to stake location of test hole both horizontally and vertically. Use staked location to coordinate with AZ811 center.
5. Excavate small (10- to 12-inch square) holes by vacuum excavation or hand digging in such a manner as to prevent any damage to utility and wrappings, coatings/other protective coverings.
6. Furnish and install color-coded, semi-permanent aboveground markers (i.e., P.K. nail, peg, steel pin or hub), directly above centerline of the structure, recording elevation and horizontal location of marker by referencing to survey marker. Photograph white board and test hole.
7. Provide pavement restoration (per jurisdiction requirements) within the limits of the original cut at the time of backfill.
8. Provide test hole deliverables that include depth, surveyed horizontal and vertical location, size and material composition of the utility exposed sealed by our Arizona registered PE, or our Arizona registered Professional Land Surveyor, Kyle Scott, RLS.









As with the Phase I of the SUE process, utility locating has its difficulties when commencing field operations. Traffic flow, proper traffic barriers (Safety), weather, soil conditions sand, clay, rock) are present challenges crews need to be prepared for and are well documented by local staff to effectively deploy the correct crews at the proper time.

IV. Survey and Data Control

T2ue will use the utility data collected through the records research, utility designating and utility locating phases of our SUE process to produce the utility base mapping for this project. The data is transferred into a CAD/GIS system for inclusion in engineering drawings.

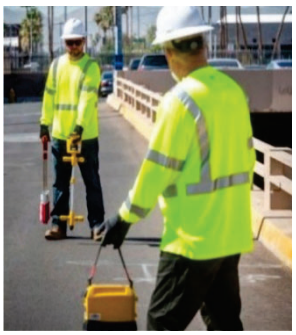
As part of our commitment to delivering the finest quality product for ADOT, T2ue will provide surveying and mapping services in-house. Our in-house survey team uses state-of-the-art digital data collection software with total station and GPS equipment for the collection of field markers and features. T2ue maintains conventional survey data (field books) and an electronic-points file backup on every project.

One primary issue to be encountered on any project assigned is Safety. A vital part of our approach to every project is recognizing that **Safety is a core value of T2ue**. It shapes the way we work as individuals and as an organization. For these types of projects, T2ue first inspects all project areas for possible hazards and addresses them prior to commencing work. More potential hazards/items are discussed in section 1c. below.

1b. Approach to identifying and implementing project requirements and meeting the Department's needs. Understanding of project requirements in the scope, designating utilities (ARIZONA811) outside the State's ROW; approach to completing a DGN file of existing utilities including those utilities that are buried and without existing records and/or abandoned/non-traceable and performing QLA test holes in/outside of State's ROW.



As an proven provider of SUE services to ADOT, T2ue is very familiar with and understands the project scope as stated in the scope of work. T2ue will perform utility investigations that depict the results using the four quality levels (QLs D, C, B and A), as described in the CI/ASCE 38-22 *Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data*, that are achieved as a result of the investigation.



A key component to Designating is the responsible charge and professional oversight of geophysical field work associated with attempting to achieve QLB. Although utility QLs can be specified individually for special projects, the intent and standard practice is to attempt to achieve QLB for all known and non-recorded utilities within a negotiated scope. What can't be achieved at QLB is depicted at either QLC or QLD, depending upon the quality of information from records and utility appurtenances in the judgement of the PE.

This approach for investigating existing subsurface utilities allows the team to accurately account for the utilities and quantify them based on field verification. Knowing the actual horizontal position of the utilities within the project limits will help with all phases of a project including preliminary planning, coordinating any necessary utility relocations, determining alternatives for utility conflict resolutions or final design decisions through construction. The investigation process begins with T2ue identifying all existing utility owners within the project limits, contacting AZ811 for a list of their member utility companies. The team will conduct a field site visit and compare the AZ811 information with what is on site. In many cases

additional research is needed to document and acknowledge all utility providers within a site boundary, as many utilities are not found on the AZ811 notice. After this is completed, T2ue will contact private utilities companies or non-member utility companies and individual owners (meet with them if required on-site) and ADOT Maintenance Managers and review the utility permit logs provided by the State, County and municipal agencies with ownership of utilities within the project limits. T2ue will research and obtain existing documents, facility maps, as-built records and design documents pertaining to utilities within the project limits. With this information, our team will create a utility owner/contact spreadsheet containing utility company name, contact name, phone number, mailing address, type of utility facility and comments.

While compiling records from utility companies and owners, field crews will be performing an above-ground topographic utility field survey to identify, survey and depict all visible utility appurtenances that might indicate the presence of an underground utility, known or unknown. At this time T2ue's team will begin the geophysical investigation and field designation of the subsurface utilities. This portion of the project is outlined in the ASCE 38-22 as data that is used in qualifying a utility depiction as QLB (designating subsurface utilities utilizing geophysical technologies to detect, verify and designate the horizontal location of subsurface utilities from above ground).



There are a number of technologies used to investigate subsurface utilities; not one piece of equipment can be used to accurately designate a complete job. The designating field crew will be equipped with several different types of equipment to designate utilities ranging in types, size and depth. Equipment includes GPR, a wide variety of pipe and cable location equipment (utilizing a electromagnetic range of 50HZ to 480 kHZ), acoustic emissions (elastic wave), insertion sonds (utilizing a electromagnetic range of 512 HZ to 83 kHZ) and color CCTV cameras. The soil conditions can hinder a field investigation when utilizing GPR and other geophysical technology and experienced technicians must be able to differentiate anomalies indicative of the utility from soil inconsistences.

Once the field team fully completes and designates the project site, field crews conduct utility sweeps of the project area using a number of techniques that help locate utilities that are unknown utilities, abandoned lines and other nonconductive utilities such as PVC lines. This field investigation also includes opening accessible manhole covers, lids, valve covers, hand-holes and other structures to identify their purpose, type of utility system and structure entry point and then documenting these structures on an appropriate structure diagram.

To ensure completeness and accountability throughout the field process, field designating teams will complete field sketches in MicroStation or ProStar (see Section 3c) for records of what was designated in the field, by day and by crew. This information is used to cross check and provide a Quality Control (QC) check between the field staff and data processing team. Once designated, the utilities are marked using temporary paint to visually represent the subsurface utilities. The team surveys the paint marks which are then digitized into a CAD file (Bentley MicroStation or Open Roads Designer) and ultimately signed by a registered PE. The CAD files will have all of the utility segments depicted at their achieved ASCE 38-22 QL and each utility will be labeled with size, material type, owner and type of service, where ascertainable by record and/or field verification.

QLA is generally reserved for specific locations where highly accurate positional and attribute data is necessary to understand whether the utility can be avoided through changes of design, or if it must be relocated. When vacuum excavation test holes are needed, T2ue will deploy survey crew(s) to mark each test hole location requested and initiate Arizona Blue Stake notification (AZ811). T2ue will apply for permits from all agencies affected by the work, including ADOT, and review project information and conduct a full sweep of potential hazards on the project. If test hole locations are found to be **outside of ADOT ROW**, the team will coordinate with the land owner or governing agency. T2ue's team will contact the municipality that owns the ROW for permits and meet with the inspector to determine the best time to dig (day or night), receive traffic control approval and call AZ811 for compliance prior to digging. Meeting with inspectors on-site makes the project run smoother because both sides understand the end goal. Digging test holes in ADOT ROW is somewhat easier as we have blanket permits with ADOT.

T2ue will request a meeting with inspectors to determine the optimal time to conduct field operations minimizing any disturbances. T2ue's representative barricade company will professionally create traffic control plans for review and approval. Our team will begin vacuum excavation per ADOT's request and carefully expose each utility line recording depth, size, material composition, soil type and horizontal information. T2ue will restore each location per agency requirements and leave the area as clean as when we arrived. All utility information will be surveyed by our-in house surveyor. The data is a final test hole form that is signed/sealed by T2ue's in-house registered PE.

T2ue uses field to finished data collection processes that enable quicker turnaround of processed data and deliverables, while at the same time reducing errors and improving the quality of work delivered. For added QC, digital photographs are taken of every test hole to record the depth and actual pipe. These steps assist in T2ue's data management processes and quality reviews and allows our clients to see exactly what we discover without delay.

T2ue will submit mapping data in the appropriate CAD format and review it with ADOT following completion of field activities. The team will consult with ADOT's design personnel during project development to determine where QLA test holes are prudent. All data in the final submittal will be tied to ADOT survey monuments and control datum. T2ue will supply all equipment, personnel and supplies needed to perform the services.

T2ue's CAD staff have extensive experience preparing CAD deliverables in **ADOT's CAD standards utilizing Bentley Open Roads Designer.** CAD staff currently uses Open Roads Designer (ORD) in preparation of SUE deliverables for other various DOTs around the country.

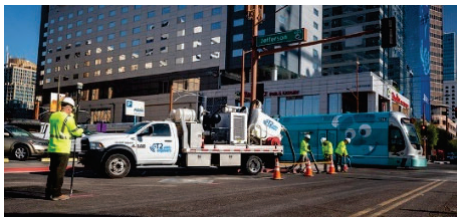
Standard deliverables T2ue will provide to ADOT's design team with an electronic DGN utility file, utility plan sheets and test hole data sheets in hard copy and PDF format and vault detail sheets, when applicable. T2ue's CAD technicians will prepare the ORD Utility Mapping file in compliance with ADOT's CAD standards for review and quality assurance by one of our Arizona registered PEs. Utility segments are documented with ownership information, achieved ASCE quality level, source information, supporting records, test hole locations, survey control data and field verification notes. This approach provides ADOT and design teams with a reliable utility inventory and facilitates future utility coordination, design updates and construction support activities.

T2ue recognizes that utility data is most valuable when it supports decision-making throughout project development. In addition to standard DGN deliverables, T2ue can provide GIS-based utility inventories, LiDAR-supported structure documentation and optional 3D utility data models for complex scenarios. These tools help ADOT design teams evaluate utility conflicts, relocation requirements, clearance constraints and design alternatives.

1c. Identify potential complications/difficulties that may be encountered in implementation of services and resolutions.

The wide geographic locations of projects assigned under this contract adds unique challenges to project Safety. Recognizing that Safety is one of T2ue's core values, our team first inspects all project areas for possible hazards or issues and addresses each one prior to commencing work. Some of these issues or hazards include the following:

Roadway Safety: T2ue realizes urban roadwork creates special hazards related to high traffic and congested roadways with unpredictable driver response to project work. Similarly, high-speed traffic along rural, open roadways will require sufficient advance warning of workers ahead. Both situations require diligent traffic control measures and enhanced safety awareness, and additional Personal Protective Equipment (PPE) may be necessary for field crews.



Special Land Concerns: T2ue is especially mindful of working in remote areas with possible wildlife concerns or encounters, working on sovereign or protected lands where special permitting is needed or where there are requirements to report any possible artifacts that may have been discovered. T2ue's standard protocol for every job requires that Job Safety Analysis (JSA) are reviewed each day to heighten awareness for these areas or items that require additional sensitivity.

Weather Conditions: Arizona's climate varies greatly depending on the geography, weather patterns and location to water sources. Weather can range from extreme heat in the desert areas to extreme cold in the mountain areas. Likewise, temperatures can vary dramatically from day-to-night and season-to-season and subsequently affect subsurface utility projects. T2ue has worked all over the state of Arizona and we will adjust our approach to each project as it relates to the current weather and temperature.

Soil Conditions: Soil conditions in Arizona also range drastically. Highly conductive soils (saturated clay) can render the use of lower frequencies equipment ineffective. Conversely, extremely nonconductive soils (dry sand) can make it difficult to establish a sufficient ground connection to complete the necessary circuit during fieldwork. T2ue understands the soil conditions throughout the state – sand, rock or clay – and the team deploys an arsenal of equipment on every project to account for poor soil conditions.

Existing Utility Information: T2ue will often not receive updated records on the existing utilities within a particular project site. Because these records are not always available, T2ue will work to identify utility owners, private or public, to gather as much information on each utility as possible. Sometimes records simply do not exist. T2ue will deploy various locating equipment to scan all areas of a project searching for utilities, both known and unknown. These searches include using the latest technology of GPR, sweeping with electromagnetic equipment, radio detection, CCTV and others to help find all utilities in the project area. Having these multiple options of locating equipment available increases T2ue's ability to target those utilities that might not have been detected previously. This clearly gives our team an advantage over other firms who do not have the breadth and depth of equipment selections.

