SPECIAL INTEREST GROUP COMMENTS AND RESPONSES
The Shanker Law Firm, PLC

November 25, 2014

Dear Brock Bamhart,

These comments on the FEIS, including this letter of transmission and all of the reports/attachments hereto, are submitted by and on behalf of:

- Protecting Arizona Resources and Children, Inc. ("PARC")
- The Foothills Community Association
- The Foothills Club West Community Association
- The Lakewood Community Association
- The Calabria Community Association
- Don't Waste Arizona, Inc. ("DWAZ")
- Gila River Alliance for a Clean Environment ("GRACE")
- Gila River Environmental Youth ("GREY")
- Patricia Lawlor, Timothy Lawl, Chad Bloomer, Michael Hirtz
- Chris Bortcher, Hugh Moxon, Patti Moxon, Nicolai Kuninoff, Scott Herman
- Phoenix Mountains Preservation Council ("PMPC")

Commenters can be reached through counsel:

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(480) 838-9300

1 PMPC has also filed comments to the FEIS under separate cover, which are incorporated herein by this reference.

Introductory information.
As noted in text on page 3-53 of the Final Environmental Impact Statement, the Arizona Department of Transportation began acquiring land for the original alignment in 1988. Between 1988 and 2001, the Arizona Department of Transportation acquired approximately 293 acres. Most of this land (258 acres) is located in the Eastern Section along Pecos Road. In 2006, the Arizona Department of Transportation began protective and hardship land acquisition in the alignment right-of-way footprint for the W59 and E1 Alternatives. Between 2006 and October 2013, the Arizona Department of Transportation purchased 326 acres (303 in the Western Section and 23 in the Eastern Section).

The comment suggests the environmental impact statement process was biased by a history of property acquisitions within the Study Area. More specifically, properties falling within the limits of the Preferred Alternative, as identified in the Final Environmental Impact Statement, were targeted for acquisition.

Land acquisition and relocation assistance services for the project are available to all individuals in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. The implementing regulations for federally funded highway projects are 49 Code of Federal Regulations Part 24. The process for hardship and advanced acquisitions is explained in text on page 4-50 of the Final Environmental Impact Statement.

The comment infers that by taking such action, the objective equal consideration of the alternatives studied in detail in the Draft and Final Environmental Impact Statements is tainted. Advanced acquisitions in parallel to a National Environmental Policy Act environmental determination process is not unprecedented and is common practice. In this case, property acquisitions by the Arizona Department of Transportation for purposes of implementing the freeway are done at risk as communicated to the agency by the Federal Highway Administration. If another action alternative had been ultimately selected, the agency would have to place the acquired properties on the market for sale and purchase. The Arizona Department of Transportation attempts to balance the risk against its mission of timely delivery of transportation infrastructure to the traveling public. Further, Federal Highway Administration regulations do not allow the ownership of right-of-way to be a factor in the decision regarding the selection of an alternative.

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The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, and housing projections in June 2013, and the project team obtained new traffic projections based on the approved socioeconomic projections. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, Purpose and Need, and Chapter 3, Alternatives). The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13). The traffic analysis used the Maricopa Association of Governments travel demand model (TransCAD software platform), as certified by the Federal Highway Administration and reviewed by the U.S. Environmental Protection Agency for air quality conformity (see Final Environmental Impact Statement page 3-27).

Alternatives, No-Action Alternative

The Arizona Department of Transportation and Federal Highway Administration appreciate the suggestion to use alternative methods to describe the No-Action Alternative and the possibility that future impacts could be different than those presented in the No-Action Alternative analysis in the Final Environmental Impact Statement (if these alternative methods were used). The comment assumes land use patterns, growth rates, and induced travel patterns would be different (from what is described in the Final Environmental Impact Statement) if the freeway were not in place. In essence, the comment is suggesting that the description of the No-Action Alternative (and its related impacts) in the Final Environmental Impact Statement is misleading.

The Arizona Department of Transportation and Federal Highway Administration agree that scenario planning methods have application in some instances; however, in this case, the Arizona Department of Transportation and Federal Highway Administration believe that the methods used to describe the No-Action Alternative as presented in the Draft and Final Environmental Impact Statements are appropriate. At a basic level, the National Environmental Policy Act requires consideration of reasonable alternatives—meaning the No-Action Alternative should be reasonable as well. Speculation about what an alternative and the conditions surrounding the alternative in the future would look like is not appropriate; the effects of alternatives must be reasonably foreseeable. Under this premise, the description of the No-Action Alternative in the Final Environmental Impact Statement is appropriate. The description of this alternative is presented in the section, Alternatives Studied in Detail, in the Final Environmental Impact Statement on page 3-30. Its features include: not extending State Route 202L west of Interstate 10 (Maricopa Freeway), assuming all other projects in the Regional

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We understand that ADOT neglected to even make an appearance of responding to 10
Transportation Plan are completed, and using population, employment, and housing projections officially approved by the Maricopa Association of Governments. The Arizona Department of Transportation and Federal Highway Administration believe that the depiction of impacts caused by the No-Action Alternative are, therefore, appropriate and correctly presented throughout the Final Environmental Impact Statement. In defining the transportation problem in Chapter 1, Purpose and Need, of the Final Environmental Impact Statement, the analysis illustrates the severity of the breakdown in the transportation network if no action were taken in the area. This is further supported by the impact analyses presented throughout Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, of the Final Environmental Impact Statement. To summarize, durations and physical lengths of congestion would worsen, travel times would become longer over the same distances, congestion would continue to spill over into the arterial street network, and monetary costs to the State and its residents would increase.

Further justification of why the No-Action Alternative description in the Final Environmental Impact Statement is most appropriate includes:

- At certain points in the Phoenix metropolitan area’s history, growth rates prior to planning for the region’s freeway system exceeded growth rates after planning for and construction of the regional freeway system began. Chapter 1, Purpose and Need, and the sections, Land Use and Economic Impacts, in Chapter 4, establish cost of living, livability, mild climate, technological advancement (affordable air conditioning), employment opportunities, a development-oriented regulatory environment, and key location for industry as primary growth drivers in the Phoenix metropolitan area. Therefore, transportation is not the sole driver of growth.

- As established in the Final Environmental Impact Statement, “pre-freeway” land use planning mimics “post-freeway” land use planning. In 1979, the Phoenix Concept Plan 2000 was adopted by the City of Phoenix. The plan called for 25 Phoenix urban villages. Of those, it established 9 villages with instructions for village planning committees to prepare 25-year concept plans. The Laveen and Estrella Villages were included in the list of 25 suggested villages, although they were not among the 9 villages adopted in the initial plan. However, the intent was that Laveen and Estrella Villages would be developed at a later point in time. The freeway system considered in the plan included only Interstate 10, Interstate 17, and U.S. Route 60—it did not include the regional freeway system. The Phoenix Concept Plan 2000 was replaced by the Phoenix General Plan, 1985–2000. The resolution adopting the General Plan directed the village planning committees to continue in the City of Phoenix’s planning process. The resolution included Laveen and Estrella as villages. Planning for the Laveen and Estrella Villages was completed around the same time as the initial planning for the regional freeway system, including the South Mountain Freeway. Therefore, the land use planning and transportation planning were conducted in parallel, not with one effort depending on the other. To conclude that land use patterns would look different than they do today (as inferred in the U.S. Environmental Protection Agency’s comment) is not consistent with past planning patterns. It is more reasonable to argue that the City of Phoenix would have continued to plan for the urban village core concept as has been envisioned since the late 1970s.
In this case, scenario planning would be speculative for the following reasons:

- Factors affecting growth vary (see above), and to assume only transportation as a growth driver would be speculative.
- Continuation of “pre-freeway” historical land use planning patterns is reasonable to expect. The section, Land Use, documents the growth scenario under the No-Action Alternative and notes that the area would develop in a similar fashion with or without the project. This is supported by:
  - The Study Area already has good connecting transportation infrastructure (although congested) to support continued development without the freeway. It is also close to downtown Phoenix. Existing infrastructure plus location would result in growth without the freeway as described in the Purpose and Need chapter. The freeway is not opening up the area to development because existing roads (for example, Pecos Road, Baseline Road, and 51st Avenue) provide access.
  - To date, approximately 67 percent of the land in the Study Area has already been developed in accordance with the City of Phoenix’s General Plan and zoning ordinance. It is assumed that such development would not be torn down and land uses redistributed if the freeway were not built.
  - Factors contributing to historical and projected growth are well-documented in the Final Environmental Impact Statement, agricultural (22 percent) and open space (11 percent) land uses in the Study Area represent only 33 percent of land area (it should be noted the 11 percent of open space is mostly not developable because of topographic challenges and floodplain constraints), while the remainder of the area is in some form of “built” land use. Distribution of zoning further supports the conclusion—12 percent of the Study Area is zoned for agricultural and open space uses while 88 percent is zoned for other more intensive land uses.
  - Factors contributing to historical and projected growth are well-documented in the Final Environmental Impact Statement in Chapter 1, Purpose and Need, and in the Chapter 4 sections, Land Use and Economic Impacts. The freeway will be built in an area planned for urban growth as established in local jurisdictions’ land use planning activities for at least the last 25 years (see the section, Induced Growth, beginning on page 4-182 of the Final Environmental Impact Statement).
  - The sections, Induced Travel and Induced Growth, beginning on pages 4-179 and 4-182, respectively, of the Final Environmental Impact Statement, establish that the freeway would contribute to minimal induced travel demand (which has, to a large degree, been accounted for in the Maricopa Association of Governments’ model).
  - Section 93.110 of the U.S. Environmental Protection Agency’s conformity rule requires that population and employment projections (which establish growth rates and distribution) used in a conformity analysis be the most recent estimates that have been officially approved by the Maricopa Association of Governments (as the metropolitan planning organization for the Maricopa County nonattainment and maintenance areas). In accordance with the Governor’s Executive Order 2011-04, county-level population projections used for all State agency planning purposes were updated by the Arizona Department of Administration in December 2012, based on the 2010 U.S. Census. To use projections other than the approved demographic trends would be inconsistent with the projections required for use in the transportation conformity assessment.

Even if one could argue the only reason the development has occurred as it has is because of the planned freeway (which is not the case—see above) for the last 30 years (in other words, if the freeway had not been planned, development would somehow have been different), the argument is irrelevant. Existing development is
now there and, therefore, it is reasonable to assume that the land use distribution and related development will be there in the future.

The analysis documented in the Final Environmental Impact Statement leads to the conclusion that the No-Action Alternative and action alternative land uses would be similar, and thus, no “scenario planning” is required. Scenario planning could have application if the area was not developed, but the manner in which the No-Action Alternative was determined and presented in the Final Environmental Impact Statement is “state-of-the-practice.” Defining the No-Action Alternative as including all projected socioeconomic growth and planned transportation projects in the Regional Transportation Plan except the proposed action is common practice. The approach taken in the Final Environmental Impact Statement has standard application in the transportation industry. In Arizona, this method to describe the No-Action Alternative has been commonplace in National Environmental Policy Act documents dating back to at least 1990. Further, the environmental impact statements for Legacy Parkway and Mountain View Corridor in Utah had a similar approach of using local land use plans, growth projections, and interviews with City representatives to determine whether the No-Action Alternative land use would be different than with the proposed action. All of these projects were in similar high-growth regions, and the conclusions were that the areas would develop with or without the project, although the timing may change.

The No-Action Alternative as defined in the Final Environmental Impact Statement is appropriate. It satisfies reasonableness, withstands a hard look, and was fully disclosed.

5 Purpose and Need

The comparison of traffic operational characteristics between the action alternative and the No-Action Alternative is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternative would:

- reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13)
- optimize travel on the region’s freeway system (see Figure 3-12)
- reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14)
- reduce the duration of level of service E or F conditions in key areas of the region’s freeway system (see Figure 3-15)
- improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8)
- provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18)

When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits approximate $200 million per year (see Table 4-27).

5 National Environmental Policy Act

The Federal Highway Administration and the Arizona Department of Transportation carefully considered all comments received on the Draft Environmental Impact Statement and developed thoughtful and complete responses to those comments as documented in the Final Environmental Impact Statement and Errata. Specific comments will be addressed in the later pages of responses.

6 National Environmental Policy Act

The Federal Highway Administration and the Arizona Department of Transportation went to great lengths to fulfill any and all requests for information in the region, the user benefits approximate $200 million per year (see Table 4-27).

2 We understand that ADOT neglected to even make an appearance of responding to 10
In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process presented in Chapter 3 of the Draft Environmental Impact Statement. This process, which occurred early in the environmental impact statement process, was revisited and validated in the Final Environmental Impact Statement (see Figure 3-2 on page 3-4).

Several action alternatives were subject to the alternatives development and screening process, not just the E1 Alternative and alternatives located on the Gila River Indian Community (Figure 3-6 on page 3-10 of the Final Environmental Impact Statement illustrates a representation of such alternatives). Alternatives that bisected Ahwatukee Foothills Village were eliminated because of their extraordinary community impacts. Alternatives located north of the mountains to avoid the protected resource would not meet the purpose and need of the project and would create impacts of extraordinary magnitude (see Table 3-5 on page 3-12 of the Final Environmental Impact Statement). Alternatives located south of the mountains would pass through Gila River Indian Community land. Any alternative on Gila River Indian Community land must consider tribal sovereignty. Tribal sovereignty is based on the inherent authority of Native American Tribes to determine themselves. While this notion of sovereignty is manifested in many areas, generally Native American land is held in trust by the United States. Native American communities have the authority to regulate land uses and activities on their land. States have very limited authority over activities within tribal land (see page 2-1 of the Final Environmental Impact Statement). From a practical standpoint, this means that the Arizona Department of Transportation and Federal Highway Administration do not have the authority to survey tribal land, make land use (including transportation) determinations directly affecting tribal land, or condemn tribal land for public benefit through an eminent domain process. The Gila River Indian Community has not granted permission to develop alternatives on its land (see Final Environmental Impact Statement page 3-25). Placing an alternative even farther south of the Gila River Indian Community land would not satisfy the purpose and need of the project. Therefore, there is no prudent and feasible alternative to avoid use of the mountains, and the E1 Alternative is the only action alternative available.

The study has considered a variety of transportation modes: transportation system management/transportation demand management, mass transit (commuter rail, light rail, expanded bus service), arterial street improvements, land use controls, new freeways, and a No-Action Alternative. These alternatives alone or in combination would have limited effectiveness in reducing overall traffic congestion in the Study Area and, therefore, would not meet the purpose and need criteria; specifically, they would not adequately address projected capacity and mobility needs of the region. Mass transit modes such as light rail and an expanded bus system were reexamined in the Final Environmental Impact Statement and were eliminated from further study because even better-than-planned performance of transit would not adequately address the projected 2035 travel demand (see Final Environmental Impact Statement page 3-4). For example, the average daily ridership for the light rail system connecting downtown Phoenix and the Arizona State University campus was approximately 44,000 in 2014. This
is only approximately 25 percent of the total daily vehicles projected to use the freeway in 2035. Two high-capacity transit corridors are being considered near the western and eastern extents of the Study Area, but such extensions would not adequately address the projected 2035 travel demand. A freeway/light rail combination would integrate a freeway and light rail system into a single transportation corridor (see Final Environmental Impact Statement page 3-6). Such a freeway/light rail system is planned at two locations: along Interstate 10 (Papago Freeway) and along State Route 51 (Piéretwa Freeway). These two segments would connect to the light rail system currently in operation. With these two freeway/light rail segments already in planning stages, members of the public identified a similar opportunity along the freeway. Most freeway/light rail combinations, however, radiate from a central travel demand generator such as a business district or airport. No such systems are known to follow a circumferential route, as the South Mountain Freeway will. Furthermore, the additional right-of-way needed for light rail (generally, a 50-foot-wide corridor) would have substantial community impacts such as displaced residences and businesses and parkland impacts. Therefore, the light rail alternative and light rail and freeway combination would not be prudent and were eliminated from further study. The freeway mode was determined to be an appropriate response to the project’s purpose and need.

Based on the comment received from the Gila River Indian Community, the proposed alternative (U.S. Route 60 Extension to Interstate 10 [Papago Freeway]) was considered in the alternative screening process presented in the Final Environmental Impact Statement (see text beginning on page 3-7). The U.S. Route 60 Extension to Interstate 10 (Papago Freeway) would result in similar benefits and impacts as the U.S. Route 60 Extension to Interstate 17 and Interstate 10 Spur, which were presented in the Draft Environmental Impact Statement. The project team subjected the U.S. Route 60 Extension to Interstate 10 (Papago Freeway) to the screening process and criteria applied to other alternatives as described beginning on page 3-3 of the Final Environmental Impact Statement. The project team found the alternative would cause substantial traffic performance impacts on Interstate 10 (Maricopa Freeway) and U.S. Route 60 (Superstition Freeway); would not address the needs based on regional travel demand and existing and projected transportation system deficiencies (which were updated with Census 2010-based socioeconomic data presented in the Final Environmental Impact Statement beginning on page 1-11); would result in thousands of residential displacements and over one hundred business displacements; would adversely affect the communities in the South Mountain Village by constructing a barrier between schools, parks, and residences; and would not be consistent with local or regional planning. For these reasons, the U.S. Route 60 Extension to Interstate 10 (Papago Freeway) was eliminated from detailed study (see Table 3-5 on page 3-12 of the Final Environmental Impact Statement).

A partial freeway from Interstate 10 (Papago Freeway) to Laveen Village is not reasonable because it would not meet the freeway’s identified purpose and need. Construction of Carver Road between 59th and 51st avenues is included in the City of Phoenix General Plan transportation element. Improving 51st Avenue between Carver Road and Pecos Road would require permission of the Gila River Indian Community. Based on previous comments from the Gila River Indian Community related to pass-through traffic using 51st Avenue, the Gila River Indian Community would not support any activities that would increase unwanted traffic through its communities. Extending Pecos Road to 51st Avenue would not be feasible because
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A portion would be located on Gila River Indian Community land, and the Gila River Indian Community has not provided permission to construct a facility on its land. Based on previous comments from the Gila River Indian Community related to pass-through traffic using 51st Avenue, the Gila River Indian Community would not support any activities that would increase unwanted traffic through its communities. Improvements to the arterial street system in the southwestern area (Laveen and Estrella Villages) are planned in the City of Phoenix General Plan. For these reasons, alternatives similar to the hybrid alternative proposed in the comment were eliminated from detailed study.

Depressing the Pecos Road sections would entail installation of pump stations to drain the main line freeway. A depressed freeway would also need a drainage channel to capture the off-site flows to prevent their entering the freeway. Pump stations were not used because of the high cost of construction and maintenance needed for their operation. The recommended freeway configuration would have the E1 Alternative aboveground and the existing culverts extending to pass the drainage under the freeway. Pecos Road currently has numerous existing culvert crossings. Depressing the freeway in this area would eliminate the existing culvert crossings and potentially have adverse flooding impacts on adjacent properties. Extending the existing culverts or upsizing the culverts would maintain or improve drainage flows. This would ensure that there would be no adverse flooding impacts on adjacent properties. (See Final Environmental Impact Statement pages 3-15 and 3-18.) To reduce impacts by depressing the freeway in the Eastern Section, the Arizona Department of Transportation would:

- need to spend an additional $400 million for right-of-way acquisition and construction
- displace an additional 300 residences
- maintain additional pump stations and detention basins for the life of the freeway
- would still have noise-related impacts requiring mitigation (i.e., noise barriers and their associated costs and visual impacts)

Because the below-ground option would result in substantially greater costs and residential displacements, this option was eliminated from further study. As stated on page 3-40 of the Final Environmental Impact Statement, the No-Action Alternative would not satisfy the purpose and need of the freeway because it would result in further difficulty in gaining access to adjacent land uses, increased difficulty in gaining access to Interstate and regional freeway systems from the local arterial street network, increased levels of congestion-related impacts, continued degradation in performance of regional freeway-dependent transit services, increased trip times, and higher user costs. Further, the No-Action Alternative would be inconsistent with Maricopa Association of Governments’ and local jurisdictions’ long-range planning and policies. The No-Action Alternative was included in the Draft and Final Environmental Impact Statements for detailed study to compare impacts of the action alternatives with the consequences of doing nothing (as impacts can result from choosing to do nothing). The impacts associated with the No-Action Alternative are discussed in each section of Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, in the Final Environmental Impact Statement. These impacts are also summarized in Table 5-3 on page 5-10 of the Summary chapter of the Final Environmental Impact Statement.
If feasible, avoidance of Section 4(f) resources is always the Federal Highway Administration and Arizona Department of Transportation’s first option. As summarized in Figure 5-2 on page 5-4 of the Final Environmental Impact Statement, numerous alignment adjustments were made to avoid use of existing and planned Section 4(f) resources. As discussed on page 5-18 of the Final Environmental Impact Statement, many alternatives were examined to avoid the use of the South Mountains; however, none of these alternatives are prudent and feasible. The Department of the Interior reviewed the Final Environmental Impact Statement and commented, “The Department agrees that the South Mountain Park and Preserve (SMPP) is a Land and Water Conservation Fund (LWCF) assisted site that will be directly impacted by the subject project. These documents assess the direct use of park land for freeway purposes to be 31.3 acres. We agree with the conclusions stated. We note that the “Measures to Minimize Harm” on the Section 4(f) Statement pages 5-23, 5-24, and 5-25 have annotated a commitment to provide replacement land for the converted park land. The Department concurs with the assessment of the impacts to the LWCF-assisted resource and acknowledges the mitigation commitment.” The complete letter can be found in page A5 of this Appendix A.

