Part A

INTRODUCTORY LETTER

September 20, 2024

Arizona Department of Transportation
Engineering Consultants Section
205 South 17th Avenue, Mail Drop 616E
Phoenix, Arizona 85007

ARDURRA

RE: RUSSELL RD; MP 3.5 – MP 5.2 DESIGN AND RECONSTRUCT ROADWAY | CONTRACT NO. 2025-005

Dear Selection Committee Members:

Ardurra Group, Inc. (Ardurra) is excited about the opportunity to submit our Statement of Qualifications (SOQ) for the Russell Road; MP 3.5 – MP 5.2 project. After the 2021 Telegraph Fire, the monsoon rains eroded several embankment slopes along Russell Gulch, causing portions of Russell Road to be eroded. Gila County has successfully secured an AZ SMART grant to fund the scoping and final design of the project. It is important for the selected consultant to have a comprehensive understanding of site location, causes of the erosion, and a toolbox of improvements to mitigate the erosion issue. Ardurra is pleased to present **Gary Fromm, PE**, as our Project (Contract) Manager for the Russell Road project. He has a history of successfully delivering ADOT federally funded projects. He has been on-site to review each location and has conducted several meetings with his technical team to provide mitigation solutions for this project. Gary has been trained in slope stabilization and served as Regional Manager for SWPPP and Slope Stabilization in a previous position. Gary is the right person to implement cost-effective mitigation measures to effectively reconstruct and preserve Russell Road from future storm events.

We have assembled a highly qualified team to support Gary on the project. Two critical elements of the project are the drainage analysis (**Raj Shah, PE**) and geotechnical evaluation (**Armando Ortega, PE** - ATEK). Raj leads an experienced team that has worked on numerous ADOT projects developing slope stabilization details. Armando has worked on several projects similar to the Russell Road project, for which ATEK has provided geotechnical analysis and recommendations. In addition, **Frank E. Henderson III, PE,** will bring his 27 years of ADOT experience and oversee the QA/QC process. **Jeff Pisha, PE,** will lead the roadway design with his 30 years of DOT and local agency experience, **Del Sol Group** will be completing the environmental studies and clearance for the project, and **Cooper Aerial** will provide Aerial Mapping.

The requirement of this project, as with any transportation project, is to provide a safe facility for the traveling public. As our team prepared our SOQ response, we developed an appropriate acronym for the project. **"Design a S.A.F.E. tomorrow, today!"**. S.A.F.E. represents S-Scope, A-Adaptable, F-Flood Resilient, and E-Efficient (Cost/Design); you will see the S.A.F.E. symbol (S) throughout the proposal, where we are looking at providing a comprehensive **Scope** that all stakeholders buy into, proposing an **Adaptable** design for the specific condition, analyzing the drainage model and evaluating the geotechnical condition to provide a **Flood Resilient** facility, and conscientiously providing an **Efficient** design that provides a cost-effective solution to be competitive for future construction grant applications.

As the Transportation Practice Director of Ardurra, I (Gary Fromm, PE) understand the importance of this project, and **our key personnel are committed to meeting or exceeding ADOT's expectations**. I will be the Project (Contract) Manager, responsible for all contractual matters and securing the required team resources. **Ardurra is not a certified DBE.** If you have any questions or require additional information about our proposal, please contact me at 602.263.1177 or gfromm@ardurra.com.

Respectfully,
Ardurra Group, Inc.

Gary Fromm, PE (AZ PE#34008)
Project (Contract) Manager/Regional Transportation Director

Designing a S.A.F.E. Tomorrow, Today!

Scope. Adaptable. Flood-Resilient. Efficient (Cost).

BENEFITS ARDURRA & OUR STAFF BRING ADOT

Ardurra is a nationally recognized firm with over 46 years of experience in transportation-related services.

Since 1978, our Phoenix-based staff has continuously delivered exceptional project management, design, and survey services on hundreds of projects.

Our 25+ year transportation collaboration history with ADOT staff spans every technical design, support, and construction group throughout the state.

Our team brings specific advantages, including:

- Technically diversified and DOT-experienced staff with proven state, federal, and LPA-funded project delivery experience
- Invested in a partnership approach to align internal and external stakeholder priorities.
- Thorough institutional knowledge of your processes, requirements, and ongoing changes, ensuring seamless project compliance.
- Vibrant application of performance-based practical design (PBPD) solutions to effectively balance risk, cost, and scope.
- Emulating project management confidence to design teams and agencies that promote project success and support ADOT's transportation goals.
- A commitment to design innovation to address each project's unique technical challenges.

Engineering Consultants Section
SOQ Proposal Certifications Form

Contract #: 2025-005 Consultant Name: Ardurra Group, Inc.

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: Gary Fromm, PE Title: Transportation Practice Director

Signature: Date: September 20, 2024

Revised 2/11/2022

ARIZONA DEPARTMENT OF TRANSPORTATION
ENGINEERING CONSULTANTS SECTION
PARTICIPATION IN BOYCOTT OF ISRAEL - CONSULTANT CERTIFICATION FORM
ADOT ECS Contract No.: 2025-005

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.

Ardurra Group, Inc.	
Company Name	Signature of Person Authorized to Sign
1001 N. Central Avenue, Suite 900	Gary Fromm, PE
Address	Printed Name
Phoenix AZ 85004	Transportation Practice Director 9/20/24
City State Zip	Title Date

ADOT Infrastructure Delivery and Operations

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.

Ardurra Group, Inc.
Company Name

1001 N. Central Avenue, Suite 900
Address

Phoenix | AZ | 85004
City | State | Zip

Signature of Person Authorized to Sign

Gary Fromm, PE
Printed Name

Transportation Practice Director
Title

UNDERSTANDING

After the 2021 Telegraph Fire, additional runoff with heavy sediment load from the scarred mountainside contributed to flooding and caused erosion along Russell Gulch. This erosion has continued, and currently, there are eight locations where a portion of Russell Road has eroded. If left unattended, erosion will continue, and additional locations will experience damage.

Our team understands that the project's goal is to mitigate the current and future erosion issues on Russell Road. The roadway serves multiple important needs, including a route for residents south of the Miami/Globe area, access to the Cobre Valley Regional Medical Center, recreational access to Tonto National Forest, and communication facilities for the FAA and other emergency service agencies.

Russell Gulch is an ephemeral stream running south to north parallel to Russell Road that we studied to evaluate the potential impacts to the project area. The drainage area contributing to this stream is approximately 7.5 square miles, generating a preliminary peak discharge of 5,070 cfs for a 100-yr storm event. We found that these conditions impacted the project area, and further analysis will provide insight into the necessary resources to mitigate impacts to the sustainability and resiliency of Russell Road.

Our team met with the Arizona Department of Transportation (ADOT) Project Manager, Tricia Brown, visited the project site, and evaluated each location identified in the Project Initiation Letter (PIL). During the field visit, we found evidence that additional erosion had occurred since the PIL was completed. We have summarized the contributing causes of the erosion and have developed initial improvements for each location. We found cross drains in several locations where the embankment slope has experienced erosion due to the inlet being clogged. These recent observations and proposed mitigations for each location are discussed below.

The Russell Road project received an AZ SMART Grant to fund the scoping and final design for this project. We understand that construction is currently not funded, and it is anticipated that additional grant funding will be required for construction. In our experience, this is an important consideration that should be broached early into the project, ideally during the scoping and development phases, because construction funding will compete against other grant applications. Our team has a keen understanding of the different grant scoring criteria that can be considered at the scoping phase of the project. We have found that early identification of potential funding sources is instrumental to being competitive and successfully securing the funding. Cost-effective solutions will be an important facet of the grant application. The proposed alternatives will be evaluated to determine a cost-benefit ratio weighted with the grant criteria. Our team will keep the goal of obtaining construction funds at the forefront of the design process to support the key objectives of this effort coming to fruition.

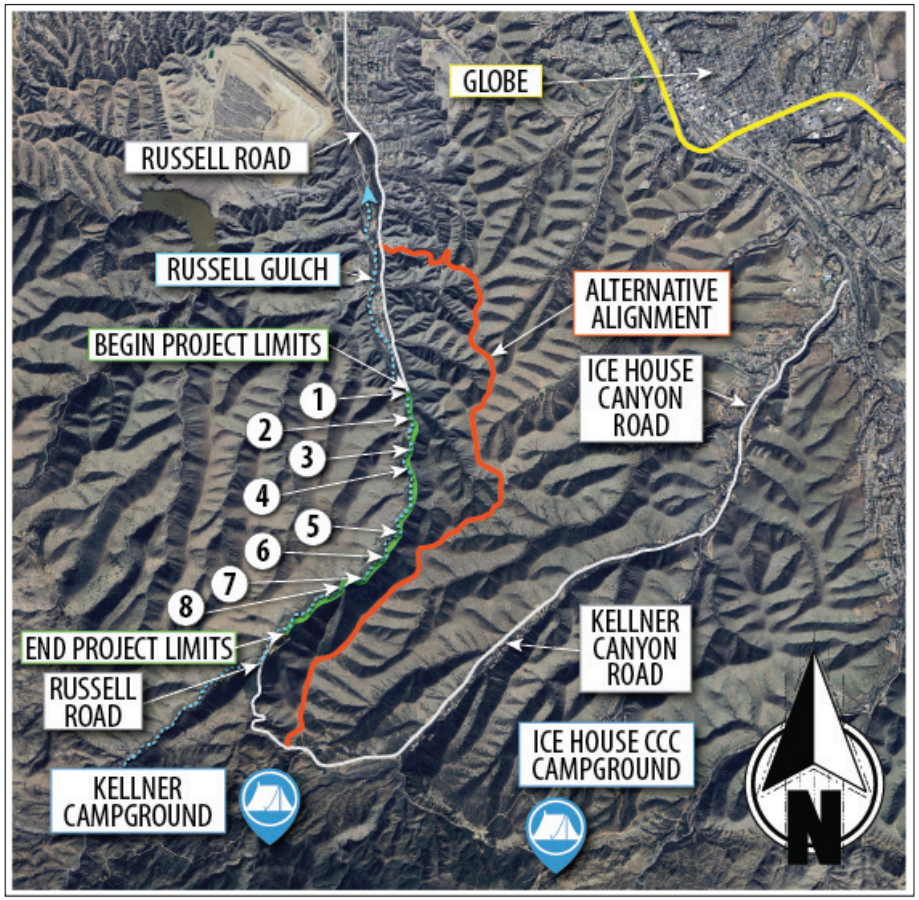
MAJOR TASKS

During our evaluation of the project, we identified the following major tasks.

Project Assessment (PA) - Scoping Document

We will develop a scoping document to evaluate the Russell Road project between mileposts 3.5 and 5.2 in Gila County. Our primary objective is to identify the most cost-effective solutions to mitigate erosion issues and provide a long-term solution to preserve the integrity of the roadway. We have explored several options at the eight locations identified in the PIL (**Figure 1**) that will be evaluated further during the PA development. The options will consider the environmental and right-of-way (ROW) impacts of the roadway and drainage improvements while considering each option's cost. A matrix will be developed that identifies the Pros and Cons of each option. Our proposed options can be selected for one or all locations, depending on what makes the most sense. This structured evaluation will offer a clear pathway to identifying the most resilient and cost-effective solution to mitigate future roadway erosion from Russell Gulch. We propose a field review with the project team to discuss each option at the eight locations. The matrix, in conjunction with the field review, will be a decision-making tool for ADOT and the stakeholders to help finalize the preferred options for the project. Since the project is primarily located within an easement in Tonto National Forest (TNF), coordination with TNF will be crucial. They will need to be included in the decision-making process. The scoping document will serve as a comprehensive resource to support the decision-making process and lay the groundwork for the subsequent design phase.

Figure 1: Features Map



Drainage

Prior to SOQ, our team submitted a public record request to obtain any available hydrology and/or hydraulics models related to this project from Gila County or ADOT. The response we received indicated there is no detailed hydrology/hydraulics information for this area. So, our team conducted a preliminary HEC-RAS analysis using USGS Lidar mapping. The HEC-RAS model was prepared for a 100-yr design flow of 5,070 cfs and allowed to run in a mix flow regime (sub and supercritical flow). Our team noticed that the slope of the Russell Gulch is steep, and most of the cross-sections indicated supercritical flow conditions. We used this data to conduct preliminary scour analyses for each location. The scour depth included local scour, general scour, bend scour, bedform scour, low flow incisment, and long-term scour with appropriate safety factors. Our analysis indicated a scour depth of up to 20 ft for the 100-yr storm event, which is approximately 40% more than what was shown in the PIL.

An aerial survey will be obtained as part of the project along with the USGS topographic mapping of the watershed to prepare the necessary hydrology model to obtain peak discharges at 10, 50, and 100-yr flows for the entire project area and specifically at the locations identified in the PIL. Our analysis will evaluate the hydraulic parameters, soil information, and scour analyses at each location to determine the types of bank protection feasible for each site. The maximum scour will occur where the soil is at its finest or in the most extreme hydraulic conditions.

Our team also conducted thorough research with FEMA on the floodplain within the project area. The FEMA website indicated no floodplain delineated along Russell Gulch within the project area. Hence, we do not anticipate FEMA coordination and/or Floodplain Use Permit (FUP) for this project.

The study will be compiled into a detailed matrix and combined with the roadway options in the PA. The matrix will provide a comprehensive understanding of the cost and constructability of the drainage improvements. A drainage report will document the drainage analysis, design options, and cost of protecting the embankment slope.

