

## 8.0 IMPLEMENTATION PLAN

### 8.1 Introduction

It is understood that US 60 will be reconstructed in segments as priorities and funding permits. This section discusses the goals and issues relative to implementing the proposed improvements and recommends various construction projects consistent with policy and the route needs.

The preferred alternatives (A-1, B-2a, C2, D-2, and E-1) have been divided into logical improvement (reconstruction) projects, based upon the guidelines and evaluations presented in this section. Each improvement project can be correlated to the plan and profile sheets in Appendix B by milestone and station designations.

### 8.2 Implementation Guidelines

The following guidelines were established and used in evaluating and recommending the series of projects for improving US 60.

- Priority was given to projects that improve safety in high accident rate areas.
- Priority was given to projects that reconstructed portions of US 60 that currently require frequent and costly maintenance.
- Priority was given to sequencing projects to achieve contiguous stretches of four-lane roadway, wherever possible.
- Priority was given to projects that improve capacity consistent with need.
- Priority was given to projects that would later experience constructability issues as traffic volumes increased.
- Project construction size was targeted between \$5 and \$15 million wherever possible to correlate with expected funding availability. Termini were selected accordingly.

### 8.3 Project Timing

Several factors were considered in establishing the sequencing of the various projects:

- Accident rates and types of accidents along the route;
- Current and projected Levels of Service;
- Maintenance of traffic along the route; and
- Other circumstances (e.g., social, political, economic, etc.) that could influence project timing.

#### 8.3.1 Accidents

Since the entire route cannot be upgraded as a single project, high accident areas were investigated to determine if remedial projects could improve driving conditions in the near term. This information was also used to prioritize the sequencing of reconstruction projects.

Figures 2-1 and 2-2 (Section 2) depict the number of accidents and accident rates along US 60 as recorded over the period from 1992 to 1997. The figures indicate that the Florence Junction intersection has the highest collective incident of accidents of the study route. Other high accident areas are near at Gonzales Pass; MP 219, the Arboretum; MP 223, and through the Town of Superior from MP 225 to 226.8.

#### 8.3.2 Level of Service

Level of Service (LOS) B has been established as the 20-year goal for the rural areas of this route. LOS C has been established for urban and urban fringe areas. Within the study limits, US 60 is currently operating at LOS E and is eligible for capacity improvements throughout, except in the vicinity of the Florence Junction intersection which is operating at LOS A. The remainder of this project is eligible for capacity improvements. Using only traffic projections and LOS as indicators, it appeared that US 60 should be widened progressively either from west to east, or east to west. However, when consideration was given to other implementation guidelines, in particular accident rates, the linear progression of implementing construction projects was altered somewhat.

#### 8.3.3 Maintenance of Traffic

Due to the current high traffic volumes and low LOS experienced along most of the route, projects should be programmed to result in the least possible impact to traffic. Preferably no more than two major

projects should be underway simultaneously and adjacent to one another to avoid adverse traffic impacts. In programming projects with this in mind, consideration was given to the duration of projects and the potential overlap of project construction schedules.

#### 8.3.4 Funding

The Florence Junction TI has met criteria for accelerated design and construction funding was therefore designed and constructed prior to completion of this study (June, 2003). Based upon the fiscal year 2004-2008 Five Year Transportation Facilities Construction Program, current funding for US 60 projects within the study limits is as shown in Table 8-1.

### 8.4 Implementation Issues

Each improvement project will require the resolution of one or more issues prior to construction. Typically, these issues are related to clearances for right-of-way, utilities, or environmental mitigation, and regulatory agency coordination and approval. The following list of implementation issues must be considered for every project. Issues that require action well in advance of design and/or construction, or that are peculiar to specific projects, are further outlined under the individual project descriptions in Section 8.5.

- On-site geotechnical investigations will be required for all projects. It is anticipated that some adjustment to the horizontal and vertical alignments will be necessary to optimize the project geometry as well as to meet the earthwork balancing goals.
- The drainage analysis for the corridor was limited to design concept level only. Summary information on all major design features can be found in Section 6.
- All projects will require new or additional right-of-way from either the TNF, State Lands, or from private ownership.
- Final locations of turnouts, acceleration/deceleration lanes, and median crossovers should be coordinated with the TNF, Department of Public Safety, ADOT Globe District, Pinal County, ADOT R/W, local agencies, and adjacent property owners.