The analyses for carbon monoxide and particulate matter (PM_{10}) indicated that concentrations for these pollutants will be in compliance with (or below) the U.S. Environmental Protection Agency’s health-based standards for these pollutants. As explained in the Final Environmental Impact Statement, the Federal Highway Administration does not conduct comparable analysis for mobile source air toxic pollutants, in part because the U.S. Environmental Protection Agency’s health risk guidelines for these pollutants are based on 70-year exposure, and it is extremely unlikely that anyone would be at a fixed located near the project for 70 continuous years. Instead, the Federal Highway Administration conducted a mobile source air toxic emissions analysis for the area affected by the project, and found that emissions in the project design year will be roughly 80 percent lower than current emissions, and that the difference between building and not building the project is only about 1 percent. Emissions will increase in the immediate vicinity of the project corridor if the project is built; to address this, the Final Environmental Impact Statement includes a summary of past health risk studies for similar projects, all of which identified very low health risk, well below the U.S. Environmental Protection Agency’s “Action Level” for addressing risk.

Responses to specific comments are provided on the following pages.
Appendix A • A111

11 Air Quality
Since the release of the Draft Environmental Impact Statement, the Arizona Department of Transportation and the Federal Highway Administration have consulted extensively with the U.S. Environmental Protection Agency on the air quality analytical approach and methods used in the Final Environmental Impact Statement. This consultation has resulted in agreement on the analysis methodologies and the results of these analyses. The carbon monoxide and particulate matter (PM\textsubscript{10}) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

12 Cultural Resources
Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the federal government and Native American Tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office, other tribal authorities, and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until the commitments in the Record of Decision are completed.

As noted in Table 4-47 on pages 4-151 through 4-153 of the Final Environmental Impact Statement, the Programmatic Agreement for the project was executed in 2006 (see Appendix 4-6 on page A674 in Volume II of the Final Environmental Impact Statement) by the signatories, the Federal Highway Administration and the Arizona State Historic Preservation Officer. The Tribes were invited to participate, but because the project is not located on tribal land, no Tribes are required to sign for the Programmatic Agreement to be executed in compliance with the National Historic Preservation Act or the National Environmental Policy Act. However, the Yavapai-Apache Nation, Fort McDowell Yavapai Nation, and Tonto Apache Tribe signed the Programmatic Agreement in 2007. The Gila River Indian Community was offered several opportunities to sign the Programmatic Agreement as a concurring party, but elected not to do so. However, as noted above, the Gila River Indian Community and other Tribes have been consulted throughout the environmental impact statement process.
even though the U.S. EPA recommended that ADOT do a Health Assessment. See, Comments of R. Haddow (included herewith). In a related comment, Richard Haddow expands on his prior discussion of ADOT’s manipulation and misapplication of air modeling techniques to support construction of the project. See, Comments of R. Haddow (included herewith); see also, Ex. 1 (Resolution of the Tempe Union High School District and the Kyrene Elementary School District opposing construction of the SMF). ADOT also failed to comply with its obligations under Section 106 of the National Historic Preservation Act. South Mountain is a Traditional Cultural Property that is sacred to a number of tribes in the area. Notwithstanding, ADOT has, in part, failed to adequately consult and coordinate with the interested tribes throughout this process. ADOT has also failed to finalize a Programmatic Agreement with the tribes, which must be completed prior to conclusion of the NEPA process. See, Comments of S. Skemore, J.D. (included herewith). As a practical matter it is impossible to mitigate destruction.

This cover letter is not intended as a comprehensive dissertation vis-à-vis all of the problems associated with the project. Nor is it intended to identify all of the applicable legal requirements that ADOT has ignored in its quest to build the SMF. These shortcomings are discussed in greater detail in the Comments/Reports included herewith (all incorporated herein by this reference). As we pointed out previously, ADOT’s efforts to champion the SMF amount to a gross abuse of the public trust and an approximately $3 billion waste of taxpayers’ money. The South Mountain Freeway will have a significant negative impact on the health of thousands of people, including children, who live, work, or go to school near the proposed right-of-way. It will require the relocation of hundreds of homes, and dry up lakes and golf courses in the Ahwatukee area. The project will pollute the air, bombard residents with noise, negatively impact recreational opportunities, devalue homes, re-route large numbers of commercial trucks through an historic bedroom community, and destroy a large segment of the South Mountain Park – a valuable natural resource that is sacred to the Gila River Indian Community and other tribes in the area. This is a significant price to pay to achieve capacity deficiencies at levels comparable to the No Action Alternative on freeways and arterials throughout the Metropolitan Area.

A more comprehensive Table of Contents follows this letter. The following people/organizations, inter alia, have, however, provided Comments on behalf of the “Comments” that are attached hereof:

1. Herman Baumann, P.E.: Mr. Baumann is a Registered Civil and Traffic Engineer in the State of California and a Registered Engineer (in retired status) in the states of Washington, Arizona, and Florida. He has over 50 years of experience in traffic and transportation engineering, traffic modeling and forecasting, and the preparation of traffic impact studies. Mr. Baumann identifies myriad deficiencies in the

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Specific responses to comments on the Final Environmental Impact Statement will be addressed as they appear later in this submission. In summary, however, the Federal Highway Administration and the Arizona Department of Transportation have produced the comprehensive multidisciplinary analysis of the effects of the South Mountain Freeway required by the National Environmental Policy Act; therefore, the project is not an abuse of public trust or a waste of taxpayer money. Council on Environmental Quality regulations [40 Code of Federal Regulations Section 1505.2(b)] require the Record of Decision to identify the environmentally preferable alternative. The environmentally preferable alternative is defined as the alternative that causes the least damage to the physical and biological environment and best protects, preserves, and enhances historic, cultural, and natural resources. Designation of the environmentally preferable alternative typically involves judgment and the balancing of some environmental values against others. The Council on Environmental Quality notes that comments on draft environmental documents (such as the Draft and Final Environmental Impact Statements for this project) can assist the lead agency in developing and determining environmentally preferable alternatives.

Although the No-Action Alternative might have less environmental impact, this alternative does not meet the project’s purpose and need. Many mitigation measures have been added to the Record of Decision based on comments received on the Draft and Final Environmental Impact Statements. The Selected Alternative is the environmentally preferable alternative that satisfies the project’s purpose and need. Although the Selected Alternative does not have the least impact in every environmental discipline, the Arizona Department of Transportation believes that this alternative best balances environmental effects and benefits.

The Selected Alternative will meet the project needs as well as or better than the other alternatives, and, in the case of the E1 Alternative, was determined to be the only prudent and feasible alternative in the Eastern Section of the Study Area. The Selected Alternative will have similar environmental effects on natural resources, cultural resources, hazardous materials, and noise; will displace fewer residences; will have the least impact on total tax revenues of local governments; will have lower construction costs; will result in less construction disruption overall to Interstate 10 (Papago Freeway); will mitigate and provide measures to minimize harm; represents all possible planning to minimize harm to resources afforded protection under Section 4(f); is favored by the majority of local governments; and will meet regulatory permitting requirements.
DEIS and FEIS. He also identifies various alternatives that should have been considered but were not. He also discusses ADOT’s failure to respond to his prior comments, as well as ADOT’s failure to make decisional data available for timely public review.

2. SWCA Environmental Consultants: The SWCA team reviewed the DEIS and the FEIS for its discussion on water, air, and noise and provided a comment “matrix.” The conclusions included in the matrix are too voluminous to outline here. SWCA did, however, confirm, in part, that: (1) there is no technical or scientific rationale for justification for why the “Study Area” is defined the way it is; (2) otherwise viable alternatives were eliminated simply because they did not fit into the arbitrarily defined “Study Area”; (3) ADOT failed to adequately respond to their prior comments; and (4) there is essentially no discussion of the impact construction would have on the wells that currently serve the Lakewood and foothills communities — this project will likely dry up the lakes and golf courses in Ahwatukee.

3. Kevin Kane: Mr. Kane is a Ph.D. candidate and instructor at Arizona State University’s School of Geographical Sciences and Urban Planning. Mr. Kane addresses the agency’s utilization of faulty population projections to support the very purpose and need for the Freeway and ADOT’s failure to provide any analysis or justification for reaching the same conclusions based on significantly different census data.

4. George Thurston, Sc.D.: Dr. Thurston is a full professor at the New York University Medical School. Dr. Thurston dentifies, in part, ADOT’s continued failure to adequately address the public health risks associated with this project, as well as the agency’s failure to adequately address his prior comments.

5. Richard Haddock: Mr. Haddock is a former District Environmental Coordinator with the Arizona Department of Transportation (ADOT). According to Mr. Haddock, in part, the use of data, the methodology employed, and the conclusions presented in the DEIS and FEIS are absolutely without technical merit and do not comply with the fundamental concepts and purpose of an environmental impact statement. Neither the DEIS nor the FEIS protect or properly inform the citizens of the level of risk to public health by building the freeway. The agency also failed to adequately respond to comments provided previously by Mr. Haddock.

6. Aaron Golub, Ph.D.: Dr. Golub is an associate professor at the School of Geographical Sciences and Urban Planning and School of Sustainability at Arizona State University. He has his Ph.D. from the Department of Civil and Environmental Engineering, U.C. Berkeley and his M.S. in Mechanical Engineering from MIT. According to Dr. Golub, ADOT failed to consider growth inducing affects necessarily associated with the construction of the SME, ADOT also failed to adequately address issues raised vis-a-vis projections of Vehicle Miles Traveled (“VMT”).
Simple Brittle: Mr. Brittle is the President and Co-Founder of Dust Waste Arizona, Inc. ("DWAZ"), a statewide non-profit environmental organization that was formed in 1990. Mr. Brittle was a member of Maricopa County Local Emergency Planning Committee for ten years. He is also a private sector consultant who has worked on various environmental and hazardous materials issues. Mr. Brittle essentially outlines the fact that ADOT simply failed to respond to his comments to the DEIS.

Thank you for your consideration. As outlined herein and supported through the attached reports/comments, there is no valid justification for the construction of the South Mountain Loop 202 Freeway.

NEPA requires a fully informed decisional process through, in part, the preparation of a FEIS. The FEIS, however, treats the crucial decision to proceed with a $3 billion tax payer funded project, not as an impending choice to be pondered, but as a foregone conclusion to be rationalized. The FEIS provides flawed analyses, generalities, and heavy-handed self-justifications. This is a direct violation of applicable law and a gross abuse of the public trust. No reasoned decision could be made on the basis of the FEIS that, for example, improvements to existing highways and arterials would not better serve regional transportation needs; that public transportation alternatives are not viable; or that abandonment of the project is impractical.

If you have any questions or concerns, please feel free to contact me directly.

Sincerely,

THE SHANKER LAW FIRM, PLC

Howard M. Shanker
For the Firm
EXHIBIT 1

Resolution Opposing Construction of the Loop
202 Freeway Extension by the
Governing Boards of the
Tempe Union High School District
(No. 213 of Maricopa County)
&
Kyrene Elementary School District
(No. 28 of Maricopa County)
GOVERNING BOARD

TEMPE UNION HIGH SCHOOL DISTRICT No. 213 OF MARICOPA COUNTY

RESOLUTION

Opposing construction of Loop 202 Freeway Extension

REASONS

A. Tempe Union High School District No. 213 of Maricopa County (“Tempe Union”) is an “A” rated school district comprised of 7 high schools.

B. The District’s boundaries encompass all of the Ahwatukee community in the City of Phoenix, parts of Chandler, the Town of Guadalupe, the City of Tempe, and the Gila River Indian community. The boundaries include a portion of the proposed site of the Loop 202 extension (the South Mountain Freeway) along Pecos Road.

C. Tempe Union enrolls more than 33,500 students in grades 9 through 12. Approximately 4,500 students are enrolled in Desert Vista High School and Mountain Pointe High School, in the Ahwatukee community of the City of Phoenix, which area will be subject to the greatest impact from an extension of the Loop 202 freeway.

D. Tempe Union has a strong interest in the safety of its students, their families and its employees, including their safe transportation to and from Tempe Union’s schools and other worksites, on streets and highways within and near Tempe Union.

E. Tempe Union also has a strong interest in air quality and its impact upon the students, their families and its employees within the Tempe Union community, and respect for the environment of the Tempe Union community.

F. It is understood that South Mountain is sacred land to many persons residing in the Tempe Union community and nearby areas, and that the Loop 202 freeway as planned along the Pecos Road alignment would remove a portion of the Mountain.

G. The Tempe Union High School District Governing Board wishes to express its opposition to the proposed extension of the Loop 202 Freeway west of Interstate 10 (the South Mountain Freeway) along the proposed Pecos Road alignment.
Although carbon monoxide levels will increase in an area where there is presently no freeway, they will be well below the U.S. Environmental Protection Agency’s health-based National Ambient Air Quality Standard. The carbon monoxide and particulate matter (PM$_{10}$) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. Potential ozone impacts are addressed through including the project in the Maricopa Association of Government’s long-range transportation plan and transportation improvement program, which meet all Clean Air Act requirements related to conformity for the ozone National Ambient Air Quality Standards. As long as projects are included in a conforming plan, as is the case for the South Mountain Freeway, then they are considered to have complied with the Clean Air Act requirements applicable to ozone.

### Acquisitions and Relocations

As noted on page 4-46 of the Final Environmental Impact Statement, no businesses will be acquired along the E1 (Pecos Road) Alternative. The impact on existing homes from the project are disclosed in the Final Environmental Impact Statement (see page 4-46).

### Noise, Air Quality

With regard to noise impacts, schools were included in the categories of activities considered in the noise pollution analysis for the project in keeping with 23 Code of Federal Regulations Part 772 (see page 4-88 of the Final Environmental Impact Statement). As stated in the Final Environmental Impact Statement, sensitive receivers, including schools, will be affected by implementation of the project. These impacts, however, will be mitigated as discussed beginning on page 4-91 of the Final Environmental Impact Statement. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. The noise analysis was updated for the Final Environmental Impact Statement (beginning on page 4-88). No substantial differences between the analyses in the Draft and Final Environmental Impact Statements resulted from the update.

With regard to air quality, although carbon monoxide levels will increase in an area where there is presently no freeway, they will be well below the U.S. Environmental Protection Agency’s health-based National Ambient Air Quality Standard. The carbon monoxide and particulate matter (PM$_{10}$) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. Potential ozone impacts are addressed through including the project in the Maricopa Association of Government’s long-range transportation plan and transportation improvement program, which meet all Clean Air Act requirements related to conformity for the ozone National Ambient Air Quality Standards. As long as projects are included in a conforming plan, as is the case for the South Mountain Freeway, then they are considered to have complied with the Clean Air Act requirements applicable to ozone.

To address the fact that emissions will increase along the project corridor, the Final Environmental Impact Statement includes a summary of past health risk studies for similar projects. The Federal Highway Administration considers this information more relevant and meaningful for communicating likely health risk than simply reporting an emissions number for the corridor. As explained in the Final Environmental Impact Statement and air quality technical report, all of these studies identified very low health risk, well below the U.S. Environmental Protection Agency’s “Action Level” for addressing risk.
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Comment noted.
INDEX of COMMENTS
(February 25, 2014)

<table>
<thead>
<tr>
<th>Code</th>
<th>Comment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Review and Critique of FEIS for Loop 202 (South Mountain Freeway) by Herman Basmaciyan, P.E.;</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>SWCA Comments on ADOT South Mountain Freeway Final EIS (September 2014)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Comment from Chris Garret, R.S., P. HGW, at SWCA regarding South Mountain Freeway (Loop 202) EIS Depressed Freeway Alternative;</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Response to Final Environmental Impact Statement (FEIS) Socioeconomic Factors by Kevin Kane;</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Comments on the South Mountain Freeway/202 Loop Final Environmental Impact Statement (FEIS) Air Quality Component by Richard Haddow;</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Response to South Mountain Freeway (Loop 202) Final Environmental Impact Statement (FEIS) by Aaron Golub, Ph.D.;</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Comments on the South Mountain Freeway Final Environmental Impact Statement (FEIS) and Section 4(F) Evaluation Issued September 2014 Regarding Impacts to Cultural Resources by Samantha Skendore, Of Counsel, The Shanker Law Firm, PLC;</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Response to Final Environmental Impact Statement (FEIS) Section 4(F) Resources;</td>
<td></td>
</tr>
</tbody>
</table>

Table of contents.
<table>
<thead>
<tr>
<th>Code</th>
<th>Comment Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Lakewood Community Association’s Concerns &amp; Response to FEIS for Loop 202 (South Mountain Freeway) by Lakewood Community Association Board of Directors;</td>
</tr>
<tr>
<td>11</td>
<td>Comments on the FEIS and Specific Responses to Laws' DEIS comments (FEIS pages B545-B592);</td>
</tr>
<tr>
<td>12</td>
<td>Don’t Waste Arizona, Inc. Response to South Mountain Freeway FEIS by President Stephen M. Brittle;</td>
</tr>
<tr>
<td>13</td>
<td>Rebuttal and Responses regarding DEIS for the South Mountain Freeway by Hugh S. Mason, Ph.D., Associate Professor, Arizona State University;</td>
</tr>
<tr>
<td>14</td>
<td>Reply Comments on FEIS from Nicolai V. Kamienoff;</td>
</tr>
<tr>
<td>15</td>
<td>Comments on FEIS from Scott Herman;</td>
</tr>
<tr>
<td>16</td>
<td>Comments on FEIS Patti Mason;</td>
</tr>
</tbody>
</table>
COMMENT 1

Review and Critique of FEIS for Loop 202 (South Mountain Freeway) by Herman Basmaciyan, P.E.
Appendix A

HERMAN BASMACIYAN, P.E.
Traffic, Transportation, Parking
Expert Witness and Consulting Services
701 Marguerite Avenue
Corona del Mar, CA 92625
Tel: 949-803-8738
herman.b@roadrunner.com

November 20, 2014
Ms. Pat Lawlis
President, Protecting Arizona’s Resources and Children (PARC)
P.O. Box 50455
Phoenix, Arizona 85076-0455
Proj. No. 130601

Subject: Review of FEIS for Loop 202, South Mountain Freeway

Dear Ms. Lawlis:

Per your request, I have reviewed, in addition to my prior review of the DEIS, the Final
Environmental Impact Statement (FEIS) for Loop 202, South Mountain Freeway (SMF) and
related documents pertaining to travel modeling, traffic circulation, and transportation and traffic
engineering/planning.

Based on my review of the documents cited above and my education, professional knowledge and
many years of experience, I have identified deficiencies and/or omissions in the NEPA
documentation for the Loop 202 South Mountain Freeway project. These deficiencies and/or
omissions are discussed in my report, attached. In view of these deficiencies and/or omissions, I
have concluded that the FEIS leads to the selection of a Preliminary Preferred Action
Alternative, improperly.

Please contact me if I can provide further details or clarification about any matters covered in this
letter and the attached report.

Sincerely,

HERMAN BASMACIYAN

Herman Basmaciyan, P.E.
REVIEW AND CRITIQUE
of
FEIS FOR LOOP 202 (SOUTH MOUNTAIN FREEWAY)

Prepared for
Protect Arizona’s Resources and Children (PARC), et al.
Phoenix, Arizona

by
Herman Basmaciyana, P.E.
November 20, 2014
# TABLE OF CONTENTS

## SECTION 1:

- LOOP 202 SOUTH MOUNTAIN FREEWAY – COMMENTS ON THE FEIS RESPONSES

- INTRODUCTION
  - Page 5

- COMMENTS ON THE FEIS RESPONSES
  - Page 5

- DIFFICULTY OF OBTAINING MAG TRAVEL FORECASTING

- MODEL INFORMATION
  - Page 25

## SECTION 2:

- LOOP 202 SOUTH MOUNTAIN FREEWAY

- ISSUES STILL NOT ADDRESSED ADEQUATELY IN THE NEPA EIS PROCESS

- INTRODUCTION
  - Page 28

- DISCUSSION OF ISSUES STILL NOT ADEQUATELY ADDRESSED IN THE NEPA PROCESS
  - Page 28

- EXHIBIT 1 - COMPARISONS OF SOCIO-ECONOMIC FORECASTS IN DEIS AND FEIS
  - Page 41

Code | Issue | Response |
---|---|---|
31 | | Table of contents. |
SECTION 1

LOOP 202 SOUTH MOUNTAIN FREEWAY

COMMENTS ON THE FEIS RESPONSES
The 2007 Maricopa Association of Governments socioeconomic projections were based on the 2005 special Census survey and were approved in May 2007. This projection series was developed using Maricopa County and State control totals from the Arizona State Demographer’s Office. The projections incorporated the current known development projects, adopted land use plans, and assumptions based on conditions at that time, but growth patterns at all levels (state, county, and sub-county) were affected by the housing boom of the early 2000s. These projections were the current adopted projection series at the time of publication of the Draft Environmental Impact Statement. The 2013 Maricopa Association of Governments socioeconomic projections were based on the 2010 Census and were approved in June 2013, after the Draft Environmental Impact Statement was published. This projection series reflected the impacts of the economic downturn and the housing market bust that started in 2008. The updated series took into account the housing foreclosure crisis and the numerous known development projects from the 2007 projection series that were canceled or altered, along with new development projects, updated land use plans, and assumptions, which were incorporated into the 2013 projections. Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer’s Office. The projections by the Arizona State Demographer’s Office were produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the sub-county level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published before the Final Environmental Impact Statement was issued.