Geotech

Early biological and cultural surveys will be completed to clear the project to conduct the geotechnical investigations during the scoping phase. If the current alignment is shifted, significant cut slopes could be required. Geotechnical data is needed earlier than usual to provide accurate information for properly selecting the most cost-effective solutions. Based on the adjacent topography, it is anticipated that the geotechnical investigation will require the construction of access roads and specialized drilling equipment to traverse the terrain. Additionally, due to the anticipated geotechnical conditions, using a hollow stem auger drilling system will likely not be feasible, and either an air rotary drilling method or possibly rock coring will need to be utilized.

The material from the anticipated cuts will be evaluated for potential use as embankment fill and cement-stabilized alluvium (CSA/Soil Cement) and analyzed for strength parameters for slope design. ADOT has used CSA to stabilize banks in the Salt River along SR 202L Red Mountain Freeway. CSA uses a larger cobble, which is ideal for this project. Soil samples will be gathered along the alignment for roadway design and scour evaluation. Based on the findings of the geotechnical investigation, additional bank protection alternatives will be evaluated with the roadway and drainage designers.

Roadway Final Design

Once the project assessment is complete, the preferred option will advance to the design phase. This involves detailed engineering work, including developing plans, specifications, and construction documents that encompass the key aspects of the project. The final design will capture resolutions to project issues or special circumstances identified in the preliminary design and advance the design tasks included in the roadway, drainage, ROW, and utility engineering. **Figure 2** shows a concept of the area. Coordination with utility companies will be necessary, especially regarding the overhead power lines in the gulch. Discussions with APS will facilitate any necessary relocations or adjustments to the existing steel poles, which do not have guy wires, being managed effectively. The final design will be developed into a Stage IV submittal. Clearances will be obtained at this point, and a comprehensive construction cost estimate will be developed that can be used to apply for construction funds. Once construction funds are secured, the project can proceed to Stage V and be advertised for construction.

Figure 2: Roadway Concept

Clearances

Environmental

Biological Resources. As part of the NEPA process, a Biological Evaluation (BE) of the Russell Gulch watershed area will be prepared to support the Project Assessment utilizing existing data sources. The BE would document the presence/absence of any known threatened and endangered and/or forest service species or critical habitat within the project area. The BE would analyze construction impacts on sensitive species/habitats and outline mitigation measures to utilize during construction (e.g., avoidance of vegetation for species protection). The project area overlaps the designated critical habitat for the Mexican Spotted Owl (Strix occidentalis lucida), which may require informal consultation with the US Fish and Wildlife Service (USFWS) if habitat (e.g., mature trees) is impacted. Coordination with the ADOT and TNF Biological Team must be initiated concurrently with the start of Stage II activities.

Cultural Resources. Numerous cultural resources have been documented in the nearby area along US 60. As part of NEPA, an evaluation of historic and prehistoric properties within and adjacent to the Area of Potential Effect (APE) will be required. Existing databases will be reviewed to determine known cultural site information, and a supplemental survey of the APE will be required to determine the presence/absence of any register-eligible sites. Coordination with the ADOT and TNF Historic Preservation Team must be initiated concurrent with the start of Stage II activities.

Hazardous Materials. Our team will review existing records to understand known hazardous materials locations along the ROW and document them in a Preliminary Initial Site Assessment, including a review of relevant historical sources to document previous land use. Lead-based paint and asbestos testing is also proposed for any structural elements within the ROW. A Phase I Environmental Site Assessment may be required for new ROW.

Section 404, Clean Water Act. Based on the "Revised Definition of Waters of the US (WOUS)" rule potential WOUS will be evaluated within the project limits and are likely considered ephemeral, non-permanent waters. A 404 Review memorandum will be prepared to ADOT standards.

Other Resources. Additional resources in the project area will be documented, including sensitive noise receptors, recreation areas/4(f) resources, air quality, water quality, US Forest Service (USFS) land use, public health and safety, traffic/transportation, and socioeconomic/ environmental justice resources. Future operations and maintenance will also be considered.

Utilities

Our utility research identified Arizona Public Service (APS) as the sole service provider within the project limits. The existing infrastructure includes overhead steel poles. We will coordinate with APS to understand any limitations or restrictions they may have for their facilities. Safeguard measures will be implemented if necessary throughout construction, such as temporary support structures or minimizing/avoiding excavation near poles. If necessary, we will work with APS when they develop their relocation plans to verify there are no conflicts with the proposed improvements and schedule the relocation prior to construction beginning for this project. Throughout the project, we will maintain regular communication with APS to address emerging issues or concerns and ensure their facilities remain protected and operational.

Right-of-Way

The majority of Russell Road within the project limits is in a Gila County 100-foot easement granted by the National Forest Service. Under this easement, Gila County is responsible for maintaining the road. To ensure compliance with project requirements, we will thoroughly review the Intergovernmental Agreement (IGA) between the National Forest Service and Gila County. Our strategy focuses on eliminating or reducing acquisition needs by minimizing the disturbance limits. A privately owned parcel belonging to Page Cattle Company is within the project area (see **Figure 3**). The private property limits are relatively close to the roadway on the Gulch side near Location #5. If work is required within the Gulch, an easement may be required from Page Cattle Company. We will closely coordinate ROW acquisition efforts with ADOT, Gila County, and the National Forest Service to facilitate a seamless and efficient process.

Grant Support

Our Grant Development Team is available to assist Gila County in the construction grant application process and has experience identifying and securing funding from various local, state, regional, federal, and other funding sources. We have demonstrated capability in successfully obtaining grants for transportation, economic development, parks and recreation, public safety, infrastructure, emergency management, and sustainability initiatives. With a commitment to excellence in grant writing and administration, our team meticulously analyzes each opportunity to support our clients. Our team will research and locate grant opportunities relevant to the project's need to create a funding plan. The plan will identify the grant type, funding availability, required match, eligible project types, timelines, and compliance considerations. The team will assist Gila County in finding funding to bridge funding gaps. We can help identify strategies to align with grant programs, such as including certain design elements or phasing a project. It will be important to begin while the PA is being developed to determine if there are scope items that could be included for specific grant types or for the project to be more competitive to secure funding.

SPECIAL ISSUES AND TECHNICAL ELEMENTS

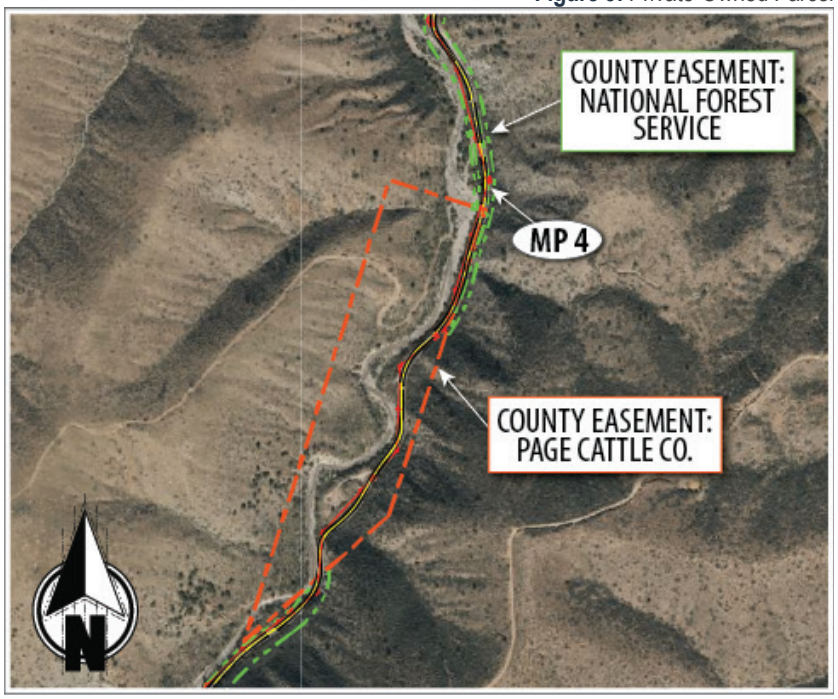
The project's technical factors begin with a thorough assessment of the project area, understanding the stakeholders' goals, and documenting them in the PA. The technical design elements will lay the foundation for the final design and future erosion mitigation measures. Construction documents will be developed for the roadway and drainage improvements to provide a safe transportation facility well into the future.

Alternatives to evaluate

Our team has identified several options to address roadway washouts and bank erosion at the eight flood-damaged locations, as shown in **Figure 1**, Page 5. These options were developed after our comprehensive field visits, an extensive review of the available project information, and an analysis of drone imagery captured during our site assessment. Since Russell Gulch is alarmingly close to the roadway embankment at all eight locations, implementing an economical yet sustainable bank protection solution is imperative to safeguard public safety.

We explored various roadway options, including maintaining the existing alignment as a two-lane roadway, an alignment shift that also maintains the two-lane roadway, and a one-lane configuration that adheres to the existing alignment (see **Figures 4 and 5**). If the one-lane option is selected, it will

Figure 3: Private-Owned Parcel



be critical to assess proper signage and sightlines or to incorporate solar traffic signals to enhance traffic management. Additionally, lowering the roadway profile at certain locations may be a cost-effective solution, pending verification of high-water elevations to mitigate flooding risks.

Figure 4: Two Lanes - Lower Profile

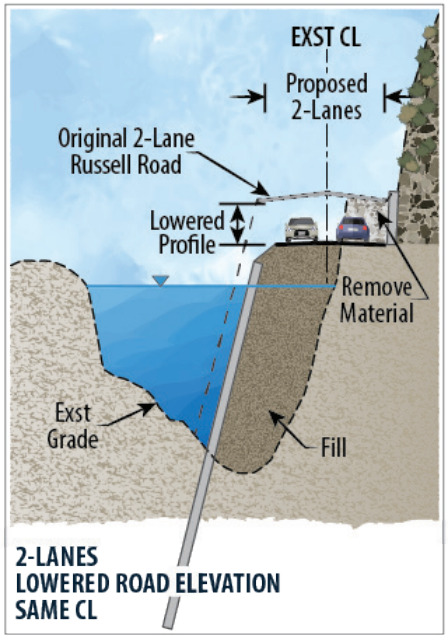
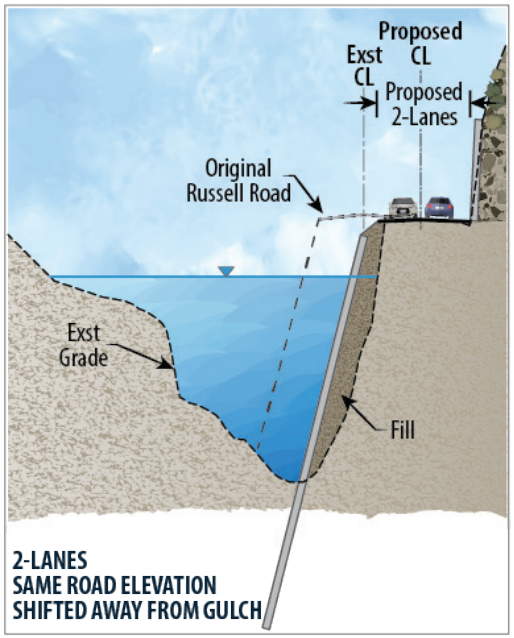


Figure 5: Roadway Realignment

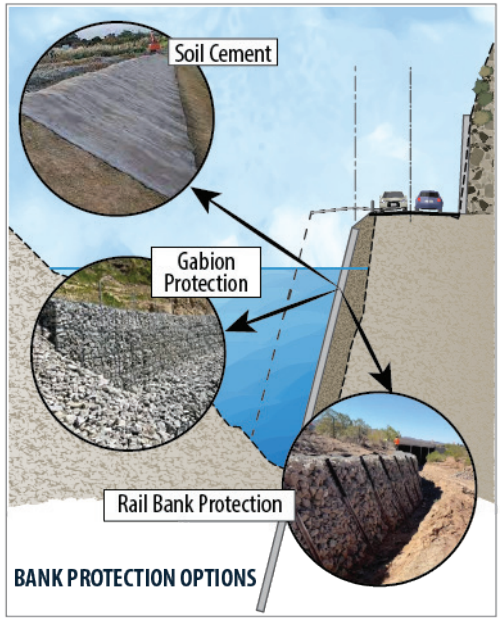


Multiple bank stabilization options have also been investigated to prevent future erosion, as well as different wall designs for effective erosion control and slope stabilization, detailed as follows (see **Figure 6**):

- **Soil Cement Bank Stabilization.** This type of bank stabilization is provided for high-velocity streams and areas where sand and gravel are readily available. Russell Gulch is a suitable location for this type of bank stabilization because of the adequate supply of sand and gravel nearby. A batch plant to produce soil-cement can be set up close to the project site. A deep toe down is required for this type of soil.
- **Gabion Bank Stabilization.** This type of bank stabilization is feasible for streams with a velocity range of 15 fps to 18 fps, and near-vertical slopes are required. This option will be viable since ample rocks are available within the project area.
- **Rail bank Stabilization.** This type of soil stabilization can be used for streams with a velocity of around 20 fps. ADOT has successfully utilized these types of bank protection in several areas.
- **Launchable Riprap bank Stabilization.** This type of riprap bank placement places a substantial amount of riprap at the toe of the slope, allowing the riprap to settle (launch) into the scour hole as the erosion develops within the toe of the bank (see **Figure 7**). The advantage of this option is that we will not have to dig down into the toe down depth. The loose riprap volume equivalent to toe down depth volume is laid, which allows reduced excavation depth while protecting the toe of the slope from erosion.