Unknown or Undocumented Utilities: Unknown utilities present a major risk to projects in terms of schedule. When unknown utilities are discovered in the field during construction, all activities are generally halted to determine what the utility is and the extent of the impact to the project. If it is a major utility that will need to be relocated the project budget can increase considerably. To address this risk, T2ue's SUE investigation practice is to perform sweeps across the site using various geophysical tools specifically used to locate unknowns. T2ue crews find 20% to 60% more utilities using our team's approach than would be found using AZ811 (Arizona Blue Stake) and records alone. T2ue documents unknown ownership, non-responsive utility owners, conflicting records, unidentified geophysical anomalies, inaccessible structures, incomplete records research and utility segments that could not be verified to QLB standards. This allows ADOT and project designers to understand utility-related project risks early in project development.

2. Contract Team

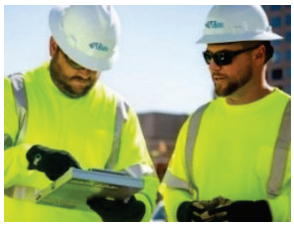
2a. Key personnel assigned to project including education, managing skills, capability and experience with similar projects.

T2ue's key staff and project managers have over two decades of experience with successfully completing numerous subsurface utility investigations for ADOT projects of varying size and complexity while satisfying program and project goals. Key personnel have worked with numerous project owners throughout Arizona and know how to effectively execute project assignments utilizing proper staffing. **Proposed staff have extensive experience working together on municipal projects and delivering SUE services in accordance with the ASCE 38-22 Standard.**

ADOT is a long-term and critically important client for T2ue and our intention will be to assign staff with adequate capacity and who we can commit long-term to performing on ADOT assignments. T2ue staff includes four key personnel who have years of experience with ADOT and the SUE process.

Travis Bix, Project Manager, has over 33 years of SUE experience, from field first-hand knowledge to managing multiple projects and up to 20 crews concurrently. He is a licensed contractor in four states (AZ, NM, NV and OR) and has a diverse background in management including completing the Harvard's Management Mentor program. Travis has managed the ADOT On-Call contract for over 19 years. He understands the ADOT system, internal ADOT team and what is required for individual task orders. Travis leads weekly coordination calls with all staff (field and office) to review workload, staffing and schedules. During these meetings project objectives are discussed prior to commencing work, along with project closeouts to obtain any lessons learned on a specific task or project to improve future performance.

Project Principal Robert Ramsey, PE (AZ #47526), LEED^{AP} is a Professional Engineer (PE) in ten states with a Civil Engineering degree from the University of Arizona. He brings ADOT a Principal-in-Charge with first-hand and extensive knowledge of SUE. Robert has trained numerous EITs and PEs within the industry based on the ASCE 38 Standard, while managing and overseeing hundreds of SUE jobs as the PE in charge, emphasizing QUALITY. He oversees over 43 on-call contracts in the Western US and is Project Principal for six State Departments of Transportation.



Project Engineer James Mueller, PE (AZ #64432) has managed SUE and utility coordination services for ADOT improvement projects including SR 101 and I-10, SR 30, SR 85 and Broadway Road/Southern Avenue/Baseline, 35th Avenue and Grand Avenue, SR 202 Widening, SR 101 from 75th Avenue to I-17, and projects for municipalities including SR 89 in Prescott and the Lake Mary Water Treatment Plant in Flagstaff. He has 15 years of experience, has a BS in Civil Engineering and is proficient in design software systems including AutoCAD Civil 3D and MicroStation. James has completed more than 200 projects involving Quality Levels D, C and B and over 1,500 Quality Level A test holes within the last two years.

Dan Padilla, Jr. is a Senior Project Manager has a BS in Molecular and Cellular Biology and more than 36 years of managerial experience and extensive knowledge of SUE, planning, layout, field survey, air vacuum extraction potholing, utility designating and CAD mapping services. He has been with the firm for 19 years and successfully manages T2ue's Southern Arizona operations and oversees multiple SUE on-call projects for ADOT and more than 70 SUE assignments under six consecutive City of Tucson On-Call contracts since 2007.

No learning curve! T2ue staff have a proven record of successfully managing ADOT on-call projects and performing SUE consultation services to facilitate the needs of the public. This expertise ensures your confidence that T2ue is the qualified consultant to continue to deliver as-needed SUE tasks.

2b. Anticipated effectiveness of team's proposed organization/coordination process. Identification of team members and experience working together and with utility owners effectively and successful partnering with ADOT. Knowledge of pertinent strategies. Explanation of organizational chart, responsibilities of team members, and the estimated effectiveness of the team's proposed organization, communication and coordination process.

T2ue's depth of personnel, experience and knowledge offers an unsurpassed ability to field an experienced team. T2ue takes pride in training our staff in all areas of SUE. T2ue's proposed team presented to ADOT has worked together on hundreds of projects across Arizona including the current Region 1 SUE On-Call with ADOT (2021). Knowing that multiple projects of all sizes can present themselves at any time it is necessary to employ a team with a large pool of resources to draw from.

T2ue team's work flow is defined at the commencement of a project during a kick-off meeting. This includes the scope, projected schedule, records status, survey requirements, safety concerns, weather impacts, SUE crews and other critical project details. This work flow is monitored weekly during coordination meetings with all project stakeholders. By having each stakeholder together/virtually, each individual stakeholder can be brought up to speed on critical dates and project progression to ensure proper planning and execution. Staff identified below will be available to work full- or part-time on assigned ADOT projects during this contract.

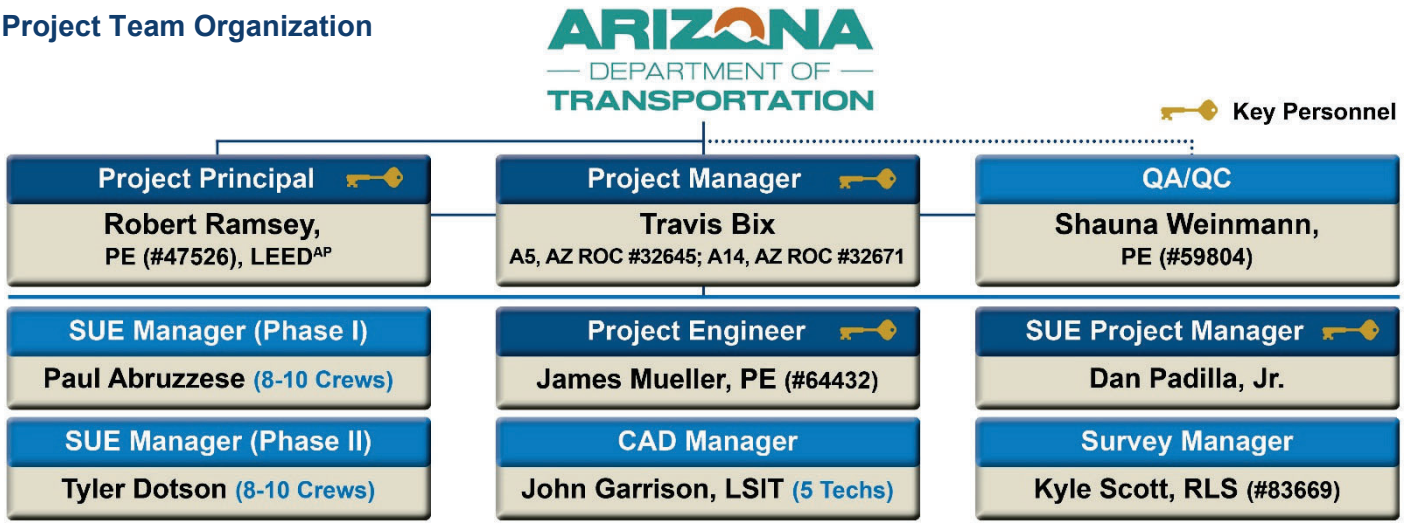
Project Team Capabilities and Experience

Team Member, Role, Years of Experience	Managing Skills, Capability and Past Experience	Professional Registration; Licenses; Education
Key Personnel		
Robert Ramsey, PE, LEED[AP] **Project Principal** 23 years total experience; 11 years with the firm	• Oversee West US SUE projects including ADOT On-Call Contract for the past 11 years • Completed over 500 projects and 5 million LF of SUE mapping over past 3 years • Principal for 33 SUE on-call contracts in the Western US	PE: AZ 47526; CO 0052872; KS 30294; LA 0047347; NM 23234; MI 6201313160; NY 109075; SD 17476; TX 128355; UT 10069774-2202, LEED[AP]; BS, Civil Engineering, University of Arizona
Travis Bix **Contract Project Manager** 33 years total experience; 27 years with the firm	• Direct SUE, utility locating and coordination for projects in the Southwest, ensuring CI/ASCE 38-22 Standards are implemented • PM, ADOT On-Call SUE Region 1 since 2017 • Contract PM managing ADOT On-Call SUE contracts through multiple on-calls since 1999	A-5, Excavating and Oil Surfacing Contractor, AZ ROC 32645; A-14, Asphalt Paving Contractor, AZ ROC 32671
James Mueller, PE **Project Engineer** 15 years total experience; 10 years with the firm	• PE for ADOT On-Call SUE Task Orders; oversees projects in AZ, NM and NV • Completed 100+ SUE projects involving QLs D, C and B and 1,000+ QLA test holes in last 3 years	PE: AZ 64432; NV 026715; BS, Civil Engineering, Northern Arizona University
Dan Padilla, Jr. **SUE Project Manager** 36 years total experience; 19 years with the firm	• 36 years Project Management experience on ADOT SUE On Call assignments • Managed T2ue's Southern AZ operations for 19 years including numerous ADOT project assignments	BS, Molecular and Cellular Biology, University of Arizona
Additional Personnel		
Shauna Weinmann, PE **QA/QC, Independent Reviewer** 15 years total experience; 5 years with the firm	• PE alternative and independent reviewer for ADOT projects • Consultant on Utility Coordination for FHWA compliant work for ADOT projects	PE: AZ 59804, CA 84744, CO 0058871, ID 19245, OK 33953, TX 123027, WA 21036004; BS, Civil Engineering, Chico State University
Paul Abruzzese **SUE Manager, Phase I** 26 years total experience; 25 years with the firm	• Oversees field operations for AZ SUE projects; direct 8 to 10 crews concurrently • Designating SUE Supervisor for multiple ADOT On-Call SUE projects for the past 12 years • Records research, Blue Stake notification, obtain permits, coordinate with utility inspectors/surveyors, prepare deliverables, participate in QA/QC process	AAS, Construction Mgmt., Mesa Community College; Test Hole Practices & Procedures, Plans Reading, Conductive Designating, GPR, MOT, OSHA Permit-Required, Confined Space
Tyler Dotson **SUE Manager, Phase II** 20 years total experience; 8 years with the firm	• Oversees field/office operations for SUE tasks per ASCE 38-22 QLA test holes and on-calls for ADOT, FCDMC, MCDOT, Mesa, Phoenix, SRP, APS, • Educated in agency requirements throughout AZ for QLA test holes, traffic control and restoration	BS, Business Admin., W.P. Carey School of Business, ASU, Tempe; AA, Business, Chandler Gilbert CC; CAD Standard Committee
Kyle Scott, RLS **Survey Manager** 22 years total experience; 1 year with the firm	• Oversees field operations for AZ Survey projects; directs 5 to 7 crews concurrently • Oversees West US Survey projects within T2ue • Current management for ADOT QA/QC projects within Phoenix and Tucson	RLS: AZ 83669; FAA Part 107 Commercial Drone Pilot Certification #4472936; BA, Geography, San Diego State University
John Garrison, LSIT **CAD Manager** 35 years total experience; 10 years with the firm	• Manage CAD deliverables for SUE/Survey projects with MicroStation and ORD requirements • Completed more than 250 SUE ASCE 38 deliverables in the past 3 years for multiple state DOTs including 78 ADOT projects, 13 on the existing ADOT on-call contract.	Land Survey in Training; TBC; GNSS/terrestrial data; ORD; MicroStation, Civil3D; OPUS RS/Static/Projects; Star*Net; PLS-CADD; 50+ MicroStation Bentley Certified Trainings

Key Personnel Resumes with qualifications and experience are included in Part D – Attachments.

All facets of the SUE process are managed by T2ue's professional in-house staff, which allows our team to efficiently schedule and coordinate each task as noted prior. Our team works with internal stakeholders, and external as well. A main issue that arises on every project is obtaining adequate record information or getting third-party utilities to openly communicate on a project. T2ue's team has decades of experience working alongside utility companies directly in the State, which strengthens our position with obtaining better information and faster responses.

Project Team Organization



2c. Project Manager who actively manages this project. Identify their education, professional registration(s)/license(s), capability and relevant experience. Recent similar projects for which the Project Manager performed a comparable function.