The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, Purpose and Need, and Chapter 3, Alternatives). The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13).
### Purpose and Need

The need for the project is based on socioeconomic factors and regional transportation demand and existing and projected transportation system capacity deficiencies (see text beginning on page 1-11 of the Final Environmental Impact Statement). The analysis of the responsiveness of the freeway to the purpose and need criteria is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternative would:

- reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13)
- optimize travel on the region’s freeway system (see Figure 3-12)
- reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14)
- reduce the duration of level of service E or F conditions in key areas of the region’s freeway system (see Figure 3-15)
- improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8)
- provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18)

When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits approximate $200 million per year (see Table 4-27).

### Alternatives

As stated in the response to comments, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression in accordance with the National Environmental Policy Act. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process presented in Chapter 3 of the Final Environmental Impact Statement. This process, which occurred early in the environmental impact statement process, was revisited and validated in the Final Environmental Impact Statement (see page 3-2).

### Traffic

Comment noted.

### Purpose and Need

The original comment draws conclusions from summarized information. As pointed out on page 5-1, in the sidebar, “What you will find in the Summary chapter,” the text in the Summary chapter is not the “final word,” and readers are urged to turn to the main text when questions about Summary chapter content arise.

### Code Comment Document

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</tr>
</tbody>
</table>

Comment noted.
### Code Comment Document

#### 41 Purpose and Need

Information used in the completion of the Final Environmental Impact Statement may be found in the Traffic Overview report. The traffic analysis zones were approved by the Maricopa Association of Governments.

#### 42 Purpose and Need

The purpose and need of analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, Purpose and Need, and Chapter 3, Alternatives). The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13).

#### 43 Purpose and Need

The point made was that the freeway, if constructed today, would result in reductions in congestion and traffic operational improvements. These reductions in congestion and traffic operational improvements will be even more pronounced in the future with additional regional population growth. Based on Maricopa Association of Governments traffic projections, the freeway will carry between 70,000 and 129,000 vehicles per day in 2020 when operational. In Maricopa County, daily vehicle miles traveled leveled increased by almost 2 percent between 2011 and 2012 and the 2012 daily vehicle miles traveled is approaching the prerecession peak in 2007. (Source: Arizona Department of Transportation Multimodal Planning Division Highway Performance Monitoring System Data for calendar years 2011 and 2012). Even if the trend of vehicle miles traveled “per capita” decreasing continues, the total vehicle miles traveled in the region will still increase along with increases in total population.

#### 44 Purpose and Need

The purpose and need of analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, Purpose and Need, and Chapter 3, Alternatives). The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13).

#### 45 Purpose and Need

The response is stating that the purpose and need for the project is not based only on the fact that the project is in the Regional Transportation Plan. The needs for the South Mountain Freeway are identified in Chapter 1 of the Final Environmental Impact Statement.
early in the Regional Freeway and Highway System, the South Mountain Freeway was a part of the initial Regional Freeway and Highway System in 1985 and has been included in every subsequent update. In 2004, Maricopa County voters approved Proposition 400, which was designed to fund completion of the remaining segments of the Regional Freeway and Highway System, including the South Mountain Freeway. A major transportation facility in the Study Area would implement the facility recognized in over 25 years of planning."

The response misses the main point of the comment that some alternatives may not have been included in the range of reasonable alternatives because of the emphasis placed on the historical context. The Purpose and Need does not include more specific needs for the Proposed Action, in addition to region-wide issues. This lack of specificity for the Study Area and the Southwest area in general, precludes the inclusion of some alternatives in the range of reasonable alternatives.

Comment 126 – ADOIT failed to provide adequate response. The comment was that some alternatives were dismissed too early or without due consideration. The FEIS states that alternatives were dismissed only after careful consideration, but does not add any new explanation as to the nature and scope of the careful considerations beyond what is included in the DEIS or FEIS.

Comment 127, Comment 128, and Comment 129 – Inadequate response to the comment is provided and no supporting data is presented.

Comment 130 and Comment 131 – These are introductory statements leading to the specific comments that follow. No response is needed and none was provided.

Comment 132 – The response in the FEIS states that “The noted duplicate criterion has been deleted from the Final Environmental Impact Statement.” However, in the FEIS the “duplicate criterion” is not deleted; it is woven into the 1st bullet item. No further explanation is provided.

Following is quoted from the FEIS:

The following general criteria reflect the criteria established for the screening process (Alternatives Screening Report [2003]):

> ability to satisfy purpose and need
> ability to minimize impacts on the human and natural environment
> ability to improve operational characteristics of the region's transportation system
> degree of public and political acceptance
> consideration of overall conceptual cost estimates

47 Alternatives

As noted on page 3-1 of the Final Environmental Impact Statement, the document Validation of the Alternatives Screening Process at the FEIS Stage (2014) provided a reassessment and validation of the alternatives screening process for the Final Environmental Impact Statement, including the revised traffic projections. This document was available for public review. Therefore, the information presented in the Final Environmental Impact Statement addressed the reconsideration and elimination of alternatives adequately, and no additional information is deemed necessary.
48 Purpose and Need, Alternatives

As noted in the responses to comments, supporting data are presented in the Final Environmental Impact Statement in Chapters 1 and 3. The document Validation of the Alternatives Screening Process at the FEIS Stage (2014) provided a reassessment and validation of the alternatives screening process for the Final Environmental Impact Statement, including the revised traffic projections (see page 3-1 of the Final Environmental Impact Statement). This document was available for public review.

49

Comment noted.

50 Purpose and Need

Because improving operational characteristics of the region’s transportation system was an identified need for the freeway, listing both the ability to satisfy purpose and need and improving operational characteristics implied that they were separate screening criteria. They were not separate screening criteria; therefore, combining them into the first criterion clarified that issue.

<table>
<thead>
<tr>
<th>Code</th>
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</tr>
</thead>
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<tr>
<td>50</td>
<td>Purpose and Need</td>
<td>Because improving operational characteristics of the region’s transportation system was an identified need for the freeway, listing both the ability to satisfy purpose and need and improving operational characteristics implied that they were separate screening criteria. They were not separate screening criteria; therefore, combining them into the first criterion clarified that issue.</td>
</tr>
</tbody>
</table>
The wording in the FEIS is:

The following general categories reflect the criteria established for the screening process (Alternatives Screening Report [2003], see Sidebar on page 3-2):

- ability to satisfy purpose and need, namely by improving operational characteristics of the region’s transportation system
- ability to minimize impacts on the human and natural environments
- degree of public and political acceptability
- consideration of overall conceptual cost estimates

This rewording creates the appearance of responding to the comment while it changes nothing.

Comment 133 – This is an introductory statement leading to specific comments that follow. No response is needed and none was provided.

Comment 134 – This comment was made in the context that some alternatives, including the “No Action” alternative, were dismissed without thorough analysis and due consideration. The response misses the point that sufficient back-up information is not provided for the dismissal of any of the alternatives.

Comment 135: The last sentence in the first paragraph of the response states that “A partial freeway from Interstate 10 (Papago Freeway) to Laveen Village is not feasible because it would not meet the proposed freeway’s identified purpose and need.” This sentence is incorrect because this segment would not be a partial freeway but would be part of a series improvements that would connect the logical termini identified in the Purpose and Need. This sentence is also incorrect because the freeway, although shorter than the “Proposed Action” would, in fact, add freeway capacity to the region’s freeway system, thus it would be consistent with the Purpose and Need.

In the 2nd paragraph of the Response it is stated that “Construction of Carver Road between 59th and 51st avenues is included in the City of Phoenix General Plan transportation element.” Accordingly, its construction should present no major obstacles and this segment can be incorporated into the system connecting the logical termini.

In the 3rd paragraph of the response, the problems associated with improvements of the segment along 51st Avenue between Carver Road and a westerly extension of Pecos Road is rejected on the basis of the sovereign rights of the Community and the speculation that these improvements would not be acceptable to the Community. The word “speculation”

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<tr>
<th>Code</th>
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<tr>
<td>S1</td>
<td></td>
<td>Comment noted.</td>
</tr>
<tr>
<td>S2</td>
<td>Alternatives</td>
<td>40 Code of Federal Regulations Section 1502.21 states that agencies shall incorporate material into an environmental impact statement by reference when the effect will be to cut down on bulk without impeding agency and public review of the action. The incorporated material shall be cited in the statement and its content briefly described. No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment. The individual alternatives screening documents were referenced throughout Chapter 3 of the Draft Environmental Impact Statement, and these documents were provided when requested. In addition, as noted on page 3-1 of the Final Environmental Impact Statement, the document Validation of the Alternatives Screening Process at the FEIS Stage (2014) provided a reassessment and validation of the alternatives screening process for the Final Environmental Impact Statement, including the revised traffic projections. This document was also available for public review.</td>
</tr>
<tr>
<td>S3</td>
<td>Alternatives</td>
<td>As stated on page 3-19 of the Final Environmental Impact Statement, lower-capacity roadways (Arizona Parkway) were considered as alternatives to the full freeway. These lower-capacity roadways would lack sufficient capacity to meet the projected travel demand. Therefore, the combination of roadways mentioned using a partial freeway, Pecos Road, Carver Road, and 51st Avenue, would not meet the projected travel demand and would, therefore, not meet the project’s stated purpose and need. The anticipated Gila River Indian Community objections to improvements of 51st Avenue are not as speculative as the comment states. As stated on page 2-10 of the Final Environmental Impact Statement, the Gila River Indian Community expressed concerns about increasing traffic through residential areas along 51st Avenue, such as increased traffic, noise, and safety issues related to speeding vehicles in pedestrian-oriented areas.</td>
</tr>
</tbody>
</table>
54 Purpose and Need

The improvements to the arterial street network as included in the Regional Transportation Plan are included in the travel demand modeling performed for the South Mountain Freeway. Despite this additional capacity, the capacity is insufficient for the projected demand.

53

The addition of the arterials as planned will add substantial capacity to the transportation network and will help meet the needs identified in the Purpose and Need.

In the response any potential advantages/benefits of the hybrid alternative are not considered. The response ends with the following statement in the 5th paragraph "For these reasons, alternatives similar to the hybrid alternative proposed in the comment were eliminated from detailed study." The hybrid alternative is dismissed without due evaluation along with "other similar alternatives." Since the "other similar alternatives are not identified, it is appropriate to consider carefully some of the distinguishing attributes of the hybrid alternative:

✓ It would provide a connection, with higher speeds than an arterial between the logical termini identified in the FEIS.
✓ It would add freeway capacity where it is needed the most, along the 59th Avenue segment, along the same alignment and design standards as the Proposed Action.
✓ The new arterial segments would have limited role in serving abutting property because there is no existing development along these segments, and opportunities for future development are few. By appropriate design standards, access to future developments can be confined to very few locations, and continuous traffic flow at high arterial speeds can be maintained.
55 Alternatives

Dismissal of all alternatives affecting Gila River Indian Community land is appropriate. The resolution by the Gila River Indian Community of not allowing alternatives on its land is sufficient evaluation. The Gila River Indian Community has consistently stated (beginning in 2000, with a Community Council resolution) that it is not interested in an alternative on its land. See Final Environmental Impact Statement Chapter 2, Gila River Indian Community Coordination. As stated earlier, provision of alternatives without sufficient capacity would not meet the project’s stated purpose and need.

56 Alternatives

The estimate assumes an eight-lane facility. The alternative analysis process is iterative. Although a depressed freeway was analyzed earlier, it was reexamined when consideration of an eight-lane facility was conducted (this reevaluation is documented in the memorandum, Validation of Alternatives Screening Process at the FEIS Stage [2014], available on the project Web site at <azdot.gov/southmountainfreeway>).

57 Comment noted.

58 Alternatives

The right-of-way needs for a depressed eight-lane freeway would be approximately 150 acres greater than those for a rolling profile eight-lane freeway.

59 Alternatives

The comment is correct that this alternative was eliminated prior to the detailed analysis of alternatives as documented in Chapter 4 of the Final Environmental Impact Statement. Potential displacements under the Ray Road and Chandler Boulevard alternatives would range between 500 and 1,000, depending on the alignment (see the document Validation of Alternatives Screening Process at the FEIS Stage [2014], available on the project Web site at <azdot.gov/southmountainfreeway>).
Comment 141 and Comment 142 – ADOT failed to provide adequate response. The reports cited in DEIS are dated 2002 (Sidebar on Page 3-2) and 2003 (Page 3-1, second column, last line). These 10-year old reports are outdated and do not reflect current conditions. Moreover, the documents were not readily available to stakeholders and the public during the DEIS review process. During the FEIS review period, these reports are still not readily available, depriving the stakeholders and the public of the opportunity to make informed judgments. They are available only by appointment with ADOT as stated in the following statement in the sidebar on Page 3-2: “Technical reports, predication reports, and memorandums can be made available for review by appointment at ADOT Environmental Planning Group, 1611 W. Jackson St., Phoenix, AZ 85007 ([602]) 712-7767.”

For some information in the DEIS and FEIS, such as the traffic volume forecasts presented in Figure 3-1, the cut line analysis presented in Figure 3-1, the regional capacity deficiencies presented in Figure 3-1, congestion levels presented in Figures 3-15 and 3-16, and others, the source is cited as “MAG, data of data, extrapolated analysis.” The specific MAG documents are not identified. The MAG source data were not readily available to stakeholders and the public during the DEIS review process. During the FEIS review period, these reports are still not readily available, depriving the stakeholders and the public of the opportunity to make informed judgments.

Comment 143-This comment was made within the context that the rejection of the alternative was based on not meeting the Purpose and Need. If the Purpose and Need was faulty due to the incorrect socio-economic data projections, then rejection solely on the basis of not meeting the Purpose and Need is not appropriate. The fact that the population and employment forecasts would need to be reduced in view of the 2010 U.S. Census results was known to the preparers but were not disclosed at the time the DEIS was circulated for comment. Since this information was not disclosed, the stakeholders and the public were deprived of the opportunity to make informed judgments. Please refer to Comment 121 for further details. In addition, the response misses the primary point of the comment by stating that the conclusion in the DEIS was re-confirmed, without providing any supporting information as requested. The DEIS and the FEIS do not even contain basic information such as daily traffic counts, let alone any figures to indicate how many through traffic (trucks as well as passenger vehicles) the I-10/SR 185 route to by-pass the Phoenix Metropolitan Area.
population and vehicle miles traveled in 2035 than the previous projections, the need for the freeway has not changed. The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13).

As noted on page xi of the Prologue to the Final Environmental Impact Statement, the purpose and need for the project was reevaluated using the new socioeconomic projections related to regional traffic and the conclusions reached in the Draft Environmental Impact Statement were reconfirmed in the Final Environmental Impact Statement.

The road network in the Maricopa Association of Governments travel demand model includes the Interstate 8 and State Route 85 corridor. So, while the roads are not in the Study Area for the project, traffic and trip distributions along the corridor are included in the traffic analysis for the project. Any traffic, including trucks, that would shift from the Interstate 8 and State Route 85 corridor to the South Mountain Freeway were included in the vehicle mix considered in the analysis.

Traffic projections, not counts, are provided throughout Chapters 1 and 3 of the Final Environmental Impact Statement (see for example Figure 1-8) and vehicle miles traveled are noted in the Air Quality section of Chapter 4.
Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer’s Office. The projections by the Arizona State Demographer’s Office are produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the sub-county level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published, but before the Final Environmental Impact Statement was issued.

The key model inputs of the TransCAD model are presented on page 1-5 of the Final Environmental Impact Statement. The final bullet states that the model uses Regional Transportation Plan-planned projects and improvements and known arterial street network improvements.

The information presented in the Final Environmental Impact Statement addressed the lack of prudent and feasible alternatives to the use of the South Mountains adequately, and no additional information is deemed necessary.

The information contained in the Summary chapter is concise, but not complete; otherwise, it would not be a summary. The summary follows the organization of the Final Environmental Impact Statement; therefore, those seeking more information on any topic may refer to the appropriate chapter to find the detail missing from the Summary chapter.

The Summary chapter of the Final Environmental Impact Statement included a basic description of the Preferred Alternative including alignment location within the Study Area, cost, proposed service traffic interchange locations (see Figure S-8 on page S-8), and typical freeway section including number of lanes and basic configuration (see Figure S-9 on page S-10).
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<tr>
<td>68</td>
<td>Design</td>
<td>We agree that the No-Action Alternative would not preclude the development of park-and-ride lots and implementation of bus routes on other high-occupancy vehicle facilities, arterials, or on dedicated rights-of-way. As stated on page 3-60 of the Final Environmental Impact Statement, however, the project may produce excess right-of-way that may be suitable for other public infrastructure projects such as park-and-ride lots or bicycle/multiuse paths.</td>
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The information contained in the Summary chapter is concise, but not complete; otherwise, it would not be a summary. The summary follows the organization of the Final Environmental Impact Statement; therefore, those seeking more information on any topic may refer to the appropriate chapter to find the detail missing from the Summary chapter.

69 Design We agree that the No-Action Alternative would not preclude the development of park-and-ride lots and implementation of bus routes on other high-occupancy vehicle facilities, arterials, or on dedicated rights-of-way. As stated on page 3-60 of the Final Environmental Impact Statement, however, the project may produce excess right-of-way that may be suitable for other public infrastructure projects such as park-and-ride lots or bicycle/multiuse paths.

The statement is not a contradiction. The expansion of the park-and-ride lot occurred in 2010. The freeway footprint was adjusted so that it would not affect the expanded lot. There are no plans to expand the lot beyond its current limits. Figure 3-8 is intended to show that efforts were successfully made to avoid existing and planned infrastructure wherever possible. The caption on the figure states that adjustments were made to the action alternative in the Eastern Section to avoid or reduce impacts on residential areas and to avoid resources protected by Section 4(f).

Without the freeway, there would be no opportunity to provide high-occupancy vehicle lanes or other services adjacent to the freeway as stated. The earlier portion of the comment states that these facilities could be constructed on other high-occupancy vehicle facilities, arterials, or on dedicated rights-of-way. However, without the freeway, the need to construct these facilities in the project area would be reduced. To construct these facilities where they are not needed is not a wise use of public funds.

70 Design The statement on page 3-40 of the Final Environmental Impact Statement means that if the No-Action Alternative were the Selected Alternative, a project similar to the South Mountain Freeway could be proposed at a later time.

The earlier portion of the comment states that these facilities could be constructed on other high-occupancy vehicle facilities, arterials, or on dedicated rights-of-way. However, without the freeway, the need to construct these facilities in the project area would be reduced. To construct these facilities where they are not needed is not a wise use of public funds.

71 Alternatives The statement on page 3-40 of the Final Environmental Impact Statement means that if the No-Action Alternative were the Selected Alternative, a project similar to the South Mountain Freeway could be proposed at a later time.
### Purpose and Need

Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer's Office. The projections by the Arizona State Demographer’s Office are produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the sub-county level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published, but before the Final Environmental Impact Statement was issued. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the need for the freeway has not changed. The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13).

As noted on page vi of the Prologue to the Final Environmental Impact Statement, the purpose and need for the project was reevaluated using the new socioeconomic projections related to regional traffic, and the conclusions reached in the Draft Environmental Impact Statement were reconfirmed in the Final Environmental Impact Statement.

Information used in the completion of the Final Environmental Impact Statement may be found in the Traffic Overview report.

The Maricopa Association of Governments socioeconomic projections are reviewed with the Maricopa Association of Governments Population Technical Advisory Committee by traffic analysis zone. While the dataset for 2035 from the 2013 Maricopa Association of Governments socioeconomic projections was not adopted, the dataset was produced using the AZ-SMART model, which operates on an annual basis, in line with the approved datasets for 2030 and 2040. The 2035 dataset conforms to the population control totals contained in the Arizona State Demographer’s Office projections approved in December 2012. A detailed timeline for the Maricopa Association of Governments 2013 socioeconomic projections can be found in the documentation available at <azmag.gov/Documents/IS_2013-06-25_MAG-Socioeconomic-Projections-Documentation-June-2013.pdf>.