**Table 8-1  
Five-Year Transportation Facilities Construction Program  
US 60 MP 211.7 to MP 226.8  
Fiscal Years 2004-2008**

BMP	Location	Type of Work	FY 2004 (\$000)	FY 2005 (\$000)	FY 2006 (\$000)	FY 2007 (\$000)	FY 2008 (\$000)
212.17	Florence Junction - Gonzales Pass	Design Roadway	3,000				
212.17	Florence Junction - Gonzales Pass, PH I	Reconstruct Roadway (Widening)			37,000		
212.00	Florence Junction - Gonzales Pass, PH II	Reconstruct Roadway (Widening)					9,000

- The final design shall incorporate the environmental mitigation measures outlined in the corridor Environmental Assessment and is included following the title page of this report.
- Provisions for livestock crossings, fencing, gate locations, and cattle guards should be coordinated with the TNF, State Lands, Arizona Game and Fish, ADOT’s Globe District, and property owners.
- Visual mitigation features will be design considerations throughout the route. Details for slope treatment (including slope reseeding), slope warping, and rock roughening/rounding must be coordinated with the TNF and ADOT’s Roadside Development Section.
- All plans and specifications must be reviewed by the TNF (where they apply within TNF jurisdiction).

Coordination is required with the Corps of Engineers and the TNF prior to and during final design. The following items must be addressed and resolved prior to construction of each improvement project.

- Nationwide General Permits (NGP) will be required from the COE under Section 404 of the Clean Water Act at various locations. Specific locations are identified in Table 6-2 and noted under each project discussion in Section 8.5.
- All improvement projects scheduled for construction three years or more following FHWA’s FONSI may require a reevaluation of the Final EA by ADOT’s Environmental Planning and Enhancement Group.

### 8.5 Recommended Implementation Plan

The following list of recommendations has been prioritized and scoped in accordance with the previously stated implementation guidelines. Each improvement project description defines the scope, cost, programming priority, and implementation issues that must be addressed early on. Figure 8-1 illustrates the project locations corresponding to the scope description.

Each improvement project involves one or more of the selected design concept alternative segments, as a whole or in part. A detailed discussion of the design features on each recommended design concept alternative is contained in Section 5.2. The following descriptions relate primarily to the scope and implementation issues of the improvement projects.