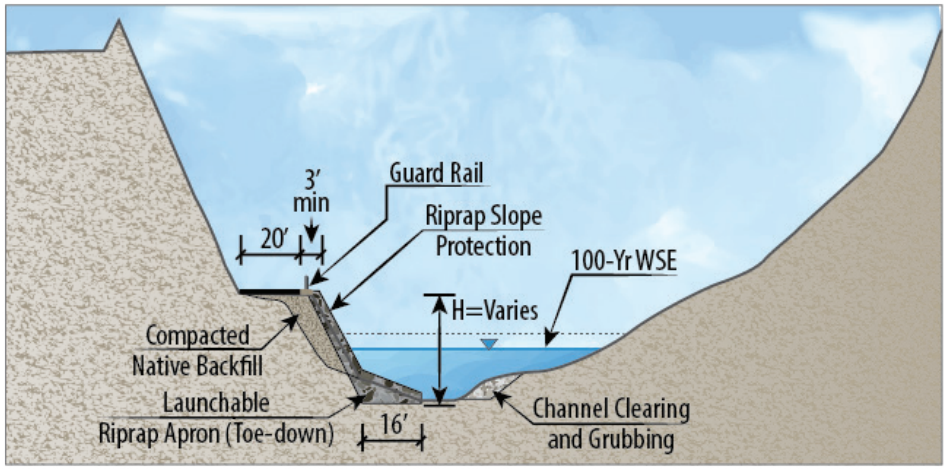
A key objective of the project is to create a buffer between Russell Gulch and the roadway. This can be achieved through two primary methods: 1) realigning the roadway further from the Gulch or 2) shifting the Gulch's main channel away from the roadway. The latter can be accomplished naturally by installing stream jetties/guide banks at strategic bends. We can redirect water flows away from the roadway by utilizing locally sourced boulders in these locations. Over time, these jetties will slow the water and encourage sediment deposition outside the bend, naturally shifting the main channel further away from the roadway. This technique offers a cost-effective, long-term solution alongside necessary bank stabilization to address existing issues in the project area.

Figure 6: Bank Protection Options



Lastly, we propose an "Out-of-the-Box" solution that involves establishing a separate alignment along the unpaved roadway east of Russell Road (see **Figure 1** red alignment, Page 5). While this option would require obtaining a new easement from the TNF and evaluating the level of the environmental clearance document, it presents a sustainable resolution to the challenges currently faced along Russell Road. The existing roadway could then be converted to a recreational path, making it eligible for alternative grant funding.

Figure 7: Launchable Riprap Bank Stabilization



The eight locations' existing issues and potential mitigation measures are:

Locations #1 (MP 3.5), #2 (MP 3.7), and #3 (MP 3.8): At Locations #1, #2, and #3, significant erosion has occurred along Russell Road, with approximately eight feet of pavement lost over 110 feet at Location #1, 13 feet of pavement over 240 feet at Location #2, and 11 feet of pavement over 250 feet at Locations #3. The relatively flat slope on the eastern side of the road presents opportunities for realignment between four feet to 25 feet in the three locations. Realigning the roadway would increase the distance between the road and Russell Gulch (See **Figure 5**, Page 8), reducing the risk of future erosion and damage. We will consider various bank protection measures to safeguard the newly aligned roads, as discussed and shown in **Figure 6**, Page 8. These solutions aim to stabilize the slopes and prevent future erosion.

In addition to the common item discussed above, each location has separate issues, further explained below:

- **LOCATION #1: UPLIFITING PAVEMENT.** Just south of the washed-out section, a significant portion (approximately 130 feet) of the pavement has been uplifted due to a tributary of Russell Gulch flowing beneath the road surface. We noticed that the tributary flow is coming at the steep slope and turning 90 degrees near the roadway, allowing sediment to drop and water to accumulate, causing it to flow under the pavement To address this issue, we will conduct hydraulic modeling to identify multiple options: **Option 1 -** Raise the roadway profile and install culverts to facilitate water passage beneath it. **Option 2 -** Construct a concrete ford crossing with cut-off walls. **Option 3 –** Realign the tributary to cross perpendicular to the roadway.

- **LOCATION #2: EXISTING UTILITY POLE IN THE GULCH.** An existing power pole on the west side of the road within Russell Gulch necessitates coordination with APS to assess any planned modifications to this power pole.

- **LOCATION #3: EXISTING CULVERT.** We will conduct hydraulic modeling to confirm the high-water elevation and determine if the road profile needs to be raised. A preliminary option suggests the freeboard elevation should be approximately two feet. This will allow for future storm events and the additional runoff and debris that could occur in the event of another fire in the area. Additionally, a pipe culvert beneath the road at this location is exposed and requires repair. The inlet is clogged, and drainage is blocked from the inlet. Drainage is currently flowing over the roadway and contributing to the bank erosion. A thorough assessment will be conducted, along with slope stabilization measures, to prevent future inlet clogging, which is a problem observed at other project locations.

LOCATION #4 (MP 3.9): EMBANKMENT WASHOUT. Approximately 135 feet of the Russell Gulch bank has experienced significant erosion, but the road remains unaffected. Potential bank stabilization options, as described previously, can mitigate this issue and stabilize the slope.

LOCATION #5 (MP4.2): EXISTING CULVERT & BANK EROSION. A 90-foot section of the Russell Gulch bank has eroded, exposing a pipe culvert beneath the road. Although the road's structural integrity is intact, continued bank erosion will jeopardize the roadway. The culvert inlet is obstructed by debris and contributes to the bank erosion, similar to the situation at Location 3. Potential bank stabilization options can be utilized to safeguard the exposed pipe and reinforce the bank. The pipe size and inlet will also be evaluated to confirm flows will not overtop the roadway.

LOCATION #6 (MP 4.4): EXISTING CULVERT & UTILITY POLE. An 18-foot width of Russell Road has been washed away over a 300-foot stretch. A potential option is to realign the roadway eastward to create a buffer from Russell Gulch. However, a retaining wall will be required and a nearby power pole may need to be relocated with this option. The exposed pipe culvert outlet requires repair, and its inlet is obstructed. Hydraulic modeling will help determine if the road can be lowered, as it sits approximately four feet above the high-water elevation.

LOCATION #7 (MP 4.6): EXISTING CULVERT & BANK EROSION. This location is similar to Location #6. A 14-foot-width of the road has eroded over a 250-foot stretch. This location could also be realigned, but another power pole will need to be evaluated for conflicts. The exposed pipe culvert outlet also needs repair, and the inlet is obstructed, contributing to the bank erosion. The hydraulic modeling will verify if the road profile can be lowered, which is around nine feet above the high-water elevation.

LOCATION #8 (MP 4.7): ROAD WASHOUT. Approximately six feet of the road has eroded over a 160-foot stretch. A potential option is to realign the roadway eastward approximately seven feet while avoiding a nearby power pole. Options for bank protection measures will be implemented to stabilize the slope and mitigate sediment issues from the hillside. Hydraulic modeling will also assess if the road profile can be lowered; it is approximately four feet above the high-water elevation. At the same time, slope stabilization measures will address debris from the hillside impacting road safety.

Russell Road improvements must be competitive in a grant application to receive construction funds.

Construction Cost Evaluation

Gila County successfully obtained the AZ SMART Grant for this project's design and will apply for additional grant funding once an accurate estimate of the proposed improvements is available. Understanding the available grants and the requirements to be competitive will be instrumental in the success. Cost is almost always a factor in the evaluations of grants. For the project to be competitive, a cost-effective solution will be required.

There were three options in the PIL where the cost ranged from $17.5M to $18.9M. Reducing this cost while providing a reliable roadway that is protected from future storm events will help this project be competitive for grant funding. If this is accomplished the risk of not obtaining construction funding for the project after the project is designed is reduced. Our team has been selected based on their experience with previous projects and bringing cost-effective solutions to mitigate the erosion issues along Russell Road.

Our team reviewed the available cost spreadsheet provided by ADOT and Gila County. We performed our independent quantity takeoff for earthwork, bank stabilization, guard rail, and pavement quantities. While reviewing the unit cost of soil cement, we noticed that the unit cost is extremely high (at $100 per sq ft, equivalent to $2,700 per cubic yard). With our prior experience and validation with other contractors, we believe soil cement is priced at around $150 per cubic yard in place instead of $100 per square foot. Using the revised unit prices will reduce the project total cost of $9M to $10M.

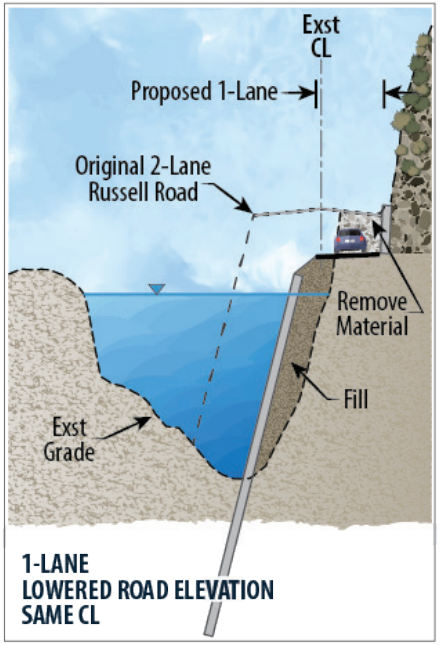
> Based on our unit prices for these major bid items, we identified cost savings in the range of $8M to $9M, depending on the bank stabilization option.

A new alignment, shown in **Figure 1**, Page 5, will be evaluated in the PA. The new alignment would include minor grading, minor drainage, and a AC/AB Section over compacted material. This pavement section will match the existing roadway section of Russell Road.

> If selected, the new alignment could save up to $10M to $11M.

Additionally, $2M in costruction cost savings could be realized by lowering the road where hydrologically feasible (see **Figure 4**, Page 8). To reduce costs further, $500k can be saved by constructing a single-lane road (see **Figure 8**). This can yield significant cost savings while restoring access to this crucial emergency corridor.

Figure 8: One-Lane Lower Profile



Based on the preliminary analysis we have compiled a cost estimate for each type of bank stabilization and roadway realignment as shown below.

Preliminary Cost of Alternatives	
Soil Cement	$13M
Gabions	$17.5M
Stacked Wall	$19.6M
Rail Bank	$19.3M
Launchable Riprap	$13.8M
Realigned (New Alignment)	$8M

2. PROJECT SCHEDULE AND RISKS

Schedule

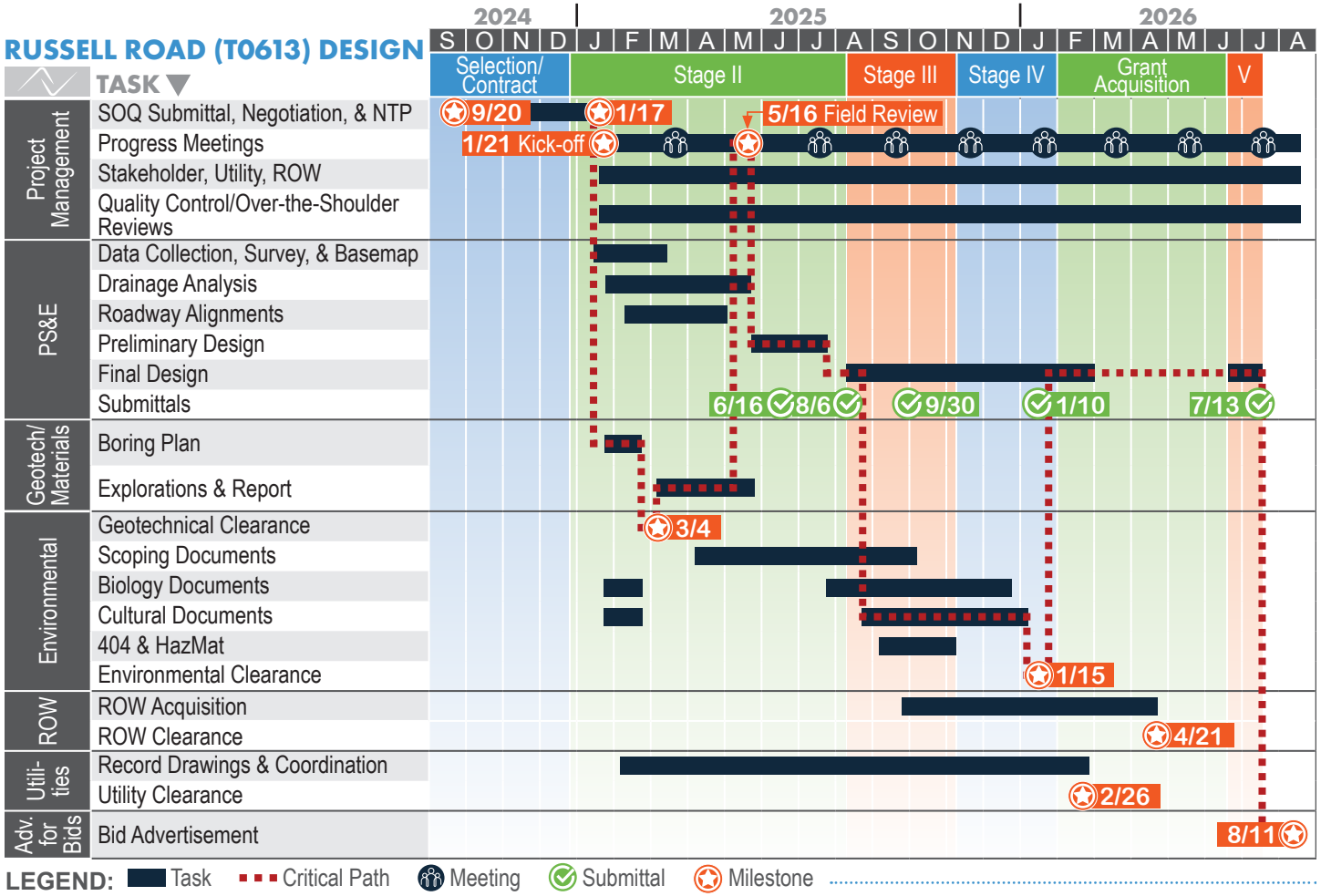
Ardurra's design delivery schedule (**Figure 9**) begins with the RFQs stated Notice to Proceed (NTP) date of 1/17/25. The schedule shows our anticipated durations, critical path, and functional relationship of major tasks and key events that produce the Stage IV submittal on 1/10/26 to meet the RFP's stated 365 calendar days. Determining the critical path (shown as a dashed red line) requires completing geotechnical (early environmental clearance, field exploration, and report), drainage evaluation, and Stakeholder Team Field Review before the Phase II Scoping Letter. Stakeholder concurrence of preferred erosion mitigation technique(s) and corresponding roadway modifications is essential to complete the final design phase efficiently. The critical path during the final design relies on environmental clearance, which depends on cultural clearance tasks defined by the stakeholder's preferred option in the scoping letter. Our proposed schedule identifies the major milestone and progress submittal dates essential to achieving the 365-calendar day schedule. The schedule will be honed and adjusted after stakeholder communications are provided during the kickoff meeting to ensure team acceptance and commitment. The schedule will then be uploaded to the ADOT Workfront software system. Our team's schedule during the final design reflects an approximate four-month engineering "pause" while Gila County acquires federal grant funds for construction. Ardurra resource allocation is flexible to complete Stage V services within two weeks after grant funds are approved. Our PM completes weekly progress meetings with assigned team members to monitor and verify progress and action item resolution. Our PMs update the Workfront schedule monthly and will report the status to ADOT team members at each progress meeting.