### Comment

**Comment 152** - As indicated in Attachment 1 to this report, population and employment projections for 2020, 2030, and 2040 were available as early as May 2012 and were adopted by the MAG Regional Council in December 2012. The adoption was for the Countywide total, at the level of Municipal Planning Areas (MPA), and at the level of Regional Analysis Zones (RAZ). Therefore, the preparers of the DEIS were, or should have been, aware that new projections were available and that the 2035 population projection in the DEIS exceeded the "new" 2040 projections (6,545,000 for 2035 in the DEIS, compared to 6,175,000 adopted for 2040). Likewise, in the DEIS the 2035 Countywide projection for employment was 3,600,000, compared to the adopted 2040 employment projection of 3,096,600. These large differences in the population and employment forecasts were known to the preparers but were not disclosed at the time the DEIS was circulated for comment. Since this information was not disclosed, the stakeholders and the public were deprived of the opportunity to make informed judgments. Even now, the population and employment forecasts at the Traffic Analysis Zone (TAZ) level are not readily available to the stakeholders and the public. Also, the FEIS does not state by whom 2035 population and employment forecasts at the level of Traffic Analysis Zones (TAZ) were approved in June of 2013.

**Comment 153** - This is an introductory lead-in paragraph to detailed comments. No response was needed and none was provided.

**Comment 154** - The DEIS comment acknowledges that an interchange at 32nd Street is not proposed. The City of Phoenix Memorandum cited in the response is dated 2006 and is based on 2030 daily traffic forecasts, and merely presents daily traffic volumes on Chandler Boulevard and the streets connecting Chandler Boulevard and Pecos Road. The response completely misses the point which is local circulation within the neighborhoods and access for the residents in the area south of Chandler Boulevard. The response also misses the point that the 2030 traffic volume projections in the City’s memorandum are on the basis that the 32nd Street interchange would be constructed. Since the 32nd Street interchange will not be constructed as part of the Proposed Action (as stated in the DEIS and the FEIS), the City’s memorandum is irrelevant and there is no evidence of bona fide analysis of local circulation.

The second part of this comment is in reference to the loss of access at 27th Avenue. The response is completely silent on this point.

**72** Purpose and Need

**Response**

Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer’s Office. The projections by the Arizona State Demographer’s Office are produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the sub-county level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published, but before the Final Environmental Impact Statement was issued. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the need for the freeway has not changed. The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13).

As noted on page vii of the Prologue to the Final Environmental Impact Statement, the purpose and need for the project was reevaluated using the new socioeconomic projections related to regional traffic, and the conclusions reached in the Draft Environmental Impact Statement were reconfirmed in the Final Environmental Impact Statement.

Information used in the completion of the Final Environmental Impact Statement may be found in the Traffic Overview report.

The Maricopa Association of Governments socioeconomic projections are reviewed with the Maricopa Association of Governments Population Technical Advisory Committee by traffic analysis zone. While the dataset for 2035 from the 2013 Maricopa Association of Governments socioeconomic projections was not adopted, the dataset was produced using the AZ-SMART model, which operates on an annual basis, in line with the approved datasets for 2030 and 2040. The 2035 dataset conforms to the population control totals contained in the Arizona State Demographer’s Office projections approved in December 2012. A detailed timeline for the Maricopa Association of Governments 2013 socioeconomic projections can be found in the documentation available at <azmag.gov/Documents/IS_2013-06-25_MAG-Socioeconomic-Projections-Documentation-June-2013.pdf>.

**73** Comment noted.

**74** Traffic

There is no reason to assume that traffic conditions have changed substantially since 2006 because no additional developments have been approved in the area. The City of Phoenix study found no adverse effects on the local street system from the freeway in the 2006 study. The comment is incorrect in that there is not a connection (on- and off-ramps) between 32nd Street and the freeway in the future traffic projection network considered by the City of Phoenix. In Figure 3 of the memorandum in Appendix 3-1 of the Final Environmental Statement, interchange connections are shown with diamonds representing the on- and off-ramps from the freeway to the local arterial street. No diamond is shown at 32nd Street and, therefore, no interchange will be located there.

**75** Traffic

The 27th Avenue interchange was evaluated but ultimately eliminated because of increased residential displacements and cost. The extension of Chandler Boulevard west of 19th Avenue is included in this project because reasonable access must be maintained to the neighborhoods at the west end of Pecos Road.
<table>
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<th>Code</th>
<th>Comment Document</th>
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<tbody>
<tr>
<td>76</td>
<td>Initially, two lanes will be provided on the extended segment of Chandler Boulevard.</td>
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<tr>
<td>77</td>
<td>No plans to develop this land have been submitted to plan approval authorities. Development of this land would not occur unless the approval authorities were satisfied that traffic impacts of the development were adequately addressed.</td>
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<tr>
<td>78</td>
<td>The Arizona Department of Transportation is required to provide reasonable access to developments. As stated in the response, emergency response times should be approximately the same as before the change in access.</td>
</tr>
<tr>
<td>79</td>
<td>The cross section, or number of lanes, along the arterial streets in the interchange will match the current configuration or the City of Phoenix's street classification designation for the arterial street. Because the freeway will go over the arterial streets, the profiles of the arterial streets will not need to be changed from their current elevation. As noted on page 3-51 of the Final Environmental Impact Statement, the final configuration of the service traffic interchanges will be determined during the final design phase.</td>
</tr>
<tr>
<td>80</td>
<td>Comment noted.</td>
</tr>
<tr>
<td>81</td>
<td>There is no reason to assume that traffic conditions have changed substantially since 2006 because no additional developments have been approved in the area. Additionally, as previously noted by the commenter, the 2030 traffic projections used in the City of Phoenix analysis in 2006 are likely higher than the current traffic projections for 2035. The City of Phoenix study found no adverse effects on the local street system from the freeway in the 2006 study.</td>
</tr>
<tr>
<td>82</td>
<td>The following response, although general, is appropriate at this level of preliminary design. Emergency responders will address the construction of the freeway by amending the local emergency response plan to include the facility. This will include emergency response on the freeway and alternative routes for diversion of traffic in the event that an incident occurred along the freeway. As concluded in the section, Social Conditions, in Chapter 4 of the Final Environmental Impact Statement, response times for police, fire, and medical emergency services will be faster when compared with response times under the No-Action Alternative. Circulation on major arterial streets will be improved through better distribution of traffic onto the overall transportation network, the provision of alternative routes, and through localized operational improvements such as grade separations and planned interchanges.</td>
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Comment 155: It is commendable that the City of Phoenix and ADOT are cooperating on the matter of the extension of Chandler Boulevard. The response is not complete because nothing is said about the number of lanes to be provided on the extended segments of Chandler Boulevard.

Comment 156: It is understood that local streets would be provided to serve the proposed developments. The points raised were the amount of traffic to be added by these developments and how the added traffic would affect Chandler Boulevard and other surface streets. No response to these points is provided. Based on the information available, about 15,000 or more daily vehicular trips would be generated by the proposed developments described in Comments 155 and 156.

Comment 157: The FEIS contains no analysis to support the response. If a detailed analysis had been made, the FEIS would not have to use words such as “reasonable” and “likely.” Sufficient information should have been provided to enable residents to assess how emergency response times for their neighborhoods might be affected. This matter should not be deferred to a subsequent determination by emergency service providers.

Comment 158: The response does not state what cross-section (or number of lanes) will be provided by ADOT on the arterial streets in the interchange areas. Also, because, as proposed, the freeway will be above grade, modification of the grade on the cross streets will need to be modified. Existing and proposed profiles of the cross streets should be shown and any potential effects discussed. Of specific interest to PARC would be the interchanges at 40th Street, 24th Street, Desert Foothills Parkway, and 17th Avenue. Since the response does not direct the reader to a specific source document (s), such information is not available or not being released to the public.

Comment 159: The explanation in the response is adequate.

Comment 160: The response is inadequate because the City traffic volume map presents daily traffic volumes only, many of the counts along and near Pecos Road taken in 2010, 2011, or 2012. No peak hourly or turning movement information is provided, nor 2015 forecasts presented. The inapplicability of the 2006 City Memorandum was discussed in Comment 154.

Comment 161: The comment specifically addresses the change in emergency response time for the areas now served by the signalized intersection of Pecos Road/32nd Street when the Freeway is built. The response is general and does not address a local issue. Therefore, the response is not adequate.
Figure 3-8 is intended to show that efforts were successfully made to avoid existing and planned infrastructure wherever possible. The expansion of the park-and-ride lot has occurred and was accommodated by the freeway design. The building of complete typical interchanges will provide the reasonable access the Arizona Department of Transportation is required to provide. Any plans to develop Gila River Indian Community land south of Pecos Road are unknown. Without additional information, existing traffic on 40th Street was used.

Comment noted.

The Arizona Department of Transportation typically holds an information meeting at the beginning of construction activities regarding the upcoming improvements and work schedules. The contractor’s required activities are established by contractual documents with the Arizona Department of Transportation.

Comment noted.

The precision of the origins and destinations study does not allow a more finite detail of analysis than presented in the Final Environmental Impact Statement.
88 Purpose and Need

The response presented the justification for the limits of the cut lines presented in the Draft and Final Environmental Impact Statements. The detailed cut-line data are provided in the Traffic Overview report and can be subtotaled by the reviewer for any subsegment of the area.

Comment noted.

89 Comment noted.

Comment 169—Explanation does not address the issue of why the cut lines could not have been sub-totaled for the Study Area.

Comment 170—It is acknowledged that the details of the cut-line analysis are added to the Traffic Overview Report. This information is very helpful in understanding the changes in traffic patterns.
Comment 170—The response to this introductory lead in comment is not adequate because of the specific points addressed in Comments 172 and 173.

Comment 172—This comment was intended to add specificity to the results; the two crossings of the Salt River are 10 to 15 miles apart and represent different travel corridors. Cutline 6 is a much better indicator of the crossings of the Salt River on the east side, since both I-10 and Loop 202 (Red Mountain) are in the same travel corridor and both cross the Salt River. Likewise, on the west side, Cutline 1 is a better indicator because it includes both I-10 (Papago) and SR 30.

Comment 173—If the cut lines had been subdivided and sub-totals presented, the total of the entire cut line could also have been included. The usefulness of the cut lines to evaluate regional traffic; to the contrary the usefulness of the cutline analysis would have been enhanced by offering the capability to evaluate the travel corridors where the Loop 202 SMF would be most effective.

Comment 174—The response to this comment states that: “The project development process includes detailed analyses of the freeway operational characteristics, including weaving areas along the entire freeway. Basic level of service information is presented in Figure 3-39 on page 3-63 of the Draft Environmental Impact Statement. In this figure, the total section is shown to experience less than 2 hours of level of service E or F conditions during the morning and evening commuting periods.” No evidence is presented in the DEIS or the FEIS that in fact any detailed analyses of weaving areas was made for the entire freeway. The Level of Service indicated in Figure 3-29 is based solely on volume to capacity ratios, which is considered the basic level of service analysis for the freeway.

Comment 174 and Comment 175—Assuming that the response means that a westbound auxiliary lane will be added between the end of the ramp from I-10 and the beginning of the exit ramp to 40th Street and perhaps beyond), it is agreed that the weaving problem in this section would be mitigated.

Comment 176—The response is inadequate because it does not provide any evidence that “The analyses to support the environmental impact statement process included weaving considerations in the operational performance of the action alternatives.” The response is inadequate. Also refer to Item 174 above.

Comment 177—The response to this comment is inadequate. When the Community granted the State permission to conduct studies for an alignment on Community land, the Community expressed four concerns, one of which was the following quote on Page 3-24

<table>
<thead>
<tr>
<th>Code</th>
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<td>90</td>
<td></td>
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<tr>
<td>91</td>
<td>Traffic</td>
<td>The response presented the justification for the limits of the cut lines presented in the Draft and Final Environmental Impact Statements. The detailed cut-line data are provided in the Traffic Overview report and can be subtotaled by the reviewer for any desired area.</td>
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<tr>
<td>92</td>
<td>Traffic</td>
<td>The response presented the justification for the limits of the cut lines presented in the Draft and Final Environmental Impact Statements. The detailed cut-line data are provided in the Traffic Overview report and can be subtotaled by the reviewer for any desired area.</td>
</tr>
<tr>
<td>93</td>
<td>Traffic</td>
<td>The reviewer is correct that the level of service information presented in the Draft and Final Environmental Impact Statements is based on volume-to-capacity ratios, which is appropriate at this level of design to support the planning phase. To clarify, the detailed analysis of the freeway operational characteristics will be completed during the final design phase of project development as the specific design elements, including weaving distances, are finalized.</td>
</tr>
<tr>
<td>94</td>
<td></td>
<td>Comment noted.</td>
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of the DEIS and the FEIS: “reduction of truck and commuter traffic on 51st Avenue and Belleline Road.” The Community Alignment, identified in brown in Figure 3-11 in the DEIS and the FEIS, is entirely in the Eastern Segment. It would have a bearing on traffic on 51st Avenue, only if it were to be paired with any of the alignment alternatives in the Western Segment. Regardless of which alignment is selected in the Western Segment and regardless of whether the Community Alignment or the Proposed E1 alignment is selected in the Eastern Segment the result would be a reduction of commuter and truck traffic on 51st Avenue. Thus, the criterion of reducing truck and commuter traffic on Belleline Road becomes, in essence, a criterion to evaluate the entire Proposed Action versus the No Action Alternative. Without the Western Section of the Proposed Action, the Community Alignment would end at 51st Avenue and would not serve to relieve traffic on 51st Avenue; on the contrary, without the Western Section of the Proposed Action, the Community Alignment would increase traffic on 51st Avenue.

Comment 178—The trucks using Belleline Road and 51st Avenue to avoid the Phoenix Metropolitan Area would shift to Loop 202 SMF. To call this shift “redistribution of traffic” is not appropriate.

Comment 179—The response is not satisfactory. The FEIS does not state if the MAG Travel Model supports the contention that trucks that now use bypass routes will continue to do so. With the proposed action, trucks would have the option of using Loop 202 SMF because the route would consist entirely of freeways, rather than the existing route via I-10 and SR 85, portions of which are non-freeway. To travel between the starting point of the Junction of I-10/I-10 and the ending point of the Junction of I-10/SR 85, trucks now have the option of using I-10 which is about 10 miles shorter than the I-8/SR 85 route and takes about 5 minutes less time during periods when there is no traffic congestion. When the Proposed Action is implemented, the option of using Loop 202 SMF will have about the same travel distance as the I-10 route; in addition, it will take at least 5 minutes less than the I-8 option. Despite signage indicating that I-8/SR 85 is the by-pass route, a trucker would not choose to incur extra travel distance and extra travel time by using the I-8/SR 85 alternative when a shorter, faster, all-freeway route is available.

A loaded network file in TransCAD format was received from MAG late during the FEIS review period. An initial evaluation revealed that, the MAG Travel Forecasting Model estimates that in 2035, there would be about 65,000 to 70,000 daily trucks on Loop 202 SMF between I-10 (Maricopa) and 40th Street. Of the total number of trucks, about 14,000 would be heavy trucks. A slightly lower number (60,000 to 65,000) is estimated for the segment of Loop 202 SMF where the alignment would leave the Pecos Road corridor and would be oriented in a southeast/northwest direction. The number of heavy trucks on this segment would also be about 14,000 per day. These numbers indicate that

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<th>Code</th>
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<tr>
<td>95</td>
<td>Traffic</td>
<td>As stated on page 3-8 of the Final Environmental Impact Statement, the Eastern and Western Sections were developed to evaluate and compare action alternatives. The page further states that combining the Eastern and Western Sections is necessary to satisfy the project’s purpose and need. The commenter’s conclusions are correct. However, the comment is regarding a criterion presented by the Gila River Indian Community, not the project team. The criterion is not a differentiator among action alternatives but is a differentiator between the No-Action Alternative and any of the action alternatives, as noted in the comment.</td>
</tr>
<tr>
<td>96</td>
<td>Traffic</td>
<td>Comment noted.</td>
</tr>
<tr>
<td>97</td>
<td>Traffic</td>
<td>The Final Environmental Impact Statement notes that the Maricopa Association of Governments regional travel demand model projects that heavy truck traffic will represent approximately 10 percent of the total traffic on the freeway, similar to what is currently experienced on other regional freeways. It does not identify specifically what routes those heavy trucks are currently using. As the comment notes, the time savings for using the freeway will only occur when there is no traffic congestion in the Phoenix metropolitan area. As shown in Figures 1-9 and 1-10 in the Final Environmental Impact Statement, the duration of congested conditions is over 3 hours in the morning and evening.</td>
</tr>
<tr>
<td>98</td>
<td>Trucks</td>
<td>The 14,000 heavy vehicles per day on the freeway will represent approximately 10 percent of the total daily traffic on the freeway, which is estimated at between 117,000 and 190,000 vehicles per day (see page 3-63 of the Final Environmental Impact Statement). Ultimately, the commenter was provided the requested travel demand model output files and responses to specific questions from the Maricopa Association of Governments two weeks prior to the original end of Final Environmental Impact Statement review period. The review period was later extended for an additional 30 days.</td>
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The assertion in the FEIS that trucks would constitute about 10% of the total traffic on the freeways in the Region is not correct. Furthermore, this information was not readily available and was not disclosed to the stakeholders and the public in the DEIS and FEIS, depriving them of the opportunity to make informed judgments.

Table 6-5 on Page 6-5 of The MAG publication “MAG External Truck Travel Model Development,” dated May 2010 defines the light, medium, and heavy truck categories in terms of the FHWA Vehicle Classification chart. The “light truck” category is comprised of pickups and vans; the “Medium Truck” category includes buses and all single unit (no trailer) trucks. The “Heavy Truck” category includes all trucks with trailers.

**Comment 180—Response is not satisfactory.** If MAG has projections of the number of truck for “through-transport of freight,” these should be presented in the FEIS for key locations throughout the network. The use of a vague statement such as about 10% of the total traffic is misleading because the number of passenger vehicles varies from interchange to interchange along the length of a freeway, while trucks, especially heavy trucks, get on and off the freeway at few locations that serve freight-related land uses. Thus the percentage of trucks, especially heavy trucks, can vary even though the number of heavy trucks might remain constant. Please also see Comment 179.

Also, even though serving as a bypass route may not be included in the Purpose and Need, this would not keep truckers using the route as a bypass if it is in fact more attractive than the I-8/SR 85 option (see Comment 179).

**Comment 181—In the sidebar on Page 3-64, quoted below, there is no statement to the effect that the MAG travel model forecast indicates that 10% of total traffic would consist of trucks. Rather, it is stated that 2007 ADOT vehicle classification counts indicate that 90% of the total traffic would consist of non-truck vehicles. The response to the comment is misleading.**

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<td>99</td>
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<td>Comment noted.</td>
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<tr>
<td>100</td>
<td>Trucks</td>
<td>The Maricopa Association of Governments regional travel demand model provides the number of trucks on each roadway link, but does not specifically identify the origin or destination of every vehicle on each roadway link. The select-link analysis presented in Figure 3-18, on page 3-36, notes that 9 percent of the total vehicles using the freeway would be pass-through, not stopping in the Maricopa Association of Governments’ region. Of the pass-through vehicles, approximately 80 percent would be heavy trucks.</td>
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<tr>
<td>101</td>
<td>Trucks</td>
<td>Agree, as stated on page 3-64 of the Final Environmental Impact Statement, commercial trucks will use the freeway.</td>
</tr>
<tr>
<td>102</td>
<td>Trucks</td>
<td>The conclusionary statement in the noted text says that “it is expected that these percentages would not vary with the proposed action.” “These percentages” refers to the 90 percent passenger car and nontruck vehicles and the remaining 10 percent as heavy trucks.</td>
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The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the proposed freeway would be automobiles. Increasing the use of the State Route 2021 (Santan Freeway) by all vehicles is an intended outcome for the region’s freeway system.

The Final Environmental Impact Statement included updated traffic projections and added some locations beyond what was presented in the Draft Environmental Impact Statement. Additionally, the Traffic Overview report provided more details related to traffic data from the Maricopa Association of Governments’ regional travel demand model. Finally, the raw model output was provided to the commenter by the Maricopa Association of Governments for review and use.

The Arizona Department of Transportation and Federal Highway Administration believe the additional details provided in the Traffic Overview report and changes to the Final Environmental Impact Statement adequately address the comment.