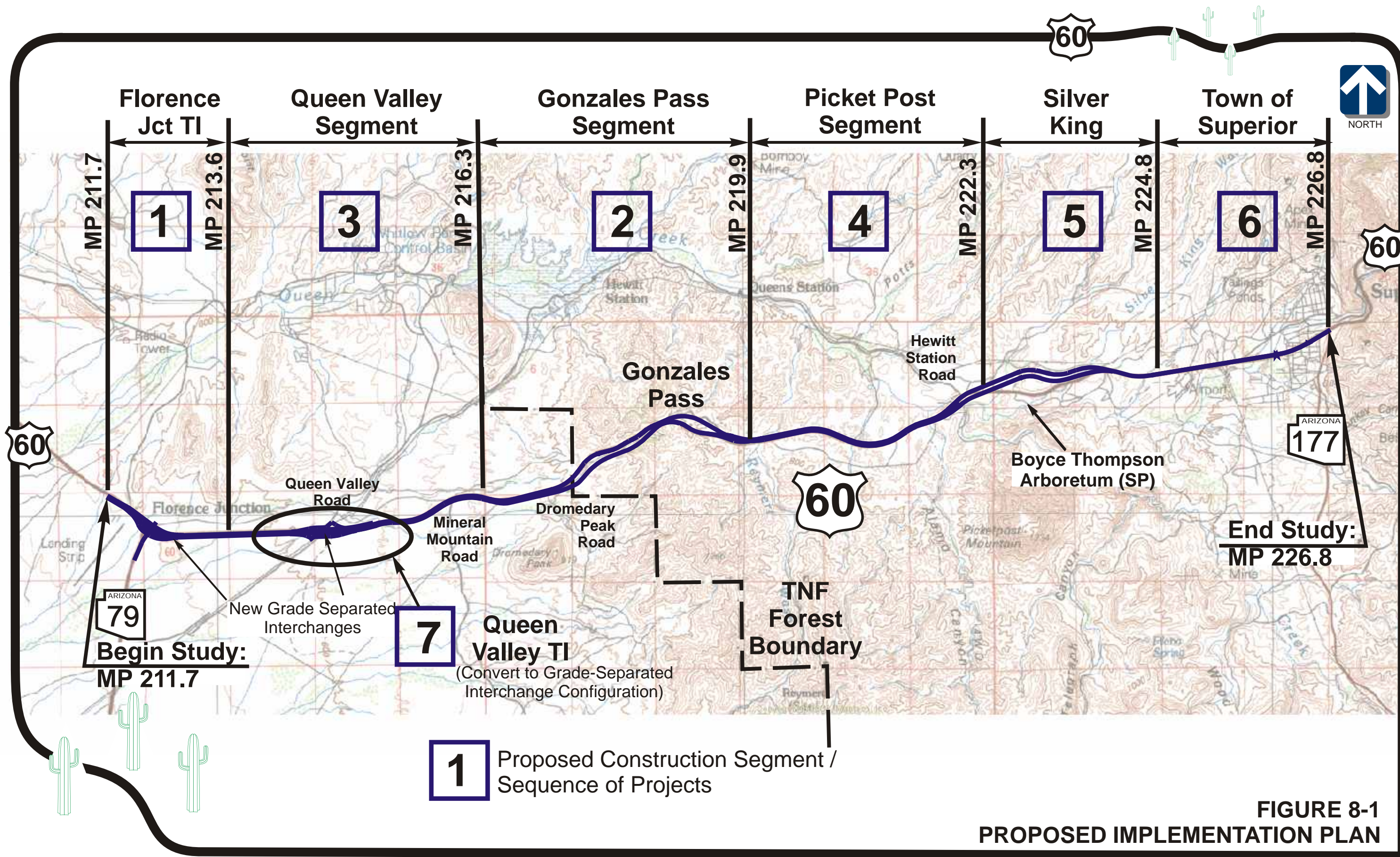
The milepost and station limits given for each improvement project are exclusive of any temporary connection to the existing roadway at either end.

### Project 1: Florence Junction TI (Project Complete) (MP 211.7 to MP 213.6)

- **Description:** Replace the existing at-grade intersections of US 60 and State Route (SR) 79 with a grade-separated interchange that will locate the US 60 roadways over SR 79. In addition, US 60 will be widened to two full lanes in each direction through the interchange limits. SR 79 will be improved through the interchange limits, including adding a SB acceleration lane to the south. To maintain local access, El Camino Viejo to the west and an access road to the east must be constructed to tie to SR 79. The EB mainline improvements must tie back into US 60 prior to the major box culvert crossing at MP 213.2

<b>Cost:</b>	Construction	\$ 11,400,000
	Design	912,000
	Right of way	3,000,000
	Utility Relocation	150,000

- **Priority:** Florence Jct. has been the focus of several traffic and safety studies to design improvements and attempt to reduce the number of accidents. This segment has the highest accident rate, and the greatest traffic volumes within the study limits.
- **Implementation Issues:** Right-of-way acquisition will involve private property and State Land. Existing businesses are involved. Two abandoned gas stations must be tested for buried storage tanks, and hazardous materials. Access must be retained to local properties during construction, as well as to the local access road, El Camino Viejo. As several washes are crossed, and some of the drainage north of the interchange could be relocated, an AZPDES permit and a Corps 404 permit will be required prior to construction.



