

## STATEMENT OF WORK

- Pima County, Arizona
- Aerospace Research Campus (ARC) Rail Expansion and Bypass
- Consolidated Rail Infrastructure and Safety Improvements (*contained in Federal Register, Vol. 83, No. 35; February 21, 2018*)

The ARC Rail Expansion Project's Primary Point of Contact is Greg Hitt, Pima County.

### 1 Background

Pima County, Arizona, in partnership with other government and private partners, is applying for funding through the Consolidated Rail Infrastructure and Safety Improvements (CRISI) Track 1 – Planning Grant. If awarded, Pima County will study the feasibility of constructing a new railway bypass at Tucson, Arizona. The proposed bypass would divert the majority of trains that use Union Pacific Railroad's (UP) Nogales Subdivision onto an ideal route that traces around the most populated areas of Tucson, rather than driving through them. Presently, the Nogales Subdivision routes trains directly through economically and socially disadvantaged residential neighborhoods, runs immediately adjacent to two elementary schools, and crosses 20 city streets, many with heavy traffic loads. The bypass, known as the ARC Rail Expansion, would mitigate residential disruption and further allow areas immediately south of Tucson to be opened to rail-served industrial development.

The proposed study would enable Pima County, UP, and state and local stakeholders to determine the conceptual economic, engineering, and environmental feasibility for construction of the railway bypass would assess environmental, economic, public, and railway operations and industrial development benefits and impacts. The study would also estimate capital and operations and maintenance costs, and identify potential public (federal, state, local) and private funding sources to construct the proposed bypass.

### 2 Objective

#### 2.1 Underlying Transportation Problem

Pima County and the supporting jurisdictions contained within the Tucson Metropolitan Area have long discussed ways to alleviate train conflicts with roadways, residential neighborhoods, and adjacent elementary schools on the UP Nogales Subdivision. The Nogales Subdivision connects UP's transcontinental Sunset Route at Tucson with Nogales, Arizona, where it connects with Ferromex at the U.S.-Mexican Border. (Ferromex extends deep into Mexico and serves the Mexican Ports of Guaymas, Tampico, and Lazaro Cardenas, as well as the City of Hermosillo and Mexico City, among other major urban areas and ports). UP's Sunset Route is one of four principal east-west railway routes between the Mississippi River Valley and the Pacific Coast, and the Nogales Subdivision is the principal connection between UP and Ferromex's network in north-central Mexico.

Statistics compiled by the University of Arizona's Eller College indicate that in the months of January, February, and March 2018, trains using the Nogales Subdivision, measured as northbound train crossings at Nogales, increased month over month by 32.61 percent, 16.67 percent, and 8.33 percent, respectively (<https://azmex.eller.arizona.edu/border-crossings/border-crossings-nogales-district-az-bpoe-total>). A high growth rate is forecasted to continue with the industrialization of Mexico, and Mexico's accelerating consumption of grain, animal feed, plastic pellets, refined petroleum products, and coal that are produced in the U.S. and drive Mexico's industrial, agricultural, and consumer markets.

## 2.2 Work to Be Completed

Work to be completed in this this planning effort is:

- The identification of a Purpose and Need Statement and Analysis of Alternatives, including:
  - Identification of a preferred alignment and identification of a No-Build alternative
  - The No-Build alternative will include some grade separation projects that would otherwise would be built if the ARC Project was not implemented
- Freight forecasting and market analysis (for both overhead and local industry rail traffic), and identification of the rail-served industrial area that would be developed through construction of the ARC Project
- Rail network planning, operations analysis, and operations simulation to determine impacts on the existing UP network in the Tucson Area, to identify mitigation measures if needed, and to identify the ARC Project's capacity and infrastructure requirements
- Conceptual engineering (at the 5% Design Level) and capital planning
- Environmental fatal-flaws analysis
- Operating and maintenance cost forecasts
- Capital replacement and renewal analysis
- Economic impact and benefit-cost analysis
- Stakeholder outreach and coordination
- Funding availability identification
- Coordination with UP

## 2.3 End State of the Project

This planning effort and study seek to complete a conceptual feasibility for construction of the proposed railway bypass; assess environmental, economic, public, and railway operations and industrial development impacts; estimate conceptual capital and operations and maintenance costs; and estimate potential public benefits. If the proposed study determines that the construction of a proposed railway bypass is feasible, study stakeholders would work together to implement the project.