As Project Manager, Travis Bix will actively manage this contract. He holds T2ue's Arizona Contractors Licenses A-5 (Excavating and Oil Surfacing Contractor), AZ ROC 32645 and A-14 (Asphalt Paving Contractor), AZ ROC 32671. With over 33 years of experience, **Travis oversees and manages SUE projects and the largest SUE team throughout Arizona.** He supports regional procedures for OSHA compliance, safety training and developing activities associated with SUE. Travis is also responsible for the recruiting, training, supervision and evaluation of locating technicians, SUE supervisors and managers. He has managed projects and on-calls contracts for ADOT, MCDOT, FCDMC, City of Phoenix and multiple clients throughout AZ including Flagstaff, Navajo Reservation, Prescott, Payson, Gila/Salt River Reservations, Tohono O'odham Reservation, San Carlos Reservation, Tucson, Nogales, Yuma, Lake Havasu, Show Low and others.

Travis has managed ADOT On-Call SUE Services contracts since 1999 and oversees the latest on-call contract for the ADOT Region 1 SUE On-Call.

Travis will attend the project kick-off meeting to commit T2ue's resources and provide ADOT with a completion schedule.

2d. Knowledge of geographical regions of AZ; including identification of proximity of team to work locations, accessibility of personnel and equipment to various rural and urban regions. Proximity of team's location to ADOT's Phoenix HQ.

ADOT is divided into three large geographical regions for administrative purposes. **Region 1** covers the western part of Arizona. **Region 2** covers north and northeastern Arizona and **Region 3** in southeastern Arizona. T2ue has two current Arizona offices with main operations in the Phoenix branch centrally located within Maricopa County along SR 101 Loop and I-17 Interchange. This location, with two major freeways at our doorstep, gives our team the ability to deploy staff around the Phoenix Metropolitan area efficiently, and through the entire state. **T2ue's team can arrive at ADOT's Phoenix HQ within 20 minutes of notification of an available project, attributable to the close proximity of our office.** T2ue's Tucson office is also available, as well as our offices in NV, NM and CO, to assist as needed, depending on proximity of projects.

T2ue has worked in Arizona for almost every major municipality, county or reservation and through all types of weather. Our team understands equipment limitations within each area of Arizona and knows how to adjust to conditions to obtain positive results. Under normal circumstances, crews will begin work on either designating (Phase I) or locating (Phase II) within five working days of task assignment. If workload at the time of a task assignment causes start date delays ultimately impacting our scheduled completion date, T2ue will make adjustments in local staff assignments and/or deploy additional staff and equipment from our regional on-call pool to stay on schedule. When necessary, during peak demand periods, T2ue's team can bring in field staff and equipment from other West region offices in NV, CO and NM. Field crews receive direct support, supervision and project coordination from the SUE Manager assigned to the ADOT project. Office support includes the required level of availability by the Project Manager, Survey and CAD Managers.

3. Firm Capability

3a. Availability of key team members for duration of the project.

Team members existing/projected workloads for prime and subs. Capacity of firm to meet needs of the project, including short time frame and quick turnaround required. Consider depth of staffing/resources. Identification of ability to meet timelines for project and provide additional personnel for multiple projects occurring simultaneously. Availability of staff to attend meetings and interact with ADOT staff on short notice. On a matrix, provide the following:

- **Current projects**, including the name of key team member responsible for project, name and location, brief description, who the work is being performed for, number of hours remaining and estimated completion date.

Project Name, Location, Owner/Client and Description	Team Members, Hours (x) Remaining for Completion	Estimated Completion, Reference
SR 30, SR 303 to Estrella Parkway, AZ, ADOT Ongoing SUE investigation from the proposed system TI for SR 30 and SR 30 to Estrella Parkway. To date T2ue has completed 40,000 LF of QLs D, C and B depictions. This project is part of the ADOT PDOC program.	R Ramsey (2), T Bix (20), J Mueller (20), D Padilla (40), J Garrison (60)	• Ongoing since 2026 • Estimated completion is October 2026 • Greg Fly, WSP 480-449-4603
US 60, Indian School and 35th Avenue, Phoenix, AZ, ADOT Lead SUE team investigating upwards of 249,000 LF of utilities and 340 QLA test holes. This project is part of the ADOT SUE On-Call Contract	R Ramsey (2), T Bix (12), J Mueller (20), T Dotson (16), K Scott (2)	• Ongoing since 2023 • Estimated completion is November 2026 • Will Hye, AECOM, 480-688-3243
SR 30, 71st Avenue to SR 202, Phoenix, AZ, ADOT Conducting a full ASCE 38-22 investigation and have depicted over 55,000 LF of underground utilities with 30 QLA utility test holes scheduled.	T Bix (16), J Mueller (20), P Abruzzese (20)	• Ongoing since 2025 • Estimated completion is December 2026 • Karen Hobbs, Stanley, 602-333-2421

T2ue is currently providing SUE services on a number of ADOT projects through the PDOC program with various consultants.

- Relevant **work completed in the past 5 years**, including name of the key team member responsible for the project, project name/location, project description, who work was performed for, and when it was completed.

T2ue is a leader in the SUE industry and trusted advisor for ASCE 38-22 Standards. With safety of the public in mind, T2ue's Project Manager and team work diligently to ensure accuracy and completeness of subsurface utilities. The experience identified below reflects a sampling of our team's experience in past 5 years. We have completed over 500 SUE projects throughout AZ in this timeframe. T2ue worked on 13 task orders throughout Region 1 on the ADOT SUE On-Call 2021-012.03, displaying the ability to effectively manage and deploy teams across the Region.

Project Name, Location, Owner/Client, Project Description, T2ue Staff	Completion, Contact
US 95 Imperial Dam Road to Aberdeen Road, Yuma, AZ, ADOT T2ue staff performed SUE services and completed 16,600 LF of QLB utility designating. **Staff:** R Ramsey, T Bix, D Padilla, J Mueller, T Dotson, P Abruzzese, J Garrison	• July 2024 • ADOT, Mohamed Noun, 602-712-8689
SR 347: Casablanca and Mammoth Road, City of Maricopa, AZ, ADOT T2ue staff performed SUE services and completed 30,000 LF of QLB utility designating. **Staff:** R Ramsey, T Bix, D Padilla, J Mueller, T Dotson, P Abruzzese, J Garrison	• December 2023 • ADOT, Mohamed Noun, 602-712-8689
SR 303: UPRR to MC 85, Buckeye, AZ, ADOT T2ue staff performed SUE services including 50,000 LF of QLB utility designating and 78 QLA test holes. **Staff:** R Ramsey, T Bix, J Mueller, T Dotson, P Abruzzese, J Garrison	• July 2023 • ADOT, Mohamed Noun, 602-712-8689
SR 101L, 75th Avenue to I-17, SUE Services, Peoria, AZ, ADOT Under the ADOT Statewide On-Call SUE Services contract, T2ue staff performed SUE services and completed 587,000 LF of QLB utility designating, surveying and mapping. T2ue also excavated 72 QLA utility test holes for highway design, requested by ADOT. **Staff:** R Ramsey, T Bix, J Mueller, T Dotson, P Abruzzese, J Garrison	• February 2023 • ADOT, Mohamed Noun, 602-712-8689
SR 347 and Riggs Road TI, Gila River Indian Community, AZ, ADOT Under the Statewide On-Call SUE Services contract, T2ue staff performed SUE services including utility designating, surveying and mapping and depicted 40,000 LF of ASCE 38 QLB utilities. T2ue also surveyed overhead utilities and sag points within the project area. **Staff:** R Ramsey, T Bix, D Padilla, J Mueller, T Dotson, P Abruzzese, J Garrison	• February 2023 • ADOT, Mohamed Noun, 602-712-8689

Project Name, Location, Owner/Client, Project Description, T2ue Staff	Completion, Contact
I-10 and SR 101L System TI Improvements, DCR and Environmental Document, Avondale/Tolleson, AZ, ADOT T2ue staff performed SUE services depicting ASCE 38 QLD utilities (shown according to available utility records) and preliminary UC services to support preliminary DCR and the design team with SUE and UC for the preliminary DCR. T2ue is scheduled to perform a QLB SUE investigation and complete UC services once the project moves into the final design phase. **Staff:** R Ramsey, T Bix, J Mueller, T Dotson, P Abruzzese, J Garrison	• June 2026 • ADOT, Mohamed Noun, 602-712-8689
GEC for I-10, SR 202 to SR 387, Chandler, Phoenix and Pinal County, AZ, ADOT T2ue provided SUE services utilizing the ASCE 38 Standard. Conducted records research QLD, field observations QLC, designating utilizing geophysical equipment to horizontally position subsurface utilities QLB and produced CAD drawings. The overall project spans roughly 12 miles of the I-10 freeway throughout Chandler, Phoenix and Pinal County. T2ue also contracted to provide 50 QLA utility test holes at potential utility conflict points critical to project design. **Staff:** R Ramsey, T Bix, J Mueller, T Dotson, P Abruzzese, J Garrison	• July 2026 • ADOT, Mohamed Noun, 602-712-8689
SR 303, Van Buren to MC 85, SUE Services, Goodyear, AZ, ADOT Under the ADOT Statewide On-Call SUE Services contract, T2ue completed SUE investigation services in accordance with the ASCE 38 Standard along the proposed SR 303L extension from MC 85 to Van Buren Street. Crews performed 360,000 LF QLB utility designating, surveying and mapping in support of the 303L extension. Heavy traffic along the route plus active construction of two separate utilities provided challenges to execution of the QLB effort. T2ue excavated QLA test holes at potential utility conflicts critical to the project design. **Staff:** R Ramsey, T Bix, J Mueller, T Dotson, P Abruzzese, J Garrison	• June 2026 • ADOT, Mohamed Noun, 602-712-8689
Kingman Traffic Interchange (TI), Andy Devine Waterline, Kingman, AZ, ADOT T2ue staff performed SUE services including 8 QLA test holes. **Staff:** R Ramsey, T Bix, J Mueller, T Dotson, P Abruzzese, J Garrison	• November 2022 • ADOT, Mohamed Noun, 602-712-8689
US 60 Centennial Wash Bridge, AZ, ADOT T2ue staff performed SUE services and completed 10,300 LF of QLB) utility designating. **Staff:** R Ramsey, T Bix, J Mueller, T Dotson, P Abruzzese, J Garrison	• October 2022 • ADOT, Mohamed Noun, 602-712-8689

3b. Document team's current technical equipment which will support this effort.

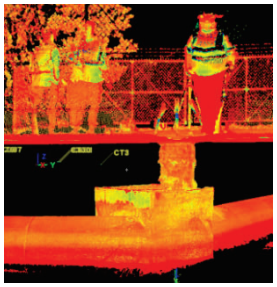
T2ue retains a fleet of SUE vehicles and owns its own equipment. T2ue's field operations manager ensures field crews have access to cutting-edge equipment and technology. Dated equipment is replaced regularly with new and more advanced models. T2ue's designating (ASCE 38-22 Quality Level B) vehicles are equipped with five different types of designating equipment, including GPR. All T2ue branches are fully-equipped with computer hardware and software including Bentley Open Roads Designer (ORD), MicroStation V8i and Bentley InRoads to meet ADOT's needs for deliverables. T2ue manages our vehicle fleet according to industry best practices. Vehicles receive routine maintenance exceeding manufacturer's guidelines to eliminate potential downtime which assures ADOT's projects remain on schedule.

T2ue's specialized field personnel's expertise in Utility Designating and Locating is complemented by state-of-the-art, non-destructive vacuum excavation trucks and specially-equipped designating vehicles. Trucks are equipped with necessary designating equipment including the following electromagnetic equipment: VIVAX, Fisher TW6, MetroTech 810, Pipehorn 800 Series, Radiodetection, Heath Instruments, Geophysical Metal Detectors and power equipment. Geophysical equipment can identify ferrous and non-ferrous objects up to 20 feet in depth and provide 100% coverage of the survey area. T2ue also has highly specialized equipment operated when needed by our geophysicists with extensive academic and field geophysical training. T2ue has access to additional company-owned vehicles and equipment from other offices in the region, and hundreds of SUE crews and fleets throughout the US.

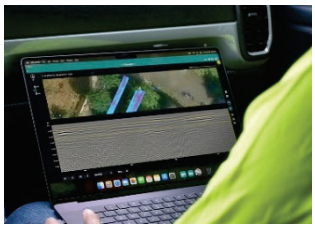
Advanced Geophysics Investigation

In addition to T2ue's suite of geophysical equipment, we offer a host of innovative equipment, services and approaches to utility investigations.

T2ue employs technology including laser scanning equipment, or **Light Detection and Ranging (LiDAR) and 360 scanning**, to collect highly accurate/precise underground chamber data and provide detailed information regarding above and below grade utility related structures and appurtenances. Our team utilizes 360-degree structure scans attributable to their high reliability. In the event of data discrepancies between records and field findings the point cloud can be reviewed for accurate analysis, eliminating the need for a revisit of the site.