The commenter misquotes the Final Environmental Impact Statement. The text actually says, “The W59 Alternative would provide more direct access to downtown Phoenix.” The comparison is derived based not only on its location, but also considering its traffic operational benefits.
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<td>108</td>
<td>All of the environmental impacts presented in Chapter 4 were considered in the evaluation of alternatives presented in Chapter 3. Text on page 3-69 presents a summary of the comparative evaluation. The impact of residential relocations on environmental justice and Title VI populations is discussed in the Environmental Justice and Title VI section beginning on page 4-29 of the Final Environmental Impact Statement.</td>
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<td>109</td>
<td>The agreement was with the first statement in the comment on the Draft Environmental Impact Statement. In response to the second part of the comment, the information presented in that section of Chapter 3 identifies contrasting characteristics of the W59 and W101 Alternatives, so in all cases items in which they are identical are omitted.</td>
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<tr>
<td>110</td>
<td>The observations presented in the comments on the Draft Environmental Impact Statement were noted, but no further changes were warranted.</td>
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<tr>
<td>111</td>
<td>The State Route 30 project is in the Maricopa Association of Governments 2035 Regional Transportation Plan, updated in January 2014. It is identified in Group 3, with implementation planned between fiscal years 2027 and 2035. As noted in the text box on page 1-5, the Regional Transportation Plan includes only projects for which funding is available or is reasonably expected. Therefore, there is an intent and expectation that the State Route 30 project will be implemented by 2035.</td>
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The freeway is part of the Regional Transportation Plan for the Maricopa Association of Governments region. The Regional Transportation Plan, as described on pages 1-5 and 1-10 of the Final Environmental Impact Statement, addresses freeways, streets, transit, airports, bicycle and pedestrian facilities, freight, demand management, system management, and safety. The freeway is only one part of the overall multimodal transportation system planned to meet the travel demand needs of the Maricopa Association of Governments region. As noted on page 3-4 of the Final Environmental Impact Statement, however, even better-than-planned performance of transit and other modes would not adequately address the projected 2035 travel demand.

The comparison of traffic operational characteristics between the action alternative and the No-Action Alternative is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternatives are responsive to the project’s purpose and need and will:

- reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13)
- optimize travel on the region’s freeway system (see Figure 3-12)
- reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14)
- reduce the duration of level of service E or F conditions in key areas of the region’s freeway system (see Figure 3-15)
- improve travel times on trips within the Study Area and across the region (see Figures 3-17 and Table 3-8)
- provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18)

When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits total approximately $200 million per year (see Table 4-27).

The Highway Capacity Manual level of service thresholds for capacity and speed are based on a single peak hour. The analysis in the Final Environmental Impact Statement used a longer period (3 hours) because congested conditions in the Phoenix metropolitan area typically last longer than just 1 hour. Therefore, the capacity and speed thresholds were adjusted slightly from the prevailing thresholds presented in the Highway Capacity Manual for the peak hour. Thus the comparison made by the commenter (such as speeds dropping from 65 mph to 60 mph) is not a true apples-to-apples comparison.

The identical arterial street network was used in the analysis of the No-Action Alternative and action alternative. The same planned land use and socioeconomic projections were used in the analysis of the No-Action Alternative and the action alternative. As noted in the Final Environmental Impact Statement Secondary and Cumulative Impact section on page 4-179, the area will develop in a similar way with or without the project.
In each figure, note “b” states that the analysis is based on the 41st Street cut line. The analysis is aggregated based on daily traffic volumes. The details of the analysis are presented in the Traffic Overview report.

The volume-to-capacity thresholds for the duration of level of service E and F calculations were applied to the 3-hour peak period, not just the peak hour. Therefore, they were adjusted slightly from the prevailing thresholds presented in the Highway Capacity Manual for the peak hour.

Comment noted.

Currently, no funding is programmed in the Regional Transportation Plan for corridor-wide improvements to State Route 85. The time line for these improvements is unknown. As described on page 3-64, the route between Interstate 10 and Wickenburg would generally follow Wickenburg Road and Vulture Mine Road.
When construction is completed on Loop 202 SMF in 2020, the most direct route for Canamex trucks traveling between I-8 and Wickenburg would be I-10 Maricopa (between I-8 and Loop 202 SMF), Loop 202 SMF to I-10 Papago, I-10 Papago between Loop 202 SMF and Loop 303, US 60 between Loop 303 and Wickenburg. The DEIS presents no timetable for the completion of the necessary improvements along the Canamex route that might make the designated Canamex route preferable to the route via Loop 202 SMF.

In essence, the response does not dispute that through trucks, including Canamex trucks, will use Loop 202 SMF. The Canamex response is presented in the context of mitigation that should have been provided but was not. The Proposed Action should not rely on uncertain actions by others or other funding sources to develop the Canamex route to Wickenburg.

Comment 211 - This is an introductory statement to subsequent comments. No response was necessary and none was given.

Comment 212 - Response is unsatisfactory because the Purpose and Need identified an Unmet Demand on the transportation system as a whole, not specifically in the Southwest Area. The analyst in the Purpose and Need also showed that the current congestion problems are in the central area with virtually none in the Southwest area. The Purpose and Need identified a need based on growth in the Southwest Area but none of the evaluations were directed at the Southwest Area; rather, all evaluations were based on Regional comparisons that were dominated by current and forecasted congestion in the Central Area. The benefits of the Proposed Action will be incidental to the Southwest Area, not to the central corridor area as claimed in the response.

Comment 213 - Satisfactory response is not provided. Since the Regional Planning Agency (in this case MAG) is the conduit for Federal funds, consistency of the timing of construction expenditures with funding allocations is essential. While it may not be stated in the DEIS and PRIS that the Proposed Action must be in compliance with the Regional Transportation Plan, it is mentioned often that it is.

Comment 214 - This is an introductory statement to subsequent comments. No response was necessary and none was given.

Comment 215 - The responses to the first, second, fourth and fifth bullets in the comment repeat previous responses and do not add new information. The third bullet is an air quality issue. The response to the last bullet states that the study

The comment infers the transportation problem is congestion in the central metropolitan area. As presented in Chapter 1 of the Draft and Final Environmental Impact Statements, the purpose and need analysis demonstrated a transportation problem associated with east-west regional mobility in the southwestern region of the Phoenix metropolitan area. The Arizona Department of Transportation, with concurrence from the Federal Highway Administration, has determined that the South Mountain Freeway (as made up by the W59 and E1 Alternatives) is the appropriate solution to the described transportation problem. A contribution of the Preferred Alternative to alleviate congestion in the central metropolitan area would be an incidental benefit of the project and would support a goal of better distribution of regional traffic across the network.

Construction phasing of a project is not an indicator of “consistency.” The location and facility type are indicators of consistency. Nowhere in the Draft Environmental Impact Statement is it referenced that the proposed action is needed to comply with the Regional Transportation Plan.

The use of the word “generate” in the response was incorrect. The response should have stated that the study considered the amount of truck traffic that would use the proposed freeway if an action alternative were to become the Selected Alternative. As noted in the comment, the Draft and Final Environmental Impact Statements consistently describe the anticipated changes in the distribution of traffic with the freeway in operation. The basic premise of the response was that impacts associated with truck traffic were considered in the study and were disclosed in the Draft and Final Environmental Impact Statements. The response was not intended to introduce a new conclusion as inferred by the commenter.
All analyses presented in the Final Environmental Impact Statement used state-of-the-practice, scientific community accepted methods, data and assumptions and were updated as appropriate as new data and/or regulatory requirements were disclosed. Updating analyses throughout an environmental impact statement process is common and expected. The Final Environmental Impact Statement reflects those updates.

The impacts analysis is presented in Table S-3 beginning on page S-10 of the Final Environmental Impact Statement. In the Section 4(f) Resources portion of the table (see page S-17), it states that no use of Section 4(f) resources would occur for the No-Action Alternative.

The exhibits were reviewed in the context of the corresponding comment and the information was considered in the development of the Final Environmental Impact Statement.

Ultimately, the commenter was provided the requested travel demand model output files and responses to specific questions from the Maricopa Association of Governments two weeks prior to the original end of Final Environmental Impact Statement review period. The review period was later extended for an additional 30 days.
November 6 -- E-mail from Mr. Anderson (MAG Director of Transportation) advising that staff is working on preparing the requested information.

November 13 -- E-mail from Mr. Anderson answering some of the questions and advising that large files containing model output had been uploaded to an FTP site for me to access.

November 13 to November 18 -- Exchange of e-mails (primarily with Mr. Livshits) to get the answers to questions not fully answered previously, or to complete the information requested in the e-mail sent to MAG on October 28. The help offered and the prompt responses by Mr. Livshits during this period are sincerely appreciated.

November 20 -- Advised by Mr. Anderson via e-mail that one of the output items requested is not available from MAG.

The entire process took about three weeks, indicating that the information was not readily available, even though it was referenced in the FEIS. The information still remains not readily available to the stakeholders and the general public.
SECTION 2
LOOP 202 SOUTH MOUNTAIN FREEWAY
ISSUES STILL NOT ADDRESSED ADEQUATELY IN THE NEPA EIS PROCESS
1. ADOT has made an “a priori” decision that the SMF will be built as a freeway generally along the alignment and between the two termini shown in the Regional Transportation Plan.

Following are the reasons and supporting information for this assertion:

a) A decision that transit was not an alternative was made prior to the submittal of Proposition 300 to the voters in 1985. Early in the decade of the 1980s, transit planning in the Phoenix Metropolitan area was in its infancy. Beyond the preparation of the Short Range Transit Plan, a requirement to obtain Federal funding assistance, very little attention was devoted to transit at the regional level.

In the decade of the 1990s transit started having a more prominent role in the regional planning process. But, by then, the decision to build Loop 202 SMF as a freeway appears to have been made, as presented in subsequent paragraphs. So any subsequent discussion of transit in the Regional Planning process is irrelevant to Loop 202 SMF.

The 2001 Update of the MAG Long Range Transportation Plan has a planning horizon of 2021 and incorporates long range concepts for Light Rail Transit (LRT), including potential corridor extensions along I-10 (Papago), I-10 (Maricopa) and Central Avenue, southerly to Baseline Road. These corridor extensions would potentially serve portions of the Southwest Area. The 2001 LRTP also addresses plans for Local Bus, Express Bus, and Bus Rapid Transit services in the Southwest Area. The 2035 Regional Transportation Plan (published...
The comment suggests the environmental impact statement process was biased by the fact that the Arizona Department of Transportation plans to use federal funds to construct the project. The National Environmental Policy Act does not allow this to be a factor in the decision regarding the selection of an alternative. Additionally, the National Environmental Policy Act process can’t be started until an action is identified. One of the purposes of the National Environmental Policy Act is to evaluate alternatives to the action being brought forward by an agency.
The comment suggests the environmental impact statement process was biased by the fact that the Arizona Department of Transportation constructed the eastern terminus in such a way that it could be expanded for a potential freeway connection. The National Environmental Policy Act does not allow this to be a factor in the decision regarding the selection of an alternative. The process of developing and screening alternatives was disclosed, robust, comprehensive, objective, and consistent with the National Environmental Policy Act’s intent to use a logical, sequential, interdisciplinary approach to establish a range of reasonable alternatives (as concluded in text beginning on page 3-26 of the Final Environmental Impact Statement). In the case of Eastern Section action alternative, the study did consider alternatives that would not connect to the existing interchange at Interstate 10 (Maricopa Freeway) and Pecos Road (see text beginning on page 3-9 and Figure 3-6 in the Final Environmental Impact Statement).

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<td>132</td>
<td>Implementation</td>
<td>The comment suggests the environmental impact statement process was biased by the fact that the Arizona Department of Transportation constructed the eastern terminus in such a way that it could be expanded for a potential freeway connection. The National Environmental Policy Act does not allow this to be a factor in the decision regarding the selection of an alternative. The process of developing and screening alternatives was disclosed, robust, comprehensive, objective, and consistent with the National Environmental Policy Act’s intent to use a logical, sequential, interdisciplinary approach to establish a range of reasonable alternatives (as concluded in text beginning on page 3-26 of the Final Environmental Impact Statement). In the case of Eastern Section action alternative, the study did consider alternatives that would not connect to the existing interchange at Interstate 10 (Maricopa Freeway) and Pecos Road (see text beginning on page 3-9 and Figure 3-6 in the Final Environmental Impact Statement).</td>
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“Comment 162- In addition to access from 40th Street, access to the park-and-ride lot would be provided off of the westbound on-ramp. This is similar to the park-and-ride operations at Happy Valley Road and Interstate 17. Bus operations and circulation would continue to operate as-is today. Traffic operational characteristics along 40th Street and at the Cottonwood Lane intersection would not be adversely affected by the freeway. The park-and-ride lot has been expanded to its ultimate configuration.”

Comment 173- To mitigate this issue, the on-ramp from Interstate 10 would be extended beyond the 40th Street exit ramp to allow traffic to merge onto the State Route 202L main line."

Also, the following quote on the ADOT web site indicates that ADOT built the interchange at I-10 (Papago)/Loop 202 (Santan) with the intent of accommodating Loop 202 SMF.

“The E1 Alternative would connect to the existing I-10 (Maricopa Freeway)/Loop 202 (Santan Freeway)/Pecos Road system traffic interchange. The E1 Alternative would replace the Pecos Road connection. The system traffic interchange was constructed in 2000–2002 to accommodate the western leg of the Loop 202—the proposed freeway.”

d) Per the following that appear on the ADOT web site, ADOT has acquired, and continues to acquire, right-of-way along Pecos Road.

“ADOT purchased some right-of-way in the corridor along Pecos Road when it was adopted as the alignment in 1988. Currently, ADOT is acquiring right-of-way to preserve the viability of the corridor and to minimize future relocation of homes and businesses as part of the agency’s long-range planning efforts. Should another alternative be adopted as a result of this study, ADOT can dispose of the land that has been acquired but is no longer needed.

A Pecos Road alignment for a portion of the proposed South Mountain Freeway was identified in a State-level Environmental Assessment completed in 1988, and that alignment was adopted by the State Transportation Board.

The E1 Alternative, as known as the Pecos Road alignment, is the only action alternative developed for the Eastern Section. Therefore, ADOT,

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<td>133</td>
<td>Implementation</td>
<td>The comment suggests the environmental impact statement process was biased by a history of property acquisitions within the Study Area. More specifically, properties falling within the limits of the Preferred Alternative, as identified in the Final Environmental Impact Statement, were targeted for acquisition. The National Environmental Policy Act does not allow the ownership of right-of-way to be a factor in the decision regarding the selection of an alternative. In this case, property acquisitions by the Arizona Department of Transportation for purposes of implementing the project are done at risk as communicated to the agency by the Federal Highway Administration. If another action alternative were to be ultimately selected, the agency would likely have to place the acquired properties on the market for sale and purchase. The Arizona Department of Transportation attempts to balance the risk against its mission of timely delivery of transportation infrastructure to the traveling public.</td>
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The comment suggests the environmental impact statement process was biased by the Arizona Department of Transportation’s recent activity related to the implementation of the Preferred Alternative. The National Environmental Policy Act does not allow the procurement of designers and constructors to be a factor in the decision regarding the selection of an alternative. In this case, procurement of designers and constructors by the Arizona Department of Transportation for purposes of implementing the project are done at risk as communicated to the agency by the Federal Highway Administration. The Arizona Department of Transportation attempts to balance the risk against its mission of timely delivery of transportation infrastructure to the traveling public.

Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer’s Office. The projections by the Arizona State Demographer’s Office are produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the sub-county level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published, but before the Final Environmental Impact Statement was issued.

Under the National Environmental Policy Act, it is common for new data to avail itself and to, therefore, update the environmental impact statement as new data become available. It is not a requirement, however, to stop the environmental impact statement process in its entirety to wait for new information to become available. Completing an environmental impact statement under those terms would be quite difficult and, arguably, the public would not receive benefits associated with a proposed public infrastructure action. In this case, the project team experts were aware that socioeconomic projections were to be made available but it was likely (based on the Draft Environmental Impact Statement content and processes and a qualitative understanding of what the updated information would show and reveal) that conclusions affected by such data would not substantially change. The team undertook a quite acceptable, common, and understood practice of publishing the Draft Environmental Impact Statement while new data were developing and then present the new information in the Final Environmental Impact Statement. The new information would not automatically assume the need for a supplemental document.
136 Socioeconomic Projections

All socioeconomic and traffic projections used in the study were obtained from the Maricopa Association of Governments. The Maricopa Association of Governments 2013 socioeconomic projections and detailed documentation are available at <azmag.gov/Projects/Project.asp?CMSID=1132&MID=Information%20Services> and were posted on June 25, 2013. The projections can also be accessed in an online viewer on the Maricopa Association of Governments Web site at <geo.azmaq.gov/maps/projections2013/>.

137 Socioeconomic Projections

Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer’s Office. The projections by the Arizona State Demographer’s Office are produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the sub-county level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published, but before the Final Environmental Impact Statement was issued. Use of the county-level projections without the more detailed regional analysis zone or traffic analysis zone information would have introduced inconsistencies in the Draft Environmental Impact Statement.

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A data set for 2035 was provided by the Maricopa Association of Governments for use in the study. The traffic projections were provided after the adoption of the socioeconomic projections.

The Maricopa Association of Governments socioeconomic projections are reviewed with the Maricopa Association of Governments Population Technical Advisory Committee by traffic analysis zone. While the dataset for 2035 from the 2013 Maricopa Association of Governments socioeconomic projections was not adopted, the dataset was produced using the AZ-SMART model, which operates on an annual basis, in line with the approved datasets for 2030 and 2040. The 2035 dataset conforms to the population control totals contained in the Arizona State Demographer’s Office projections approved in December 2012. A detailed time line for the Maricopa Association of Governments 2013 socioeconomic projections can be found in the documentation available at <azmag.gov/Documents/IS_2013-06-25_MAG-Socioeconomic-Projections-Documentation-June-2013.pdf>.
Appendix A • A161

Code Comment Document

140 Socioeconomic and Traffic Projections

At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer’s Office. The projections by the Arizona State Demographer’s Office are produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the subcounty level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published, but before the Final Environmental Impact Statement was issued. As noted previously, the updated information was incorporated into the Final Environmental Impact Statement.

The Maricopa Association of Governments socioeconomic projections are reviewed with the Maricopa Association of Governments Population Technical Advisory Committee by traffic analysis zone. While the dataset for 2035 from the 2013 Maricopa Association of Governments socioeconomic projections was not adopted, the dataset was produced using the AZ-SMART model, which operates on an annual basis, in line with the approved datasets for 2030 and 2040. The 2035 dataset conforms to the population control totals contained in the Arizona State Demographer’s Office projections approved in December 2012. A detailed time line for the Maricopa Association of Governments 2013 socioeconomic projections can be found in the documentation available at <azmag.gov/Documents/IS_2013-06-25_MAG-Socioeconomic-Projections-Documentation-June-2013.pdf>.

“In June 19, 2013, the MAG Regional Council, by consent, approved the MAG resident population, housing and employment by Municipal Planning Area (MPA) and Regional Analysis Zone (RAZ) for July 1, 2020, 2030 and 2040. Corresponding Traffic Analysis Zone (TAZ) level socioeconomic forecasts were then developed by MAG and provided for transportation modeling in the summer of 2013.”

The FEIS also states in response to DEIS Comment Number 123 in Volume III of Responses to Comments that:

“Under the National Environmental Policy Act, it is common for new data to avail itself and to, therefore, update the environmental impact statement as new data become available. It is not a requirement, however, to stop the environmental impact statement process in its entirety to wait for new information to become available. Completing an environmental impact statements under those terms would be quite difficult and, arguably, the public would not receive benefits associated with a proposed public infrastructure action. In this case, the project team experts were aware that socioeconomic projections were to be made available but it was likely (based on the Draft Environmental Impact Statement content and processes and a qualitative understanding of what the updated information would show and reveal) that conclusions affected by such data would not substantially change. The team undertook a quite acceptable, common, and understood practice of publishing the Draft Environmental Impact Statement while new data was developing and then present the new information in the Final Environmental Impact Statement. The new information would not automatically assume the need for a supplemental document.”

In this case, the data is not “new” but fundamental and vital to many aspects of the EIS for the Proposed Action. The “new” socio-economic forecasts affect many facets of the EIS analyses, including traffic projections, air quality, noise, land use, growth inducement, social conditions, economic implications, water resources, and possibly others. The preparers of the EIS did not reveal in the DEIS that, as stated in the Response to Comment 123, they had a “qualitative understanding” that the new information would not affect any conclusions, significantly. This lack of disclosure raises questions about the nature and scope of the analyses that led to the “qualitative understanding” prior to the release of the DEIS, since these are not disclosed in the FEIS either. The decision not to disclose significant

The socio-economic projections in the FEIS appear to overstate the amount of growth in the Southwest Area. Please see the tabulation and comparison of the DEIS and FEIS socio-economic projections (Exhibit 1). The FEIS does not contain or refer to this type of comparison, at all, nor is there any attempt to explain the reasons for the seemingly disproportionate changes between the DEIS and the FEIS projections.

Known development projects with varying degrees of investment and jurisdictional approval are input to AZ-SMART, the socioeconomic model used by the Maricopa Association of Governments to develop long-range projections. The datasets, methods, and assumptions used in the model are reviewed and approved by the Maricopa Association of Governments Population Technical Advisory Committee. Detailed documentation for the 2013 socioeconomic projections is available at <azmag.gov/Documents/IS_2013-06-25_MAG-Socioeconomic-Projections-Documentation-June-2013.pdf>.

