



South Mountain Transportation Corridor Study

Citizens Advisory Team
Technical Report Summary

Draft Utilities

Why study utilities in the Environmental Impact Statement (EIS)?

The Phoenix metropolitan area is growing rapidly and has been since the 1950s. Today's American society requires that public/quasi-public services are in place to support this growth. So, as growth spurs the need for more transportation infrastructure, it also spurs the need for utility infrastructure. At times, the two can be in conflict.

Without proper planning and coordination, the construction of a major transportation investment, like the proposed South Mountain Freeway, could require the relocation and/or the reconstruction of major utility lines providing electricity, phone, sewer, natural gas, water, and fiber optics to perhaps millions of people. Relocation and/or reconstruction of major utility lines and corridors can be extremely costly and delay meeting important project schedules. Additionally, a project of this size would likely affect smaller utility lines, irrigation canals, and wells.

Utility lines, corridors, etc. are abundant in the Study Area. For this project, the study team focused on major utility corridors and the potential for the South Mountain Freeway to be in conflict with their locations.

What kind of impacts would occur from construction?

In the Western Section of the Study Area, all of the action alternatives would possibly affect the following major utilities:

- Roosevelt Irrigation District (RID) Canal (the freeway would have to cross it)
- Two Union Pacific Railroad tracks (the freeway would have to cross them)
- Two major overhead power lines – a Western Area Power Administration (WAPA) 230 kV line that parallels Elwood Street and a Salt River Project (SRP) 230 kV line adjacent to Broadway Road
- Kinder Morgan Energy Partners 20-inch high pressure petroleum pipeline that parallels the Union Pacific Railroad lines
- Southwest Gas 10-inch gas pipeline adjacent to Buckeye Road
- Two underground fiber optic lines – a Sprint line parallel to Lower Buckeye Road and an AT&T line adjacent to the RID canal.

Individual alternatives would have specific utility impacts as discussed in the following.

The W55 Alternative would potentially affect additional major utilities, including:

- Two 90-inch City of Phoenix sanitary sewer lines along Broadway Road between 59th and 63rd avenues
- Several City of Phoenix 12-inch waterlines along major crossroads
- SRP irrigation laterals
- Multiple power lines
- The Salt Canal along Van Buren Street



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- Multiple Union Pacific Railroad spur tracks near 55th Avenue
- Power substation at 59th Avenue and Lower Buckeye – avoidance may be possible in design.

The W71 Alternative would potentially affect additional major utilities, including:

- Two 90-inch City of Phoenix sanitary sewer lines along Broadway Road between 71st and 75th avenues
- Several City of Phoenix 12-inch waterlines along major crossroads
- SRP irrigation laterals
- Multiple power lines
- The Salt Canal along Van Buren Street

The W101 Alternative and Options would potentially affect additional major utilities including:

W101WPR and W101WFR

- City of Phoenix 66-inch sanitary sewer line
- Cox overhead fiber optic cable at Van Buren Street and at 99th Avenue
- City of Tolleson 12-inch water line along Roosevelt Street
- Roosevelt Irrigation District well
- Salt River Project well
- SRP irrigation laterals
- Multiple power lines
- Three City of Tolleson 48-inch sewer lines
- Seven City of Phoenix sanitary sewer lines 60-inch or greater
- Fourteen City of Phoenix wells
- Kinder Morgan Energy Partners 12-inch petroleum pipeline parallel to Buckeye Road
- Two Cox Cable underground fiber vaults at Lower Buckeye Road and 99th Avenue

W101W99 – This option would have the same impacts as W101PR and W101FR with the following exceptions:

- More Cox overhead fiber optic cable
- City of Avondale 12-inch water line
- More City of Tolleson 12-inch water line
- More City of Phoenix 66-inch sanitary sewer lines
- No affect on Roosevelt Irrigation District well
- No affect on Salt River Project well

W101CPR and W101CFR

- City of Phoenix 66-inch sanitary sewer line
- Cox overhead fiber optic cable at Van Buren Street and 99th Avenue
- City of Tolleson 12-inch water lines
- Roosevelt Irrigation District well
- Salt River Project well
- SRP irrigation laterals
- Multiple power lines



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- Four City of Tolleson 48-inch sewer lines
- Eight City of Phoenix sanitary sewer lines 60-inch or greater
- Eight City of Phoenix wells
- Pump station and sewer lift station near Buckeye Road and 95th Avenue
- Kinder Morgan Energy Partners 12-inch petroleum pipeline parallel to Buckeye Road.

