



2010 Safe Bicycle and Pedestrian Routes Plan

ADOT MPD Task Assignment 31-10
PGTD 0489
Contract # T08-49-U0001

Work Plan

Prepared by:



Prepared for:

ARIZONA DEPARTMENT OF TRANSPORTATION
CITY OF SIERRA VISTA

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1 INTRODUCTION

The Arizona Department of Transportation (ADOT), through the Planning Assistance for Rural Areas (PARA) program, awarded funding for the City of Sierra Vista Safe Bicycle and Pedestrian Routes Plan. The purpose of the PARA program is to assist counties, cities, towns, and tribal communities in rural Arizona to address a broad range of multimodal transportation planning issues, including roadway and non-motorized modes of travel.

The primary products of the City of Sierra Vista Safe Bicycle and Pedestrian Routes Plan will be:

- **A map depicting existing Sierra Vista bicycle and pedestrian routes.** The Sierra Vista Bicycle and Pedestrian Routes Map will include the existing City of Sierra Vista shared use path network, on-street bicycle lanes, and other local streets suitable for bicycles and pedestrians. The map will be designed to be easily understandable and utilized by the public and will include bicycle and pedestrian routes that connect key nodes such as schools, parks, and commercial centers.
- **Identification of needs and deficiencies of the Sierra Vista bicycle and pedestrian Routes.** These could include signalized or unsignalized pedestrian crossings, striped bicycle lanes, widened shoulders, or additional pathways/trails to establish connectivity.
- **Identification of projects that upon implementation will improve the connectivity, function, and safety of the Sierra Vista bicycle and pedestrian Routes.** The improvements will be packaged into a program of projects for near-term, mid-term, and long-term implementation. The resultant project list will serve as a guide for community development, project funding applications, and project implementation.

1.1 Study Area

The study area encompasses the urbanized portion of the City of Sierra Vista, including County enclaves, as depicted in **Figure 1**. Fort Huachuca is not included in the study area.

1.2 Study Objectives

The City of Sierra Vista Safe Bicycle and Pedestrian Routes Plan will be accomplished through completion of the following project objectives:

- Identify nodes and activity centers.
- Map a network of bicycle and pedestrian routes that connect the nodes and activity centers.
- Identify route deficiencies in terms of safety and comfort of the bicyclist and pedestrian.
- Identify improvement projects that will address the deficiencies.



- Develop planning-level estimates of probable cost for the improvements.
- Prioritize the improvements into near-term, mid-term, and long-term implementation projects.
- Develop a Final Report that includes the plan of improvements and final recommendations.

Each of these objectives is discussed in more detail below.

1. **Identify nodes and activity centers, including parks, schools, and commercial centers.** The first step in the project will be to identify where people want to walk. Activity centers may include parks, schools, and commercial centers. In addition, a key element of the study will be to identify where future activity centers may be constructed so that adequate bicycle and pedestrian facilities can be incorporated into their planning, design, and construction.
2. **Create a map depicting bicycle and pedestrian routes that connect the nodes and activity centers.** The next step is to prepare a map depicting the City of Sierra Vista Bicycle and Pedestrian Routes. Routes may include both the most direct route (e.g., shortest distance), and a route of local neighborhood streets that, while longer in distance, may be considered more comfortable for many bicyclists and pedestrians.

The City of Sierra Vista has gradually implemented a network of shared use paths. Many streets within the City have sidewalks. The City also has a small network of striped bicycle lanes. The significant shared use path system will serve as the backbone of the Sierra Vista Bicycle and Pedestrian Routes and will be supplemented with on-street routes, including local streets.

Other information may be included on the map such as schools, parks, and major commercial centers. The map will assist Sierra Vista residents and visitors identify the best way to bicycle or walk to destinations in the City. The map may include general bicycle and pedestrian safety tips and the “rules of the road.” Kimley-Horn will consult with the City on the size and format. The map may be prepared as an 11” x 17” page that is easily reproduced, or a more detailed large format fold-out map.