The observation reached by the commenter is correct. The reduction in total population is generally at the outer years of the horizon (2030 to 2035); most of the growth slated for the Study Area occurs in the earlier years of the horizon. Therefore, the Study Area experienced a lower percentage decrease in projected population in 2035 than the county as a whole. The values presented in the Final Environmental Impact Statement are accurate.
Known development projects with varying degrees of investment and jurisdictional approval are input to AZ-SMART, the socioeconomic model used by the Maricopa Association of Governments to develop long-range projections. The datasets, methods, and assumptions used in the model are reviewed and approved by the Maricopa Association of Governments Population Technical Advisory Committee. Detailed documentation for the 2013 socioeconomic projections is available at <azmag.gov/Documents/IS_2013-06-25_MAG-Socioeconomic-Projections-Documentation-June-2013.pdf>.

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The prologue to the Final Environmental Impact Statement provided details related to the changes between the Draft Environmental Impact Statement and the Final Environmental Impact Statement (see page xi in the Final Environmental Impact Statement).

As noted on page xi of the Prologue to the Final Environmental Impact Statement, the purpose and need for the project was reevaluated using the new socioeconomic projections related to regional traffic, and the conclusions reached in the Draft Environmental Impact Statement were reconfirmed in the Final Environmental Impact Statement. Similarly, it is noted on page xi that the alternatives development and screening process was validated using the updated socioeconomic and traffic projections.
The Arizona Department of Transportation and Federal Highway Administration used a planning horizon of 2035 so that the study would be consistent with the planning horizon for the Regional Transportation Plan and regional air quality conformity analysis.

5. The planning horizon year is too short.

The FEIS states that construction of the freeway will take about five to six years (please see Chapter 3, Alternatives, Page 3-60, first column). This would place opening of the entire freeway in or about the year 2020, with a planning horizon year of 2035, or 15 years after opening day. It is generally accepted practice to use a planning horizon year about 20 years beyond the opening date of the freeway.

6. Interim impacts with phased construction are not presented.

Phased construction is mentioned in the FEIS, but no discussion of interim traffic impacts is presented. It is stated that construction would start at about the same time along Pecos Road and along the W.59th Avenue alignment, but the middle section connecting the two initial segments would come later. The FEIS does not disclose whether the initial segment to be constructed along Pecos Road will have substantial, if any, benefits for the traveling public until such time as the middle section is constructed.

If during construction, cultural resources are encountered along the middle section, where this might be likelier than any other segment, any benefits of the freeway along Pecos Road would not be realized for a long time while impacts would be incurred, such as property takings, access route changes for residents, construction period impacts, and the possibility that westbound motorists on Loop 202 Santan and northbound I-10 (Maricopa) will use Pecos Road inadvertently and come to a stub end, with exits only into residential areas.
The total number of heavy trucks that will use the main line of the freeway will vary by location, but average out to approximately 10 percent. The percentage presented in the Final Environmental Impact Statement is an approximation that generally represents the entire corridor. Similarly, other regional freeways experience varying levels of heavy truck usage, but the 10 percent level is the average.

It is not anticipated that a high number of heavy trucks will use the traffic interchanges serving primarily residential areas. Again, the percentage is approximate and varies and is presented for travel on the freeway main line. The quotes presented in the comment are correct in that trucks will use the freeway for varying purposes. A detailed discussion of trucking in the region is presented on page 3-64 of the Final Environmental Impact Statement.

### Code Comment Document

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<tr>
<td>146</td>
<td>The FEIS does not address truck traffic, adequately.</td>
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Also, the traffic forecasts indicate that the Pecos Road segment would have lower traffic volumes compared to the Western Section along the 59th Avenue alignment. It would be prudent not to start the construction of the Pecos Road segment until after it is ascertained that there would be no issues to delay the construction of the middle and 59th Avenue segments. Without the central portion, the portion of the route along 59th Avenue would have independent utility as an initial segment, whereas the Pecos Road segment would not.

7. The FEIS does not address truck traffic, adequately.

The FEIS states that: "The Maricopa Association of Governments regional travel demand model projects that truck traffic would represent approximately 10 percent of the total traffic on the proposed freeway, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101, and U.S. Route 60." This general statement in the FEIS is the only indication of the number of trucks on Loop 202 SMF. On the other hand, ADOT truck traffic counts indicate that many segments along existing freeways in the region have substantially more than 10% truck traffic, while some others have less. Despite requesting additional truck traffic information in the DEIS comments, no additional information is presented in the FEIS.

If as stated in the FEIS, the MAG travel model forecasts truck traffic volumes, why not present the number of trucks for the freeways, including Loop 202 SMF? A mere mention of a percentage figure may lead to incorrect conclusions. As an example, with the information available in the FEIS, the total 2035 traffic on the SMF would be about 133,000 vehicles per day between 24th Street and 40th Street, whereas the traffic would be 120,000 vehicles per day between 40th Street and I-10 (Maricopa). If we were to apply the 10% truck traffic assumption, we would have about 13,200 trucks per day between 24th Street and 40th Street and about 12,000 trucks per day between 40th Street and I-10 (Maricopa). Thus, the FEIS suggests, and one would conclude that the residential area served by 40th Street interchange would result in a net increase in truck traffic of about 1,200 per day. (The term "net" is used because some trucks would get off and some trucks would get on the freeway at the interchange.) Does the MAG model indicate this level of truck activity at the 40th Street interchange? This level of activity at an interchange serving primarily a

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</tr>
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</table>
A166 - Appendix A

Residential area is very unlikely, yet that would be the conclusion if the reader were to rely on the “percentage” calculation.

Following are a series of quotes from the ADOT website:

“The primary purpose of the proposed freeway is not to create a “truck bypass” for downtown Phoenix. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and providing alternatives to allow traffic—including truck traffic—to bypass already congested routes. Unlike other “loop” freeways in the Phoenix metropolitan area, the proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic between the eastern and western portions of Maricopa County.”

This paragraph says, although not in so many words, that some trucks that now use congested routes will use Loop 202 SMF as a by-pass.

“Commercial trucks would use the proposed freeway. As with all other freeways in the MAG region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. And as with the other freeway in the MAG region, the primary users of the proposed section would be automobiles.”

This quote is stating, in essence, that trucks would in fact use Loop 202 SMF for through-transport, which is described in the following quote from the ADOT website.

“Traffic that neither starts nor ends in the Valley is referred to as “pass-through.” An example is I-10 traffic that originates in Los Angeles and passes through the Phoenix area, without stopping, on the way to El Paso.”

These quotes support the contention in the DEIS comments that, intended or not, trucks will use Loop 202 as a by-pass for through or intra-regional trips.

The MAG Traffic Forecasting Model produces truck traffic forecasts for all freeways and arterials in the Region. An initial review indicates that there are large differences between the model results and the "approximately 0% trucks on the freeways" quoted in the FEIS. Because the MAG forecast information became available late in the FEIS review period, a detailed analysis of the truck traffic patterns, such as origin-destination pairs, could not be performed. The difference between actual model results and the 0% statement in the FEIS remains unexplained. Please refer to Section 1, Comment 179 for further details of the truck forecasts and to Section 1, Page 25 for the timetable for availability of the MAG model results.
8. The DEIS and the FEIS assume that SR-30 would be connected to the Proposed Action alignment in the Western Section even though funding for this route is not assured.

The inclusion of SR 30 is not appropriate in the context of the analysis for the proposed action. In the event that construction of SR30 is delayed to a post-2035 period due to lack of funding or due to environmental constraints, the traffic projections for Loop 202 SMF would be substantially affected.

The FEIS did not contain a sensitivity analysis to assess the implications of this eventuality. The No Action alternative also includes SR-30, albeit without a good definition of how it would connect with the arterial system and thence to I-10 (Papago). If SR 30 were to be included in the No Action alternative, a possible reasonable variation would have been the construction of the W59 portion of the Proposed Action between I-10 and SR 30 as part of an extension of SR 30.

9. The DEIS and FEIS contain conclusions without presenting appropriate backup; also, some referenced information is not readily available.

The following is one of the Comments on the DEIS (Item 6.m in the Comments).

"Numerous tables and figures carry the notation "Source: MAG, Year, Extrapolated Analysis." The actual source of the data should have been provided and the data provided by MAG should have been included in the FEIS as an Appendix or should have been made readily available and accessible. The Traffic Overview Report, which is the basis of much of Chapter 3 (Alternatives) in the DEIS, does not offer anything further in this matter. Without more backup information, it is not possible to ascertain what constitutes "extrapolation," and whether the extrapolation reflects the full extent and significance of the information available. Difficulties were encountered in obtaining source information from MAG and are documented on Page 25 of Section 1 of this report. Identify specific...

In Chapter 3 (Alternatives) of the FEIS, traffic volume, capacity, and other information is provided in spotty manner and does not offer the opportunity to ascertain if the information provided for selected locations is reasonable and if it fits in with the overall picture. For example, in Figure 3-38, daily traffic volumes are presented for the length of South Mountain Freeway.
149 Alternatives

These alternatives and the combination of alternatives were evaluated in the Final Environmental Impact Statement. However, they did not satisfy the project purpose and need. A partial freeway from Interstate 10 (Papago Freeway) to Laveen Village is not reasonable because it would not meet the proposed freeway’s identified purpose and need.

Construction of Carver Road between 59th and 51st avenues is included in the City of Phoenix General Plan transportation element.

Improving 51st Avenue between Carver and Pecos roads would require permission of the Gila River Indian Community. Any alternative on Gila River Indian Community land must consider tribal sovereignty. Tribal sovereignty is based in the inherent authority of Native American Tribes to govern themselves. While this notion of sovereignty is manifested in many areas, generally Native American land is held in trust by the United States. Native American communities have the authority to regulate land uses and activities on their land. States have very limited authority over activities within tribal land (see page 2-1 of the Final Environmental Impact Statement). From a practical standpoint, this means that the Arizona Department of Transportation and Federal Highway Administration do not have the authority to survey tribal land, make land use (including transportation) determinations directly affecting tribal land, or condemn tribal land for public benefit through an eminent domain process. Based on previous comments from the Gila River Indian Community related to pass-through traffic using 51st Avenue, the Gila River Indian Community would not support any activities that would increase unwanted traffic through its communities.

Extending Pecos Road to 51st Avenue would not be feasible because a portion would be located on Gila River Indian Community land, and the Gila River Indian Community has not provided permission to construct a facility on its land. Based on previous comments from the Gila River Indian Community related to pass-through traffic using 51st Avenue, the Gila River Indian Community would not support any activities that would increase unwanted traffic through its communities.

Improvements to the arterial street system in the southwestern area (Laveen and Estrella Villages) are planned in the City of Phoenix General Plan.

For these reasons, alternatives similar to the hybrid alternative proposed in the comment were eliminated from detailed study.
elements. One such alternative, “the hybrid” alternative, was suggested in the DEIS comments, but was dismissed without due consideration in the Responses to Comments in the FEIS. The primary reasons for rejection were that the hybrid alternative would not meet the Purpose and Need and that it would necessitate construction on land owned by the Community. Comment 135 in Section 1 of this report, describes the hybrid alternative and enumerates points in its favor.

Also Comment 136 in Section 1 explains why an alternative should not be dismissed without thorough analysis, solely because it traverses Community land. Several such alternatives, including the so-called Community Alternative as depicted in Figure 3-25 of the DEIS and FEIS, were also dismissed early in the NEPA process, primarily on the basis that they would traverse Community land.

The reasons for the dismissal of these and other alternatives are not presented with adequate supporting information to enable the stakeholders and the public to make informed judgments.

As distinct from the Community Alternative mentioned above, the Community submitted yet another alternative during the DEIS comment period. That alternative would lie generally along Baseline Road between 59th Avenue and I-10 and would connect to I-10, either as an extension of US 60 or at Baseline Road. As in the case of similar alternatives submitted early in the NEPA process, the Community’s recent submittal appears to have been ignored in the FEIS.

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## EXHIBIT 1
### COMPARISON OF SOCIO-ECONOMIC FORECASTS IN DEIS AND FEIS

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Comparison of WAG Population and Employment Forecasts for DEIS and FEIS

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**COMMENT 2**

SWCA Comments on ADOT South Mountain Freeway Final EIS (September 2014)
As presented in Chapter 1, *Purpose and Need*, the Study Area was based on where transportation modeling indicated the transportation problem would be diminished by an additional facility. Through transportation modeling, analysis of socioeconomic data, and coordination with stakeholder agencies, the Study Area for the project was strategically positioned where a gap exists in the regional transportation system’s loop freeway network (see Chapter 3, page 3-3 of the Final Environmental Impact Statement). Even so, contrary to what the commenter states, alternatives outside the Study Area were rigorously and comprehensively evaluated during the alternatives development and screening process. Ultimately, none of the alternatives outside the Study Area could address the identified purpose and need (see text beginning on page 4 of the Record of Decision).

Current transportation guidance (developed during the time frame of the South Mountain Freeway environmental impact statement) states that transportation objectives developed during the transportation planning process and identified in a statewide or metropolitan transportation plan can be the primary source of a project’s purpose and need statement. The transportation planning process enables State and local governments and metropolitan planning organizations, with the involvement of stakeholders and the public, to establish a vision for a region’s future transportation system, define a region’s transportation goals and objectives for realizing that vision, decide which needs to address, and determine the time frame for addressing these needs. Out of the process emerge proposed projects intended to meet the needs and achieve the objectives of the plan.
As presented in Chapter 1, Purpose and Need, the Study Area was based on where transportation modeling indicated the transportation problem would be diminished by a major transportation facility. Through transportation modeling, analysis of socioeconomic data, and coordination with stakeholder agencies and the public, the Study Area for the project was strategically positioned where a gap exists in the regional transportation system's loop freeway network (see Chapter 3, page 3-3 of the Final Environmental Impact Statement, and page 4 of the Record of Decision). Even so, alternatives outside the Study Area were rigorously and comprehensively evaluated during the alternatives development and screening process. The Riggs Road Alternative (Final Environmental Impact Statement page 3-9 and Record of Decision page 7), which the commenter mentions specifically, is primarily on Gila River Indian Community land, and the Gila River Indian Community has not allowed detailed study of an alternative using its land. Furthermore, the Riggs Road Alternative would not complete the loop system, thereby causing substantial out-of-direction travel for motorists. Ultimately, none of the alternatives outside of the Study Area, including the Riggs Road Alternative, could address the identified purpose and need with regard to regional travel demand and existing and projected transportation system capacity deficiencies. Similar discussions are provided in the Final Environmental Impact Statement for the other alternatives outside the Study Area.

Current transportation guidance (developed during the time frame of the South Mountain Freeway environmental impact statement process) states that transportation objectives developed during the transportation planning process and identified in a statewide or metropolitan transportation plan can be the primary source of a project's purpose and need statement. The transportation planning process enables State and local governments and metropolitan planning organizations, with the involvement of stakeholders and the public, to establish a vision for a region’s future transportation system, define a region's transportation goals and objectives for realizing that vision, decide which needs to address, and determine the time frame for addressing these needs. Out of the process emerge proposed projects intended to meet the needs and achieve the objectives of the plan.
A174 - Appendix A

SWCA Comments on ADOT South Mountain Freeway Final EIS (September 2014) Prepared for PARC et al.

ADEQUACY OF THE NEPA ANALYSIS

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- Federal route defined in the 1999 MAJ Regional Transportation Plan and, although from the EIS, ADOT has never committed to construct along this route. Gravel, trees and shrubs are less likely to impact the final alignment, particularly in the proposed western sections of the South Mountain Freeway, but any new alternatives to the ADOT Good Alignment were not presented at the technical meeting. For ADOT’s proposal of Construction Alternatives in the Draft Environmental Impact Statement included many that were located outside of the Study Area in Phoenix. None of the alternatives were given more than a cursory glance before being rejected, and without adequate justification, eliminated from further consideration. In contrast, we can see no reasonable justification for why the Riggs Road Alternative (page 3 of the EIS) was not carried forward for detailed analysis. The alternative route would significantly move to complete the freeway corridor from the west of Phoenix, thus allowing for increased traffic flow from Phoenix to other points south, or from other points west. In addition, the freeway is located in Phoenix. This functionality should be weighed against the continuous at-grade, noise, visual, and other adverse effects of routing the proposed freeway along Pecos Road directly adjacent to a heavily developed residential area. The Pecos Road Alternative was eliminated from further study because it doesn’t provide a symmetrical link around Phoenix by joining with the San Tan Freeway at I-10.
The purpose of Figure 4-18 is to demonstrate that emissions of criteria pollutants are decreasing and continue to do so. More recent data confirm and strengthen the trend, but do not change the conclusion. Therefore, updating the figure would be of no substantive benefit.

There is no substantive benefit to updating ambient monitoring data for the same reasons as mentioned previously—newer data strengthen the conclusions in the Final Environmental Impact Statement, but do not change them.

The core of the comment regarding the air quality study area seems to be the exclusion of nonattainment areas near the Study Area. The Pinal County particulate matter (PM$_{2.5}$ and PM$_{10}$) nonattainment areas were not included in the air quality study area because they are far enough from the project (15 miles) that the emissions from the project would not impact those areas. The receptor diagrams in the air quality technical report demonstrate that concentrations drop to zero or near zero within a few hundred meters of the project. The air quality study area was determined through interagency consultation and neither of the air quality agencies involved in the interagency consultation process (Arizona Department of Environmental Quality or the U.S. Environmental Protection Agency, Region 9) requested that these areas be included in the analysis.

The current nonattainment and maintenance areas for particulate matter (PM$_{10}$), carbon monoxide, and ozone in Maricopa County are presented in the Record of Decision, Figure 23, on page 69.

The main point of the remainder of the air quality comments is that they have not been incorporated in the Final Environmental Impact Statement. These points are discussed at an appropriate and standard level of detail in the air quality technical report and are incorporated into the Final Environmental Impact Statement by reference. The air quality technical report, along with other technical appendices have always been available to the public. It should be noted that the commenter states that vehicle miles traveled and vehicle mix are critical and should be discussed in the Final Environmental Impact Statement—again, this information is incorporated by reference and was requested by a commenter earlier in project development.

The commenter incorrectly states that a hot-spot analysis was conducted for mobile source air toxics. A hot-spot analysis was only conducted for carbon monoxide and particulate matter (PM$_{10}$). The Draft Environmental Impact Statement analysis included a draft carbon monoxide dispersion modeling analysis and a qualitative particulate matter (PM$_{10}$) analysis. However, the Final Environmental Impact Statement analysis had to meet transportation conformity requirements; conformity requires that the year of peak emissions be modeled, which was determined to be 2035 for both pollutants. The quantitative particulate matter (PM$_{10}$) analysis only addressed 2035 because it was first completed for the Final Environmental Impact Statement and this is the only required year. Since the carbon monoxide analysis was an update of the Draft Environmental Impact Statement analysis, and since both years were modeled in the Draft Environmental Impact Statement, both were presented in the Final Environmental Impact Statement for continuity, even though only 2035 was technically required.
The Maricopa Association of Governments regional travel demand model projects that truck traffic will represent approximately 10 percent of the total traffic on the freeway, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60. As disclosed in the Final Environmental Impact Statement, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) will continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85 (see page 3-64 of the Final Environmental Impact Statement).

Vibration-related Impacts

As stated in the response to comments on the Draft Environmental Impact Statement, no federal requirements are directed specifically to highway traffic-induced vibration. All studies completed by highway agencies to assess the impact of operational traffic-induced vibrations have shown that both measured and predicted vibration levels are less than any known criteria for structural damage to buildings. No mitigation is warranted.
The noise analysis presented in the Final Environmental Impact Statement uses the most recent Arizona Department of Transportation Noise Abatement Policy (last updated in 2011), which was formally approved by the Federal Highway Administration, and traffic projections provided by the Maricopa Association of Governments in August 2013. Both the Noise Control Act of 1972 and the Quiet Communities Act of 1978 addressed emissions from transportation vehicles and equipment, machinery, appliances, aircraft, and other products in commerce. Based on this authority, the U.S. Environmental Protection Agency developed noise emission standards and controls for vehicles, which are enforced by the U.S. Department of Transportation. The noise emissions of motor vehicles are used in the Federal Highway Administration’s noise prediction model (Traffic Noise Model), which was used on this project (see Final Environmental Impact Statement beginning on page 4-88). The noise regulations of other agencies have limited (U.S. Department of Housing and Urban Development and local noise ordinances) or no applicability (Federal Transit Administration—for federally funded transit projects) to the project. U.S. Department of Housing and Urban Development regulations consider noise in the acquisition of undeveloped land and noise exposure to existing developments. The Federal Highway Administration’s Procedures for Abatement of Highway Traffic Noise and Construction Noise specifies abatement criteria for undeveloped land and existing housing. These criteria were used to determine mitigation for the project (see Final Environmental Impact Statement beginning on page 4-88). Local noise regulations are intended to address nuisance noise. They address emissions from modified motor vehicle exhausts, loud performances, and nighttime activities. Page 4-174 of the Final Environmental Impact Statement discusses the mitigation measures to be used to address the noise generated during construction, including nighttime construction. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. The Occupational Safety and Health Administration Occupational Noise Exposure, Hearing Conservation Amendment applies to on-the-job worker exposure to noise. These exposure limits will apply to highway construction workers in compliance with the Arizona Department of Transportation’s safety policy.