W101EPR and W101EFR

- City of Phoenix 66-inch sanitary sewer line
- Cox overhead fiber optic cable at Van Buren Street and 99th Avenue
- City of Tolleson 12-inch water lines
- Roosevelt Irrigation District well
- Salt River Project well
- SRP irrigation laterals
- Multiple power lines
- Four City of Tolleson 48-inch sewer lines
- Five City of Phoenix sanitary sewer lines 60-inch or greater
- One City of Phoenix wells
- Pump station and sewer lift station near Buckeye Road and 91st Avenue
- Kinder Morgan Energy Partners 12-inch petroleum pipeline parallel to Buckeye Road.

The options vary in the length of utility disruption that could occur as a result of construction.

In the Eastern Section, the E1 Alternative could affect utilities such as:

- An El Paso Gas natural gas line on 47th Avenue
- Two major overhead power lines – a WAPA 230 kV line at 47th Street and a SRP 500 kV line adjacent to Pecos Road
- A City of Phoenix 48-inch water line along Pecos Road
- A City of Phoenix 48-inch sanitary sewer line along Pecos Road
- Qwest telephone cables
- A Kinder Morgan petroleum pipeline

How do the alternatives differ in construction-related impacts?

In general, comparison of impacts between alternatives in the Western Section are fairly equal, with the exception of major site facilities such as railroad spur lines, power substations and pump/lift stations. As noted earlier, some action alternatives may affect longer lengths of utility corridors than others, but the difference in length of potential disturbance is non-distinguishable among the action alternatives.

What kinds of freeway operational impacts (post-construction) would occur?

No operational impacts from the South Mountain Freeway are anticipated on utilities.



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Are there any specific and/or unique impacts from the build alternatives?

For a project of the magnitude of the South Mountain Freeway, there are no unique impacts anticipated on utilities at this time.

What if the project was not constructed?

No impacts on utilities would be expected.

What can be done to reduce impacts on utilities?

ADOT will look at a number of ways to avoid or reduce construction-related impacts. Basic mitigation to minimize utility impacts is really inherent in the final design of the freeway. During this period, on-going coordination with utility purveyors would occur to identify such measures as utility encasement, bridge structures, etc. to minimize the impacts. ADOT would also consider design refinements such as minor adjustments in alignment or reduction in right-of-way needs to minimize utility impacts.

Are the conclusions presented in this summary final?

It is quite likely that quantitative findings relative to impacts are subject to change. The reasons for future changes which will be presented to the public during the Draft EIS, Final EIS and Final Design stages are based on the following:

- Refinement in design features through the design process.
- Updated aerial photography as it relates to rapid growth in the Western Section of the Study Area.
- On-going communications with the City of Phoenix regarding measures to minimize harm to South Mountain Park/Preserve.
- On-going communications with GRIC in regards to granting permission to study action alternatives on GRIC lands.
- Potential updates to traffic forecasts as updated regularly by MAG.
- Potential updates with regards to the special 2005 survey to augment the 2000 Census.
- As design progresses, cost estimates for construction, right-of-way acquisition, relocation and mitigation will be updated on a regular basis.

However, even with these factors affecting findings, it is anticipated the affects would be equal among the alternatives and consequently impacts would be comparatively the same. This assumption would be confirmed if and when such changes were to occur.

As a member of the Citizens Advisory Team, how can you review the entire technical report?

The complete technical report is available for review by making an appointment with Mike Bruder or Ralph Ellis at 602-712-7545.