3. **Identify route deficiencies in terms of safety and comfort of the bicyclist and pedestrian.** The next step will be to identify barriers, obstacles, impediments, or deficiencies in the Sierra Vista Bicycle and Pedestrian Routes that can be addressed to improve safety and comfort. We anticipate a major impediment identified will be safe crossings of major roadways, such as Fry Boulevard, SR 90, and SR 92.
4. **Identify improvement projects that will address the deficiencies and improve the safety and comfort of the bicyclist and pedestrian.** Improvement projects may include those that are relatively simple to implement, as well as more complex projects that require significant planning, design, and funding. Simple projects may consist of pedestrian ramps, pedestrian countdown signals at intersections, signage, pavement markings, and striped bicycle lanes. Complex improvements may include center raised medians to provide pedestrian refuge.



5. **Develop planning-level estimates of probable cost for the improvements.** We will develop planning-level cost estimates for the identified improvements to the Sierra Vista Bicycle and Pedestrian Routes. The costs will be derived from FHWA's PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System, BIKESAFE: Bicycle Countermeasure Selection System, and our knowledge of recent bicycle and pedestrian safety improvement implementations.
6. **Prioritize the improvements into near-term, mid-term, and long-term implementation projects.** Proposed improvements will be prioritized into three categories consistent with their level of complexity, cost, level of coordination required, and implementation time frame. Simple improvements are those that can be implemented within a relatively short time frame (1 to 5 years) and at a relatively minimal cost. Moderately complex improvements may require a longer time to implement (6 to 10 years) and a higher level of coordination and funding. Complex improvements are those that may require several years (10 years or more) to implement because of environmental, budget, or other coordination constraints.
7. **Develop a Final Report that includes the plan of improvements and final recommendations.** The Plan will provide City staff with a planning document that can be used to help secure funding for implementation of the multimodal improvements. The Final Report will contain the Sierra Vista Bicycle and Pedestrian Routes Map, recommended improvements to these routes, and recommendations to improve public awareness of bicycling and pedestrian safety.

1.3 Technical Advisory Committee (TAC)

A TAC has been established to participate in the study consisting of the following agencies, departments, and jurisdictions:

- City of Sierra Vista
- Cochise County
- Fort Huachuca
- Southeastern Arizona Governmental Organization (SEAGO)
- ADOT, Multimodal Planning Division
- ADOT, Communication and Community Partnerships
- ADOT, Safford District
- Arizona State Land Department

TAC meetings will be held at key milestones and/or decision points during the study. The purpose of the meetings will be to communicate study progress, provide opportunities for discussion, and present study documents (Scope of Work, Working Papers, Summary Reports, and Final Reports) for review and comment. Milestone points at which TAC meetings will be held are identified in Tasks 1 through 7.