Strategies to Avoid or Make Up Any Slippage

Ardurra's ADOT project delivery experience provides keen awareness that the highest risks for schedule slippage are clearance approvals and scope creep. Gary and the Ardurra team recognize this and will drive activities to ensure the tasks stay on track by:

- Focusing on keys/priorities previously listed and noted on the schedule.
- Developing a comprehensive scope before the project starts.
- Identifying schedule risks, establishing proper mitigation, and reviewing risks at monthly project meetings.
- Review the schedule at monthly project meetings focusing on critical path items and a three-month look ahead.
- Develop and maintain an action item register with regularly tracked and updated deadlines at project meetings.
- Coordinating early and regularly with stakeholders and agencies.
- Communicating proactively and responsively.

Figure 9: Schedule



Risk Register

Our team completed a comprehensive project review and identified the project-specific risks shown in **Figure 10**. We recognize that early identification of risks, solutions, and mitigation strategies is essential to delivering work on time and within budget. Early project activities will focus on further identifying benefits to cost for major items, rein in unnecessary cost growth, and seek opportunities to reduce cost without sacrificing needed improvements. Gary will lead the team in managing and mitigating risks by continually reviewing and providing updates to ADOT during monthly progress meetings or as risks are resolved. Our team will:

- Identify and openly discuss issues.
- Meet to develop a corrective action plan. With its interim milestone dates, this plan will measure progress and ensure we all contribute to getting the task(s) back on track.
- Review task dependency to get an advance start on future tasks tied to any task that has slipped.
- Mobilize additional staff from our deep bench of local and national resources.

Communicating and advancing the risk register with ADOT PM Tricia Brown will occur at the project's onset. Updates to the risk register will be completed monthly with progress meetings and discussed with the team regularly. Risks and mitigation measures will be continuously identified, monitored, and mitigated.

Figure 10: Risk Matrix

Risk	Impact	Severity	Probability	Overall Risk	Legend: 1 = Low | 5 = High Overall Risk = Severity + Probability Countermeasures
Obtaining approval from Tonto National Forest	If TNF does not concur with the design and the impacts that occur within Forest Service Property, they may not provide approval and delay the project schedule.	5	4	9	✓Our team will obtain input from TNF throughout the project's development. The coordination will begin prior to the PA so the project can be properly scoped to meet TNF goals. At each design submittal, TNF will be included as a reviewer so there are no surprises at the end when approval is required.
Hydrology and design frequency	The overall design schedule can be impacted because this analysis will be the primary element of the overall design.	5	4	9	✓Our team will discuss the storm's design frequency and develop the watershed base conditions to develop a hydrology model prior to initiating the hydraulic design.
NEPA process estimated at 12 months for Environmental Assessment	The project duration is 12 months, putting the environmental clearance on the critical path. Any delays in the clearance process will delay the project	5	4	9	✓Identifying the interim critical path items for the environmental clearance and providing a realistic schedule is needed to track it properly. If USFWS consultation is required, it will be on the critical path. The other tasks will be included in the detailed schedule and monitored to meet the overall clearance date.
Hydraulics and Bank Stabilization Options	Depending on the selected bank protection option, the cost can be significantly high, which can skew the benefit-cost ratio and jeopardize funding opportunities.	4	4	8	✓We will evaluate the options during the PA Phase and discuss them with the team to reach a consensus before starting the final design.
Special status species critical habitat impact analysis, potential consultation with US Fish and Wildlife Service	Consultation with a regulatory agency can result in delays in environmental clearance if the agency is not provided with an appropriate review and approval time.	5	3	8	✓If the habitat for the Mexican Spotted Owl is impacted, consultation with USFWS is anticipated. Identifying suitable habits and determining whether there are impacts will be a priority. If impacts are identified, the design team will be consulted to determine if avoidance is an option. If not, we will provide the consultation material to USFWS so their review can occur, providing ample time for concurrence.
Developing a design that is not competitive for the grant application process	If the final design does not consider the criteria to be competitive in the grant process, the project may be designed but never constructed.	5	3	8	✓Our team will begin the project's scoping with the end goal of obtaining grant funding for construction. We may recommend including features or items in the project so it can better compete for grant funds and be more likely to succeed.
Current Roadway alignment	The current alignment is extremely close to Russell Gulch, and as we fix these eight locations, more locations can be eroded in the future, risking public life and private properties.	4	3	7	✓We will review the existing alignment and analyze other locations where the Gulch is extremely close to the roadway. If necessary, we will evaluate another alternative alignment in detail during the PA phase, as shown in **Figure 1**, red alignment.

3. PROJECT TEAM EXPERIENCE AND AVAILABILITY

Our team (**Figure 11**) was specifically selected for this design effort. It provides ADOT with the right combination of team members who understand, through their project experience, the challenges associated with delivering this project. Key Personnel qualifications are summarized on the following page, with detailed resumes at the end of this proposal. **Company responsibilities and corporate titles are included on the resumes at the end of this submittal.**

Project (Contract) Manager Gary Fromm, PE

34 Years of Experience | BSCE | AZ PE #36495
50% Availability | 20% Expected Time Commitment

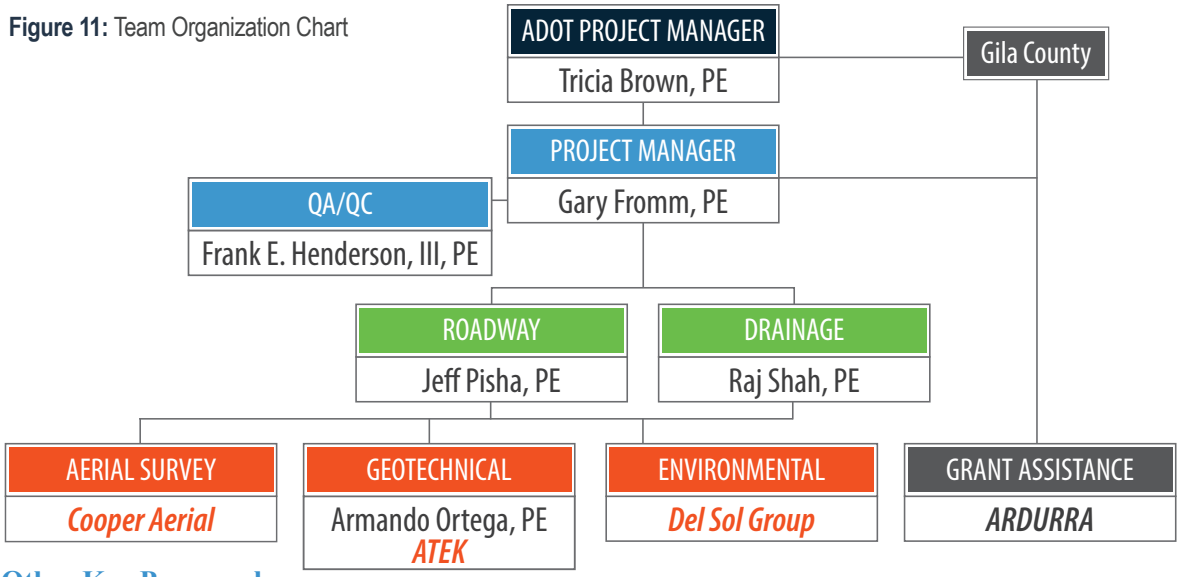
Gary brings diversified experience working with various governmental agencies at the city, county, state, and federal levels. His proven track record as a leader who can effectively coordinate with multiple disciplines simultaneously to resolve project issues promptly makes him stand out. His comprehensive experience across all phases of the project development process, from planning and programming to design and construction administration, demonstrates his ability to oversee projects from start to finish. Gary has received formal training on Sediment Control and Slope Stabilization. During this training, proper Best Management Practices (BMP) and innovative slope stabilization with native vegetation and natural materials were covered. Gary was selected for a statewide team to develop standard specifications and details for Caltrans. From this experience, Gary was named the Central Region Storm Water Program Manager. In this capacity, he managed a team to review stabilization issues and develop details to mitigate erosion throughout the region. Considering these qualities, Gary is undoubtedly the right choice as this project's Project (Contract) Manager.

Qualifications/Value to ADOT
- 34 Years of Experience
- Formal Training in Erosion Control and Slope Stability
- Federally Funded Project Experience

ADOT Experience & Record of Success
- Over 20 years working with ADOT
- Successfully completed the design of over 50 ADOT On-Call tasks
- ADOT project experience in Erosion Control and Slope Stability

Current Project Commitments:
- City of Buckeye | Jackrabbit Trail | 15% Committed
- City of Scottsdale | Scottsdale Road | 15% Committed
- City of Phoenix | CapEX LRT | 15% Committed
- ADOT | PDOC | 5% Committed

Figure 11: Team Organization Chart



Other Key Personnel

Key Personnel: Name | Role | License No. | Availability/Commitment	Relevant Experience: Owner | Project Name	Qualifications | Value to ADOT and Project Stakeholders
Frank E. Henderson, III, PE QA/QC Experience: 46 Years AZ PE No. Pending 50% Availability/ 10% Expected Time Commitment	▪ ADOT | PDOC On-Call (2018-006) ▪ ADOT | SR 303L (Peoria – Mountain View) ▪ ADOT | SR 73 Emergency Drainage Repair ▪ FCDMC | 27th/Olney Avenue Storm Drain	✓ 46 years of transportation and drainage infrastructure experience ✓ 26 years progressive ADOT and LPA design and project management experience delivering 40+ federal funded projects ✓ PM for three floodplain erosion mitigation projects totaling 2.5 mile of bank protection design ✓ Institutional knowledge of ADOT's project delivery process ✓ Construction management experience for project totaling $275M
Jeff Pisha, PE Roadway Experience: 30 Years AZ PE No. 28940 50% Availability/ 50% Expected Time Commitment	▪ Illinois Department of Transportation | IL Rte 31 Improvements and Stream Relocation ▪ ADOT | SR 85 Preservation from Elota Avenue to MP 60 (F0672)	✓ Expertise in innovative roadway geometric design. ✓ Successfully delivered over 33 DOT and LPA federally funded projects.
Raj Shah, PE Drainage Experience: 34 Years AZ PE No. 27556 65% Availability/ 60% Expected Time Commitment	▪ FCDMC | 27th Ave/Olney Ave Storm Drain ▪ City of Phoenix | Local Drainage Mitigation Four Sites ▪ SRPMIC | Senior Center G & D Plans	✓ Raj brings expertise in drainage design, scour, and hydraulics. ✓ He has completed more than 12 major bank stabilization projects in the state.
Armando Ortega, PE, ICC (ATEK) Geotech Experience: 27 Years AZ PE No. 39511 50% Availability/ 25% Expected Time Commitment	▪ ADOT | Swift Trail (SR 366) Frye Fire and Flooding Damage Project-Level Repairs, F0191 01D ▪ ADOT | Colcord Road bridge Replacement over Gordon Canyon ▪ BIA | Fresnal Canyon Wash Bridge, BIA Bridge H662	✓ Specific experience with roadway damage remediation after erosion caused by runoff after a fire. ✓ Experience in performing geotechnical studies in remote and difficult terrain.