Resulting benefits of the project would include: an increase in public health and safety by reducing rail traffic through residential neighborhoods, through the regular routes of schoolchildren attending public elementary schools, and across city streets; reduction of motor vehicle wait times, air emissions, and roadway congestion at railway/roadway at-grade crossings; reallocation of public funds to other grade-separation projects that are equally in

need of funding; and, creating economic growth and job creation in a new rail-served industrial area.

The proposed bypass and railway realignment would reduce freight train crossing frequencies at 20 of the city's at-grade highway rail crossings, where approximately 300,000 cars cross daily, leading to the reduction of local and highway road congestion, motor vehicle pollution from idling (during periods of grade crossing occupancy by trains), and pedestrian safety risks.

The potential bypass and railway realignment will also provide the opportunity to plan and limit the number of future at-grade highway rail crossings on the potential bypass route. The proposed study will seek to minimize new at-grade highway/railway crossings in order to reduce the number of motor vehicle and train interfaces. The study will consider both grade-separations and consolidation of roadways on the new route.

The study will also examine industrial development, as the potential bypass and railway realignment will open up thousands of acres of vacant land for rail-served development, expanding the region's international freight logistics opportunities. Once completed, the ARC Project will provide a significant economic benefit to Tucson, as well as Southern Arizona, and will provide ladders of opportunity and job creation.

## 2.4 Public Benefits

In summary, the planning effort will produce a number of key public benefits, such as:

- Increased public safety through the reduction of train traffic through at-grade highway and sidewalk rail crossings in economically disadvantaged areas of Tucson, especially for pedestrians walking to and from public elementary schools;
- Reduced air emissions and reductions in general air pollution through reduced idling times of motor vehicles as a result of shorter grade crossing occupancy times by trains along the original railroad route of the UP Nogales Subdivision;
- Decreased individual fuel consumption from shortened idling times of motor vehicles, due to reduced grade crossing occupancy times by trains along the original railroad route;
- Diminished surface street congestion due to reduced grade crossing occupancy times by trains along the original railroad route;
- Increased economic activity, job creation, and trade, created by new industrial development along the proposed railway bypass, and increased rail-related jobs
- Enhanced public safety initiatives through the reallocation of funds earmarked for grade-separations on this route; and,
- Created potential to redevelop the old railroad corridor using other forms of mass transit, including integrating the City of Tucson's streetcar with a new modal system, with the intent to connect the public to large employment centers, the airport, and other commercial areas in and around Downtown Tucson.

### 3 Project Location

At present, UP freight rail service operates on the UP Nogales Subdivision, which originates in Tucson, Arizona, and interchanges with Ferromex at the U.S.-Mexican Border at Nogales. The UP Nogales Subdivision divides the southern half of the City of Tucson.

The proposed railroad bypass is expected to be relocated to a U.S. Census Bureau-designated Rural Area, just south of the Tucson Metropolitan Area. The proposed alignment will run parallel to Old Vail Connection Road, within both unincorporated Pima County and partially within the incorporated limits of the City of Tucson on the south side of the city. It is estimated that approximately 91 percent of the proposed project and study area will be located in a Rural Area, and within both Arizona's 2<sup>nd</sup> and 3<sup>rd</sup> Congressional District (Rep. Martha McSally and Rep. Raul Grijavla, respectively)

### 4 Description of Work

Section 8.0 of the Project Narrative addresses the Project Management Plan (PMP) for the ARC Project, which informs the Project Team on how to develop the project work plan, budget, and schedule for the tasks listed below. The PMP also provides instructions for team organization, team decision-making, roles and responsibilities, and interaction with the FRA, as well as addressing quality assurance and quality control procedures throughout the life of the project. The below sections describe the work to be performed throughout the project, and lists the deliverables associated with each task.

The Project Point of Contact is Greg Hitt, Pima County.

#### 4.1 Task 1: Detailed Project Work Plan, Budget, and Schedule

Pima County acknowledges that work on subsequent tasks will not commence until the Detailed Project Work Plan, Budget, and Schedule has been completed, submitted to FRA, and Pima County has received approval in writing from FRA. Pima County understands the FRA will not reimburse Pima County for costs incurred in contravention of this requirement.

##### 4.1.1 Task 1 Deliverables:

- Detailed Project Work Plan, Budget, and Schedule
- Project Team Kick-off Meeting, with notes
- A Project Coordination Agreement with Union Pacific Railroad.