T2ue has the ability to complete a scan of roadway, high traffic or other rapid deployment areas using **Multi-Channel Ground Penetrating Radar (MCGPR)** equipment in place of traditional single-channel GPR. MCGPR can capture a substantial amount of subsurface data quickly in the field, relative to single-channel methods. Data collected is high density in all three dimensions accurately mapped and geospatially accurate. The results are reconciled with the records and potential utilities identified with traditional horizontal utility designating methods. The system is a cutting-edge MCGPR solution dedicated to utility detection and positioning in 3D; data will be spatially identified using survey-grade GPS.







MCGPR facilitates the detection of buried pipes, ducts and cables for safe digging, geotechnical projects and detection of geological anomalies such as trenches, structures, or other anomalies which may impact project constructability. The unit can operate around 20 to 30 mph, which is around four times faster than older MCGPR units. It boasts interchangeable GPR arrays for near surface and deep detection to scale solutions and approaches for each project's unique requirements. For complex interchanges, bridge crossings, retaining walls, major drainage structures and utility-congested corridors, T2ue can develop three-dimensional utility conflict visualization models utilizing surveyed utility data, QLA test hole elevations, LiDAR point clouds and Bentley OpenRoads tools. These models assist in evaluating utility clearances, relocation requirements and design alternatives.

3c. Description of past performance in terms of QC of budget commitments, quality of work and compliance with project task schedule. Include firm's internal QC procedures and how quality program will enhance the development of projects.

ADOT can feel confidence in our team's ability to exceed their requirements in terms of cost, schedule and quality, both through our sound approach and documented past history of performance. T2ue utilizes BST financial/accounting system, which is specifically designed for use by Architectural/Engineering firms. BST software generates detail budget reports that project managers can use to easily identify areas where the tasks are not being completed in a cost-effective and timely manner and take corrective measure to get the project on budget and schedule. Financially, T2ue's advanced BST accounting system positions the company for sustained project management performance and compliance with Federal Cost Accounting Standards. The system provides all necessary information at the contract, project and task levels for the Project Managers to effectively execute their budget control responsibilities in a timely manner. T2ue's team consistently meets budget of each project.

T2ue holds "Monthly Operating Review" meetings (MORs) attended by PMs, senior management and executive level. Project budgets, schedules, QA/QC and client satisfaction issues are reviewed. T2ue utilizes SmartSheet scheduling software to assist with keeping project on schedule and ensureing there is adequate resources available to handle task orders. Our project manager monitors daily progress and updates the project schedule to determine if more resources are required and milestones are met. This means schedules are met for each project T2ue undertakes.

T2ue's QA Plan has embraced Total Quality Management (TQM) as our corporate philosophy. Our QA/QC philosophy has formalized components to ensure quality. These include periodic reviews by PMs, in-house peer reviews, external consultant reviews, flowcharts, checklists, error checking and value engineering. T2ue uses other technological innovations that aid in increasing the quality of our service as well as increasing the efficiency with which we perform our services. We are using a field software solution called **Builterra** to document test holes electonically. When a test hole is perfomed all of the data is entered into an electronic form and the location is geo-tagged into the test hole data form. The software is cloud based and allows our office staff and SUE managers the ability to review the data as it is being collected, which reduces time spent coordinating. T2ue crews are currently using this system to also document photo and structure diagrams. In addition, T2ue is employing the use of another cloud based system called **ProStar**, which is a piece of field equipment that bluetooths to T2ue's designating equipment and allows technicians to automate certain aspects of field sketches and field note records. As the SUE technician is performing work, the unit can log the location and equipment settings in real time. This data can be reviewed by office staff as it is being collected, which aids in improving overall quality of the work being performed and reducing the chance of errors or repeat field visits.

4. Past Performance

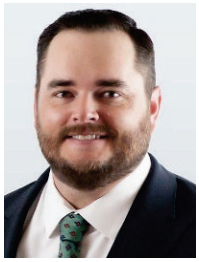
In 2019 Cardno divested its Utility Engineering and Survey business line to create a separate entity, T2 UES, Inc. d/b/a T2 Utility Engineers to further enhance the offerings of Utility Engineering services and better serve the needs of our clients. This occurred during our existing Region 1 SUE on-call contract. ADOT has assigned this contract and all other ADOT contracts with T2 UES, Inc. All key staff ADOT is familiar with remain intact and are ready to continue providing ADOT with the same quality service.

PART D. Attachments

Key Personnel Resumes

Robert Ramsey, PE, LEED AP

Summary of Experience



Robert is a Vice President at T2ue responsible for directing Utility Engineering and Surveying (UES) services in the West. He is a registered Professional Engineer in 10 states and oversees Subsurface Utility Engineering (SUE) investigations for compliance with applicable laws and standard of care for utility engineering projects. Robert's expertise includes providing SUE, utility design, survey, utility coordination and project management services for utility infrastructure projects throughout the West.

Robert offers 23 years of utilities engineering and mapping experience, including 12 years of direct experience conducting and managing SUE projects based on the American Society of Civil Engineers (ASCE) 38-22 Standard. He provides professional engineering guidance, quality assurance/quality control (QA/QC) and leads training sessions on how to successfully implement ASCE 38 into the design process for consultants and project owners. Robert is also the ASCE UESI State Chair for the Arizona Chapter.

Robert directs SUE contracts for multiple municipalities, Departments of Transportation (ADOT, CDOT, NDOT, NMDOT, TXDOT and UDOT) and 43 agency on-call contracts in the West. He has completed more than 400 ASCE 38-22 mapping projects with over 5 million linear feet of Quality Level B mapping and more than 2,000 Quality Level A test holes within the last three years.

Significant Projects

ADOT, Contracts 2017-004 and 2021-012, On-Call SUE Services, Region 1, AZ. Professional Engineer (PE) and PIC for these on-call contracts for ADOT that included 23 separate projects, this includes 44 separate task orders, completing Phase 1 and Phase 2 SUE work for ADOT on the 2017-004 contract with an additional 13 projects completed under the 2021-012 contract. T2ue staff investigated the projects in accordance to the ASCE 38 standard, effectually depicted utilities per the ASCE 38 standard (Quality Level D, C and B) under this contract. The work also included completing Quality Level (QL) A test holes for precise locations of critical conflicts for Prime Design firms.

ADOT, SR 101L, I-17 to Pima Road, SUE Services, Phoenix/Scottsdale, AZ. PE responsible for management of SUE services based on the ASCE 38 Standard including mapping and designating utilities to QLs D, C and B for ADOT. The project includes adding general purpose lanes and auxiliary lanes throughout the 13-mile stretch of the SR 101L. Survey staff set controls and completed mapping for these widening improvements for both directions of the freeway.

ADOT, I-10, I-17 to SR 202, Broadway Curve, Survey and SUE Services, Phoenix, AZ. Lead PE for survey services and completion of a SUE investigation in accordance with ASCE 38, for WSP and ADOT, in support of the proposed roadway improvements along the I-10 freeway from the I-17 (split) to the Loop 202 (Santan) freeway. The investigation provided an update to the previous utility mapping from 2009 for the project. In total 462,486 LF of utilities were identified within the nine requested areas during the new SUE investigation. Included was QLA test holes, topographic survey of the corridor and UC meetings from the investigation.

ADOT, SR 101, Broadway to SR 202, Phoenix, AZ. Lead PE for the utilities investigation team for the GEC consultant Kimley-Horn on the ADOT freeway expansion. SUE investigation was completed at 30 separate locations along the multi-mile corridor at areas of concern by the Utility Coordination team. The investigation was conducted in accordance with ASCE 38, in support of the proposed roadway improvements along the SR 101 Loop from Broadway to the

Current Position

Project Principal,
Vice President, Western US

Years of Experience

23

Joined T2ue

April 2015

Education

BS, Civil Engineering,
University of Arizona

Professional Registrations

Professional Engineer (PE):

- AZ 47526
- CO 0052872
- KS 30294
- LA 0047347
- MI 6201313160
- NM 23234
- NY 109075
- SD 17476
- TX 128355
- UT 10069774-2202

LEED Accredited Professional (AP)

Affiliations

- American Council of Engineering Companies (ACEC)
- American Public Works Association (APWA)
- American Society of Civil Engineers (ASCE)
- Utility Engineering and Surveying Institute (UESI)

Robert Ramsey, PE, LEED AP

Loop 202 (Santan) freeway. It also included 24 ASCE 38 QLA test holes for critical conflict points to resolve design conflicts prior to construction. The investigation was completed in August 2018. T2ue was requested by ADOT to extend utility services through construction as their representative in the field; activities concluded in September 2020.

GEC SR 189, SUE Services, Nogales, AZ. Lead PE and Principal. T2ue, completed a SUE investigation per ASCE 38 for AECOM under a GEC contract for ADOT in support of the proposed roadway improvements along SR 189 from the International Border to Grand Avenue in Nogales, AZ. Previous utility investigation had been conducted along the project length and T2ue's SUE investigation was completed in two phases. The first phase consisted of T2ue's staff "checking/verifying" portions of the previous utility investigation from 2017. The second phase consisted of T2ue fully designating a portion of the overall project and some "spot checks" of other utilities throughout the project. It also included field sweeps (a method of searching for undocumented utilities) along the eastern portion of the project, east of the I-19 freeway. The investigation included records research, utility structure survey and the use of appropriate geophysical methods to determine the existence and horizontal position of subsurface utilities and overhead aerial utilities. The resulting information enabled existing utilities to be depicted on the deliverables in accordance with their achieved Utility QL. 34,326 LF of utilities were identified during Phase I of the SUE investigation and 31,778 LF of utilities were identified during the second phase of the investigation (a total of 66,104 LF of utilities).

ADOT/Jacobs, SR 101L/I-10 TI Improvements, DCR and Environmental Document, Avondale/Tolleson, AZ. Lead Contract Manager and Sr. Project Manager for SUE and UC Services for the project within multiple agencies. Perform SUE services depicting ASCE 38 QLD utilities (shown according to available utility records) and provided preliminary UC for the design team in support of the preliminary DCR. T2ue will also provide a QLB SUE investigation and complete UC services once the project moves into the final Design phase.

ADOT/AECOM, I-10: Kino Boulevard Traffic Interchange (TI) to Country Club Road TI Design-Build Project, SUE Services, Tucson, AZ. SUE PE. T2ue provided SUE services on this 3.5-mile improvements project in Tucson, AZ. Services included records research, designating and mapping services (ASCE 38 QLs D, C and B) of 244,500 LF of underground utilities and executed air-vacuum excavation of 50 (ASCE 38 QLA) test holes for the design phase of the project. The project included reconstruction of I-10 with three general purpose lanes in each direction between milepost 262 (east of Park Avenue) and Alvernon Way and the TI at I-10 and Kino Parkway to improve existing traffic and safety issues. Construction included a new TI at I-10 and Country Club Road, a new I-10 westbound entrance ramp from Alvernon Way, an I-10 undercrossing to connect the North and South Kino Sports Complex and the removal of the TI at Palo Verde Road and I-10. As a new and additional service, T2ue prepared a web-based user-friendly interactive GIS database of the results of the ASCE 38 QLs D, C and B SUE Utility Investigation to assist the design team during the Utility Coordination process for the project.

ADOT/WSP, I-19 and Irvington Road TI (AZ04403900), SUE Services, AZ. Lead PE and Principal. T2ue provided SUE services on this 1.8-mile interchange improvements project in Tucson, AZ. Services included records research, designating and mapping services (ASCE 38 QLs D, C and B) of 121,000 LF of underground utilities and executed air-vacuum excavation of 45 (ASCE 38 QLA) test holes for the design phase of the project. The project included Closed Circuit TV video inspection of 1,200 ft of sanitary sewer line. Extensive coordination had to be conducted between the two jurisdictions involved, the City of Tucson DOT and Mobility (DTM) and ADOT.

ADOT, I-10, Dysart Road to I-17, SUE Services, Phoenix, AZ. SUE PE. SUE services included completion of 22 (ASCE 38 QLA) test holes and designating of 20,000 linear feet of utilities. Utilities included water and sewer lines, irrigation, gas line, storm drain, telephone and electrical lines on a project area totaling about one-half mile and consisting of portions of 39th, 38th and 35th Avenues where they intersect with I-10. This investigation project was completed for a future freeway widening project.