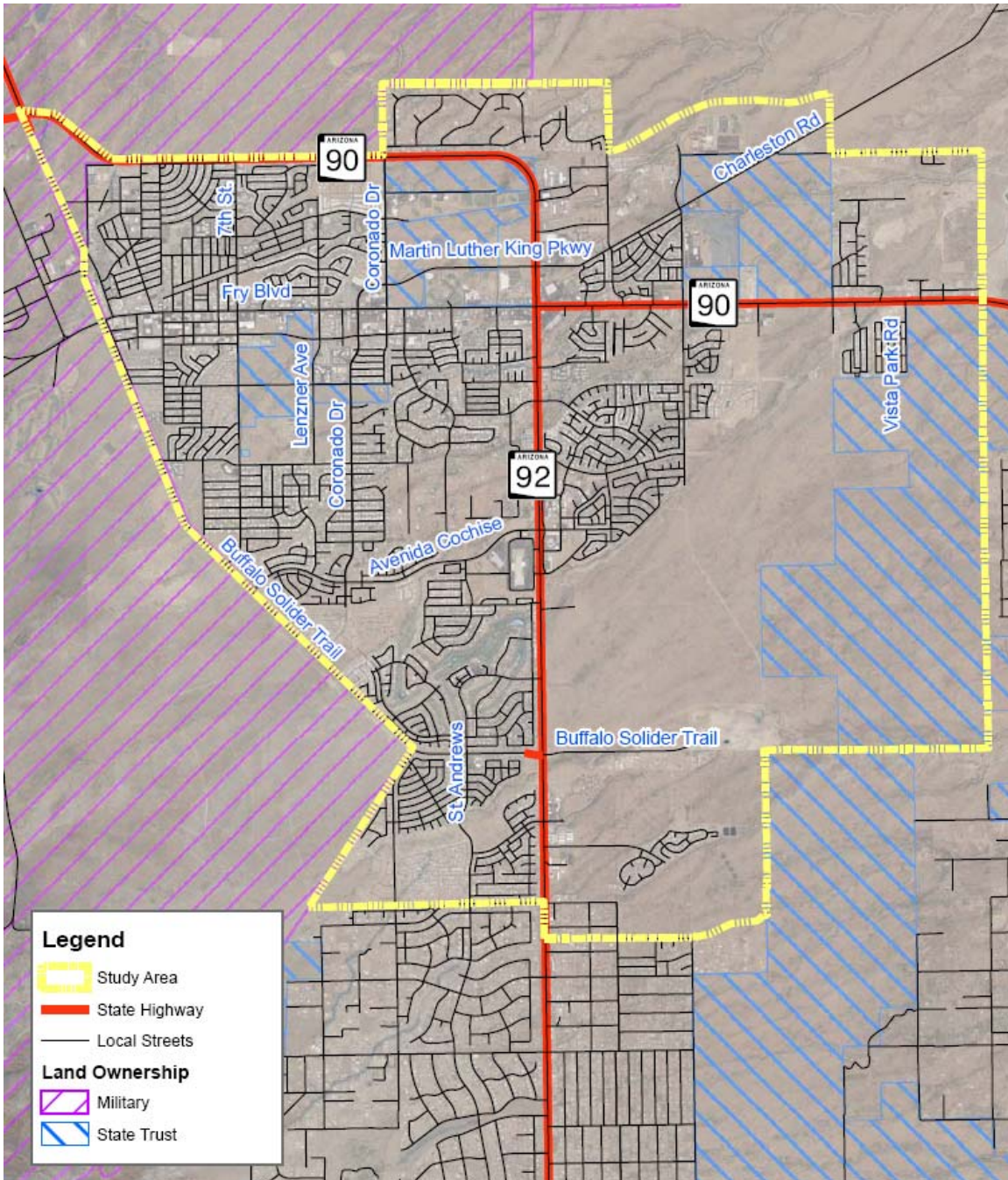


Figure 1: City of Sierra Vista Safe Bicycle and Pedestrian Routes, Study Area



1.4 Public Involvement

This Plan will be developed in collaboration with all stakeholders, including the public, agency staff, and elected officials. Kimley-Horn will support the assigned ADOT public involvement consortium to develop the Public Involvement Plan (PIP).

The PIP will describe strategies to inform the public of study progress, encourage citizen participation, and solicit input on concepts and recommendations. The PIP will identify the number, timing, and format of the public involvement activities. These may include stakeholder meetings, public open houses, or web-based surveys.

1.5 Environmental Justice

The City of Sierra Vista Safe Bicycle and Pedestrian Routes Plan process and products will comply with federal and state, regulations and policies that apply to long-range transportation planning. Of particular note is Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations. A concerted effort will be made to reach minority and low-income populations for the public open house meetings. In addition, should any of the projects identified in the Plan place a disproportionate burden on minority or low-income populations, the Plan will explain the considerations that dictated this recommendation over alternative actions.

1.6 Project Team

Arizona Department of Transportation, Multimodal Planning Division, will lead the Study. Michael Sanders serves as ADOT Project Manager. Kimley-Horn and Associates serves as prime consultant for the Sierra Vista Safe Bicycle and Pedestrian Routes Plan. Brent Crowther serves as Consultant Project Manager. Contact information is listed in Table 1.

Table 1. Project Contacts

Name / Organization	Role	Contact Information
Michael Sanders Arizona Department of Transportation, Multimodal Planning Division	ADOT Project Manager	206 South 17th Avenue, MD 310B Phoenix, AZ 85007 Telephone: 602-712-8141 Msanders@azdot.gov
Jeff Pregler City of Sierra Vista, Department of Community Development	City of Sierra Vista, Lead Local Contact	1011 N. Coronado Drive Sierra Vista, AZ 85635 Telephone: (520) 417-4413 Jeff.Pregler@sierravistaaz.gov
Donald Brush City of Sierra Vista, Department of Community Development	City of Sierra Vista, Alternate Local Contact	1011 N. Coronado Drive Sierra Vista, AZ 85635 Telephone: (520) 417-4413 Donald.Brush@sierravistaaz.gov