#### 4.2 Task 2: Planning Activities

In this task, several activities will be conducted in order to define the Purpose and Need Statement for the proposed railway bypass: to define, justify, and explain the ARC Project to the public, to affected business entities, to regulatory agencies, to elected officials, and to non-governmental organizations.

In addition, an Analysis of Alternatives will be created. Many alternatives can be screened out due to severe environmental impacts, technical unfeasibility, cost, or lack of community support. An environmental fatal-flaws analysis will then examine the alternatives for any environmental

fatal flaws, or items too cumbersome to practically overcome during planning and construction. Any alternatives that make it past the initial screening and environmental fatal flaws analysis will be refined and evaluated against the No-Build Scenario, until a Preferred Alternative is selected. Selecting the Preferred Alternative an important step in the study, as it will inform the preceding project tasks.

#### **4.2.1 Task 2 Deliverables:**

- Memorandum: Identification of Purpose and Need Statement and Analysis of Alternatives
- Memorandum: Environmental Fatal Flaws Analysis

#### **4.3 Task 3: Freight Forecasting, Market Analysis, and Industrial Development Potential Sites Analysis**

Pima County and UP will work together on Freight Forecasting, Market Analysis (for both overhead and local industry rail traffic), and Industrial Development Potential Sites Analysis. These activities are needed to predict future activity levels, projected growth, and possible development locations for future rail-served industrial clients, as well as planning locations for rail-served development that will create positive economic impacts and provide economic and employment opportunities for residents of Pima County, the state, and the region.

#### **4.3.1 Task 3 Deliverables:**

- Memorandum: Freight Forecasting, Market Analysis, and Industrial Development Potential Sites Analysis

#### **4.4 Task 4: Conceptual Engineering, Estimating, and Operations Analysis**

Rail Network Planning, Operations Analysis, and Operations Simulation are necessary to determine impacts on the existing UP network in the Tucson area and potential future capacity and infrastructure requirements for the ARC Project.

Conceptual Engineering (5% Design) and Capital Planning will be based on the Preferred Alternative, resulting in proposed alignment, typical track sections, wayside and at-grade crossing signal engineering concepts, roadway improvements, and drainage and structures needs. Conceptual Engineering will utilize UP standards, and where UP standards are not published, American Railway Engineering and Maintenance-of-Way Association (AREMA) guidelines and current practices will be utilized.

The Conceptual Engineering (CE) and Capital Planning activity will inform the “Opinion of Probable Engineer’s Estimate of Cost of Construction,” which will be inclusive of real estate acquisition costs and trackage, earthworks, structures, signaling, railway facilities, and appurtenances necessary for the bypass, commensurate with a railway line that is intended for long-term sustainable operation. Contingencies appropriate to the level of investigation will be incorporated for this study. In addition, the CE and Capital Planning activity will also inform the “Engineer’s Estimate of Probable Operating and Maintenance (O&M)” Costs and Capital Replacement and Renewal Analysis. This necessary activity will determine conceptual, cyclical

costs over the project's lifecycle, and will inform Pima County, UP, and other stakeholders of maintenance costs for the ARC Project as well as intersecting roadways.

#### **4.4.1 Task 4 Deliverables:**

- Conceptual Engineering (5% Design) Drawings
- Memorandum: Rail Network Planning, Operations Analysis, and Operations Simulation
- Memorandum: Capital and O&M Probable Costs

#### **4.5 Task 5: Economic Analysis**

The Economic Analysis section will conduct a Benefit-Cost Analysis (BCA) and an Economic Impact Analysis (EIA), using lifecycle cost of the ARC Project. In addition, the Economic Analysis will use the Freight Forecasting, Market Analysis, and Industrial Development Potential Sites Analysis to forecast public benefits of the industrial development portion of the project.

#### **4.5.1 Task 5 Deliverables:**

- Memorandum: Economic Analysis including BCA, EIA, and Industrial Development Economic Analysis

#### **4.6 Task 6: Funding Availability Assessment**

A Funding Availability Assessment will compile a list of public and private resources that Pima County and its stakeholders can use to fund the development and construction of the proposed project.

#### **4.6.1 Task 6 Deliverables:**

- Memorandum: Funding Availability Assessment

#### **4.7 Task 7: Union Pacific Railroad Support**

This task reimburses UP for labor, travel, and office expenses incurred for engineering, operating, and industrial development analysis services provided by UP throughout the study.

#### **4.7.1 Task 7 Deliverables:**

- No deliverable; UP support is needed throughout the duration of the study.