Groundwater data in other areas may be more current; however, this additional level of detail would not assist the environmental impact statement decision-making process because groundwater levels are not a differentiating factor among action alternatives and because each action alternative is located in a similar area and follows a similar vertical profile.
Water Resources

Impacts from well/water acquisition will be mitigated through well or water replacement. In the event that well replacement were to be impossible, the Arizona Department of Transportation would still replace the water that would be lost through the acquisition.
Mobile sources are not regulated for impacts on visibility in Class I areas (40 Code of Federal Regulations Section 51.307) and neither of the air quality agencies involved in the interagency consultation process (Arizona Department of Environmental Quality or the U.S. Environmental Protection Agency, Region 9) requested that Class I areas be included in the analysis.

Qualitative discussions regarding construction activities are found under Mitigation on page 4-85 of the Final Environmental Impact Statement. Maintenance activities mentioned by the commenter (i.e., repaving, re-striping, landscaping maintenance) will be construction-like activities, although at a smaller scale, and will have similar, but more often less impact than construction activities.
Socioeconomic projections are updated every 3 to 5 years by the Arizona State Demographer’s Office. The projections by the Arizona State Demographer’s Office are produced at the county level and were approved in December 2012. The Maricopa Association of Governments is tasked with producing the sub-county level projections, and those were approved in June 2013 after the Draft Environmental Impact Statement was published, but before the Final Environmental Impact Statement was issued. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. These new projections were used to update other sections, including Air Quality (beginning on page 4-68).

Figure 4-18 was not updated because the comparison of national economic and demographic growth indicators and air emissions show the same trend of increasing vehicle miles traveled and decreasing emissions of principal air pollutants. Updating the figure would neither change the conclusions of the environmental document or aid in decision-making.

Comment noted.
Particulate matter ($\text{PM}_{10}$) emission rates (from vehicles and re-entrained road dust) were used in the CAL3QHCR dispersion model to generate particulate matter ($\text{PM}_{10}$) concentrations at specific receptor locations at each of the three analysis locations. The particulate matter ($\text{PM}_{10}$) concentrations (including a background concentration) were used to determine whether the vehicle emissions resulting from the project would cause the applicable National Ambient Air Quality Standards for particulate matter ($\text{PM}_{10}$) to be exceeded. For each analysis location, particulate matter ($\text{PM}_{10}$) emission rates for running exhaust, crankcase running exhaust, brake wear, and tire wear were developed using MOVES2010b. The conformity regulations require hot-spot analyses to address the year or years of peak emissions. Through the interagency consultation process, 2035 was selected as the analysis year when traffic volumes and vehicle miles traveled would be the greatest. The U.S. Environmental Protection Agency was consulted on the conformity methodology presented in the Final Environmental Impact Statement.

The carbon monoxide analysis was updated for the Final Environmental Impact Statement similar to the particulate matter ($\text{PM}_{10}$) analysis, using link-specific data and model inputs consistent with the inputs the Maricopa Association of Governments uses for regional carbon monoxide emissions analyses.

The Draft Environmental Impact Statement analysis included a draft carbon monoxide dispersion modeling analysis and a qualitative particulate matter ($\text{PM}_{10}$) analysis. However, the Final Environmental Impact Statement analysis had to meet transportation conformity requirements; conformity requires that the year of peak emissions be modeled, which was determined to be 2035 for both pollutants. The quantititative particulate matter ($\text{PM}_{10}$) analysis only addressed 2035 because it was first completed for the Final Environmental Impact Statement and this is the only required year. While carbon monoxide consists only of exhaust emissions, particulate matter ($\text{PM}_{10}$) consists of exhaust, brake wear, tire wear, and road dust. The trend in exhaust emissions is downward, due to the ongoing phase-in of U.S. Environmental Protection Agency tailpipe emissions standards, but brake wear, tire wear, and road dust increase in direct proportion to vehicle miles traveled (there are no U.S. Environmental Protection Agency standards that reduce these sources of emissions).

The Final Environmental Impact Statement (page 4-75) states that the Maricopa Association of Governments most recent conformity analysis for its regional transportation plan shows regional emissions of carbon monoxide will be highest in 2035. This is from the regional model, whereas Table 4-32 in the Final Environmental Impact Statement shows site-specific modeled results, hence the difference. Regardless, the conclusion remains the same that the project complies with the transportation conformity regulations at 40 Code of Federal Regulation, Part 93 and with conformity provisions of Section 176(c) of the Clean Air Act.
As indicated in the Final Environmental Impact Statement, the project complies with the transportation conformity regulations at 40 Code of Federal Regulations Part 93 and with the conformity provisions of Section 176(c) of the Clean Air Act. The U.S. Environmental Protection Agency was consulted on the conformity methodology presented in the Final Environmental Impact Statement.

The Pinal County particulate matter (PM$_{2.5}$ and PM$_{10}$) nonattainment areas were not included in the air quality study area because they are far enough from the project (15 miles) that the emissions from the project would not impact those areas. The air quality study area was determined through interagency consultation and neither of the air quality agencies involved in the interagency consultation process (Arizona Department of Environmental Quality or the U.S. Environmental Protection Agency, Region 9) requested that these areas be included in the analysis.

The U.S. Environmental Protection Agency’s guidance for hot-spot modeling for highway projects does not require such an extensive receptor grid. The geographic extent of the hot-spot modeling was agreed to through interagency consultation with the Arizona Department of Environmental Quality and the U.S. Environmental Protection Agency. Concentrations comply with the National Ambient Air Quality Standards at the roadside and decrease with distance away from the roadway. Extending the receptor network would simply produce additional model results that are even farther below the National Ambient Air Quality Standards.

The figure in question was based on emissions information that was out of date. In addition, it presented information on source contributions for all 188 air pollutants that are regulated by the U.S. Environmental Protection Agency as air toxics, even though most of these pollutants are not mobile source air toxics. Pages 4-74 and 4-75 of the Final Environmental Impact Statement include three tables and one figure with local Maricopa County information about the sources of mobile source air toxic pollutants, which is more relevant to the Study Area.
## Air Quality

The figure in question was based on emissions information that was out of date. In addition, it presented information on source contributions for all 188 air pollutants that are regulated by the U.S. Environmental Protection Agency as air toxics, even though most of these pollutants are not mobile source air toxics. Pages 4-74 and 4-75 of the Final Environmental Impact Statement include three tables and one figure with local Maricopa County information about the sources of mobile source air toxic pollutants, which is more relevant to the Study Area.

The Joint Air Toxics Assessment Project study is provided as background information in the Draft and Final Environmental Impact Statements, but the study itself is not relevant to the type of analysis done pursuant to the Federal Highway Administration’s interim mobile source air toxics guidance, which is an emissions analysis. Monitored ambient concentrations of mobile source air toxics, the focus of the Joint Air Toxics Assessment Project, do not inform this type of analysis. The discussions in the Air Quality section of the Final Environmental Impact Statement are of sufficient detail to understand existing conditions without having to use the particular study the commenter mentions. It should be noted, however, that Tables 4-30 and 4-31 in the section, Air Quality, use this study to show existing conditions regarding mobile source air toxics. Also, the mobile source air toxics analysis showed that emissions will decline, and that reductions on the order of 57 to 92 percent will occur irrespective of whether the project is constructed.

The table presents the findings of the Joint Air Toxics Assessment Project, which was completed in 2004. Updating these background data would not change the conclusions of the project-specific analysis.
The conformity regulations require hot-spot analyses to address the year or years of peak emissions. Through the interagency consultation process, 2035 was selected as the analysis year when traffic volumes and vehicle miles traveled would be the greatest. The Draft Environmental Impact Statement analysis included a draft carbon monoxide dispersion modeling analysis and a qualitative particulate matter (PM$_{10}$) analysis. However, the Final Environmental Impact Statement analysis had to meet transportation conformity requirements; conformity requires that the year of peak emissions be modeled, which was determined to be 2035 for both pollutants. The quantitative particulate matter (PM$_{10}$) analysis only addressed 2035 because it was first completed for the Final Environmental Impact Statement and this is the only required year. Since the carbon monoxide analysis was an update of the Draft Environmental Impact Statement analysis, and since both years were modeled in the Draft Environmental Impact Statement, both were presented in the Final Environmental Impact Statement for continuity, even though only 2035 was technically required. While carbon monoxide consists only of exhaust emissions, particulate matter (PM$_{10}$) consists of exhaust, brake wear, tire wear, and road dust. The trend in exhaust emissions is downward, due to the ongoing phase-in of U.S. Environmental Protection Agency tailpipe emissions standards, but brake wear, tire wear, and road dust increase in direct proportion to vehicle miles traveled (there are no U.S. Environmental Protection Agency standards that reduce these sources of emissions).

The Final Environmental Impact Statement (page 4-75) states that the Maricopa Association of Governments most recent conformity analysis for its regional transportation plan shows regional emissions of carbon monoxide will be highest in 2035. This is from the regional model, whereas Table 4-32 in the Final Environmental Impact Statement shows site-specific modeled results, hence the difference. Regardless, the conclusion remains the same that the project complies with the transportation conformity regulations at 40 Code of Federal Regulation, Part 93 and with conformity provisions of Section 176(c) of the Clean Air Act.

The background values used in the Final Environmental Impact Statement were updated from what was used in the Draft Environmental Impact Statement (see Table 4-32 on page 4-76 of the Final Environmental Impact Statement) and were agreed to through interagency consultation with the Arizona Department of Environmental Quality and U.S. Environmental Protection Agency.
Ozone is a regional pollutant, and under the Clean Air Act conformity requirements, ozone precursor emissions are addressed at the regional level through emissions analysis of the Maricopa Association of Government’s long range transportation plan. As long as projects are included in a conforming plan, as is the case for the South Mountain Freeway, then they are considered to have complied with the Clean Air Act requirements applicable to ozone. Analysis of the alternatives for National Environmental Policy Act purposes is not necessary, because any alternative would have to meet this same conformity test in order to proceed (the Arizona Department of Transportation and Federal Highway Administration could not approve any alternative that did not meet regional conformity requirements for demonstrating compliance with the ozone National Ambient Air Quality Standards). The question of whether one alternative is “better” than another from an ozone standpoint is moot, because all alternatives are required to be consistent with attainment of the ozone standard.

The conformity regulations require hot-spot analyses to address the year or years of peak emissions. Through the interagency consultation process, 2035 was selected as the analysis year when traffic volumes and vehicle miles traveled would be the greatest. The Draft Environmental Impact Statement analysis included a draft carbon monoxide dispersion modeling analysis and a qualitative particulate matter (PM10) analysis. However, the Final Environmental Impact Statement analysis had to meet transportation conformity requirements; conformity requires that the year of peak emissions be modeled, which was determined to be 2035 for both pollutants. The quantitative particulate matter (PM10) analysis only addressed 2035 because it was first completed for the Final Environmental Impact Statement and this is the only required year. Since the carbon monoxide analysis was an update of the Draft Environmental Impact Statement analysis, and since both years were modeled in the Draft Environmental Impact Statement, both were presented in the Final Environmental Impact Statement for continuity, even though only 2035 was technically required. While carbon monoxide consists only of exhaust emissions, particulate matter (PM10) consists of exhaust, brake wear, tire wear, and road dust. The trend in exhaust emissions is downward, due to the ongoing phase-in of U.S. Environmental Protection Agency tailpipe emissions standards, but brake wear, tire wear, and road dust increase in direct proportion to vehicle miles traveled (there are no U.S. Environmental Protection Agency standards that reduce these sources of emissions).

The Final Environmental Impact Statement (page 4-75) states that the Maricopa Association of Governments most recent conformity analysis for its regional transportation plan shows regional emissions of carbon monoxide will be highest in 2035. This is from the regional model, whereas Table 4-32 in the Final Environmental Impact Statement shows site-specific modeled results, hence the difference. Regardless, the conclusion remains the same that the project complies with the transportation conformity regulations at 40 Code of Federal Regulations, Part 93 and with conformity provisions of Section 176(c) of the Clean Air Act.
### Air Quality

174. **MOVES2010b** is the mobile-source emission factor model used in this analysis. The main point of the comment appears to be that these critical data have not been incorporated into the Final Environmental Impact Statement. These data were incorporated into the air quality technical report, which is available to the public. These data were incorporated into the Final Environmental Impact Statement by reference (see page 4-78).

175. **The conformity regulations require hot-spot analyses to address the year or years of peak emissions. Through the interagency consultation process, 2035 was selected as the analysis year when traffic volumes and vehicle miles traveled would be the greatest. The Draft Environmental Impact Statement analysis included a draft carbon monoxide dispersion modeling analysis and a qualitative particulate matter (PM10) analysis. However, the Final Environmental Impact Statement analysis had to meet transportation conformity requirements; conformity requires that the year of peak emissions be modeled, which was determined to be 2035 for both pollutants. The quantitative particulate matter (PM10) analysis only addressed 2035 because it was first completed for the Final Environmental Impact Statement and this is the only required year. Since the carbon monoxide analysis was an update of the Draft Environmental Impact Statement analysis, both were presented in the Final Environmental Impact Statement for continuity, even though only 2035 was technically required. While carbon monoxide consists only of exhaust emissions, particulate matter (PM10) consists of exhaust, brake wear, tire wear, and road dust. The trend in exhaust emissions is downward, due to the ongoing phase-in of U.S. Environmental Protection Agency tailpipe emissions standards, but brake wear, tire wear, and road dust increase in direct proportion to vehicle miles traveled (there are no U.S. Environmental Protection Agency standards that reduce these sources of emissions).**

176. **Conformity applies to the nonattainment or maintenance area(s) where the proposed project is located; therefore, modeling a nonattainment area 15 miles away from the project is neither necessary nor required.**

177. **MOVES2010b is the mobile-source emission factor model used in this analysis.**
The mobile source air toxics analyses as presented in the Final Environmental Impact Statement were based on average daily traffic volumes over a 1-year period. Vehicle miles traveled are presented in the mobile source air toxics tables starting on page 4-80 of the Final Environmental Impact Statement. The Final Environmental Impact Statement indicates that local vehicle mix was modeled in the project for review by the general public.
179 Air Quality

Figure 4-28 in the Draft Environmental Impact Statement was based on MOBILE6.2 national defaults, including the national default vehicle fleet mix. Because MOBILE6.2 has been replaced by MOVES, the graphic was no longer relevant and was deleted.

180 Air Quality, Trucks

The Final Environmental Impact Statement indicates that local vehicle mix was a model input (page 4-79). Details on vehicle mix (heavy trucks versus all vehicles) are located in the appendix of the air quality technical report (page A-3), which is available to the public. Technical reports are designed to support the environmental impact statement, not to be reproduced in the environmental impact statement.

As with all other freeways in the region, trucks will use the project for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the freeway will be automobiles. The Maricopa Association of Governments regional travel demand model projects that truck traffic will represent approximately 10 percent of the total traffic on the freeway, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60. As disclosed in the Final Environmental Impact Statement, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) will continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85 (see page 3-64 of the Final Environmental Impact Statement). The vehicle mix and specifically the percentages of trucks using the facility is similar in vehicle mix ratios found throughout the region’s existing freeway system.
Similar to the Joint Air Toxics Assessment Project, the Phoenix, Arizona Air Toxics Assessment – Final Comprehensive Report is not relevant to the type of analysis done pursuant to the Federal Highway Administration’s interim mobile source air toxics guidance, which is an emissions analysis. The mobile source air toxics analysis presented beginning on page 4-78 of the Final Environmental Impact Statement is an estimated inventory of mobile source air toxics emissions for the entire Study Area for 2025 and 2035. This approach was used because the inventory estimate accounts for changes in traffic and emissions on all roadways affected by a proposed project and would, therefore, be a more reliable predictor of changes in exposure to mobile source air toxics.
Appendix A

The National Near Roadway Mobile Source Air Toxic Study is discussed on page 4-81 of the Final Environmental Impact Statement, although not in detail. The National Near Roadway Mobile Source Air Toxic Study is provided as background information in the Draft and Final Environmental Impact Statements, but the study itself is not relevant to the type of analysis done pursuant to the Federal Highway Administration’s interim mobile source air toxics guidance, which is an emissions analysis. Monitored ambient concentrations of mobile source air toxics, the focus of the National Near Roadway Mobile Source Air Toxic Study, are not to be reproduced in the environmental impact statement, nor to be included in the public technical reports. The information presented in the appendix of the air quality technical report (Page A-3), which is available to the public, will provide the reader with an understanding of the emissions associated with the project and the potential for adverse environmental impacts. The information contained in the appendix will be particularly useful in the future for updating the emission inventories of the project.

The Council on Environmental Quality’s Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act state that environmental impact statements should be analytic rather than encyclopedic (40 Code of Federal Regulations Part 1502.2(a)). The information presented in both the Draft and Final Environmental Impact Statements demonstrated mobile source air toxics emissions at the study area level will be much lower in the future. The U.S. Environmental Protection Agency’s MOVES model predicts lower mobile source air toxics in the future; therefore, it can be logically assumed that these emissions will be lower at the schools as well.

The mobile source air toxics analyses presented in the Final Environmental Impact Statement were based on average daily traffic volumes over a 1-year period. The Final Environmental Impact Statement indicates that local vehicle mix was a model input (page 4-79). Details on vehicle mix (heavy trucks versus all vehicles) are located in the appendix of the air quality technical report (page A-3), which is available to the public. The U.S. Environmental Protection Agency’s MOVES model also predicts lower mobile source air toxics emissions at the schools as well.
Noise Analysis of noise-related impacts from maintenance activities is not required under Arizona Department of Transportation and Federal Highway Administration noise policies. Noise generated by maintenance activities would be temporary in nature and would be similar to that generated during construction of the freeway (see page 4-173 of the Final Environmental Impact Statement). A discussion of induced growth can be found beginning on page 4-182 of the Final Environmental Impact Statement. Vehicle traffic mix projections were provided by the Arizona Association of Governments and are consistent with the regional conformity analysis. The technical report is designed to support the environmental impact statement and is available to the public.
The noise analysis presented in the Final Environmental Impact Statement uses the most recent Arizona Department of Transportation Noise Abatement Policy (last updated in 2011), which was formally approved by the Federal Highway Administration, and traffic projections provided by the Maricopa Association of Governments in August 2013. Both the Noise Control Act of 1972 and the Quiet Communities Act of 1978 addressed emissions from transportation vehicles and equipment, machinery, appliances, aircraft, and other products in commerce. Based on this authority, the U.S. Environmental Protection Agency developed noise emission standards and controls for vehicles, which are enforced by the U.S. Department of Transportation. The noise emissions of motor vehicles are used in the Federal Highway Administration’s noise prediction model (Traffic Noise Model), which was used on this project (see Final Environmental Impact Statement beginning on page 4-88). The noise regulations of other agencies have limited (U.S. Department of Housing and Urban Development and local noise ordinances) or no applicability (Federal Transit Administration—for federally funded transit projects) to the project. U.S. Department of Housing and Urban Development regulations consider noise in the acquisition of undeveloped land and noise exposure to existing developments. The Federal Highway Administration’s Procedures for Abatement of Highway Traffic Noise and Construction Noise specifies abatement criteria for undeveloped land and existing housing. These criteria were used to determine mitigation for the project (see Final Environmental Impact Statement beginning on page 4-88). Local noise regulations are intended to address nuisance noise. They address emissions from modified motor vehicle exhausts, loud performances, and nighttime activities. Page 4-174 of the Final Environmental Impact Statement discusses the mitigation measures to be used to address the noise generated during construction, including nighttime construction. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. The Occupational Safety and Health Administration Occupational Noise Exposure, Hearing Conservation Amendment applies to on-the-job worker exposure to noise. These exposure limits will apply to highway construction workers in compliance with the Arizona Department of Transportation’s safety policy.
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191

The impacts to surface waters as a result of the project are discussed beginning on page 4-105 of the Final Environmental Impact Statement. To mitigate these impacts, the use of BMPs, such as urban tree planting, urban landscaping, stormwater quality control facilities, and land use controls is recommended. The project is located in the southwestern part of the state of Arizona, which is a semi-arid region with limited water availability. The project area is characterized by a high density of existing infrastructure, such as highways and roads, which have already caused water quality issues and decreased water resources. The mitigation measures are designed to minimize the project's impact on surface waters and protect the existing water resources.

The specific water quality concerns associated with the project are discussed in the Final Environmental Impact Statement. These concerns include increased runoff, decreased water quality, and increased sedimentation. The project area is located near several water quality-sensitive areas, such as lakes and rivers, and the project's construction activities have the potential to disrupt these sensitive environments.

To address these concerns, the project team has implemented several mitigation measures, such as the use of BMPs, stormwater quality control facilities, and land use controls. The project team has also conducted a thorough analysis of the potential impacts to surface waters and has developed mitigation measures to minimize these impacts. The project team has also consulted with local water agencies and stakeholders to ensure that the mitigation measures are effective.