**Table 1. Project Contacts (continued)**

Name / Organization	Role	Contact Information
Brent Crowther Kimley-Horn and Associates	Kimley-Horn Project Manager	2210 East Fort Lowell Road, Ste. 200 Tucson AZ 85719-2460 Telephone: 520-615-9191 Brent.crowther@kimley-horn.com
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Adria Henderson Kimley-Horn and Associates	Kimley-Horn Project Analyst	2210 East Fort Lowell Road, Ste. 200 Tucson AZ 85719-2460 Telephone: 520-615-9191 adria.henderson@kimley-horn.com
Lindsay Middleton Kimley-Horn and Associates	Kimley-Horn Graphics Designer	2210 East Fort Lowell Road, Ste. 200 Tucson AZ 85719-2460 Telephone: 520-615-9191 lindsay.middleton@kimley-horn.com

2 PROJECT WORK PLAN

Kimley-Horn will complete tasks 1 through 7 as described below.

- Task 1 – Work Plan
- Task 2 – Current and Future Conditions and Deficiencies in the Study Area
- Task 3 – First Phase of Public Involvement
- Task 4 – Evaluation Criteria and Plan for Improvements
- Task 5 – Second Phase of Public Involvement
- Task 6 – Draft Final Report and Executive Summary
- Task 7 – Final Report, Executive Summary, and Documentation

Completion of study tasks will lead to development two working papers, and a final report.

- Working Paper No. 1 – Current and Future Conditions: existing and future conditions for multimodal travel; infrastructure deficiencies of roadway and non-motorized transportation modes.



- Working Paper No. 2 – Evaluation Criteria and Plan for Improvements: projects that address the needs and deficiencies for near-term, mid-term, and long-term planning horizons.
- Final Report and Executive Summary: summary of findings and recommendations.

2.1 Project Schedule

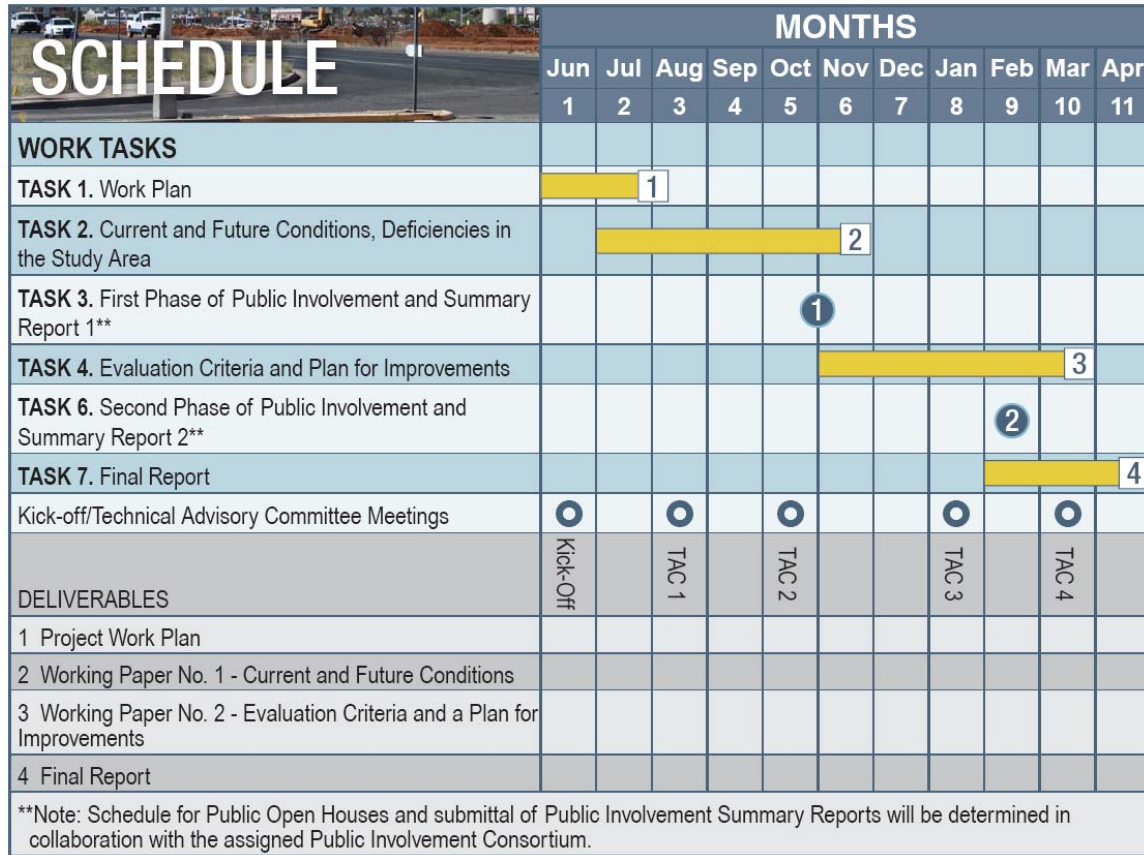
The project is proposed to be completed within an 11-month timeframe. The project schedule is presented in Figure 2. Key elements of the project schedule are listed in Table 2.