Consultant's Recent Relevant Experience

Project Details				Similar Technical Elements								
Ardurra has a very strong resume for successfully completing the scoping and final design of ADOT projects with similar features, complexities, cost, and stakeholders. Key relevant and comparable features are shown below. All of these projects, were delivered on time, within budget, and with a high level of quality.	Contract Value	Owner	Firm Role	Roadway Realignment	Slope Stability	Drainage	Erosion Control	Environmental Clearance	Utility Coordination	ROW	Federally Funded	Local Agency Project
SR 73 Roadway Embankment and Drainage Repair: The design team completed the Scoping Document and final design for an emergency roadway embankment and culvert inlet/outlet structure repair at approximately MP 334 on the Fort Apache Indian Reservation. The project scope included replacing the outlet structure, widening the shoulders, and replacing the guardrail. Ardurra's innovative design utilized an intricate system of stacked gabion baskets, a vertical stair-stepped energy dissipater, and a stilling basin to absorb and reduce water velocities and replace the existing culvert outlet. Stakeholder collaboration included ADOT PMG, ADOT District, and the White Mountain Apache Native American community.	$65k	ADOT	Prime		✓	✓	✓		✓			
SR 188 Drainage Repair Mill and Overlay: The ADOT Globe District requested Ardurra to provide survey, drainage analysis, erosion protection, culvert improvements, and pavement preservation design services for SR 188 at MP 254 and MP 256-257. Ardurra's analysis identified that the preferred solution is to replace existing corrugated metal pipes (CMPs) with two new reinforced concrete box culverts (RCBCs) with sufficient capacity to eliminate roadway overtopping. Ardurra provided watershed drainage analysis, RCBC hydraulic design, survey, base mapping, traffic control, erosion control, RCBC outlet protection, and special design details.	$225k	ADOT	Prime		✓	✓	✓	✓	✓	✓		
Lake Pleasant Parkway, West Wing Parkway to SR 303L: Ardurra provided scoping and design services to widen a two-lane roadway into a four-lane parkway, including bicycle and pedestrian improvements between West Wing Parkway and SR 303L. Like the Russell Road project, this project included hydrology/hydraulics, open channel, storm drain design, riprap design, scour protection, 404 permitting, and utility relocation coordination.	$1.35M	City of Peoria	Prime	✓	✓	✓	✓		✓	✓		✓
US 70 Gila River Bridge Replacement and Erosion Control: The Gila River Bridge is the second-longest bridge in Arizona. The bridge replacement included embankment stabilization at and around the bridge. Ardurra provided erosion control plans, SWPPP, special provisions, and cost estimates.	$40k	ADOT	Sub		✓		✓				✓	
Baffert Drive to Nogales: Ardurra provided topographic survey, predesign, and final design services to improve pedestrian and bicycle connectivity within the City of Nogales by installing a 10-foot-wide asphalt multi-use pathway (MUP) along Frank Reed Road. This was a locally funded project with the City of Nogales that included a retaining wall and slope stabilization in a drainage area within the project limits.	$440k	ADOT	Prime		✓		✓	✓	✓	✓	✓	✓

Subconsultant Notable Expertise

Geotech. ATEK is a Native American-owned Arizona-based engineering consulting firm specializing in geotechnical engineering, materials engineering, construction materials testing, and special inspection services. ATEK Principals have a wealth of knowledge of the southwest's geotechnical conditions, allowing them to provide cost-effective engineering solutions to complex projects. ATEK's experience includes roadway damage remediation after erosion caused by runoff after a fire, as well as performing geotechnical studies in remote and difficult terrain.

Environmental. Del Sol's services include National Environmental Policy Act (NEPA) documentation, including Environmental Impact Statements (EIS), EAs, and Categorical Exclusions. Del Sol's experience includes preparation of National Environmental Policy Act (NEPA) documentation, including Environmental Assessments (EAs), and Categorical Exclusion (CE) for projects involving ADOT/FHWA, BLM, EPA, USDA/RUS, USFS, and numerous Tribes for federal undertakings.

Aerial Mapping. Cooper produces digital imagery from aerial photography, digital airborne sensors, unmanned aerial vehicles, and satellites. It offers full-service image processing and plotting capabilities and can perform rectification, translations, compression, calibration, and algorithms provide required mapping products.

GARY FROMM, PE
Project (Contract) Manager

YRS OF EXPERIENCE (FIRM | TOTAL)
2 | 34

REGISTRATION(S)
Professional Engineer AZ #36495
Professional Engineer CA #50864
Professional Engineer NV #P031194

EDUCATION
BS, Civil Engineering University of Arizona

CORPORATE TITLE/ RESPONSIBILITIES
Transportation Practice Director: Responsibilities include the overall operation of the Transportation Practice in the Mountain Region

VALUE TO ADOT
- 34 Years of Experience
- 20 years working with ADOT
- Formal Training in Erosion Control and Slope Stability
- Federally Funded Projects Experience

PROFILE SUMMARY
Gary brings 34 years of transportation project management and design experience. He has worked with various Arizona governmental agencies for over 20 years. Gary has worked with ADOT on various projects, including slope stabilization and retaining structures. He has proven himself as a leader who can coordinate with multiple disciplines concurrently to resolve project issues in a timely manner. His experience includes all phases of the project development process, including planning and programming, design, and construction administration. While at the California Department of Transportation (Caltrans) Gary received training on Sediment Control and Slope Stabilization. During this training, proper Best Management Practices (BMP) were covered, as well as innovative slope stabilization with native vegetation and natural materials. Gary was selected for a statewide team to develop standard specifications and details for Caltrans for the Statewide Storm Water Pollution Permit. From this experience, Gary was named the Central Region Storm Water Program Manager. In this capacity, he managed a team to review stabilization issues and develop details to mitigate erosion areas throughout the region. He will utilize his past experience and training on stabilizing slopes and preventing sediment transportation to waterways to the Russell Road project.

PROFESSIONAL EXPERIENCE
ADOT, Broad Street ADA Improvements, Globe, AZ. Contract Manager. Ardurra was recently selected for this project to evaluate and upgrade the pedestrian facilities in Historic Downtown Globe to meet ADA standards. An ADA Compliance Report and a Scoping Letter will be developed to identify the locations and facilities that do not meet current ADA standards. Design plans will be developed. This information and estimated cost will be used to apply for grant funding for construction and finalize the design.

ADOT SR 188; Wheatfields to US 60 (H6155). Project Manager and Freeport McMoRan Utility Coordination. Develop the design of a two-box culvert extension and a protection system of the existing utilities that serviced Freeport McMoRan's Miami Mining Operation. State Route 188 was widened to a four-lane facility. The mine has utilities crossing SR 188 that are critical to their operations. A requirement to widen the roadway was the eleven utility pipes needed to be in service during construction. Gary designed the box culvert extension where the utilities passed under SR 188. Included in the design were the support brackets for each pipe in addition to a temporary support system during construction. A shield protection was designed to protect the pipes and prevent damage during construction activities.

ADOT, Local Government On-Call (includes Federal Funds). Statewide, AZ. Task Manager. This contract has required scoping documents preparation, environmental and cultural reports, and clearances, PS&E packages, and post-design support. As part of this on-call contract, we have been assigned several projects: Ironwood Drive roadway and drainage improvements and Safe Routes to School enhancement for the City of Apache Junction; traffic and roadway Project Assessment for Juan Sanchez Boulevard for the City of San Luis; Davis Road alignment study Project Assessment for Cochise County; NEPA and cultural resource reporting and clearances for SR 188; City of Tusayan Bus Shelters; and parking lot improvement at Tonto Natural Bridge State Park.

ADOT Cienega Creek – Marsh Station Phase III (H7473). Project Manager. Developed the final design and specifications for a two and a half miles of pavement rehabilitation and bridge replacement. The eastbound and westbound Cienega Creek structures were replaced. Two lanes of traffic were accommodated throughout construction in each direction. Cross-over detours were provided to provide a safe work area to replace the structures. The existing sheet pile and riprap slope mattress erosion protection was protected and extended for the new structures. Cienega Creek is classified as an impaired waterway and drainage basins were designed to accommodate first flush requirements.

ADOT, Roadway On-Call, Various Locations, AZ. Project Manager. Developed the final construction documents for several pavement preservation projects throughout Arizona. Tasks typically included pavement rehabilitation, safety evaluation, maintenance concerns, and traffic operations. Coordination with multiple ADOT disciplines and stakeholders was required to address the concerns and achieve the goals of each project.

GARY FROMM, PE | Contract Manager

ADOT, Quiet Pavement Program, Phoenix, AZ. Project Manager. The Quiet Pavement Program is an ADOT program developed to reduce the traffic noise levels on the Regional Freeway System. A 1-inch asphalt rubber (AR-ACFC) overlay was placed on the entire Regional Freeway System in the metropolitan Phoenix area. Gary's team was selected to design six out of the ten phases of this program. Extensive coordination with various ADOT sections (materials, bridge, traffic, and the district) was required to develop the details and specifications used throughout the program. These projects were accelerated to meet commitments made to the public and construction windows for the placement of AR-ACFC. After the construction, Gary's team completed the noise modeling for various locations throughout the Regional System.

City of Prescott, SR 69/SR 89 Connector, Prescott, AZ. Project Manager. Gary's team prepared the final design plans for the SR 69/SR 89 parkway connector (Prescott Lakes Parkway) in Prescott. The parkway acts as a bypass to the heavily congested intersection of SR 69 and SR 89. This project constructed 2.5 miles of a 4-lane divided roadway in rolling hills terrain. Water and sanitary sewer mains were also provided throughout the project in anticipation of future development along the corridor.

City of Peoria, Beardsley Road Connector. Peoria, AZ. Project Manager. Developed the Design Concept Report and final design for the Beardsley Road Connector project, which added new access to SR 101L between Union Hills Drive and 75th Avenue. The project extended Beardsley Road east of 81st Avenue to a new southbound frontage road between 75th Avenue and Union Hills Drive, reconfigured freeway ramps, added Arizona's first U-Turn ramp that provides access to eastbound 101L, and reconstructed (lengthened) the Union Hills Drive ramp to eastbound 101L. The development of construction plans was completed in May 2009. The $25 million construction project includes multiple new roadways and ramps, two new bridges, arterial roadway widening, a new roundabout, retaining walls, gabion bank protection in the Agua Fria River, traffic signals, roadway lighting, protection of an existing sanitary sewer main, construction sequencing, traffic control, cost estimates, special provisions, utility coordination, and coordination with multiple project stakeholders.

City of Peoria, Happy Valley Road Construction Management At Risk (CMAR), Peoria, AZ. Project Manager. This $55M CMAR project entails improvements to the existing roadway and a new alignment. The project limits are from Lake Pleasant Road to Terramar Boulevard on the Happy Valley Road alignment. There was a new roadway alignment from 91st Avenue to 83rd Avenue, 83rd Avenue was reconstructed, and Happy Valley Road was widened and realigned throughout the four miles of improvements. Major work items included mass earthwork, a new bridge over New River, box culverts, sound walls, waterline and utility installation, and a signalized intersection at 83rd Avenue. Due to new development in the area, coordination with the developer and homeowners in the area was required by facilitating several public meetings during design and construction.

ADOT, On-Call Pre-Design Services, Various Locations, AZ. Project Manager. Gary's team prepared Project Assessments (PAs) and Design Concept Reports (DCRs) for projects throughout the State. The extent of work varied depending on the project. Under this contract, the work included site visits to identify and discuss project issues, public meetings to obtain public comments, coordination with key stakeholders, development of alternatives to be presented to stakeholders and included in the DCR, delineation of right-of-way, and the preparation of drainage and environmental documents.

ADOT, SR 202L Red Mountain Freeway Design-Build (General Engineering Consultant), Maricopa County, AZ. Lead Civil Reviewer. Gary led the civil reviews, which included maintenance of traffic (MOT), roadway, drainage, signing, and striping. This Design Build project involved the construction of 20 miles of infrastructure improvements to enhance capacity needs on State Route 202 between SR 101L and Broadway Road. The GEC responsibility served as an extension of the Arizona Department of Transportation to oversee the design and construction of general-purpose lanes (GPLs) on SR 202L Red Mountain Freeway. There was extensive coordination with the ADOT, the contractor and the contractor's designer to provide approval of the design plans.

ADOT SR 169 Cherry Creek Road. Design Manager. Gary managed the final design of the SR 169 widening project to add left and right turn lanes at Cherry Creek Road. Culverts were extended to provide sufficient clear distance to for the roadway widening. Lateral ditches were included, and riprap placed in potential erosion areas.

ADOT Cienega Creek – Marsh Station Phase I (H2390). Railroad and Utility Coordination. Union Pacific Railroad (UPRR) relocated its main rail line as part of the Marsh Station Interchange project to eliminate a substandard vertical clearance crossing on I-10. Phase I of the project constructed the embankment and drainage for the UPRR realignment. Gary coordinated between UPRR and ADOT that the final design of the ADOT design of the embankment and drainage matched the UPRR design of the rail alignment. Special Provisions were developed for the embankment material for the subgrade of the railroad bed. Kinder Morgan installed a new petroleum pipeline from Texas to California during the project. The pipeline was installed within the project limits. Coordinating with Kinder Morgan and their design was required for the proposed improvements of the Marsh Station Interchange and the realignment of UPRR. A Change of Access Report was developed for the new interchange location on I-10. The report was submitted to FHWA for review and was ultimately approved.

Highway 88 Passing Lanes, Pine Grove, CA. Project Engineer. This project included widening the existing roadway at four locations in mountainous terrain. The widening accommodated passing lanes and isolated turn lanes within project limits. Extensive drainage and utility relocation were required. Slope stabilization was identified and addressed after two intense storms and an extremely wet season. More than 80 driveway connections were designed as part of this project. Public and local concerns were frequently addressed.

Highway 88 Roadway Rehabilitation, CA. Project Manager. Managed the design activities to produce contract plans, specs, and estimate for a roadway rehabilitation project at Silver Lake. This project included excavating 80,000 cubic yards of granite material and constructing a new structure. Coordination with the El Dorado Forest Service was required to negotiate an optional deposit site for the granite on the Forest Service property. The estimated cost savings for securing this site was $1M.

FRANK E. HENDERSON, III, PE
QA/QC

YRS OF EXPERIENCE (FIRM | TOTAL)
17 | 46

REGISTRATION(S)
Professional Engineer AZ #28940
Professional Engineer ID #P21995
Professional Engineer MT #PEL-PE-LIC-902296
Professional Engineer NM #28577
Professional Engineer NV #030957
Professional Engineer SD #16380
Professional Engineer UT #13290933-2202
Professional Engineer WY #19876

EDUCATION
BS, Civil Engineer United States Air Force Academy

CORPORATE TITLE/ RESPONSIBILITIES
Water Group Leader: No corporate responsiblities

VALUE TO ADOT
- Institutional knowledge of ADOT's project delivery process will be implemented through a thorough QC review to ensure Stage submittals meet all ADOT technical and administrative requirements.
- CM experience for projects totaling $275M combined with specific knowledge of Ardurra's SR 73 technical design will confirm plans contain constructible details that prevent change orders

PROFILE SUMMARY
Frank has 46 years of civil engineering experience providing design and construction management services. His experience includes a wide range of transportation, water, wastewater, and stormwater collection and conveyance infrastructure. Frank's expertise includes federal, state, and local agency coordination and construction management services in civil infrastructure, transportation, roads, bridges, pavement, water, and sewer systems, and utility system relocation. His final design project management experience is supplemented by his experience delivering more than 75+ miles of urban freeway, urban arterial, and rural highway projects.