**FIGURE 8-1  
PROPOSED IMPLEMENTATION PLAN**

**Project 2: Gonzales Pass Segment**  
(MP 216.3 to MP 219.9)

- **Description:** Construct the new EB lanes south of the existing roadway from MP 216.3 to the summit. At the summit, the improvements shift from the south to the north side of the existing. Through the summit, the existing roadway is reconstructed from MP 218.4 to 219.3 to provide the necessary vertical stopping sight distance. The WB improvements tie back into the existing US 60 prior to the Reymert Wash bridge structure at MP 219.9.
- **Cost:**

Construction	\$ 12,601,000
Design	1,008,000
Right of way	1,000,000
Utility Relocation	2,000,000
- **Priority:** This segment of the study has the second highest accident rate, with mountainous terrain and limited opportunities to pass. While climbing lanes exist, they end just prior to the summit in both directions leading up to the summit. Consequently, there are cars attempting to pass at the ends of the climbing lanes that nearly conflict. The limited shoulders and slow moving traffic add to the need for this segment to be improved. At the public meetings, Gonzales Pass was identified as the primary concern to the Superior residents.
- **Implementation Issues:** Right-of-way acquisition will involve the TNF only. There are several major drainage crossings, requiring Corps 404 permits. There is a major 6-inch gas line that must be relocated in advance of much of the roadway work. Relocation of this line is a significant activity to the EPNG Company. This relocation is a scheduling issue as shutdowns to complete the relocations are limited. There will be phased construction required at the summit due to the differences between the existing and proposed profiles. There is no nearby detour to route traffic through while construction continues, so continuous maintenance of traffic will be required.

**Project 3: Queen Valley Segment**  
(MP 213.6 to MP 216.3)

- **Description:** Construct two new EB lanes south of and nearly parallel to the existing US 60 roadway, completing the improvements between the Florence Junction TI and the Gonzales

Pass project. The EB improvements can be constructed completely separate from the existing travel lanes, and tie into the completed Gonzales Pass improvements. At-grade intersections are required at Queen Valley Road/Magma Railroad and at Dromedary Peak Road, providing a median crossover and the opportunity to make left- and U-turns. The TI improvements will be completed during Phase 7.

- **Cost:**

Construction	\$ 6,802,000
Design	545,000
Right of way	7,000,000
Utility Relocation	150,000

- **Priority:** Construction of the new EB makes the divided highway continuous from Phoenix to Gonzales Pass. Passing opportunities are available, but are rather short as the terrain provides little sight distance for vehicles to pass. While traffic speeds are still high on this segment, the EB traffic begins to slow down, especially the larger truck traffic, as it approaches the mountains leading to Gonzales Pass. Since the Queen Valley segment has no grades and passing restrictions, this segment was selected for construction next.
- **Implementation Issues:** Right-of-way acquisition will involve State Lands. The route crosses 2 intermittent streams, all of which require a Section 404 permit. An AZPDES permit will be required prior to construction. There is a 6-inch EPNG Gas line that crosses the roadway that may require minor adjustments and protection. This segment of the highway provides access to many State Land recreation sites. Access during construction must be maintained.

**Project 4: Picket Post Segment**  
(MP 219.9 to MP 222.3)

- **Description:** Construct the new two-lane EB roadway that is north of and parallel to the existing roadway generally throughout this segment. A new bridge crossing is required at Reymert Wash at the onset of the improvements. The improvements end by transitioning back to the existing US 60 alignment just before crossing Queen Creek at MP 222.3.

- **Cost:**

Construction	\$ 8,900,000
Design	712,000
Right of way	0
Utility Relocation	100,000

- **Priority:** After Gonzales Pass, this segment is the most rugged segment remaining, with no passing opportunities for EB traffic. Completing this segment will resolve most of the remaining issues of slow-moving trucks and RVs climbing the mountainous grades.
- **Implementation Issues:** Right-of-way acquisition will only involve the TNF. No major utility relocations are required. The route crosses 2 intermittent streams, all of which require a Section 404 permit. An AZPDES permit will be required prior to construction. As all of the improvements are south of the existing roadway, maintenance of traffic should be minimal as nearly all of the construction is completely separated from traffic.

**Project 5: Silver King Segment**  
(MP 222.3 to MP 224.8)

- **Description:** Construct the new EB and WB improvements, located north of and separate from the existing US 60 traffic, between the Queen Creek and Silver King bridge crossings. Beyond Silver King Wash, the improvements transition to a 5-lane section for the balance of the improvements. Relocation of Hewitt Station Road is required, along with a portion of existing US 60 to provide access to the Arboretum and other area properties. The improvements end at the western limits of the Town of Superior. Several new bridge structures are included; one over Queen Creek, two over Happy Camp Wash, and improvements added to the unnamed wash crossing at MP 224.6.