#### **4.8 Task 8: Stakeholder Outreach and Coordination**

Stakeholder outreach and coordination activity is essential to the success of the study. Pima County will solicit feedback from both the public and stakeholders in mixed groups regarding the implementation of the ARC Project, including potential constraints and funding issues.

#### **4.8.1 Task 8 Deliverables:**

- No deliverable; stakeholder outreach and coordination are needed throughout the duration of the study. Town hall meetings, open houses, charrettes, workshops, community meetings may be required to solicit input from the public and various stakeholder groups.

## 4.9 Task 9: Final Performance Report

The Final Performance Report will summarize the ARC Project's objectives, activities, outputs, outcomes, such as public benefits, and budget results. In addition, the report will summarize and analyze performance measures to determine if the projected benefit actually occurred during the analysis period. Pima County will complete the Final Performance Report within 90 days of the end of the grant's period of performance. Lessons learned and other feedback will be included in the Final Performance Report.

In addition, a Final Report, inclusive of all project memorandums developed for the study, will be organized in preparation for the FRA Final Performance Report.

### 4.9.1 Task 9 Deliverables:

- Final Report, inclusive of all project memorandums developed for the study
- FRA Final Performance Report
  - This report will be submitted within 90 days of the end of the grant's period of performance and should describe the cumulative activities of the project, including a complete description of the City of Tucson's achievements with respect to the ARC Project objectives and milestones.

## 5 Project Schedule and Deliverables

The period of performance for all work will be approximately 18 months, from January 2020 to June 2021. The deliverables associated with this Grant/Cooperative Agreement are listed below. The Grantee must complete these deliverables to FRA's satisfaction in order to be authorized for funding reimbursement and for the Project to be considered complete. A Gantt chart that illustrates the project's tasks and schedule is available on the project website (<https://webcms.pima.gov/cms/One.aspx?portalId=169&pageId=427311>).

<b><u>Task #</u></b>	<b><u>Deliverable Name</u></b>	<b><u>Related Task</u></b>	<b><u>Duration / Due Date</u></b>
<b>1</b>	<b>Development of Detailed Project Work Plan, Budget, and Schedule</b> <ul style="list-style-type: none"> <li>• Detailed Project Work Plan, Budget, and Schedule</li> <li>• Project Team Kick-off Meeting, with notes</li> <li>• A Project Coordination Agreement with Union Pacific Railroad.</li> </ul>	N/A	<ul style="list-style-type: none"> <li>• 60 days after the obligation of FRA funding</li> <li>• February 28, 2020</li> </ul>
<b>2</b>	<b>Planning Activities</b>	After Task 1	<ul style="list-style-type: none"> <li>• 120 days</li> </ul>

<u>Task #</u>	<u>Deliverable Name</u>	<u>Related Task</u>	<u>Duration / Due Date</u>
	<ul style="list-style-type: none"> <li>• Memorandum: Identification of Purpose and Need Statement and Analysis of Alternatives</li> <li>• Memorandum: Environmental Fatal Flaws Analysis</li> </ul>		<ul style="list-style-type: none"> <li>• June 26, 2020</li> </ul>
3	<p><b>Freight Forecasting, Market Analysis, and Industrial Development Potential Sites Analysis</b></p> <ul style="list-style-type: none"> <li>• Memorandum: Freight Forecasting, Market Analysis, and Industrial Development Potential Sites Analysis</li> </ul>	Concurrent with Task 2	<ul style="list-style-type: none"> <li>• 120 days / 4 months</li> <li>• June 26, 2020</li> </ul>
4	<p><b>Conceptual Engineering, Estimating, and Operations Analysis</b></p> <ul style="list-style-type: none"> <li>• Conceptual Engineering (5% Design) Drawings</li> <li>• Memorandum: Rail Network Planning, Operations Analysis, and Operations Simulation</li> <li>• Memorandum: Capital and O&amp;M Probable Costs</li> </ul>	After Tasks 2 and 3	<ul style="list-style-type: none"> <li>• 180 days / 6 months</li> <li>• December 29, 2020</li> </ul>
5	<p><b>Economic Analysis</b></p> <ul style="list-style-type: none"> <li>• Memorandum: Economic Analysis including BCA, EIA, and Industrial Development Economic Analysis</li> </ul>	After 4	<ul style="list-style-type: none"> <li>• 45 days</li> <li>• February 11, 2021</li> </ul>
6	<p><b>Funding Availability Assessment</b></p> <ul style="list-style-type: none"> <li>• Memorandum: Funding Availability Assessment</li> </ul>	After 4	<ul style="list-style-type: none"> <li>• 45 days period</li> <li>• February 11, 2021</li> </ul>