Table 2. Project Milestones and Deliverables

Technical Advisory Committee Meetings	
TAC 1	August 2010
TAC 2	October 2010
TAC 3	January 2011
TAC 4	March/April 2011
Public Involvement	
Public Involvement, Phase I	October/November 2010
Public Involvement, Phase 2	February 2011
Project Deliverable	
Work Plan	July 2010
Working Paper No. 1 – Current and Future Conditions, Deficiencies in the Study Area	November 2010
Working Paper No. 2 – Evaluation Criteria and Plan for Improvements	March 2011
Final Report and Executive Summary	April 2011



Figure 2: Project Schedule



2.2 Task 1: Work Plan

The objective of Task 1 is to prepare and present the Work Plan to the TAC for review and comment. The Work Plan will include a description of work tasks and associated products, schedule, study area map, and a project management framework to ensure that the objectives of ADOT and the TAC are achieved.

Kimley-Horn will participate in developing a Public Involvement Plan tailored to the needs of the City of Sierra Vista residents, in cooperation with a study team that includes the ADOT Project Manager, a Communications and Community Partnerships (CCP) staff member, and the CCP public involvement consortium.

After review and approval by the ADOT Project Manager, we will distribute and present the Work Plan and Public Involvement Plan to the TAC at the first TAC meeting.

Task 1 also includes project management and project coordination activities. Our approach includes monthly conferences/teleconferences with the ADOT Project Manager and local contact, monthly progress report/reporting, and up to four TAC meetings.



Work Tasks

- Schedule, prepare for, and attend a kick-off meeting with the ADOT Project Manager and local contact to discuss the Work Plan and Public Involvement Plan. The Kimley-Horn team will prepare a meeting summary.
- Address comments to the Work Plan made at the kick-off meeting. Submit a revised Work Plan for review and approval for distribution to the TAC.
- Schedule, prepare for, and attend the first TAC meeting. The Kimley-Horn team will prepare a meeting summary.
- Address TAC comments made at the first TAC meeting and prepare and submit the final Work Plan.
- Prepare monthly invoices and progress reports.

Deliverables

- Work Plan (Study Area Boundary, Work Tasks, Project Schedule, and Study Goals and Objectives)
- Public Involvement Plan (developed by CCP Consortium)
- TAC Meeting No. 1 agenda, presentation materials, and meeting summary

2.3 Task 2: Current and Future Conditions and Deficiencies in the Study Area

The objective of Task 2 is to compile available data and information in the study area necessary to prepare a map of Sierra Vista Bicycle and Pedestrian Routes and to identify deficiencies on these bicycle and pedestrian routes.

This process will involve reviewing existing and anticipated future land use patterns and locations of future community facilities and pedestrian destinations (e.g., parks, recreation centers, employment centers, etc.), crash data, roadway functional classification, and the City's existing and proposed shared use path system. Currently available traffic volume data may be summarized on a selected basis based on data availability from the City of Sierra Vista and ADOT.

Following compilation of data, we will document safety, access, and connectivity deficiencies of the Sierra Vista Bicycle and Pedestrian Routes. To help identify needs and deficiencies, the Kimley-Horn team proposes a field review to be held with City of Sierra Vista planning and engineering staff, ADOT, and other key TAC members. During the field review, we will walk one or more key bicycle and pedestrian routes, discuss their deficiencies, and brainstorm potential improvements that would be acceptable to the City.