- **Cost:**

Construction	\$ 14,068,000
Design	1,125,000
Right of way	1,000,000
Utility Relocation	2,000,000

- **Priority:** Completion of this segment will complete the divided improvements from Gonzales Pass to the western limits of Superior. This segment was selected prior to projects 6 & 7 as the traffic entering/leaving the Arboretum through a narrow, curvilinear corridor is the most restrictive area left within the study limits. The segment has no passing opportunities, and several accidents at the entrance to the Arboretum, providing the justification of completing it prior to Segments 6 & 7.

- **Implementation Issues:** Right-of-way acquisition will involve private properties and TNF lands. The route crosses 4 intermittent

streams, all of which require a Section 404 permits. AZPDES permits will also be required prior to construction. As the improvements are crossing close to existing residences, noise mitigation requirements must be implemented. Through the pass, several hundred feet of 6-inch EPNG gas line will require relocation. This relocation is a scheduling issue as shutdowns to complete the relocations are limited.

**Project 6: Town of Superior Improvements**  
(MP 224.8 to MP 226.8)

- **Description:** The existing roadway within the Town of Superior will be symmetrically widened through out the balance of this improvement segment. The existing profile will not be modified. The added lanes will match the existing edge of roadway profile and cross slope. The bridge over Stone Avenue will also be widened to accommodate the widening, but will not be adjusted vertically. The improvements will terminate with the introduction of the ramps to the SR 177 interchange. The outside, widened lanes will align with the on/off ramps of the interchange.
- **Cost:**

Construction	\$ 8,800,000
Design	704,000
Right of way	500,000
Utility Relocation	500,000
- **Priority:** This is the last segment of improvement within the study limits as the speed is already reduced through the town limits. The 5-lane section will provide greater capacity, but will ultimately be restricted by the 2-lane roadway that leaves the town to the east and enters the Queen Creek Canyon. This segment does have several accidents, but most occur at the intersection with Main Street. While the existing intersection already has a median left-turn lane, the added lanes could provide for greater traffic gaps, providing better opportunities to enter/exit the highway.
- **Implementation Issues:** The improvements are generally all contained within existing R/W. There are several utilities that could require adjustment, as well as all of the street lighting and irrigation facilities that will require relocation. As many of the businesses will lose street and R/W parking, public involvement will be required to remind residents/businesses of the proposed improvements, as many years will have passed since the completion of the public involvement process of the study documents.

**Project 7: Queen Valley Road TI**  
(MP 214 to MP 215)

- **Description:** These improvements include only the traffic interchange at Queen Valley Road, converting the previously constructed at-grade crossing to the fully access controlled, grade-separated crossing. To complete the TI, Queen Valley Road must be realigned slightly to optimize the bridged crossing over the Arizona Magma Railroad, and the crossroad. The EB on-ramp and WB off-ramp will require at-grade RR crossings. Finally, an access road to recreation areas on State Lands east of the RR tracks must be maintained from the modified Queen Valley Road.
- **Cost:**

Construction	\$ 13,615,000
Design	1,090,000
Right of way	-
Utility Relocation	-
- **Priority:** With the divided roadway improvements completed during Phase 3, these improvements are only necessary once the highway has been designated as fully access controlled.
- **Implementation Issues:** All Right-of-way acquisition with private property and State Land should have been completed under Phase 3. An AZPDES permit will be required prior to construction. Coordination will be required with the Magma Railroad (BHP Copper), as well as with the Arizona Water Company, who maintains a 12-inch waterline parallel to the railroad.

**8.6 Implementation Costs**

Preliminary cost estimates were prepared for each improvement project. While the Unit prices for the alternatives comparisons were based upon the most recent published (1999) ADOT bid results, the costs for the implementation projects were estimated based on 2002 and 2003 bid tabs in the area with adjustments made to reflect the location of the project and the difficulty of the work anticipated. The details for the quantity estimate and unit prices are explained in Section 7, Itemized Cost Estimates.

**8.7 Implementation Schedule**

It is recommended that the previously identified projects be constructed in the order noted. The State Transportation Board will determine the programming of the designs, R/W acquisitions, and construction.