ADOT, GEC for I-10, I-17 (Split) to SR 202 (Santan/South Mountain), SUE Services, Phoenix, AZ. SUE PE. Provided SUE services utilizing the ASCE 38 Standard. Conducted records research (QLD), field observations (QLC), designating utilizing geophysical equipment to horizontally position the subsurface utilities (QLB) and produced CAD drawings. The overall project spans roughly 12 miles of the I-10 freeway throughout the Cities of Phoenix, Tempe and Chandler. The team investigated nine areas selected by the client, including sections along the US 60 and SR 143, approximately 8 miles of freeway.

ADOT, I-17 TI at Pinnacle Peak Road and Happy Valley Road, SUE Services, Phoenix, AZ. SUE PE for management of SUE services including complete mapping based on the ASCE 38 Standard for ADOT and designating to QLs D, C and B. The overall project included more than 188,975 linear feet of designated and investigating of underground utilities, water lines, storm drain and telephone and gas lines. The investigation was completed for traffic interchange improvements on two major intersections along I-17. The project also included 19 QLA test holes.

ADOT, I-10, El Camino del Cerro and Ruthrauff Interchange, SUE Services, Tucson, AZ. PE responsible for the preparation of documents related to records research, designating and mapping (ASCE 38 QLs D, C and B) and air-

Robert Ramsey, PE, LEED AP

vacuum excavation of over 160 test holes (QLA) for the design of the new freeway interchange. Conducted through ADOT SUE Statewide On-Call contract.

ADOT, Loop 101, Chaparral Road to Loop 202, SUE Services, Scottsdale AZ. PE responsible for the preparation of documents for 75 test holes (ASCE 38 QLA) for the design of a new 5-mile freeway widening. Also provided records research, designating and mapping services (ASCE 38 QLs D, C and B) of all utilities within the ADOT right-of-way.

ADOT, SR 87 and Ruins Drive Intersection, SUE Services, Coolidge, AZ. Lead PE for SUE services for a portion of SR 87 at the intersection of Ruins Drive. Performed SUE designating (ASCE 38 QLs D, C and B) services to map the horizontal position of existing underground utilities for intersection improvements for this ADOT project. This project was completed as part of the ADOT Statewide SUE On-Call.

ADOT, US 60 from Greenway Road to El Frio Street, SUE Services, El Mirage, AZ. Lead PE. Provided oversight of SUE services for this 1.25-mile project on US 60 from Greenway Road to El Frio Street. Performed designating (ASCE 38 QLs D, C and B) SUE services to map the horizontal position of existing underground utilities.

ADOT, I-10 and SR 90 Interchange, SUE Services, Benson, AZ. PE/Utility Coordinator for the preparation of documents related to the excavation of 43 air-vacuum excavation test holes (QLA) at identified conflict locations. As part of the ADOT Statewide SUE On-Call, conducted utility mapping and designating (QLB) for design of the new interchange.

ADOT, SR 92 and Foothills Drive, SUE Services, Sierra Vista, AZ. Lead PE. Oversight of SUE services for 0.25 miles of SR 92 and the intersection of SR 92 and Foothills Drive. Provided designating (ASCE 38 QLs D, C and B) SUE services to map the horizontal position of existing underground utilities. This small corridor had over 20,000 linear feet of subsurface utilities. Also completed 52 QLA test holes for utilities in conflict with overall design and construction.

City of Phoenix, Job Order Contract (JOC) for SUE Services, Phoenix, AZ. Project Principal. Oversee SUE services and have extensive experience with the City's processes, procedures and staff. Crews have completed over 47 projects for the City in the past year. T2ue staff provided SUE services for City projects involving water main replacement for various roadways including Flower Street to Thomas Road Storm Drain Design and Grovers Avenue Storm Drain Improvements. T2ue performs SUE services utilizing ASCE 38 and has completed numerous locating projects involving more than 750 test holes (QLA) and provides survey, CAD support, designating and locating services (QLs D, C and B).

City of Mesa, On-Call SUE Services, Mesa, AZ. Project Principal. T2ue has completed 10 projects for the City on an on-call basis and SUE services for City projects involving water main replacement projects for various roadways. Crews perform SUE utilizing the ASCE 38 Standard and has completed numerous locating projects involving more than 750 test holes (QLA). T2ue also provides investigating and designating services (QLs D, C and B).

Maricopa County Department of Transportation (MCDOT), On-Call SUE Services, Maricopa County, AZ. PE. Oversight of SUE services (QLs D, C, B and A). Work performed includes roadway infrastructure projects with majority involving roadway improvement projects, with recent focus on intersection clearing for installation of new traffic signals. The firm has held this contract since 2001, which includes work performed in accordance with the ASCE 38 standard.

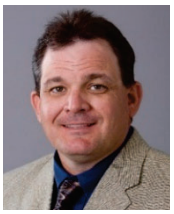
City of Tucson, On-Call SUE Services, Tucson, AZ. PE. Oversight of SUE services for this on-call contract, supported by staff in Tucson and Phoenix offices. Provide records research, utility mapping, utility designating and test holes (ASCE 38 QLs D, C, B and A) for projects located throughout the City. Perform as-needed in-house Survey and CAD, completing 56 assignments to date. Also obtain right-of-way and traffic permitting, provide proper notification to the Arizona 811 Center of proposed excavation activities and manage subconsultants for traffic control and barricades.

Salt River Project (SRP), On-Call SUE Services, Statewide, AZ. Project Director. Provide oversight for this on-call contract established in 1999 to perform SUE and survey mapping services. The team conducts full utility investigation and potholing (QLs D, C, B and A) on all SRP facilities state-wide and completes utility mapping based on ASCE 38 Standard for mapping subsurface utilities with 8 designating crews (QLB) and a minimum of 4 locating crews (QLA) daily. Each year the team designates more than 2,000,000 feet of utilities and excavates over 5,000 test holes for SRP.

Valley Metro, South Central Light Rail Extension, Survey, Mapping and SUE Services, Phoenix, AZ. Lead Utility Engineer for underground utility locating and mapping services as a subconsultant to HDR. Provided survey, mapping and SUE services utilizing the ASCE 38 Standard for mapping subsurface utilities. SUE services included conducting records research (QLD), field observations (QLC), designating utilizing geophysical equipment to horizontally position the subsurface utilities (QLB) and providing CAD drawings. The ASCE 38 Plan was signed and sealed by a professional engineer. The preliminary design team completed a utility base map of only record information for the 15% plans and roughly 308,000 LF of utilities. After the investigation and ASCE 38 process was completed, the team mapped 555,015 LF of utilities and over 125 unknown utilities that spanned over 2 miles in footage. Following ASCE 38, the team mapped over 80% more utilities than on record. This advanced investigation aids the CMAR team with building a faster, cheaper and safer project for City and Valley Metro. Performed utility coordination with CMAR team, Valley Metro, HDR and the City.

Travis Bix

Summary of Experience



Travis has 33 years of experience managing SUE, utility locating and utility coordination services for projects throughout the Southwest, ensuring CI/ASCE 38-22 Standards are implemented. As SUE Director, he oversees all SUE projects and directs/supports regional procedures for OSHA compliance, safety training and developing activities associated with designating, CAD mapping and vacuum excavation.

Travis is well-versed in all aspects of subsurface utility locating and designating and oversees all aspects of SUE on-call contracts in Arizona. He has completed numerous projects on multiple Department of Transportation (DOT) contracts including ADOT, MCDOT, NDOT and NMDOT. Travis also oversees projects for the Flood Control District of Maricopa County (FCDMC), Salt River Project (SRP), Arizona Public Service (APS) Company, City of Phoenix, City of Mesa and numerous consulting engineering firms. Travis recruits, trains, supervises technicians and crew chiefs and manages the firm's fleet of air-vacuum excavation trucks and support vehicles. He has been involved in the development, implementation and evaluation of personnel and equipment procedures and is responsible for cost management of designating tasks, CAD mapping and vacuum excavation. Travis is the qualifying party for two Arizona Contractor's Licenses: A-5, Excavating and Oil Surfacing Contractor: AZ ROC 326345 and A-14, Asphalt Paving Contractor: AZ ROC 326371.

Significant Projects

ADOT, Contracts 2017-004 and 2021-012, On-Call SUE Services, Region 1, AZ. Project Director. Since 1998 the firm has provided SUE services on an on-call basis for hundreds of ADOT roadway design/construction projects throughout Arizona. Provide oversight and management of SUE services for ADOT for 23 projects including 44 separate task orders, completing Phase 1 and Phase 2 SUE work for ADOT on the 2017-004 contract with an additional 13 projects completed under the 2021-012 contract. T2ue staff investigated the projects in accordance to the ASCE 38 standard, effectually depicted utilities per the ASCE 38 standard (Quality Levels D, C and B) under this contract. The work also included completing Quality Level (QL) A test holes for precise locations of critical conflicts for Prime Design firms. Crews have provided over 3.2 million LF of QLB mapping and 800 QLA test holes.

ADOT, SR 101L, I-17 to Pima Road, SUE Services, Phoenix/Scottsdale, AZ. Project Director responsible for management of SUE services based on the ASCE 38 standard including mapping and designating utilities to QLs D, C and B for ADOT. The project includes adding general purpose lanes and auxiliary lanes throughout the 13-mile stretch of the SR 101L. Survey staff set controls and completed mapping for these widening improvements for both directions of the freeway.

ADOT, I-10, I-17 to SR 202, Broadway Curve, Survey and SUE Services, Phoenix, AZ. Project Director for survey services and completion of a SUE investigation in accordance with ASCE 38, for WSP and ADOT, in support of the proposed roadway improvements along the I-10 freeway from the I-17 (split) to the Loop 202 (Santan) freeway. The investigation provided an update to the previous utility mapping from 2009 for the project. In total 462,486 LF of utilities were identified within the nine requested areas during the new SUE investigation. Included was QLA test holes, topographic survey of the corridor and UC meetings from the investigation.

ADOT, SR 101, Broadway to SR 202, Phoenix, AZ. Project Director for the utilities investigation team for the GEC consultant Kimley-Horn on the ADOT freeway expansion. SUE investigation was completed at 30 separate locations along the multi-mile corridor at areas of concern by the Utility Coordination team. The investigation was conducted in accordance with ASCE 38, in support of the

Current Position

SUE Project Manager/ Director, UES West

Years of Experience

33

Joined T2ue

July 1999

Education/Training

- Scottsdale Community College, 1990
- Utility Locating Seminar, Seattle, 1998
- Locating Instruments Seminar, Seattle, 1998
- Management Training Seminar, 1996
- ATSSA Traffic Control Supervisor, 1999
- ASTTS Traffic Control Technician, 1999

Professional Licenses

- T2: A-5, Excavating and Oil Surfacing Contractor, AZ ROC 326345
- T2: A-14, Asphalt Paving Contractor, AZ ROC 326371
- A-7, Excavating and Grading Contractor, NV #0086556
- GA02, Maintenance and Repair Contractor, NM #400568

Affiliations

- American Council of Engineering Companies (ACEC)
- American Public Works Association (APWA)
- Society of American Military Engineers (SAME)

Travis Bix

proposed roadway improvements along the SR 101 Loop from Broadway to the Loop 202 (Santan) freeway. It also included 24 ASCE 38 QLA test holes for critical conflict points to resolve design conflicts prior to construction. The investigation was completed in August 2018. T2ue was requested by ADOT to extend utility services through construction as their representative in the field; activities concluded in September 2020.

ADOT/Jacobs, SR 101L/I-10 Traffic Interchange (TI) Improvements, DCR and Environmental Document, Avondale/ Tolleson, AZ. Project Director for SUE and UC services for the project within multiple agencies. Perform SUE services depicting ASCE 38 QLD utilities (shown according to available utility records) and provided preliminary UC for the design team in support of the preliminary DCR. T2ue will also provide a QLB SUE investigation and complete UC services once the project moves into the final Design phase.

ADOT, I-17 TI at Pinnacle Peak Road and Happy Valley Road, SUE Services, Phoenix, AZ. Project Director for SUE services including complete mapping based on the ASCE 38 Standard for ADOT and designating to QLs D, C and B. The overall project included more than 188,975 linear feet of designated and investigating of underground utilities, water lines, storm drain and telephone and gas lines. The investigation was completed for traffic interchange improvements on two major intersections along I-17. The project also included 19 QLA test holes.

ADOT, SR 101, I-17 to 75th Avenue, Glendale and Phoenix, AZ, ADOT. Project Director for SUE locating services performed in accordance with the ASCE 38 Standard. Investigated 586,901 LF of utilities on both west bound and eastbound SR 101 including large intersections. Seven miles including some frontage.

ADOT, GEC for I-10, I-17 (Split) to SR 202 (Santan/South Mountain), SUE Services, Phoenix, AZ. Project Director. Provided SUE services utilizing the ASCE 38 Standard. Conducted records research (QLD), field observations (QLC), designating utilizing geophysical equipment to horizontally position the subsurface utilities (QLB) and produced CAD drawings. The overall project spans roughly 12 miles of the I-10 freeway throughout the Cities of Phoenix, Tempe and Chandler. The team investigated nine areas selected by the client, including sections along the US 60 and SR 143, approximately 8 miles of freeway.