PROFESSIONAL EXPERIENCE
ADOT, PDOC On-Call Contract (No. 2014-006.16). Project Manager. PM for nine assignments, including design and construction phase services. Projects included I-8/Araby (10 interchange with roundabouts), SR 179 pavement preservation (six miles), SR 89 (two miles widening with turn lanes), Buckeye multiuse path (two miles), Maricopa Casa Grande Highway widening (2.5 miles), and four irrigation canal bridges in Yuma County.

ADOT, PDOC On-Call Contract (2018-006.16). Project Manager for three assignments, including Nogales multi-use path (1.5 miles), US 93 Dome Valley intersection (realign intersection, create turn lanes, and widen two miles of US 93), and four irrigation canals in Yuma County.

ADOT, PDOC On-Call Contract (2022-006.13). Project Manager for five assignments that include Holbrook B40 (1.5 miles pavement preservation), SR 85 (17 miles pavement preservation), and three LPA projects for Clarkdale (1.5-mile multi-use path), Globe (40 ADA ramp replacements), and Jerome (0.25-mile collector street replacement).

ADOT, On-Call District Minor, Globe, AZ. Project Manager and Construction Manager. This project included working with the San Carlos Tribe and White Mountain Apache Tribe. The services provided consisted of rural highway and roadway, drainage, utilities, ROW, survey, geotechnical, environmental, cultural resources, traffic, structural, erosion control, landscape architecture, pre-design, planning, post-design services, GIS, road maintenance, technical reports, and ADA compliance.

ADOT, Traffic Safety Section (TSS) On-Call, Various, AZ. Project Manager. Projects varied and consisted of all pre-construction activities for various tasks. These tasks included the development of project scoping documents, preparation of designs and construction plans, technical specifications, special provisions, cost estimates, and other planning, scoping, design, and related construction documents. Projects included roadway design and survey, intersection improvements, auxiliary lanes, medians, curb and gutter and sidewalk, turn lanes, road widening, and drainage improvements. Currently managing four tasks under this on-call contract.

ADOT, I-10 Broadway Curve Design-Build, Phoenix, AZ. Utilities Coordinator. As one of ADOT's six designated key design-build roles, Frank coordinated utility mapping, conflict identifications, relocation design, and CPM scheduling. Utility mapping identified approximately 2000 utility crossings of new freeway improvements, of which 600 utility locations were confirmed during schematic design to be potential conflicts with new underground facilities. Final design utility coordination tasks included verifying prior rights, preparing legal descriptions, conducting 700+ utility meetings, reviewing/approving 70+ utility relocation plans, 150+ construction permits, and 50+ service request letters. Major utility relocations that were designed, sequenced, and relocated without impacting the construction schedule were:

- Salt River Project (SRP) 69kV transmission, 12kV distribution, and irrigation facilities across I-10 in 27 locations. SRP relocations included:
- Four SRPI irrigation relocations totaling 3500' of pipe ranging from 36-inch to 84-inch RCP
- Two 69kV SRP Transmission crossings, including new poles and conductors.
- Five 12kV SRP Distribution crossings of I-10 totaling 2+ miles of primary service.
- Fifteen locations of municipal (Phoenix and Tempe) water and sewer infrastructure for 12-inch to 30-inch pipes with 30-inch and 42-inch sleeves.
- APS 230kV outage for Salt River bridge construction.

FRANK E. HENDERSON, III, PE | QA/QC

ADOT, SR 303L, Peoria Avenue to Mountain View, Phoenix, AZ. Project Manager. Managed and coordinated the development of construction documents for 4.5 miles of new six-lane divided urban freeway with eight new bridge overpasses, storm drains, channels, and detention basin drainage facilities. Construction documents included lighting, landscape, noise abatement walls, retaining walls, and aesthetic treatments. Utility coordination included three miles of new irrigation distribution and tailwater collection system for Maricopa Water District (MWD), private irrigation relocations, joint trench communication duct bank crossing, and Arizona Public Service (APS) 69kV OH relocation. This project is the largest CMAR in Arizona's history and is the first federally funded CMAR.

ADOT, I-8 / Araby Road Intersection, Yuma, AZ. Project Manager. Managed and coordinated design, engineering, surveying, and ROW services for this roundabout conversion project and converted signalized intersections at I-8/Araby Road, westbound ramps, eastbound ramps, and Gila Ridge Road to roundabout intersections. Final design services and construction. This entailed constructing and reconnecting crossroads, ramps, front road approaches, and drainage improvements. Prepared final design documents, ROW/utility/materials clearances, and utility removal/relocation.

ADOT, US60/Bell Road Traffic Interchange Design-Build. Phoenix, AZ. Utilities Coordinator. Frank coordinated utility mapping, conflict identifications, relocation design, and relocation coordination services during the design and construction phases of the Bell Road bridge over US 60 and the BNSF railroad. The utility coordination role included identifying utility relocation alignments, reviewing utility relocation plans, creating utility construction sequencing, and completing multiple utility clearance letters compatible with the design-build construction schedule. Frank's team identified utility conflicts, conducted weekly coordination meetings, and reviewed relocation plans.

ADOT, SR 179, I-17 to Red Rock Vista. Yavapai County, AZ. Project Manager. Ardurra provided pre-design, final design, and post-design civil engineering services to construct approximately six miles of pavement preservation along SR179. This project included a mill and replace of the existing pavement along SR 179, sealing transverse cracks and fog and blotter coat on the shoulders, and upgrading existing guardrail end terminals to current standards.

ADOT, SR 89 Paulden Turn Lanes. Paulden, AZ. Project Manager. Provided management and design team oversight for initial and final PAs and final design to widen SR 89, add NB and SB turn lanes on on/off-ramps separating through and turning movements, and channelize intersections with raised curb and gutter to control access. The scope also included a full-width mill and replacement of existing pavement, installation of new pavement markings, signage, and drainage improvements.

ADOT, I-17 Pavement Preservation, 19th Ave to Arizona Canal Trail, Phoenix, AZ. Project Manager. The project includes producing roadway plans and striping plans to resurface 13 miles of the I-17 mainline. I-17. Mainline improvement features included guardrail replacements, slab repairs, and bridge deck modifications. Project improvements included the design and plans to reconstruct 125 sidewalk ramps and traffic signals to be ADA-compliant.

ADOT, US 93/Dome Valley Road Intersection, Yuma County, AZ. Project Manager. Managed and coordinated scoping and final design to reconfigure the US 95 intersection with Dome Valley Road at milepost (MP) 40.43 in Yuma County. Intersection improvements eliminated skewed Dome Valley Road alignment with poor sight visibility at an intersection outside of the US 93 horizontal curve and added turn lanes for both northbound and southbound directions of travel with eight-foot shoulders. Roadway improvements included guardrail height and end treatments, mill and overlay full width of US 93, extending existing drainage facilities, and signing and pavement markings.

ADOT, Holbrook Business 40, Crestview Road to Joy Nevin Avenue, Holbrook, AZ. Project Manager. Managed final design services to prepare plans, specifications, and estimates for approximately 1.1 miles of pavement rehabilitation. Pavement rehabilitation includes cold patch spot repairs, pothole reconstruction, and longitudinal and transverse crack (less than ½ inch) sealing. The project scope required field reconnaissance and preparation of an ADA Compliance Report for approximately 125 sidewalks, ramps, and traffic signal features in the corridor. ADA report identified 25 sidewalk ramps, 30 sidewalk replacement areas, and two traffic signal push button modifications that were advanced through design to develop approved construction documents.

ADOT, SR 85, Elota Avenue to MP 60, Pima County, AZ. Project Manager. Managed final design services to prepare plans, specifications and estimate for approximately 17.5 miles of pavement preservation. Pavement preservation includes milling one inch of asphalt, sealing transverse cracks, and replacing with 2.5 inches of new asphalt with chip seal and fog coat treatment. The project included upgrading existing guardrail and guardrail end treatments to meet current standards. The Scoping Letter evaluated and summarized several erosion areas but did not progress to the final design.

ADOT, SR 95 and Mohave Road Intersection (MP 142), Colorado River Indian Tribe, Parker, AZ. Assistant Project Manager and QA/QC. The ADOT Yuma District has requested pre-design services to realign and construct a 1.5-mile arterial approach and a roundabout to replace the existing SR 95 and Mohave Road intersection (MP 142). The goal of the project is to determine the preferred intersection configuration by preparing a Project Assessment Report (PAR).

ADOT, Avenue 28E @ County 9th Street - Salinity Canal Bridge Replacement, Yuma County, AZ. Project Manager. Ardurra completed the topographic survey and final design for rehabilitating the single-span Salinity Canal Bridge. Design elements required in conjunction with bridge replacement include horizontal alignment, vertical profile for roadway approaches and bridge deck, structural design, pavement structural section design, signing, marking, traffic control, and development of a construction schedule compatible with agriculture and harvest trucking operations.

JEFF PISHA, PE
ROADWAY

YRS OF EXPERIENCE (FIRM | TOTAL)
<1 | 30

REGISTRATION(S)

Professional Engineer AZ #28940
Professional Engineer IL #062054984
Professional Engineer IN #PE10809439
Professional Engineer MN #52803
Professional Engineer WI # 47332
Professional Traffic Operations Engineer #3637

EDUCATION
BS, Civil Engineering Bradley University

CORPORATE TITLE/ RESPONSIBILITIES
Transportation Group Leader: No corporate responsiblities

VALUE TO ADOT
- Expertise in innovative roadway geometric design.
- Successfully delivered over 33 DOT and LPA federally funded projects.

PROFILE SUMMARY

Jeff has a multi-faceted transportation background that includes managerial and technical experience on a variety of location and final design transportation projects. He has handled the crucial tasks of environmental review, project design, funding, governmental approval, and public involvement for his clients. His projects have included resurfacing, reconstruction, and new rural, urban, and interstate roadways. He has served in all aspects of the project development process from authoring location design reports, roadway geometric design, preparation of contract plans, writing of specifications, and inter-agency coordination between FHWA, DOT, Tollway, regulatory agencies, and local municipalities. He has conducted various types of meetings to fulfill the public involvement criteria ranging from public informational meetings to public hearings.

PROFESSIONAL EXPERIENCE

Illinois Department of Transportation (IDOT), Illinois Route 31, Illinois Route 176 to Illinois Route 120, McHenry County, IL. Project Manager for the Contract Plan preparation for the improvement of Illinois Route 31 from Illinois Route 176 to Illinois Route 120, a distance of approximately 8 miles. The scope of work includes reconstruction of the roadway to add lanes from a two-lane undivided cross-section to two lanes in each direction with a 30-foot landscaped median. The project also included a shared-use path along the east side of the roadway and a sidewalk along the west side. Extensive ROW acquisition was needed along the corridor for these improvements and several permits, including a USACE 404 permit for impacts to jurisdictional wetlands. Structural work included a bridge replacement, numerous retaining walls, and a new longitudinal culvert along the corridor. The project involved extensive environmental mitigation, including tree replacements and a stream relocation. Responsibilities include oversight of the contract plan development, cost estimates, and overall management of the interdisciplinary team.

Illinois Department of Transportation, District 2, US Highway 30, Whiteside County, IL. Project Manager responsible for leading a team of consultants, in cooperation with the IDOT District 2 and the Federal Highway Administration, to complete an Environmental Impact Statement and Preliminary Design for a major improvement project along the Lincoln Highway (US Route 30) in Whiteside County, Illinois. The project corridor was approximately 25 miles long and 10 miles wide, extending from Illinois Route 136 near Fulton to Illinois Route 40 in Rock Falls. Responsibilities included preparing 20 intersection design studies, a preliminary plan and profiles for three alignment alternatives, and preliminary cost estimates.

Illinois Department of Transportation, Elgin O'Hare Expressway (Eastern Extension), District 1, DuPage County, IL. The Elgin O'Hare Bypass is a $3.6 billion highway that will provide access to Chicago O'Hare airport from the west. The airport's expansion plans include the development of a new western terminal, which the highway will serve. Design Coordination Manager for the project's Tier One Environmental Impact Study (EIS) on behalf of the Illinois Department of Transportation, assuring the project's conformance to Context Sensitive Solutions (CSS) policies. Responsibilities included coordinating the internal reviews of the various contracts, geometric plan reviews, and QA/QC at the major milestone submittals.

Illinois Department of Transportation, Illinois Tollway, City of Marengo, Illinois Route 23 at Jane Addams Memorial Tollway (I-90) Interchange, Marengo, IL. Project Manager for the Conceptual Design Phase I Study and Phase II Contract Plans for constructing a new interchange at Illinois Route 23 and I-90 in Marengo, McHenry County, Illinois. The project included reconstruction of Illinois Route 23 from a two-lane highway to a three-lane highway, new interchange ramps with roundabouts at the ramp intersections along Illinois Route 23, all electronic tolling plazas, reconstruction of the Illinois Route 23/Harmony Road intersection from a stop-controlled intersection to a roundabout, coordination with utility agencies having facilities in the project vicinity, drainage requirements for the interchange, natural resource preservation, and ROW acquisition documents. The estimated construction cost for the project was $25M. Scope of work for Conceptual Design Phase I (30% design services) included the preparation of a Concept Design Report, together with utility documents in accordance with the requirements of the latest edition of the Tollway's Design Section Engineer's Manual. Phase II design services included the preparation of contract plans, cost estimates, and specifications. Responsibilities included analyzing, evaluating, and developing several interchange configurations, preparing a feasibility study, and overseeing the preparation of the Phase II Contract Plans.