Another effective way to garner stakeholder input is through a web-based survey. Kimley-Horn will develop the survey that will ask respondents to identify and describe areas of high-bicycle and pedestrian use in Sierra Vista, general bicycle and pedestrian obstacles that they have faced on Sierra Vista roadways, and specific bicycle and pedestrian safety concerns.



The surveys will be made available on a project website that will be established at azdot.gov, or on the City's website. To maximize a broad-based response, we will notify local bicycle and pedestrian advocacy organizations, city boards, commissions, and committees that have an interest in bicycle and pedestrian mobility and safety, and others as identified by the Public Involvement Consortium in collaboration with the TAC and City and ADOT project managers. Media releases may be distributed requesting citizen input to the survey.

Work Tasks

- Document key nodes and activity centers (current and future), as identified from current and future land use patterns (community facilities, residential areas). Document daily traffic volumes as available and applicable, bicycle and pedestrian crashes, and multimodal facilities (shared use paths, bicycle lanes, sidewalks, and roadway shoulders).
- Prepare a map of the City of Sierra Vista Bicycle and Pedestrian Routes. The map will include a network of bicycle and pedestrian routes that connect the nodes and activity centers. The network will include both routes along major roadways and arterials, as well as routes that utilize lower volumes streets (local streets) and shared use paths. The objective is to provide the end user with alternatives based on their own comfort and experience.
- In conjunction with the first TAC meeting, conduct a field review with members of the TAC including City of Sierra Vista staff, and ADOT. The purpose of the field review will be to identify key bicycle and pedestrian route deficiencies and to discuss potential improvements to these routes that may be acceptable to the City of Sierra Vista. Observations made by the field review participants will provide input into the identification of needs and deficiencies on the Sierra Vista Bicycle and Pedestrian Routes. At the conclusion of the field review, a debrief session will be held to summarize identified concerns and issues for bicycle and pedestrian mobility and safety.
- Develop a bicycle and pedestrian conditions survey. Notify advocacy organizations of the survey. Provide a link to the survey for posting to the project website at azdot.gov.
- Document infrastructure deficiencies for bicycle and pedestrian mobility and safety for near-term, mid-term, and long-term planning horizons. Deficiencies may include missing links, difficult street crossings, or other conditions identified through field review and crash analysis.
- Prepare draft Working Paper No. 1. The Working Paper will include quantitative and qualitative descriptions of pedestrian and bicycle safety and mobility deficiencies.
- Submit the draft Working Paper for review and approval for distribution to the TAC.
- Schedule, prepare for, and attend the second TAC meeting to present Working Paper No. 2. The Kimley-Horn team will prepare a meeting summary.



- Address TAC comments and prepare the final Working Paper No. 1 and submit the final Working Paper to the ADOT Project Manager for posting on the ADOT website.

Deliverables

- Working Paper No. 1 - Current and Future Conditions and Deficiencies in the Study Area
- TAC Meeting No. 2 agenda, presentation materials, and meeting summary

2.4 Task 3: First Phase of Public Involvement

The objective of Task 3 is to support the public involvement consortium to implement the first phase of public involvement. Details and format of the public involvement will be developed in by the Public Involvement Consortium.

The purpose of the first phase of public involvement will be to present information and findings related to existing and future conditions, and needs and deficiencies for public input and review.

The first phase of public involvement will consist of an open house. Display materials will be available for the public to view. Mapping will be provided on which the public will be asked to mark-up their comments and suggestions.

Work Tasks

- Review plans and information developed by the public involvement consortium in preparation for the public involvement activity.
- Prepare any required presentation boards and handout materials.
- Attend and present information at the public involvement activity; respond to questions, take notes of questions.

Deliverables

- Public meeting display materials
- Meeting observations and notes for input to the Public Involvement Summary Report.

2.5 Task 4: Evaluation Criteria and Plan for Improvements

The objective of Task 4 is to develop a program of projects and implementation strategies that address the bicycle and pedestrian safety needs and deficiencies identified in Task 2. Each project will be developed to enough detail for development of planning-level cost estimates. The program of projects will be prioritized considering their complexity, community perspectives, cost/funding, and potential to improve bicycle and pedestrian safety and mobility. Project development will focus on improving bicycle and pedestrian safety and mobility between nodes and activity centers, including current and future community facilities, schools, parks, and commercial centers.