ADOT, I-10, Dysart Road to I-17, SUE Services, Phoenix, AZ. Project Director. SUE services included completion of 22 (ASCE 38 QLA) test holes and designating of 20,000 linear feet of utilities. Utilities included water and sewer lines, irrigation, gas line, storm drain, telephone and electrical lines on a project area totaling about one-half mile and consisting of portions of 39th, 38th and 35th Avenues where they intersect with I-10. This investigation project was completed for a future freeway widening project.

ADOT/AECOM, US 93 Vista Royale, SUE and UC Services, Yavapai County, AZ. Project Director for SUE services provided in accordance with the ASCE 38-22 and UC services in support of the US 93 Vista Royale project. Project improvements include 3 miles of roadway improvements, upgrading to a four-lane divided highway and a new bridge over the BNSF bridge at milepost (MP) 192.88. T2ue is completing QLs D, C, B and A SUE services and UC services throughout the project design.

GEC SR 189, SUE Services, Nogales, AZ. Project Director. T2ue, completed a SUE investigation per ASCE 38 for AECOM under a GEC contract for ADOT in support of the proposed roadway improvements along SR 189 from the International Border to Grand Avenue in Nogales, AZ. Previous utility investigation had been conducted along the project length and T2ue's SUE investigation was completed in two phases. The first phase consisted of T2ue's staff "checking/verifying" portions of the previous utility investigation from 2017. The second phase consisted of T2ue fully designating a portion of the overall project and some "spot checks" of other utilities throughout the project. It also included field sweeps (a method of searching for undocumented utilities) along the eastern portion of the project, east of the I-19 freeway. The investigation included records research, utility structure survey and the use of appropriate geophysical methods to determine the existence and horizontal position of subsurface utilities and overhead aerial utilities. The resulting information enabled existing utilities to be depicted on the deliverables in accordance with their achieved Utility QL. 34,326 LF of utilities were identified during Phase I of the SUE investigation and 31,778 LF of utilities were identified during the second phase of the investigation (a total of 66,104 LF of utilities).

ADOT/AECOM, I-10: Kino Boulevard TI to Country Club Road TI Design-Build Project, SUE Services, Tucson, AZ. Project Director. T2ue provided SUE services on this 3.5-mile improvements project in Tucson, AZ. Services included records research, designating and mapping services (ASCE 38 QLs D, C and B) of 244,500 LF of underground utilities and executed air-vacuum excavation of 50 (ASCE 38 QLA) test holes for the design phase of the project. The project included reconstruction of I-10 with three general purpose lanes in each direction between milepost 262 (east of Park Avenue) and Alvernon Way and the TI at I-10 and Kino Parkway to improve existing traffic and safety issues. Construction included a new TI at I-10 and Country Club Road, a new I-10 westbound entrance ramp from Alvernon Way, an I-10 undercrossing to connect the North and South Kino Sports Complex and

Travis Bix

the removal of the TI at Palo Verde Road and I-10. As a new and additional service, T2ue prepared a web-based user-friendly interactive GIS database of the results of the ASCE 38 QLs D, C and B SUE Utility Investigation to assist the design team during the Utility Coordination process for the project.

ADOT, I-10: Ina Road to Ruthrauff TI, (I-10 Gap), SUE Services, Tucson, AZ. Project Director for SUE services on this project conducted through ADOT SUE On-Call contract. Oversaw the preparation of documents related to records research, designating and mapping services (ASCE 38 QLs D, C and B). T2ue conducted ASCE 38 QLB utility designating and mapping of 148,750 LF of underground utilities and has coordinated air-vacuum excavation of 36 test holes (ASCE 38 QLA) for the design of the new project.

ADOT, I-10, El Camino del Cerro and Ruthrauff Interchange, SUE Services, Tucson, AZ. Project Director responsible for the preparation of documents related to records research, designating and mapping services (ASCE 38 QLs D, C and B) and air-vacuum excavation of over 160 test holes (QLA) for the design of the new freeway interchange. Conducted through ADOT SUE Statewide On-Call contract.

ADOT/WSP, I-19 and Irvington Road TI (AZ04403900), SUE Services, AZ. Project Director. T2ue provided SUE services on this 1.8-mile interchange improvements project in Tucson, AZ. Services included records research, designating and mapping services (ASCE 38 QLs D, C and B) of 121,000 LF of underground utilities and executed air-vacuum excavation of 45 (ASCE 38 QLA) test holes for the design phase of the project. The project included Closed Circuit TV video inspection of 1,200 ft of sanitary sewer line. Extensive coordination had to be conducted between the two jurisdictions involved, the City of Tucson DOT and Mobility (DTM) and ADOT.

ADOT, I-40/US 93 West Kingman System TI, Kingman, AZ. Project Director. T2ue staff provided ASCE 38 QLs D, C and B Utility Mapping for the proposed interchange of I-40 and US 93 which will alleviate traffic delays along Beale Street. The SUE investigation was successful in designating and locating 20,400 LF of underground utilities and 13,000 LF of aboveground utilities. T2ue also performed excavation of 14 (ASCE 38) QLA test holes at critical points to the design based on results of the utility mapping.

ADOT, SR 89/Tenger Drive, SUE Services, Yavapai and Maricopa Counties, AZ. Project Director for SUE services provided based on the ASCE 38 Standard. Designated over 170,000 LF of utilities over 5 miles of roadway. Utilities detected included water, sewer, cable, telephone, storm drain, traffic signal and electrical. This investigation project was completed for future highway improvements through Yavapai and Maricopa Counties.

ADOT, US 95 and Avenue 8E, SUE Services, Yuma, AZ. Project Director for SUE locating services provided in accordance with the ASCE 38 Standard. Completed 10 (QLA) test holes and designating over 15,000 linear feet of utilities including waterline, telephone and irrigation. The project area involved 1.16 miles along US 95 and Avenue E and the investigation was completed for future intersection improvements.

ADOT, SR 92 Foothills Drive, SUE Services, Sierra Vista, AZ. Project Director. Provided designating (ASCE 38 QLs D, C and B) SUE services to map the horizontal position of existing underground utilities. This project involved over 0.25 miles of SR 92 and the intersection of Foothills Drive in Sierra Vista, AZ. This small corridor had over 20,000 LF of subsurface utilities. Also completed 52 test holes (QLA) where utilities were in conflict with the overall design and construction.

ADOT, SR 77 at Barrows Place and Miguel Road, SUE Services, Mammoth, AZ. Project Director. Performed SUE locating services on over 0.50 miles of SR 77 in Mammoth, AZ. Provided designating (QLs D, C and B) SUE services to map the horizontal position of existing underground utilities. Completed 10 test holes (QLA) designating 3,500 LF of utilities, including telephone lines, along a 4-mile stretch of roadway. This investigation project was completed for future highway improvements and pavement preservation in Pinal County.

ADOT, US 60 Frontage Road: Greenway Road to El Frio Street, SUE Services, El Mirage, AZ. Project Director. Provided oversight of SUE services for this 1.25-mile project on US 60 from Greenway Road to El Frio Street. Performed designating (ASCE 38 QLs D, C and B) SUE services to map the horizontal position of existing underground utilities. Completed 20 test holes and designated 40,000 linear feet of utilities over 1.5 miles of roadway from Greenway Road to El Frio Street in El Mirage, AZ.

ADOT, SR 87 and Ruins Drive Intersection, SUE Services, Coolidge, AZ. Project Director for SUE services for a portion of SR 87 at the intersection of Ruins Drive. Performed SUE designating (ASCE 38 QLs D, C and B) services to map the horizontal position of existing underground utilities for intersection improvements for this ADOT project. This project was completed as part of the ADOT Statewide SUE On-Call.

James Mueller, PE

Summary of Experience



James is a registered PE and SUE Project Manager with 15 years of experience. He leads T2ue's Arizona operations and provides engineering oversight and management for SUE projects based on the ASCE 38 Standard. James manages SUE and utility coordination services and has completed more than 200 projects involving Quality Levels D, C and B and over 1,500 Quality Level A test holes within the last two years. He has worked with multiple agencies in the West managing SUE projects and tasks for ADOT, FCDMC, MCDOT and the Cities of Mesa, Goodyear, Phoenix, Scottsdale and Flagstaff in Arizona. He also oversaw SUE services for assignments in Nevada DOT (NDOT), City of Las Vegas, City of Henderson and Las Vegas Valley Water District and NMDOT in other states. James is proficient in design software systems including AutoCAD Civil 3D and MicroStation.

James currently manages SUE services for ADOT improvement projects including SR101 and I-10, SR30, SR 85 and Broadway Road/Southern Avenue/Baseline, 35th Avenue and Grand Avenue, SR 202 Widening, SR 101 from 75th Avenue to I-17, and projects for municipalities including SR 89 in Prescott and the Lake Mary Water Treatment Plant in Flagstaff.

Significant Projects

ADOT, 2021-012, On-Call SUE Services, Region 1, AZ. Project Engineer. Provide engineering support for this statewide on-call contract. Since 1998, the firm has provided SUE services on an on-call basis under this contract for hundreds of ADOT roadway design/construction projects throughout Arizona. T2ue staff have conducted underground utility designating, test holes (potholes) and mapping services based on the ASCE 38 (Quality Levels D, C, B and A). Crews have provided over 3.2 million LF of Quality Level B mapping and 800 Quality Level A test holes for 40 ADOT projects.

ADOT, I-10: SR 85 to Verrado Way, SUE Services, Buckeye, AZ. SUE PE/Project Manager. Under the ADOT Statewide On-Call SUE Services contract, James managed SUE services including 65,000 LF of (ASCE 38 Quality Level B) utility designating, surveying and mapping. T2ue was also contracted to excavate 45 (ASCE 38 Quality Level A) utility test holes for the proposed roadway design. T2ue staff completed 65,000 LF of (ASCE 38 Quality Level B) utility designating, surveying and mapping and excavated 45 (ASCE 38 Quality Level A) utility test holes for highway design.

ADOT, SR 101L, I-17 to Pima Road, SUE Services, Phoenix/Scottsdale, AZ. Project Engineer. Provided engineering support for SUE services performed based on the ASCE 38 Standard. Services included mapping and designating utilities to Quality Levels D, C and B for ADOT. The project includes the addition of general purpose lanes and auxiliary lanes throughout the 13-mile stretch of the SR 101L. Survey staff set controls and completed mapping for these widening improvements for both directions of the freeway.

ADOT, I-17 from Arizona Canal Diversion Channel (ACDC) to Greenway Road, Phoenix, AZ. Project Engineer. Provided engineering support services including SUE investigation in accordance with ASCE 38, for the ADOT portion of I-17 in Phoenix from the Arizona Canal Diversion Channel (ACDC) to Greenway Road. The study included the use of appropriate surface geophysical methods to determine the existence and horizontal position of subsurface utilities. The resulting information enabled existing subsurface utilities to be depicted on plans in a standardized manner. The SUE investigation was successful in designating and locating a total of

Current Position
Project Engineer,
UES West

Years of Experience
15

Joined T2ue
March 2016

Education
BS, Civil Engineering,
Northern Arizona University

Software
AutoCAD
Civil3D
HEC-HMS
HEC-1
HEC-RAS
Water/Sewer/Storm CAD

Professional Registrations
Professional Engineer (PE):
- AZ #64432
- NV #026715
- OR #96111PE

Affiliations
- APWA
- ASCE

James Mueller, PE

234,412 linear feet of underground utilities, including 219,604 linear feet of subsurface utilities, 14,807 linear feet of above-ground utilities and 1,680 linear feet of reinforced box culvert.

ADOT, I-17 Traffic Interchanges (TI) at Pinnacle Peak Road and Happy Valley Road, SUE Services, Phoenix, AZ. Project Engineer. SUE services included complete mapping based on the ASCE 38 Standard for ADOT and designating to Quality Levels D, C and B. The overall project included more than 180,000 linear feet of designated and mapping of underground utilities, water lines, storm drain and telephone and gas lines. The investigation was completed for TI improvements on two major intersections along I-17.

ADOT/Jacobs, SR 101L/I-10 TI Improvements, DCR and Environmental Document, SUE and UC Services, Avondale/Tolleson, AZ. Perform SUE services depicting ASCE 38 Quality Level D utilities (shown according to available utility records) and provided preliminary UC services for the design team in support of the preliminary DCR. T2ue will also provide a Quality Level B SUE investigation and complete UC services once the project moved into the final design phase.