Illinois Tollway, Central Tri-State (I-294) at Irving Park Road (IL 19) Interchange Feasibility Study, Schiller Park, IL. Project Engineer for the Feasibility Study to investigate providing full access to the existing partial access interchange at the Central Tri-State (CTS) Tollway and Irving Park Road. The current interchange includes access to and from the north only, and additional ramps were investigated to complete the interchange and provide access to and from the south. Options included providing the ramps at IL 19 and further to the south to tie into Mannheim Road (US Route 12/20/45) in the vicinity of the O'Hare Oasis, which was removed as part of the ongoing reconstruction of the CTS. The Study included traffic analyses, identification and evaluation of alternatives, stakeholder and public involvement, concept geometrics, and a Feasibility Study Report. Responsibilities included overseeing the development and evaluation of interchange alternatives and the Feasibility Study Report.

Illinois Tollway, Ronald Reagan Memorial Tollway (I-88) from US Route 30 to US Route 52, Lee and Whiteside Counties, IL. Design task manager on this Phase II engineering project. The project consisted of the Phase II plan preparation of contract plans, cost estimates, and specifications for the rehabilitation of the Reagan Memorial Tollway (I-88) MP 44.2 (US Route 30) to M.P. 55.1 (US Route 52). Responsibilities consisted of the oversight of the preparation of the maintenance of traffic plans for the entire project corridor, pavement marking and signing plans and the reconstruction of the ramps at the I-88 and IL 26 interchange, wetland delineations and report, and constructability reviews.

Parsons Brinckerhoff, Inc., ILLIANA Expressway, Will County, IL. IDOT and the Indiana Department of Transportation, along with the Federal Highway Administration, were the joint lead agencies for the evaluation of a potential transportation corridor connecting I-55 in Illinois to I-65 in Indiana. The Illiana Corridor evaluation was a tiered Environmental Impact Statement (EIS). The Tier One EIS evaluated potential corridors to determine the alternative that overall has the best balance of avoiding social and environmental impacts, providing transportation benefits, and incorporating community goals. Beginning in 2011, over 100 alternative concepts were developed for the Illiana study. Through stakeholder involvement, resource agency coordination, and project evaluations, the number of alternatives was reduced to three Build Alternatives, in addition to the No-Action Alternative. The Build Alternatives ranged in length from 47 to 51 miles and were compared based on several key evaluation factors. Served as the Project Manager as a subconsultant for the Tier Two EIS. Responsibilities during Tier Two included the preparation of interchange-type studies for a variety of different alternatives at the Illiana and I-57 interchange, preparing an Access Justification Report, and preparing an Interchange Design Study for the preferred interchange type.

Will County Division of Transportation, Laraway Road, Cedar Road to LaGrange Road, Frankfort and New Lenox, IL. Deputy Project Manager for a Phase I Study to improve Laraway Road from Cedar Road to LaGrange Road in the Villages of New Lenox and Frankfort. The scope of work includes the reconstruction and widening of Laraway Road from a two-lane rural roadway to a four-lane urban cross-section with a grassed barrier median. Other scope items include intersection improvements, sidewalk and bike path provisions, and noise abatement walls. This project will utilize federal funding, and as such, coordination is ongoing with the IDOT(IDOT) and the Federal Highway Administration (FHWA). Phase I study is following Federal guidelines and is being documented via a Categorical Exclusion Project Development Report (PDR) and a Drainage Study. Stakeholder involvement activities, including local agency meetings, a public meeting, and a public hearing, are also included. Responsibilities included oversight of the Phase I plans, development of the Project Development Report, cost estimates, and IDOT and Will County coordination.

McHenry County Division of Transportation, Miller Road, Illinois 31 to River Road, McHenry County, IL. Project Manager on this Phase I Study and Phase II Contract Plans for improvements to Miller Road from Illinois Route 31 to River Road. Improvements along Miller Road included reconstructing from a three-lane to a five-lane section along with auxiliary turn lanes. Miller Road was realigned to improve the roadway's horizontal geometry. Improvements also included additional turn lanes on Illinois Route 31, Green Street, and the North River Road intersecting streets. Additionally, a new Miller Road bridge structure over the Fox River was constructed adjacent to the existing structure to accommodate the proposed improvements. The total combined length of improvements was 3.25 miles. Responsibilities included overseeing the preparation of the Project Development Report and developing the contract plans and specifications.

McHenry County Division of Transportation, Johnsburg Road, Illinois Route 31 to Chapel Hill Road, McHenry County, IL. Project Manager for a Phase I Study and Phase II Contract Plans for McHenry County Division of Transportation to improve Johnsburg Road from Illinois Route 31 to Chapel Hill Road and to three intersecting streets. This CMAQ and ITEP-funded project involved widening and resurfacing of Johnsburg Road to improve the capacity and level of service for the intersections. Improvements were completed on Riverside Drive, Spring Grove Road, and Chapel Hill Road intersecting streets. Improvements encompassed widening to provide intersection channelization and traffic signals and adding a continuous third lane to function as a median/left turn lane. The intersecting streets were widened to provide channelization at their intersections with Johnsburg Road. Responsible for managing the development of alternate geometric studies for the Johnsburg Road/Chapel Hill intersection. Alternates included a significant realignment, maintaining existing geometry, and a roundabout. The alternates were evaluated based on capacity improvements, ROW impacts, costs, and public support. Jeff led the public coordination effort, which included two open house public meetings and a public hearing, where a roundabout was the preferred alternative. Responsible also for managing the preparation of contract plans, specifications, and estimates, which included the development of complex maintenance-of-traffic plans, removal plans, plans and profiles, drainage and utilities plans and profiles, intersection grading plans, cross sections, pavement marking, and signing, lighting, and traffic signals.

McHenry County Division of Transportation, Illinois Route 31 at Illinois Route 120, McHenry, IL. Project Manager a Phase I Study and Phase II Contract Plans for improving the Illinois Route 31 at Illinois Route 120 intersection. The Phase I Study included preparing three intersection design studies, a location drainage study, public involvement, and a project development report. Phase II Contract Plans encompassed the preparation of detailed maintenance-of-traffic plans, roadway plans and profiles, jointing plans, intersection lighting, structure widening, drainage and utilities, cross sections, and three traffic signals. Responsibilities included overseeing the preparation of the Project Development Report and developing the contract plans and specifications.

RAJ SHAH, PE
DRAINAGE

YRS OF EXPERIENCE (FIRM | TOTAL)
14 | 34

REGISTRATION(S)
Professional Engineer AZ #27556

EDUCATION
BS, Civil Engineering Arizona State University

CORPORATE TITLE/ RESPONSIBILITIES
Drainage Group Leader: No corporate responsiblities

VALUE TO ADOT
- ADOT Project Experience
- Hydrology and Hydraulics design capabilities
- More than 10 bank stabilization design experience in State
- Scour and Sediment Transport
- Final Design and Construction Plan experience

PROFILE SUMMARY

Raj has more than 33 years of predesign, final design, and post-design stormwater experience and has completed more than 160 projects throughout Maricopa County. Prior to joining Ardurra, he served as a Flood Control District of Maricopa County (FCDMC) PM for 10 years. His expertise includes drainage design, area drainage master studies/plans (ADMS/P), stormwater, hydrology/hydraulics, flood hazard mitigation, LID implementation, and Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR) submittals. Raj will perform hydrologic stormwater analysis, establish catch basin locations, complete storm drain hydraulics, and determine retention basin volumes. Raj is recognized for optimizing the detention basin design to limit the footprint and allow maximum usable property to remain. He encourages innovative and cost-effective solutions for all stormwater designs, including using various 2D and 3D modeling tools to analyze the unique drainage characteristics of each project site/corridor.

PROFESSIONAL EXPERIENCE

ADOT, SR 188 Scour Mitigation design and Pavement Preservation, Globe, AZ. Drainage Engineer. The ADOT Globe District requested Ardurra to provide survey, drainage analysis, erosion protection, culvert improvements, and pavement preservation design services for SR 188 at MP 254 and MP 256-257. Existing culvert crossings of SR 188 are of insufficient capacity, such that during large storm events, the flow overtops the roadway. Ardurra's analysis identified that the preferred solution is to replace existing corrugated metal pipes (CMPs) with two new reinforced concrete box culverts (RCBCs) with sufficient capacity to eliminate roadway overtopping. Ardurra provided watershed drainage analysis, RCBC hydraulic design, survey, base mapping, traffic control, erosion control, RCBC outlet protection, and special design details. Project improvements include mill and overlay the existing pavement, replace guardrail, replace two down drains and reconstructing gabion channel lining. The final design includes construction documents, special provisions, cost estimate, and SWPPP.

ADOT, SR 303L, Peoria Avenue to Mountain View Boulevard, Surprise, AZ. Drainage Engineer. Ardurra completed the final design for a six-lane divided urban freeway and two diamond TIs. The final design accounted for the ultimate (4+1) lane configuration. Final design services included project management, roadway geometrics, off-site hydrology, on-site hydraulics, survey, ROW delineation, utility relocation coordination, public involvement, and post-design. The construction phasing plan maintained traffic on the existing two-lane roadway concurrent with freeway construction. Our team received perfect scores of "5" on ADOT's ECS Evaluation Form. Support project design features included lighting, traffic signals, ITS/FMS, noise walls, and agency coordination.

ADOT, US60/Bell Road Traffic Interchange Design/Build. Surprise, AZ. Drainage Engineer. Ardurra provided design and construction services to construct a new Bell Road bridge over US 60 and the BNSF railroad using Design/Build project delivery. The new grade-separated interchange eliminates the at-grade BNSF Railway crossing, reduces congestion, and continues connectivity between US 60 and Bell. Our services included developing alternative technical concepts (ATCs), identifying utility relocation alignments, and creating utility construction phases compatible with a design-build construction schedule. Ardurra's team identified utility conflicts, conducted weekly coordination meetings, and reviewed relocation plans.

ADOT, I-8/Araby Rd TI Reconstruction. Yuma, AZ. Drainage Engineer. Ardurra provided the final design to reconstruct the existing signalized diamond interchange into two new roundabouts. Final design services include project management, roadway geometrics, off-site hydrology, on-site hydraulics, survey, ROW delineation, and utility relocation coordination. Roundabout improvements required reconnecting existing crossroads, ramps, frontage roads, approaches, and drainage improvements. Construction was divided into two phasing plans to accommodate commercial truck volumes and maintain local traffic on existing streets and frontage roads. Support project design features included supplemental survey, lighting, traffic signals, ITS/FMS, and agency coordination.

ADOT, I-10/395th Ave TI, Tonopah, AZ. Drainage Engineer. Ardurra completed the roadway geometric design for a new tight diamond TI. Key project design features included realigning 395th Ave to a perpendicular crossing over I-10 to accommodate the ultimate I-10 configuration. Support features included cross-street design, MOT/construction sequence to maintain existing crossroad traffic at all times, utility relocations, FHWA coordination, Bridge Selection Report, and ROW delineation. Construction documents were developed to comply with ADOT design standards and specifications. Project features included urban freeway TI, urban arterial, on/off ramps, bridge overpass, temporary crossovers, traffic signals, complex storm drain, agency coordination, utility coordination, ROW delineation, and final design.

ADOT, Ave 28E @ County 9th St – Salinity Canal Bridge Replacement. Wellton, AZ. Drainage Engineer. Ardurra completed the topographic survey and final design to rehabilitate the single-span Salinity Canal Bridge. Our team prepared plans, specifications, and estimates for all work needed for full bridge rehabilitation. Design elements required in conjunction with bridge replacement include horizontal alignment, vertical profile for roadway approaches and bridge deck, structural design, pavement structural section design, signing, marking, traffic control, and development of a construction schedule compatible with agriculture and harvest trucking operations.

ADOT, Baffert Drive to Nogales High School, Nogales. AZ. Drainage Engineer. Ardurra provided topographic survey, predesign, and final design services to improve pedestrian and bicycle connectivity within the City of Nogales by installing a 10-ft wide asphalt multi-use pathway (MUP) along Grand Avenue and Frank Reed Road (formally Apache Boulevard). Design elements required in conjunction with pedestrian and bicycle improvements include Developing new horizontal geometric alignment and vertical profile for the proposed MUP, upgrading pedestrian facilities to meet Americans with Disabilities Act (ADA) design guidelines, analyzing existing drainage patterns and facilities, identifying new drainage facilities compatible with new MUP to maintain existing drainage patterns and summarize in a Drainage Report, and new signing and pavement markings.

ADOT, US 95 & Dome Valley Rd Intersection Improvements. Yuma, AZ. Drainage Engineer. Ardurra provided project management, survey, roadway and drainage design, and clearance coordination for this ADOT Project Development On-Call task for pre-design, final design, and post-design phases to add dedicated right and left turn lanes from US 95 to Dome Valley Road. Our design team ensured compliance with ADOT and FHWA design guidelines and standards. The predesign phase included a Scoping Letter (SL) with concept plans (30%). The final design included Stage III (60%), Stage IV (95%), Stage V (100%), and final sealed plans, special provisions, and Engineer's Opinion of Probable Cost (OPC).

ADOT, Juan Sanchez Boulevard: 10th Avenue to Avenue E. Yuma, AZ. Drainage Engineer. Ardurra provided predesign, final design, and post-design civil engineering services to construct approximately three miles of pavement preservation along US95 (Juan Sanchez Boulevard). Improvements included ground-in rumble strips, fog coat and blotter material, pavement markings, and other ancillary work.