<u>Task #</u>	<u>Deliverable Name</u>	<u>Related Task</u>	<u>Duration / Due Date</u>
7	<b>Union Pacific Railroad Support</b> <ul style="list-style-type: none"> <li>No deliverable; Union Pacific Railroad provides engineering, operating, and industrial development analysis services</li> </ul>	Whole Project	<ul style="list-style-type: none"> <li>18 months</li> <li>No Deliverable</li> </ul>
8	<b>Stakeholder Outreach and Coordination</b> <ul style="list-style-type: none"> <li>No deliverable</li> </ul>	Whole Project	<ul style="list-style-type: none"> <li>18 months</li> <li>No Deliverable</li> </ul>
9	<b>Final Performance Report</b> <ul style="list-style-type: none"> <li>Final Report</li> <li>Final Performance Report</li> </ul>	<ul style="list-style-type: none"> <li>After Tasks 5 and 6</li> </ul>	<ul style="list-style-type: none"> <li>90 days</li> <li>May 12, 2021</li> </ul>

## 6 Project Estimate and Budget

The total estimated cost of the ARC Project study is \$1,336,599 for which the FRA grant may contribute up to 66 percent of the total cost, not to exceed \$880,000. Any additional expense required beyond that provided in this grant to complete the ARC Project study shall be borne by the Grantee.

### Project Estimate by Task

<b>Task #</b>	<b>Task Name</b>	<b>Total Cost</b>
1	<b>Development of Detailed Project Work Plan, Budget, and Schedule (including Project Team Kick-Off Meeting)</b>	\$25,000
2	<b>Planning Activities</b> <ul style="list-style-type: none"> <li>Identification of Purpose and Need Statement and Analysis of Alternatives</li> <li>Environmental Fatal Flaws Analysis</li> </ul>	\$290,000
3	<b>Freight Forecasting, Market Analysis, and Industrial Development Potential Sites Analysis</b>	\$95,000
4	<b>Conceptual Engineering, Estimating, and Operations Analysis</b> <ul style="list-style-type: none"> <li>Rail Network Planning, Operations Analysis, and Operations Simulation</li> </ul>	\$420,000

	<ul style="list-style-type: none"> <li>• Conceptual Engineering (5% Design) and Capital Planning</li> <li>• Operating and Maintenance Cost Forecasting</li> <li>• Capital Replacement and Renewal Analysis</li> </ul>	
5	<b>Economic Analysis</b>	\$85,000
6	<b>Funding Availability Assessment</b>	\$15,000
7	<b>Union Pacific Support</b> <ul style="list-style-type: none"> <li>• Union Pacific Railroad provides engineering, operating, and industrial development analysis services</li> </ul>	\$80,000
8	<b>Stakeholder Outreach and Coordination</b>	\$70,000
9	<b>Final Performance Report</b> <ul style="list-style-type: none"> <li>• Final Report</li> <li>• Final Performance Report</li> </ul>	\$20,000
10	<b>Fiscal and Programmatic Oversight</b> <ul style="list-style-type: none"> <li>• Reports and continuous data collection to comply with grant requirements</li> </ul>	\$236,599
<b>Total Project Cost by Task</b>		<b>\$1,336,599</b>

## Project Estimate Contributions

Funding Source	Project Contribution Amount	Percentage of Total Project Cost
FRA Grant	\$880,000	66%
Grantee (Pima County)	\$220,000 Cash \$236,599 In-Kind Personnel and Fringe	34%
<b>Total Project Cost</b>	<b>\$1,336,599</b>	<b>100%</b>

## 7 Project Coordination

The Grantee shall perform all tasks required for the ARC Project through a coordinated process, which will involve affected railroad owners, operators, and funding partners, including:

- City of Tucson

- Union Pacific Railroad
- Arizona Department of Transportation
- Federal Railroad Administration (FRA)

## 8 Project Management

The Grantee is responsible for facilitating the coordination of all activities necessary for implementation of the Project. Upon award of the Project, the Grantee will monitor and evaluate the Project's progress through regular meetings scheduled throughout the period of performance. The Applicant/Grantee will:

- Participate in a project kickoff meeting with FRA
- Complete necessary steps to hire a qualified consultant/contractor to perform required Project work
- Hold regularly scheduled Project meetings with FRA
- Inspect and approve work as it is completed
- Review and approve invoices as appropriate for completed work
- Perform Project close-out audit to ensure contractual compliance and issue close-out report
- Submit to FRA all required Project deliverables and documentation on-time and according to schedule, including periodic receipts and invoices
- Comply with all FRA Project reporting requirements, including, but not limited to:
  - Status of project by task breakdown and percent complete
  - Changes and reason for change in project's scope, schedule and/or budget
  - Description of unanticipated problems and any resolution since the immediately preceding progress report
  - Summary of work scheduled for the next progress period
  - Updated Project schedule
- Hold monthly project team meetings – i.e., Pima County, Union Pacific Railroad, Consultant Team, etc.

### 8.1 Project Management Plan

Pima County shall develop a Project Management Plan (PMP) for the scope of services awarded by the CRISI Grant. The PMP is Pima County's overarching project implementation plan that spans the entire period of the project. The PMP will describe Pima County's approved policies, practices, and procedures related to the management, planning and conceptual design for the CRISI Grant scope of work. As the project progresses, the initial PMP should be updated as needed to include any new or improved procedures. The PMP will include the following sections:

- A description of the scope of work for the Project;
- Adequate staff organization with well-defined reporting relationships, statements of functional responsibilities, job descriptions, and job qualifications;
- Organizational structures, management skills, and staffing levels required throughout the project;

- A document control procedure and recordkeeping system;
- Project Contracting – will follow state statutes and Pima County Procurement Code D29.4 for uniform and efficient contracting;
- Procedures for monitoring and controlling project costs, schedule, and scope to ensure they don't exceed or deviate from the requirements;
- Risk Management Plan identifying potential risks and methods to manage those risks as well as describing procedures for monitoring, identifying and managing future risks as they arise;
- A Change Order Procedure that includes a documented, systematic approach to handling Project scope, budget and scheduling changes;
- Quality control and quality assurance functions, programs and responsibilities for the project;
- A documented system health and safety plan for the entire project lifecycle;
- If applicable, description of required safety certifications and processes;
- Identification of required stakeholder agreements, right of way agreements, and other critical third party agreements and the process for obtaining those agreements;
- Required government actions or approvals;
- Material testing policies and procedures, if applicable to the Project; and,
- Internal plan implementation, communications, and reporting requirements.

## 8.2 Background on Pima County's Project Management Plan Guidance

The Pima County Project Management Office and the Pima County Grants Management Office will provide all project management and oversight of the grant. All projects of this nature are managed according to the Pima County Project Management Manual, which includes the Gate Process. The Gate Process are mandated milestone reviews to determine if a project has met all the required milestones and remains on target (scope, schedule and budget). The Pima County PMP manual and workflow schematic are available at Pima County's Project Management and Gate Process website, [http://webcms.pima.gov/government/project\\_management\\_office\\_pmo/](http://webcms.pima.gov/government/project_management_office_pmo/).

In addition, this manual addresses procurement of professional services, change-order management, and risk management, and provides an escalation ladder to direct issues needing resolution in a timely matter to the appropriate parties. The key purpose of the manual is to provide structure to keep projects on schedule, on budget, and within scope. **The Pima County PMP manual will be used to develop the project's PMP.**

## 8.3 Project Management Tools

Tools that will be used to manage and monitor the progress of this Project will be included in the overall Project Management structure. The following items will be set up and used to report progress:

- **Detailed Work Plan:** Listing of individual tasks identified for the execution of each phase of the work as identified in the Statement of Work of this application. The Work Plan will be monitored at-least weekly, with work progress updates provided monthly.
- **Detailed Schedule:** A detailed project schedule will be developed to monitor progress of individual tasks and milestones. The schedule will be submitted concurrently with the Work Plan. The schedule will also be monitored at-least weekly, with monthly updates.
- **Program Budget:** A detailed Project Budget will be developed, monitored weekly and an update will be provided monthly. Project Billings and reimbursement from FRA will be processed monthly.
- **Quality Control Program:** A quality assurance/quality control (QA/QC) plan for the execution of this work will be provided within 30 calendar days of initiation.
- **Document Control:** Pima County will be responsible for Document Control and providing an information exchange/ document storage application.
- **Communications and Outreach Program:** the engineering consultant will develop an Outreach and Communications program and will be responsible for providing relevant progress information for the project that is required as part of this study.