ADOT/AECOM, US 93 Vista Royale, SUE and UC Services, Yavapai County, AZ. Currently providing SUE services in accordance with the ASCE 38-22 and UC services in support of the US 93 Vista Royale project. Project improvements include 3 miles of roadway improvements, upgrading to a four-lane divided highway and a new bridge over the BNSF bridge at milepost (MP) 192.88. T2ue is completing Quality Levels D, C, B and A SUE services and UC services throughout the project design.

ADOT/AECOM, I-10: Kino Boulevard Traffic Interchange (TI) to Country Club Road TI Design-Build Project, SUE Services, Tucson, AZ. SUE PE. T2ue provided SUE services on this 3.5-mile improvements project in Tucson, AZ. Services included records research, designating and mapping services (ASCE 38 Quality Levels D, C and B) of 244,500 LF of underground utilities and executed air-vacuum excavation of 50 (ASCE 38 Quality Level A) test holes for the design phase of the project. The project included reconstruction of I-10 with three general purpose lanes in each direction between milepost 262 (east of Park Avenue) and Alvernon Way and the TI at I-10 and Kino Parkway to improve existing traffic and safety issues. Construction included a new TI at I-10 and Country Club Road, a new I-10 westbound entrance ramp from Alvernon Way, an I-10 undercrossing to connect the North and South Kino Sports Complex and the removal of the TI at Palo Verde Road and I-10. As a new and additional service, T2ue prepared a web-based user-friendly interactive GIS database of the results of the ASCE 38 Quality Level D, C and B SUE Utility Investigation to assist the design team during the Utility Coordination process for the project.

ADOT, I-10: Ina Road to Ruthrauff TI, (I-10 Gap), SUE Services, Tucson, AZ. SUE PE for SUE services on this project conducted through ADOT SUE On-Call contract. Responsible for overseeing preparation of documents related to records research, designating and mapping services (ASCE 38 Quality Levels D, C and B). T2ue conducted ASCE 38 Quality Level B utility designating and mapping of 148,750 LF of underground utilities and has coordinated air-vacuum excavation of 36 test holes (ASCE 38 Quality Level A) for the design of the new project.

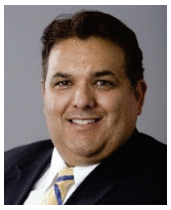
ADOT, I-10, El Camino del Cerro and Ruthrauff Interchange, SUE Services, Tucson, AZ. SUE PE. Oversaw the preparation of documents related to records research, designating and mapping services (ASCE 38 Quality Levels D, C and B) and air-vacuum excavation of over 160 test holes (ASCE 38 Quality Level A) for the design of the new freeway interchange. Conducted through ADOT SUE Statewide On-Call.

ADOT, I-40/US 93 West Kingman System TI, Kingman, AZ. SUE Project Engineer. T2ue staff provided ASCE 38-02 Quality Levels D, C and B Utility Mapping for the proposed interchange of I-40 and US 93 which will alleviate traffic delays along Beale Street. The SUE investigation was successful in designating and locating 20,400 LF of underground utilities and 13,000 LF of aboveground utilities. T2ue also performed excavation of 14 (ASCE 38) Quality Level A test holes at critical points to the design based on results of the utility mapping.

ADOT, SR 95 at Marina Boulevard, FO245 01C, Bullhead City, AZ. SUE Project Engineer. T2ue completed ASCE 38 Quality Levels D, C and B Utility Mapping at the intersection of SR 95 and Marina Boulevard for proposed intersection improvements. The SUE investigation was successful in designating and locating 5,500 LF of underground utilities and 150 LF of aboveground utilities.

Daniel Padilla, Jr.

Summary of Experience



Dan is a Senior Project Manager at T2 Utility Engineers (T2ue) with more than 36 years of managerial experience and extensive knowledge of Subsurface Utility Engineering (SUE), planning, layout, field survey, air vacuum extraction potholing, utility designating and CAD mapping services. He oversees SUE projects throughout Southern Arizona and is currently managing T2ue's City of Tucson SUE Services On-Call contract and various southern Arizona projects under the ADOT On-Call SUE and Utility Locating Services contract. Dan successfully manages multiple SUE on-call projects in Arizona and has delivered 70 SUE assignments under six consecutive City of Tucson On-Call contracts since 2007.

Dan also managed T2ue's Nevada office for three years where he oversaw the Nevada DOT On-Call SUE Services contract among numerous other Nevada contracts. He also served as interim manager for T2ue's New Mexico office for 2.5 years. His knowledge and understanding of SUE results in quality deliverables and exceptional client service.

Significant Projects

ADOT, Contracts 2017-004 and 2021-012, On-Call SUE Services, Region 1, AZ. Senior Project Manager. Manage as-needed SUE projects in Southern Arizona. Provide SUE services on an on-call basis under this contract held by the firm since 1998 for hundreds of ADOT roadway design and construction projects located throughout Arizona. ADOT on-call contracts included 23 separate projects, 44 separate task orders, and completion of Phase 1 and Phase 2 SUE work for ADOT on the 2017-004 contract with an additional 13 projects completed under the 2021-012 contract. T2ue staff investigated the projects in accordance to the ASCE 38 standard, effectually depicted utilities per the ASCE 38 standard (Quality Levels D, C and B) under this contract. The work also included completing Quality Level (QL) A test holes for precise locations of critical conflicts for Prime Design firms.

ADOT/AECOM, I-10: Kino Boulevard Traffic Interchange (TI) to Country Club Road TI Design-Build Project, SUE Services, Tucson, AZ. Senior Project Manager. T2ue provided SUE services on this 3.5-mile improvements project in Tucson, AZ. Services included records research, designating and mapping services (ASCE 38 QLs D, C and B) of 244,500 LF of underground utilities and executed air-vacuum excavation of 50 (ASCE 38 QLA) test holes for the design phase of the project. The project included reconstruction of I-10 with three general purpose lanes in each direction between milepost 262 (east of Park Avenue) and Alvernon Way and the TI at I-10 and Kino Parkway to improve existing traffic and safety issues. Construction included a new TI at I-10 and Country Club Road, a new I-10 westbound entrance ramp from Alvernon Way, an I-10 undercrossing to connect the North and South Kino Sports Complex and the removal of the TI at Palo Verde Road and I-10. As a new and additional service, T2ue prepared a web-based user-friendly interactive GIS database of the results of the ASCE 38 QLs D, C and B SUE utility investigation to assist the design team during the Utility Coordination process for the project.

ADOT/WSP, I-19 and Irvington Road TI (AZ04403900), SUE Services, AZ. Senior Project Manager. T2ue provided SUE services on this 1.8-mile interchange improvements project in Tucson, AZ. Services included records research, designating and mapping services (ASCE 38 QLs D, C and B) of 121,000 LF of underground utilities and executed air-vacuum excavation of 45 (ASCE 38 QLA) test holes for the design phase of the project. The project included Closed Circuit TV video inspection of 1,200 ft of sanitary sewer line. Much coordination had to be conducted between the two jurisdictions involved, the City of Tucson Department of Transportation and Mobility (DTM) and ADOT.

Current Position

Senior Project Manager, UES West

Years of Experience

36

Joined T2ue

October 2007

Education

BS, Molecular and Cellular Biology, University of Arizona, 1997

AutoCAD II (1 semester), Central Arizona College, 2002

GPS Methodology Training, (2 classes), Holman's Survey, 2002

State Plane Coordinates and Differential Leveling Workshop, Holman's Survey, 2002

Dale Carnegie Professional Management Training

Affiliations

- American Council of Engineering Companies (ACEC)
- American Public Works Association (APWA)
- American Society of Civil Engineers (ASCE)
- National Utility Contractors Association (NUCA)
- Society of American Military Engineers (SAME)
- Utility Engineering and Surveying Institute (UESI)

Daniel Padilla, Jr.

ADOT/AECOM, GEC SR 189, SUE Services, Nogales, AZ. Senior Project Manager. T2ue completed a SUE investigation in accordance with ASCE 38 for AECOM under a GEC contract for ADOT in support of the proposed roadway improvements along SR 189 from the International Border to Grand Avenue in Nogales, AZ. Previous utility investigation had been conducted along the project length and T2ue's SUE investigation was completed in two phases. The first phase consisted of T2ue's staff "checking/verifying" portions of the previous utility investigation from 2017. The second phase of the project consisted of T2ue fully designating a portion of the overall project along with some "spot checks" of other utilities throughout the project. It also included field sweeps (a method of searching for undocumented utilities) along the eastern portion of the project, east of the I-19 freeway. The utility investigation included records research, utility structure survey and the use of appropriate geophysical methods to determine the existence and horizontal position of subsurface utilities. Also investigated overhead aerial utilities. The resulting information enabled existing utilities to be depicted on the deliverables in accordance with their achieved Utility Quality Level. 34,326 LF of utilities were identified during Phase I of the SUE investigation and 31,778 LF of utilities were identified during the second phase of the investigation (a total of 66,104 LF of utilities).

ADOT, I-10: Ina Road to Ruthrauff TI, (I-10 Gap), SUE Services, Tucson, AZ. Senior Project Manager for SUE services on this project conducted through ADOT SUE On-Call contract. Responsible for preparation of documents related to records research, designating and mapping services (ASCE 38 QLs D, C and B). T2ue conducted QLB utility designating and mapping of 148,750 LF of underground utilities and has coordinated air-vacuum excavation of 36 test holes (QLA) for the design of the new project.

ADOT, I-10, El Camino del Cerro and Ruthrauff Interchange, SUE Services, Tucson, AZ. Senior Project Manager. Managed the preparation of documents related to records research, designating and mapping services (ASCE 38 QLs D, C and B) and air-vacuum excavation of over 160 test holes (QLA) for the design of the new freeway interchange. Conducted through ADOT SUE Statewide On-Call.

ADOT/AECOM, ADOT PDOC, US 93 Vista Royale DSR, SUE and Utility Coordination Services, Yavapai County, AZ. Senior Project Manager. T2ue provided SUE Services with utility designating and utility test holes in accordance with the ASCE 38-22 and Utility Coordination services for AECOM and ADOT, in support of the US 93 Vista Royale project. Project improvements include 3 miles of roadway improvements, upgrading to a four-lane divided highway and a new bridge over the BNSF bridge at milepost (MP) 192.88. Highway improvements include the construction of two southbound travel lanes and a roundabout at the intersection of Morton Airpark Road. T2ue completed ASCE 38 QLs D, C, B and A SUE services and Utility Coordination services throughout the project design.

ADOT, SR 347: SR 238 to Maricopa City Limits, SUE (Designating) Services, Maricopa, AZ. SUE Project Manager. T2ue conducted ASCE 38 QLB SUE services which involved investigation and mapping of over 20,000 LF of existing utilities for the design phase of this improvement project.

ADOT F0476, SR 347 and Riggs TI, SUE (Designating) Services, Pinal County, AZ. SUE Project Manager. T2ue conducted ASCE 38 QLB SUE services which involved an investigation and mapping of 40,320 LF of existing utilities for the design phase of this improvement project.

Pima County Pima County Department of Transportation (PCDOT), Sunset Road: I-10 to River Road, SUE Services, Tucson AZ. Senior PM. Manage the preparation of documents related to records research, designating and mapping services (CI/ASCE 38 QLs D, C and B) and air-vacuum excavation of over 60 test holes (QLA) for the design of new bridges over the Union Pacific Railroad (UPRR) and Rillito River connecting Sunset Road to the River Road. This project continues the grade separated Sunset Road Bridge being designed under the ADOT I-10 Gap project and takes it east to the River Road tie in location.

PCDOT, Valencia Road: Wilmot Road to Kolb Road, SUE Services, Pima County, AZ. Senior Project Manager. Performed excavation of 56 air-vacuum utility test holes (QLA) at identified conflict locations.

PCDOT, Valencia Road: Alvernon Way to Wilmot Road, SUE Services, Pima County, AZ. Senior Project Manager. Performed excavation of 90 air-vacuum utility test holes (QLA) at identified conflict locations.

PCDOT, Magee Road: La Cañada to Oracle Road, SUE Services, Pima County, AZ. Senior Project Manager responsible for providing Subsurface Utility Engineering services which included excavating 24 test holes (ASCE 38 QLA) for this Roadway Improvements project.

PCDOT, Tanque Verde Road: Catalina Highway to Houghton Road, SUE Services, Pima County, AZ. Project Manager responsible for providing records research, designating and mapping services (ASCE 38 QLs D, C, and B) for the design of 1.7 miles of roadway widening and improvements along with air-vacuum excavation of 40 test holes (ASCE 38 QLA).

Daniel Padilla, Jr.