Work Tasks

- Recommend and define specific projects that address the identified needs and deficiencies for near-term, mid-term, and long-term planning horizons. Project development will focus on improving safety and mobility between nodes, activity centers, commercial centers, residential areas, and recreation areas. These may include improvements that are relatively simple to implement, as well as more complex improvements that may require significant planning, design, and funding. Simple improvements could consist of pedestrian ramps, pedestrian countdown signals at intersections, signage, pavement markings, and striped bicycle lanes. Complex improvements may include signalized pedestrian crossings or center raised medians to provide pedestrian refuge. Future design studies that will be required will be identified.
- Prioritize the projects into near-term, mid-term, and long-term implementation projects, consistent with their level of complexity, cost, level of coordination required, and implementation time frame. Simple improvements are those that can be implemented within a relatively short time frame (1 to 5 years) and at a relatively minimal cost. Moderately complex improvements may require a longer time to implement (6 to 10 years) and a higher level of coordination and funding. Complex improvements are those that may require several years (10 years or more) to implement because of environmental, budget, or other coordination constraints.
- Prepare planning-level cost estimates for project implementation. The costs will be derived from FHWA's PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System, BIKESAFE: Bicycle Countermeasure Selection System, and our own recent experience implementing bicycle and pedestrian safety improvements in Southern Arizona.
- Prepare draft Working Paper No. 2.
- Submit the draft Working Paper No. 2 for review and approval for distribution to the TAC.
- Schedule, prepare for, and attend the third TAC meeting to present Working Paper No. 2. The Kimley-Horn team will prepare a meeting summary.
- Address TAC comments and prepare the final Working Paper No. 2 and submit the final Working Paper to the ADOT Project Manager for posting on the ADOT website.

Deliverables

- Working Paper No. 2 - Program of Projects
- TAC Meeting No. 3 agenda, presentation materials, and meeting summary

2.6 Task 5: Second Phase of Public Involvement

The objective of Task 5 is to support the public involvement consortium to implement the second phase of public involvement. The purpose of the second phase of public involvement will be to present information and findings related to the program of projects



for public input and review. Details of public involvement activities will be developed in collaboration with the ADOT CCP and the assigned public involvement consortium.

It is anticipated that the second phase of public involvement activities will be limited to electronic posting and dissemination of study products.

Work Tasks

- Provide study materials to the ADOT and City of Sierra Vista Project Managers for posting to their respective websites.
- Disseminate study products electronically to the project contact list (to be completed by Public involvement consortium)

Deliverables

- Study materials for posting to ADOT and City of Sierra Vista websites.
- Summary of comments received (to be completed by Public involvement consortium)

2.7 Task 6: Draft Final Report and Executive Summary

The objective of this task is to compile the data and findings from the working papers and summary reports prepared in previous tasks into a Draft Final Report and Executive Summary.

Work Tasks

- Prepare a Final Report outline that contains a compilation of data from all working papers and input received from the stakeholders and the public.
- Prepare draft Final Report in conformance with the approved outline.
- Prepare draft Executive Summary that provides the most relevant information from the Study.
- Submit the draft Final Report and draft Executive Summary for review and approval for distribution to the TAC.
- Schedule, prepare for, and attend the fourth TAC meeting at which the draft Final Report and draft Executive Summary will be presented. The Kimley-Horn team will prepare a meeting summary.
- Compile comments received on the draft Final Report and draft Executive Summary and prepare a comment resolution summary.
- Address each comment in the preparation of the Final Report and Executive Summary.

Deliverables

- Draft Final Report
- Draft Executive Summary
- TAC Meeting No. 4 agenda, presentation materials, and meeting summary



2.8 Task 7: Final Report and Executive Summary

The objective of Task 7 is to finalize the Draft Final Report and Executive Summary based on comments received from the TAC and stakeholders.

Work Tasks

- Address each comment received from the TAC in the preparation of the Final Report and Executive Summary.
- Produce and submit one hard copy and one CD of the Final Report and Executive Summary to each TAC member, plus 10 hard copies and 5 CD copies to the ADOT Project Manager. Each CD will contain all working papers, the final report, and the executive summary.

Deliverables

- Final Report and Executive Summary
- CD containing the Working Papers, Final Report, and the Executive Summary
- TAC Meeting No. 4 agenda, presentation materials, and meeting summary