ADOT, SR 179, I-17 to Red Rock Vista. Yuma, AZ. Drainage Engineer. Ardurra provided predesign, final design, and post-design civil engineering services to construct approximately six miles of pavement preservation along SR179. This project included milling and replace the existing pavement along SR179, sealing transverse cracks and fog and blotter coat on the shoulders, and upgrading existing guardrail end terminals to current standards.

ADOT, Wellton Mohawk Canal Bridges. Buckeye, AZ. Drainage Engineer. Ardurra provided predesign and final design for rehabilitating two bridges in Yuma County. Project tasks for the Wellton Mohawk Canal Bridge include removal and reconstruction of the bridge superstructure and north and south abutment caps, new raised abutment cap elevations, raised superstructure fixed ends, replacement of existing neoprene pads with elastomeric bearing pads, replacement of existing wing walls, grading improvements, new roadway approaches, and removal and replacement of existing concrete barrier. The Mohawk Canal Bridge project tasks include removing and replacing wing walls with new retaining structures, removing the deck and replacing, replacing steel bearing improvements, and new roadway approaches.

ADOT, SR 89 / Paulden Turn Lanes. Paulden, AZ. Drainage Engineer. PA provided initial and final PAs to widen SR 89 and add NB and SB turn lanes on on/off-ramps separating through and turning movements. The intersections were channelized with raised curb and gutter to control access. The scope also included a full-width mill and replacement of existing pavement, installation of new pavement markings, signage, and drainage improvements.

FCDMC, Skunk Creek at Peoria Sports Complex, Maricopa County, AZ. Responsible for in-house design of 1.5 miles of drainage channel using grouted riprap. The design included toe-down depth calculations, a review of HEC-II analysis to calculate channel freeboard, velocity, width, and depth, and construction special provisions and cost estimates.

FCDMC, Salt River Bank Protection, McClintock to Mill Avenue, Maricopa County, AZ. Served as a Project Engineer responsible for reviewing design plans for 3.5 miles of channel bank protection. The project design included a review of toe-down calculations, including local scour, general scour, armoring depth, bridge pier scour, contraction scour, construction plans, and special provisions for the entire project. Reviewing the proposed and existing HEC-2 model was part of this project. Complex modeling of proposed freeway bridge piers and bridge piers over Indian Bend Wash was included in this project.

City of Peoria, Beardsley Road Channel, Peoria, AZ. Project Manager. Ardurra recently completed a study and final design of the Beardsley Road Channel Improvements project. These improvements reduced maintenance, improved aesthetics, and conveyed 100-year flows. Design tasks included hydrology/hydraulic modeling, channel alternative analyses, permitting, survey, utility coordination, public involvement, and cost estimates.

ARMANDO ORTEGA, PE
GEOTECH

YRS OF EXPERIENCE (FIRM | TOTAL)
27 | 12

REGISTRATION(S)

Professional Engineer AZ #39511

CERTIFICATIONS

National Highway Institute, Subsurface Investigation, October 1998

National Highway Institute, Techniques for Pavement Rehabilitation, October 2000

National Highway Institute, LRFD for Highway Bridges Substructures and Earth Retaining Substructures, June 2007

EDUCATION

BS, Civil Engineering Arizona State University

CORPORATE TITLE/ RESPONSIBILITIES

Principal of Atek: Responsiblities

VALUE TO ADOT

- Experience with similar projects involving remediation of failed roadway due to runoff after fire.

PROFILE SUMMARY

Armando has over 27 years of experience in geotechnical engineering, including design, construction, and inspection of roadways/highways, bridges, earth and flood retaining structures, sports, energy, educational, and residential developments. His responsibilities ranged from financial and technical management of regional and department units to performing and supervising field and laboratory materials testing, geotechnical engineering, and special inspections. His design proficiency includes shallow and deep foundations, dynamic soil mechanics, liquefaction analysis, slope stability, levee design and evaluation, rock anchors, and buried pipe design. Armando has performed numerous LRFD shallow and deep foundation designs throughout Arizona. Additionally, Armando has performed pavement and geotechnical design for numerous public agencies, including various state highway projects throughout Arizona, including several large urban freeways in Maricopa County. His involvement in pavement design includes structural section design, construction material specifications, inspection and testing, and mix design review for both rigid and flexible pavements.

PROFESSIONAL EXPERIENCE

ADOT, State Highway Swift Trail (SR 366), Frye Fire and Flooding Damage Project-Level Repairs (F0191 01D), Graham County, AZ. The project consists of roadway improvements along State Route 366 located within Graham County, Arizona. SR-366 Swift Trail alignment was severely damaged by excessive runoff from storm events following the “Frye Fire” (June 2017) involving a large area of the Mt. Graham watershed. During the storm runoff, culverts were plugged with erosional detritus that caused water to breach the culverts and flow across the highway. As a result, sections of roadway embankments experience erosional undercutting of the pavement section. Previously implemented slope protection measures ceased functioning as designed due to the erosion of the soil and bedrock cut slopes, soil/mudslides, and localized rockfall events, respectively. This project includes improving the culverts and limited repairs of the existing asphaltic pavement between mileposts 121 and 139. The project’s scope is to perform a geotechnical study, geotechnical design, a geological evaluation of the anchored rockfall system, and pavement design for improvements. Armando was the lead geotechnical engineer and project manager on the project.

BIA, Fresnal Canyon Wash Bridge-BIA Bridge H662, Tohono O’odham Nation, AZ. The project involves designing a structural crossing to replace the BIA Bridge H662 located in the Baboquivari District within the Tohono O’odham Nation (TON). The previous crossing structure was washed out during heavy rain events and is structurally unsound and obsolete. The existing crossing consisted of four corrugated metal pipes approximately 60 inches in diameter with a gravel road over the culverts. During heavy rains and flooding periods, the wash overflows, making it difficult for the community members to cross the 80-foot-wide wash. Both spread footings and drilled shafts were analyzed as alternatives for supporting the new bridge; due to the considerable flow in the wash and corresponding scour, the final design consisted of a drilled pier foundation single-span bridge. Armando was the lead geotechnical engineer and project manager on the project.

ADOT, Colcord Road Bridge - Gordon Canyon (T0087 01C), Gila County, AZ. The project involves replacing the existing Colcord Road bridge over the Gordon Canyon, located approximately twenty-five miles east of Payson in Gila County, Arizona. The bridge foundations were failing due to scour from increased runoff. The project included the removal of the existing bridge deck and the construction of a new fifty-one-foot-long bridge supported on shallow spread footings. Additionally, the project will include constructing a new three-sided box culvert located approximately one hundred and seventy feet north of the bridge to provide detour traffic access across Gordon Canyon during construction. Armando was the lead geotechnical engineer and project manager on the project.

ADOT, Nogales-Tucson Highway, I-19, EL Toro Road, AZ. The project rehabilitates the existing north and southbound bridge decks of I-19 at the EL Toro Road Overpass (Milepost 45.88) in Sahuarita, Arizona. The roadway aspects of the project consist of three parts: widening the southbound lanes of I-19 to the inside, constructing a detour road, and connecting the detour road to the northbound lanes of I-19. The foundation aspect of this project consists of widening the southbound bridge to support two additional lanes of traffic during construction, including the design of additional drilled pier-supported foundations. Armando was the lead geotechnical engineer and project manager on the project.

ADOT, SR 303L, US 60 to Happy Valley parkway Design Build, AZ. The project consisted of approximately six miles of roadway improvements along SR 303L between US 60 and Happy Valley Road in Peoria, Arizona. The improvements included sound walls, HOV lane, and retention basin excavations. Armando was the lead geotechnical engineer and project manager on the project.

ADOT, SR 202L Red Mountain Freeway: SR101L TI-Broadway Road Design-Build, AZ. The project comprised 19 miles of improvements to the Red Mountain Freeway, with 13 miles of inside widening to accommodate a new HOV lane in both directions. Existing subgrade failure in four areas required full-width roadway removal and replacement. Additionally, deep soil mixing was utilized to mitigate the future roadway settlement. The final six miles constructed the addition of an exterior General Purpose Lane (GPL). The GPL work included the widening of four existing traffic interchanges, ramp removal and replacement to accommodate the new geometry, sound walls, retaining walls, grading, and PCCP placement. Armando was the lead geotechnical engineer and project manager on the project.

ADOT, US 60 (Grand Avenue) / Thunderbird Road, AZ. The project involves realigning Thunderbird Road to curve toward US 60 and connect at the existing US 60/Thompson Ranch Road intersection. The roadway improvements include changes to the alignment and footprint of Thunderbird Road, Thompson Ranch Road and the frontage road. Existing culverts required widening and construction of new wing walls. Armando was the lead geotechnical engineer and project manager on the project.

ADOT, SR 202L (Superstition Freeway) / SR 202L (Santan Freeway) Traffic Interchange System, Mesa, AZ. Armando served as the Geotechnical Department Manager overseeing the administration of both Phases 1 and 2 of design. The contract included geotechnical design of all aspects of the traffic interchange, including foundations, pavements, walls, and drainage. These tasks included coordinating with ADOT engineers and several private design consulting firms. Armando was the geotechnical department manager and principal in charge during the project.

ADOT, I-10 and SR 202L System Traffic Interchange, Maricopa County, AZ. This project constructed a four-level freeway system interchange with fully directional ramps to and from the existing Interstate-10 and the proposed SR 202L. Armando performed the field engineering, assisted with the geotechnical analysis of the roadway and foundations reports, and performed and analyzed a demonstration shaft. Additionally, Armando created and delivered a proposed design package to ADOT. The plan offered pavement design for several pavement segments, including rigid, flexible, and temporary roadways. The design package also included construction material specifications and a cost estimate. All design efforts were successfully coordinated with ADOT pavement engineers for review and approval. Consequently, this project became the first rigid-pavement design created by a consultant for ADOT.

ADOT, SR 202L and 56th Street to Kyrene Road, Urban Freeway, Maricopa County, AZ. This project constructed several miles of urban freeway comprised of three lanes in each direction, several exit ramps, and urban roadways. Armando designed and submitted the design package to the ADOT. The plan included the pavement design for several pavement segments, including rigid, flexible, and temporary roadways. The design package also included construction material specifications and a cost estimate. All design efforts were successfully coordinated with ADOT pavement engineers for review and approval.

From: ADOT Business Engagement and Compliance Office
To: mtnmarketing
Cc: ContractorCompliance@azdot.gov
Subject: Bidders List for Ardurra Group, Inc.
Date: Friday, September 20, 2024 11:44:24 AM

Ardurra Group, Inc., AZUTRACS Number: 10953 has submitted a Bidder/Proposer list for **2025-005** on 09/20/2024 at 11:44 AM MST (UTC - 07:00).

Bidders/Proposers for this firm include:

Firm Name	AZUTRACS #	Expiration Date	Email Address	Phone Number
ATEK Engineering Consultants, LLC.	11395	08/31/2025	aortega@atekec.com	480-659-8065
Cooper Aerial	16537	03/27/2027	Phil@cooperaerial.com	602-678-5111
Del Sol Group, LLC	10261	04/06/2025	nsanders@groupdelsol.com	480-642-9845

CONSULTANT INFORMATION PAGES (CIP)

CONTRACT NO.: 2025-005

CONTACT PERSON: Gary Fromm, PE

E-MAIL ADDRESS: gfromm@ardurra.com

TITLE: Transportation Practice Director

CONSULTANT FIRM: Ardurra Group, Inc.

ADDRESS: 1001 N. Central Avenue, Suite 900

CITY, STATE, ZIP: Phoenix, AZ 85004

TELEPHONE: 602.263.1177

FAX NUMBER: N/A

UNIQUE ENTITY ID# (FROM SAM WEBSITE): KDJLNJ742G43

ADOT CERTIFIED DBE FIRM? (YES/NO) No

SUBCONSULTANT(S):	TYPE OF WORK	ADOT CERTIFIED DBE FIRM (YES/NO)
ATEK Engineering Consultants, LLC	Geotech, Material Testing, Subsurface	Yes
Del Sol Group, LLC	Environmental & Related Services	Yes
Cooper Aerial	Survey, Mapping, Aerial	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:	ATEK Engineering Consultants, LLC
CONTACT PERSON:	Armando Ortega, PE
E-MAIL ADDRESS:	aortega@atekec.com
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ADDRESS:	111 S. Weber Drive
	Suite 1
CITY, STATE ZIP:	Chandler, AZ 85226
TELEPHONE:	480.659.8065
FAX NUMBER:	480.656.9658
UNIQUE ENTITY ID #:	UM1HBJNBCML7

SUBCONSULTANT FIRM NAME:	Del Sol Group, LLC
CONTACT PERSON:	Noelle Sanders
E-MAIL ADDRESS:	nsanders@groupdelsol.com
TITLE:	Environmental Director
ADDRESS:	319 E. Palm Lane
CITY, STATE ZIP:	Phoenix, Arizona 85004
TELEPHONE:	480.642.9845
FAX NUMBER:	N/A
UNIQUE ENTITY ID #:	HD1VLFRJ4CD6

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.

SUBCONSULTANT(S) TABLE:

SUBCONSULTANT FIRM NAME:	Cooper Aerial
CONTACT PERSON:	Phil Gershkovich
E-MAIL ADDRESS:	phil@cooperaerial.com
TITLE:	Principal
ADDRESS:	11402 N. Cave Creek Road
CITY, STATE ZIP:	Phoenix, AZ 85020
TELEPHONE:	602.678.5111
FAX NUMBER:	602.678.5228
UNIQUE ENTITY ID #:	ZKNMTNFPGM57

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

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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	September 20, 2024 Date
Gary Fromm, PE Printed Name	Transportation Practice Director 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
N/A	Supplemental Services Disclosure Form (Required for Supplemental Services Type Contracts ONLY)

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