PCDOT, La Cañada: Ina Road to Calle Concordia, SUE Services, Pima County, AZ. Senior Project Manager. Provided records research, designating and mapping services (QLs D, C and B) for the design of 2.25 miles of roadway widening and improvements and performed excavation of various test holes (QLA) to locate underground utilities at identified conflict locations.

PCDOT, La Cañada: River Road to Ina Road, SUE Services, Pima County, AZ. Senior Project Manager. Performed records research, designating and mapping services (QLs D, C and B) for the design of 2 miles of roadway widening and improvements.

City of Tucson Department of Transportation (Tucson DOT), Grant Road: Palo Verde Boulevard to Venice Place, SUE Services, Tucson, AZ. Senior Project Manager. As a subconsultant to the City of Tucson's design consultant, provided SUE services including CI/ASCE 38 QLs D, C and B mapping of more than 151,000 linear feet of subsurface utilities along the 1.5-mile long project between Palo Verde Boulevard to Venice Place in Tucson. Also performed 140 test holes (QLA) on various utilities in conflict with the proposed design.

Tucson DOT, Houghton Road: Speedway Boulevard to 22nd Street, SUE Services, Tucson, AZ. Senior Project Manager. Provided SUE services including utility records research, designating and mapping services for the design of 2.2 miles of roadway widening and improvements. Also performed utility mapping (CI/ASCE QLs D, C and B) of the additional Houghton Road segment of 22nd Street to Tanque Verde Road and 46 test holes (Quality Level A) to locate underground utilities at identified conflict locations.

Tucson DOT, Houghton Road: Valencia Road to 22nd Street, SUE Services, Tucson, AZ. Senior Project Manager. Provided SUE services including approximately six miles of subsurface and overhead utility designating (QLs D, C and B) and air-vacuum excavation of approximately 130 test holes (QLA) at identified utility conflicts.

Tucson DOT, Houghton Road: Tanque Verde Road to 22nd Street, SUE Services, Tucson, AZ. Senior Project Manager. Provided SUE services including records research, utility designating and utility mapping (QLs D, C and B) of all utilities between Speedway Boulevard and Tanque Verde Road. Also performed oversight and management of air-vacuum excavation of 46 test holes (QLA).

Tucson DOT, Silverbell Road Improvements, El Camino Del Cerro to Goret Road, SUE Services, Tucson, AZ. Senior Project Manager. Provided SUE services including excavation of 86 test holes (CI/ASCE 38 QLA) at identified utility conflict locations.

Tucson DOT, Tucson Modern Streetcar Project, Phases I and II, SUE Services, Tucson, AZ. Senior Project Manager. As part of the City of Tucson On-Call SUE Services contract, provided designating and mapping (QLs D, C and B) SUE services to map underground and overhead utilities during the design phase of this project. During Phase I, provided designating and mapping of all subsurface and overhead utilities within the downtown Tucson area designated as the "priority area". In Phase II, performed QLs D, C and B mapping services under the supervision of the design-build team for the area between downtown Tucson and the downtown redevelopment area west of I-10. Due to the heavy traffic in downtown Tucson, the team conducted most of the work during night-time hours and coordinated assignments to avoid special events planned in the area. 150 test holes (QLA) were excavated to verify the horizontal/vertical position of utilities potentially in conflict with the proposed design. Also excavated an additional 40 test holes at a later date under a separate contract.

City of Tucson/Stantec, Tucson Modern Streetcar, Line Segments 1 and 2, SUE Services, Tucson, AZ. Performed SUE services including records research, designating and mapping services (ASCE QLs D, C and B) to accurately map all utilities within the infrastructure improvements priority and optional areas for the City of Tucson Downtown Infrastructure Improvement Design-Build project. Also provided 147 test holes (ASCE QLA) at identified conflict locations.

City of Tucson, Regional Transportation Authority (RTA) Downtown Links Phase III Project, Services, Tucson, AZ. Senior Project Manager. Under the current City of Tucson On-Call SUE contract provided air-vacuum excavation of 25 utility test holes (QLA) on various water lines critical to the design of the Church Avenue to Broadway Boulevard section of the project. Coordination was conducted with ongoing downtown events and most of the work was conducted during the night. This project had an extremely tight deadline and was completed on time and within budget.

SOQ Bidder's/Proposer's Solicitation List Confirmation Email

Janet Sharkey

From:	ADOT Business Engagement and Compliance Office <AZUTRACS-Support@azdot.gov>
Sent:	Thursday, August 20, 2026 12:19 PM
To:	Janet Sharkey
Cc:	ContractManagement@azdot.gov
Subject:	Bidders List for T2 UES, Inc.

Caution: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

T2 UES, Inc., AZUTRACS Number: 18620 has submitted a Bidder/Proposer list for **2027-001** on 08/20/2026 at 12:19 PM MST (UTC - 07:00).

T2 UES, Inc. submitted a blank bidders/proposers list. This means that they did not list any firms that they reached out to or were contacted by during the preparation of this bid/proposal. NOTE: Subbing out work is encouraged, where applicable. Under some circumstances, no subbing opportunities are available.

PART E. Amendments

ARIZONA DEPARTMENT OF TRANSPORTATION

KATIE HOBBS
GOVERNOR

JENNIFER TOTH
DIRECTOR

Date: August 17, 2026

TO: ALL INTERESTED PARTIES

SUBJECT: AMENDMENT NUMBER 01

REFERENCE: REQUEST FOR QUALIFICATIONS
CONTRACT NUMBER: 2027-001
CONTRACT DESCRIPTION: ON-CALL SUBSURFACE UTILITY ENGINEERING SERVICES

The following questions have been asked in reference to the above Request for Qualifications package:

Question No. 1:
What companies hold the current ADOT On-Call Subsurface Utility Engineering Services Contract?

Answer No. 1:
Please refer to contract number 2021-012 under the Recent Selections tab of the ECS website found at this link: https://azdot.gov/business/engineering-consultants/selections/recent-selections .

Question No. 2:
The fifth paragraph on page 4 of the RFQ states "Any submissions for Prequalification with ECS received after Tuesday, August 12, 2026 at 2:00 P.M. Arizona (Phoenix) Time are not guaranteed to be reviewed by the SOQ due date." August 12, 2026 is a Wednesday. Was this meant to be Tuesday, August 11, 2026 or Wednesday, August 12, 2026?

Answer No. 2:
The intended deadline date for prequalification is Tuesday, August 18, 2026. Please have prequalification applications submitted by this date.

Question No. 3:
We submitted our Prequalification Application yesterday Wednesday, August 12, 2026 around 2:50 pm, will our prequalification application be approved prior to ADOT's Advertisement RFQ Contract Number: 2027-001 - On-Call Subsurface Utility Engineering Services SOQ due date of August 26, 2026 at 2 PM?

Answer No. 3:
If the prequalification application was submitted prior to the August 18, 2026 deadline then it will be reviewed. If items are needed to approve your firm's prequalification, ECS will reach out to your firm and explain what needs to be done.

Question No. 4:
If we plan to use subcontractors (not subconsultants) do we need to treat them as a subconsultant and create the bidder's list and fill out the CIP forms? For reference, if we were to utilize a barricade company, would we need to put them in the bidder's list and fill out the CIP form for them?

Answer No. 4:
Subcontractors do not have to be listed on the CIP forms but will need to be listed on the bidders list. A CIP form and DBE Goal/Assurance form is needed from the prime consultant. ECS would consider a barricade/traffic control company a direct expense firm. A direct expense firm provides a service but does not make recommendations or

form analysis. A subconsultant is any firm providing professional services on a contract; they make decisions, perform analysis and/or make recommendations.

Question No. 5:
If we are not utilizing any subconsultants, do we need to include a blank bidder's list email?

Answer No. 5:
Yes, a blank bidders list is acceptable if it is applicable per the contract. However, please refer to answer four in this amendment for clarification on a direct expense firm and a subconsultant. Any firms being utilized on the contract must be included on the Bidders/Proposers List.

Elizabeth Hodge Smith

Elizabeth Hodge Smith
Contract Specialist
Engineering Consultants Section

AN OFFEROR MUST ACKNOWLEDGE RECEIPT OF THIS AMENDMENT BY SIGNING BELOW AND INCLUDING ALL PAGES OF THIS AMENDMENT IN THE SOQ SUBMITTAL. FAILURE TO DO SO SHALL RESULT IN REJECTION OF THE PROPOSAL.

T2 UES, Inc. d/b/a T2 Utility Engineers
CONSULTANT NAME

SIGNATURE

* This amendment is not included in the total page count in the Statement of Qualification submittal.

PART F. Consultant Information Pages

CONSULTANT INFORMATION PAGES (CIP)

CONTRACT NO.: 2027-001

CONTACT PERSON: Robert Ramsey, PE

E-MAIL ADDRESS: robert.ramsey@t2ue.com

TITLE: Project Principal, VP Western US

CONSULTANT FIRM: T2 UES, Inc. d/b/a T2 Utility Engineers

ADDRESS: 19621 N 23rd Drive, Suite 150

CITY, STATE, ZIP: Phoenix, AZ 85027

TELEPHONE: 602-977-8037

FAX NUMBER: N/A

UNIQUE ENTITY ID# (FROM SAM WEBSITE): VXR7DY7K6DJ7

ADOT CERTIFIED DBE FIRM? (YES/NO) No

SUBCONSULTANT(S):	TYPE OF WORK	ADOT CERTIFIED DBE FIRM (YES/NO)

NOTE: This page is not evaluated by the Selection Panel but is used by Engineering Consultants Section for administrative purposes.

Revised 05/02/2024

SUBCONSULTANT(S) TABLE:

SUBCONSULTANT FIRM NAME:	N/A
CONTACT PERSON:	
E-MAIL ADDRESS:	
TITLE:	
ADDRESS:	
CITY, STATE ZIP:	
TELEPHONE:	
FAX NUMBER:	
UNIQUE ENTITY ID #:	

SUBCONSULTANT FIRM NAME:	
CONTACT PERSON:	
E-MAIL ADDRESS:	
TITLE:	
ADDRESS:	
CITY, STATE ZIP:	
TELEPHONE:	
FAX NUMBER:	
UNIQUE ENTITY ID #:	

NOTE: Each Subconsultant listed in the SOQ must be included in the Subconsultant Table of the CIP. Add additional Subconsultant Table pages as necessary. The CIP is not evaluated by the Selection Panel but is used by Engineering Consultants Section for administrative purposes.

*Please confirm that each Subconsultant listed is in the eCMS database. If a Subconsultant's name is not in the eCMS database, contact ECS at E2@azdot.gov and allow two (2) business days to have the Subconsultant added to eCMS. Click Here check the eCMS database or go to ECS Website.

Revised 05/02/2024

DBE GOAL ASSURANCE/DECLARATION

This Contract is Race Neutral (No DBE Goal-DBE use encouraged).

By signing below, and in order to submit an SOQ proposal and be considered to be awarded for this contract, in addition to all other pre-award requirement, the consultant/Proposer certifies that they will meet the established DBE goal or will make good faith efforts to meet the goal for the contract and that arrangements with certified DBEs have been made prior to SOQ and/or Cost Proposal submission. The proposer will meet the established DBE goal or will make good faith efforts to meet the goal on each Task Order assignment associated with the contract and that arrangements with certified DBEs have been made prior to SOQ and/or Task Order proposal submission.

Signature	08/26/2026
	Date
Robert Ramsey, PE	Project Principal, VP Western US
Printed Name	Title

SOQ SUBMITTAL CHECKLIST

Place a check mark on the left side of the table indicating compliance with the following items. Only include the Supplemental Services Disclosure Form listed below if the form is requested in the Request for Qualifications:

☑	SOQ is within the page limit indicated in the RFQ
☑	SOQ is combined into one PDF Document no larger than 15 MB
☑	All Amendments are Included and Signed
☑	Introduction Letter (Including all required elements/statements)
☑	SOQ Proposal Formatted According to Requirements Listed in RFQ Section IV, #11.
☑	Correct SOQ Certification List (15 pt **OR** 9 pt) Signed and Dated by a Principal or Officer of the Firm
☑	Completed Consultant Information Pages (CIP)(Including listing DBE firms, if applicable)
☑	DBE Goal Assurance/Goal Declaration completed (located at the top of this page)
☑	All Subconsultants & Proposed Work Type listed on CIP (Including indicating DBE firms)
☑	Any Additional Required Documents (Specific to RFQ such as Resumes for all Key Personnel named)
☑	Commenting or User Rights Feature Enabled in SOQ PDF Document
☐	Supplemental Services Disclosure Form (Required for Supplemental Services Type Contracts ONLY)

NOTE: This page is not evaluated by the Selection Panel but is used by Engineering Consultants Section for administrative purposes.

Revised 05/02/2024