The project team has also conducted a thorough analysis of the potential impacts to surface waters and has developed mitigation measures to minimize these impacts. The project team has also consulted with local water agencies and stakeholders to ensure that the mitigation measures are effective.
Comment noted.

Water Resources, Secondary and Cumulative Impacts

The Gila River Indian Community has not provided notice to the Arizona Department of Transportation regarding reasonably foreseeable development. As a result, development along the Gila River Indian Community boundary is speculative.

The Final Environmental Impact Statement’s Secondary and Cumulative Impacts section includes a discussion of water resources and the continued conversion of undisturbed land to human-based development. All reasonably foreseeable development plans are included as "human-based" development. The specifics the commenter requests can be found in "Development Plans" on page 4-7 of the Final Environmental Impact Statement and in Figures 4-4 and 4-5 on pages 4-8 and 4-10, respectively. In an effort to avoid being encyclopedic, the specific information is not repeated.
### SWCA Comments on ADOT South Mountain Freeway Final EIS (September 2014) Prepared for PARC et al.

#### Adequacy of the NEPA Analysis

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Section</th>
<th>Page(s)</th>
<th>Resource Area</th>
<th>SWCA Comment on Draft EIS</th>
<th>ADOT Responses to Comments on Draft EIS</th>
<th>SWCA Review of Final EIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Water Resources</td>
<td>4-100</td>
<td>Ground-water</td>
<td>Analysis of impacts as required under NEPA and other laws has been fundamental</td>
<td>158 specific comments are addressed below.</td>
<td>See specific comment responses below.</td>
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This passage highlights a general lack in the Cumulative Impacts section of the EIS. The fundamental lineup in assessing cumulative impacts is to identify what is reasonably foreseeable action. However, due to the nature of the action (i.e., impacts to the same area over a time frame), this limits the ability to assess impacts over both time and space. No list of Reasonably Foreseeable Actions is provided at the 4-100. Lack of this fundamental background information results in an inadequate framework for assessing cumulative impacts.

From the analysis of cumulative impacts of water resources, the reasonably foreseeable actions considered appear to be fairly generally defined at this point. However, along the south side of the eastern alignment, the Q1 River Forest inventory, ought to have been explicitly assessed for its redwood recovery. Forest development in this area has a high likelihood of changing the location of stormwater discharges and the impact of those stormwater discharges.

Rationale: The reduction of stormwater is slated as being identified in such cases of water. This line a valid method of identifying any real impacts from the project. It is not, however, a valid method of identifying any cumulative impacts from the project.

Specifically, there is no list of Reasonably Foreseeable Actions in the EIS that can be reviewed. For completeness, there is no discussion of how each Reasonably Foreseeable Action would impact the environment in terms of time and space. There is no discussion of the actual impacts that would result from these Reasonably Foreseeable Actions.

Even if these issues are not, for the sake of argument, that there are no failure activities along the Q1 River Indian Community, that should be considered, so that the activities that would occur there would be pertinent to the Q1 River Indian Community. These needs are not treated in a reasonable manner. This information is not made available to the public and may not be noted for the decision maker either.

Further, it is not reasonable to disregard potential future development activities of the Q1 River Indian Community, other because these activities are not in the Q1 River Indian Community. Every jurisdiction (city, county, state, and federal) must develop policies and plans that must be based on such development. Thus, the Q1 River Indian Community has a regulatory process in which ADOT has no role in this reason for evaluating the impacts. ADOT regulations must reflect the cumulative impacts, as well as analyses of actions beyond immediate agency control (i.e., the U.S. Forest Service). ADOT’s determination of any analysis of future development on Q1 River Indian Community is made separately. ADOT’s final EIS (respect NEPA) regulation and guidance.
The City of Phoenix regularly evaluates a wide array of factors that will influence long-term (50 years) water availability and water demand. These assessments are documented in the city’s Water Resources Plan. The most recent document was published in 2011 (see <phoenix.gov/waterservicessite/Documents/wsd2011wrp.pdf>). The study states, “Today, the City maintains a well diversified water supply portfolio which is sufficient to meet the needs of this growing community for decades to come.” Additionally, the City of Phoenix Water Services Department states in its Water Supplies frequently asked questions document (updated July 25, 2014) that “Phoenix water supplies are in good condition.”

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**Note:** The table is not fully visible, but it appears to be a report or a detailed document with specific entries.
The response was explaining that all wells and well owners will be treated the same and that the Arizona Department of Transportation understands that relocation of any well is a difficult activity. However, the Arizona Department of Transportation has effectively mitigated well impacts associated with its projects throughout the region and state.

In the specific case of the Lakewood wells, it is anticipated that because the wells are located south of Pecos Road, they may not be directly affected by the freeway and could remain in place. The pipes associated with the water delivery system would need to be protected as they pass under the freeway, but production would not be affected.
The City of Phoenix regularly evaluates a wide array of factors that will influence long-term (50 years) water availability and water demand. These assessments are documented in the city’s Water Resources Plan. The most recent document was published in 2011 (see <phoenix.gov/waterservicessite/Documents/wsd2011wrp.pdf>). The study states, “Today, the City maintains a well diversified water supply portfolio which is sufficient to meet the needs of this growing community for decades to come.” Additionally, the City of Phoenix Water Services Department states in its Water Supplies frequently asked questions document (updated July 25, 2014) that “Phoenix water supplies are in good condition.” Based on information received from the City of Phoenix Water Services Department, the current breakdown of water sources is 41 percent from the Central Arizona Project (Colorado River) and 49 percent from the Salt River Project (Verde River and Salt River). The remaining water comes from groundwater and reclaimed water. Combining all water sources, the City of Phoenix’s current total capacity is approximately 555 million gallons per day. During the peak summer months, the total demand is approximately 380 million gallons per day. The Water Resources Plan notes that from the peak demand year of 2002, total demand has actually declined by more than 16 percent, while the service population increased by nearly 8 percent. The Foothills Community Association well produces approximately 700 gallons per minute, which equals approximately 1 million gallons per day. In comparison to the current peak demand and the total capacity, the well represents 0.26 percent and 0.19 percent, respectively. The City of Phoenix provides water for several golf courses and has indicated that there is sufficient capacity to serve the long-term needs of the Foothills golf course were that the only option left.

The procedure identified on page 4-108 of the Final Environmental Impact Statement defines the procedure that the Arizona Department of Transportation will use to replace adversely affected wells, and also identifies the general costs the Arizona Department of Transportation will incur to replace the lost water sources. As noted in this discussion, if it were necessary to provide replacement water instead of a new well, the Arizona Department of Transportation would, in negotiations with the well owner, include the difference between the costs of pumping the well and the costs of the new replacement water source.
either completely unavailable or overextraction is going to be challenging. That leaves only one source of water: municipal water from the City of Phoenix. The City of Phoenix is currently using a few City of Phoenix water sources as a backup, and it has been noted that it does not, however, fully investigate the impact of the cost.

There is a reason to be concerned about the Princeville water. The Princeville water is relatively pure, but the Princeville site has been identified as a potential source for contamination. This is particularly concerning because the site is located near a natural gas and oil well, and there is a possibility that the well could be contaminated. This could have a serious impact on the quality of the water supply for the Princeville community.

The Princeville community would likely become economically dependent on municipal water from the City of Phoenix. The costs of providing municipal water from the City of Phoenix would be prohibitive, and the Princeville community would not be able to raise funds to construct a new well. The Princeville water would be sufficient to meet the needs of the Princeville community, but it would not be able to meet the needs of the City of Phoenix.

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Groundwater data in other areas may be more current; however, this additional level of detail would not assist the environmental impact statement decision-making process because groundwater levels are not a differentiating factor among action alternatives and because each action alternative is located in a similar area and follows a similar vertical profile.
Comment noted.

As described on page 4-118 of the Final Environmental Impact Statement, it is anticipated that the W59 (Preferred) Alternative will qualify for Section 404 of the Clean Water Act Nationwide Permit #14, Linear Transportation Projects, because of the limited amount of fill that would be placed into jurisdictional waters. Generally, nationwide permits on non-tribal lands in Arizona have water quality certification conditions, which, when implemented, provide conditional water quality certification for the permit; however, if the activity affects an impaired water, an individual water quality certification is required.

If an individual Section 404 permit is required, a permit application will be submitted to the U.S. Army Corps of Engineers describing the proposed activity. Once the application is complete, the U.S. Army Corps of Engineers issues a public notice containing the information needed to evaluate the likely impacts of the activity. A notice is sent to all interested parties including adjacent property owners, government agencies, and others who have requested a notice. During the public notice period of the individual permit, the Arizona Department of Environmental Quality conducts its Clean Water Act Section 401 certification review. As part of the application review, the Arizona Department of Environmental Quality may issue a public notice that provides an opportunity for the public to comment on the Arizona Department of Environmental Quality certification decision prior to providing a water quality certification.

Controlling and treating runoff is a normal function of Arizona Department of Transportation projects. The U.S. Army Corps of Engineers, as a cooperating agency, has participated and contributed in each step of the environmental process. The agency has found the logical sequence of decision making to be sound and in line with National Environmental Policy Act requirements. The Arizona Department of Environmental Quality has also contributed to the process. Both agencies have oversight roles in project permitting as established in the Clean Water Act (Sections 401, 402, and 404). Extensive mitigation in accordance with the permitting requirements can be found in the Water Resources and Waters of the United States sections of Chapter 4 of the Final Environmental Impact Statement. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. The Arizona Department of Transportation will comply with the conditions required in the Section 404 permit and Section 401 water quality certification.
### ADEQUACY OF THE NEPA ANALYSIS

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<td>404 permit issuance</td>
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<td>The issuance of the Section 404 Individual Certification in light of the impaired nature of the Salt and Gila rivers should have been discussed.</td>
<td>ADOE states the issuance would only require some mitigation measures. The issuance of the Section 404 would be subject to the requirements of the Clean Water Act. ADOE should consider the potential impacts of the issuance of the Section 404 on the Salt and Gila rivers.</td>
<td>SWCA recommends additional mitigation measures be implemented to address the potential impacts of the issuance of the Section 404 on the Salt and Gila rivers.</td>
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This response does not adequately address the issue, as noted by the SWCA. The ADOE's response is insufficient in addressing the potential impacts of the issuance of the Section 404 on the Salt and Gila rivers.
COMMENT 3

Comment from Chris Garret, B.S., P. HGW, at SWCA regarding South Mountain Freeway (Loop 202) EIS Depressed Freeway Alternative
Appendix A

Code Comment Document

November 5, 2014

Patricia Laws
Protecting Arizona’s Resources and Children, Inc.
P.O. Box 50455
Phoenix, AZ 85078

Re: South Mountain Freeway (Loop 202) EIS Depressed Freeway Alternative

Dear Ms. Laws:

The purpose of this letter is to provide you with some thoughts specific to the dismissal of the depressed freeway alternative in the ADOT Loop 202 EIS. As a hydrologist, it is difficult to actually assess from a technical viewpoint whether a depressed freeway alternative is reasonable or not, for the very simple reason that ADOT has not provided any analysis to review or consider, even at a generic level. For that reason, most of the following thoughts are related to the NEPA process, and not the actual hydrology.

I note that both the Draft EIS and Final EIS state the following (page 3-18): “For these reasons, the depressed freeway options were not carried forward for further study. Instead, the rolling profile was carried forward. Maintaining the existing flows onto Community land with a rolling profile would require extension of the existing drainage structures and the construction of small drainage basins at regular intervals.” This statement is precedent in the EIS by a discussion of the design components that would be required to consider a depressed freeway option. From this it would appear that ADOT considered and analyzed the depressed freeway option internally. Even if we assume that such an internal analysis was conducted, it remains unclear as to why this alternative was dismissed as an alternative1.

That an alternative is different is not a reason to dismiss it. That an alternative could take more land, have a bigger footprint, cost more, or require special engineering is all components to be analyzed and compared against other alternatives, not reasons to dismiss an alternative from consideration. Generally speaking, the only valid reasons to dismiss an alternative are that it does not meet the Purpose and Need, is illegal, or that design constraints make it impossible to accomplish (i.e., it is not practical or feasible).

A review of the Purpose and Need is enlightening on this point. It does not mention cost or funding as any part of the purpose and need for this project. It appears to me that the depressed freeway alternative meets the stated purpose and need for this project just as well as any other alternative. The depressed freeway alternative clearly should not have been dismissed for not meeting the Purpose and Need.

1 The National Environmental Policy Act is a disclosure exercise, designed to ensure that a decision maker, as well as the public, adequately understands the environmental impacts (both positive and negative) of various alternatives that meet the Purpose and Need. Failure to discuss the merits for dismissal of an alternative, either in the EIS or in publicly available decision documents, is contrary to the spirit of the law as well as to available NEPA guidance.

203 Alternatives

Depressing the freeway is considered a design option of the associated alternative. Numerous design options were evaluated and documented during the alternatives development and screening process. It is not required within the National Environmental Policy Act process that every potential similar variation be carried forward and studied in detail.

As noted beginning on page 3-15 of the Final Environmental Impact Statement, depressing the Pecos Road sections would entail installation of pump stations to drain the main line freeway. A depressed freeway would also need a drainage channel to capture the off-site flows to prevent their entering the freeway. Pump stations were not used because of the high cost of construction and maintenance needed for their operation. The recommended freeway configuration has the E1 Alternative aboveground and the existing culverts extending to pass the drainage under the freeway. Pecos Road currently has numerous existing culvert crossings. Depressing the freeway in this area would eliminate the existing culvert crossings and potentially have adverse flooding impacts on adjacent properties. Extending the existing culverts or upsizing the culverts would maintain or improve drainage flows. This would ensure that there would be no adverse flooding impacts on adjacent properties. To reduce impacts by depressing the freeway in the Eastern Section, the Arizona Department of Transportation would:

• need to spend an additional $400 million for right-of-way acquisition and construction
• displace an additional 300 residences
• maintain additional pump stations and detention basins for the life of the freeway
• would still have noise-related impacts requiring mitigation (i.e., noise barriers and their associated costs and visual impacts)

Because the below-ground option would result in substantially greater costs and residential displacements, this option was eliminated from further study.

The individual alternatives screening documents were referenced throughout Chapter 3 of the Final Environmental Impact Statement, including the E1 Alternative - Profile Variations along Pecos Road memorandum mentioned on page 3-18. This document and others were included as part of the Validation of the Alternatives Screening Process at the FEIS Stage (2014) document, which presented a reassessment and validation of the alternatives screening process for the Final Environmental Impact Statement, including the revised traffic projections. This document was available for public review on the project Web site at <azdot.gov/southmountainfreeway>. 
Which then begs the next question, are the design constraints impossible to overcome to build a depressed freeway? By ADOT’s own analysis, they are not impossible to overcome. ADOT states the various manners in which drainage issues could be overcome. ADOT also correctly points out that overcoming these drainage design concerns will have other environmental impacts.

Of course they’ll have environmental impacts—that’s to be expected from any alternative. Examining the trade-off of these benefits versus environmental impacts is exactly the point of including the alternative in an EIS. That there are different or greater impacts is simply not a valid reason to dismiss an alternative. ADOT also hints (but does not fully analyze) that there are environmental benefits to the alternative with respect to noise and air quality, but dismisses these benefits as negligible. In total, this amounts to an arbitrary dismissal of impacts (both positive and negative) that ought to have been provided to the decision-maker and public in order to allow an informed decision to be made.

In other words, it’s perfectly acceptable if ADOT were to weigh the costs and benefits of a depressed freeway, and then in the end make an informed choice to not build a depressed freeway alternative. But it is contrary to NEPA guidance and practice to dismiss an alternative, without analysis or comparison, that can be physically built, isn’t illegal, and meets the stated Purpose and Need.

When evaluating these trade-offs, it is also useful to look to historical analogs. A quick review of Valley freeways suggests that ADOT historically has found that there certainly is a benefit to construction of a depressed freeway. In those cases, clearly the costs and benefits met have been weighed and in those cases, a depressed freeway ended up being the selected alternative, despite having the same engineering concerns to overcome as stated in the South Mountain Freeway Final EIS. Granted, this is an imperfect comparison because locations differ and hydrologic conditions differ, as do land use conditions. But the fact that ADOT has not only analyzed but chosen to build depressed freeways in the past certainly raises a reasonable expectation that it is a valid alternative to at least consider in the context of an EIS.

In summary, from a hydrologic standpoint there certainly would be tradeoffs (both positive and negative) from building a depressed freeway, and there certainly could be technical challenges to overcome. As it seems doubtful those technical challenges rise to the level of impossibility, and as it seems that a depressed freeway alternative could still meet the stated Purpose and Need, it is reasonable that those tradeoffs should be analyzed in the context of an alternative in the EIS.

Sincerely,

Chris Garrett, P.E.
SWCA Environmental Consultants
Experience Summary

Mr. Garrett has served as the director of SWCA’s Tucson office since 2011. In that role, he has overseen the execution of projects large and small, managing interdisciplinary, multi-phase projects involving a variety of tasks and sub-consultants. Mr. Garrett is an experienced NEPA planner and he has managed or participated in the preparation of more than a half dozen major Environmental Impact Statements.

Mr. Garrett has been centrally involved in two of the most controversial NEPA projects in Arizona in the past five years. Mr. Garrett is the project manager for the Rosemont Copper Project EIS for the Coronado National Forest, which has involved highly complex technical issues, numerous cooperating agencies, and vocal public comment. Mr. Garrett was also involved in the Northern Arizona Withdrawal EIS, developing the Reasonably Foreseeable Developments scenario for numerous uranium mining claims.

As a registered Professional Hydrologist specializing in groundwater (P.HGW.), Mr. Garrett also coordinates hydrologic investigations and water resource assessments with federal and state agencies, water and energy utilities, commercial and industrial clients, developers, and private land owners, as well as providing hydrologic analysis for EISs and EAs.

Mr. Garrett has served as an adjunct faculty member in water resources technology at Gateway Community College, and as a guest speaker for the Bureau of Land Management training in aquifer testing.

Selected Project Experience

Southline Transmission EIS, Las Cruces, New Mexico, to Willcox, Arizona; Southline Transmission LLC. SWCA serves as the third-party NEPA consultant to the BLM and the Western Area Power Administration (the co-federal agencies) and Southline Transmission LLC (the proponent). The project proposes more than 360 miles of new and rebuilt transmission line and will provide 1,000 megawatts of capacity to southern New Mexico and Arizona. Role: Environmental Specialist. Provided hydrologic analyses and NEPA expertise.

Rosemont Mine EIS, Coronado National Forest near Tucson, southwestern Pima County, Arizona; Rosemont Copper Company. As a third party consultant, SWCA worked with the U.S. Forest Service (USFS) to determine and document potential environmental impacts of a proposed open-pit copper, molybdenum, and silver mine on more than 5,000 acres of private and National Forest lands in the Santa Rita Mountains. Role: Project Manager / Hydrologist. Since 2010, has served as lead hydrologist and Project Manager, responsible for oversight of expert peer review of groundwater modeling, geochemical modeling, and surface water modeling. Served a key role in designing mitigation and monitoring components for this project. Project required a sophisticated and robust approach to hydrologic and geochemical modeling, and assessment of reports to opinion resources.

CHRIS GARRETT, B.S., P.HGW.
Tucson Office Director, Project Manager, Hydrologist

204
Résumé.
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COMMENT 4
Response to Final Environmental Impact Statement (FEIS) Socioeconomic Factors
by
Kevin Kane
The FEIS responds to the criticism of its use of outdated input data in comments 19 and 20. ADOT notes that Census 2010-based socioeconomic data had not yet been adopted by MAG at the time of the DEIS, and they are now integrated in the FEIS. Comment 20 notes that the newly updated projections in the FEIS are consistent with the county-wide estimates provided by the ADOA and presented in my response to the DEIS.

The response in comment 20 also states that, “While new projections based on the 2010 census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the DEIS were validated in the FEIS.” Namely, that the proposed action is needed. A comparison of DEIS and FEIS socioeconomic projections is included in Table 1:

<table>
<thead>
<tr>
<th>Table 1: Comparison of DEIS vs. FEIS 2035 Projections</th>
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<tbody>
<tr>
<td><strong>2010 Census</strong></td>
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<tr>
<td><strong>DEIS (using 2005 Census input data)</strong></td>
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<tr>
<td>County Population</td>
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<tr>
<td>Study Area Population</td>
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<tr>
<td>County Employment</td>
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<td>Study Area Employment</td>
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While the population and employment estimates now correctly use current data (which includes a period of substantially slowed employment and population growth in the County and Study Area from 2005-2010), these major differences are not accompanied by updated narrative conclusions or justification. The only acknowledgment of these differences is from the above-quoted response in comment 20. Therefore, while new figures are provided in the FEIS, ADOT did not sufficiently address my comment to the DEIS (comment #1), which stated that
An important point is that the purpose and need analysis presented in the Draft and Final Environmental Impact Statements demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13). Even with the lower values for 2035, extensive growth is still projected for Maricopa County and the Study Area. As shown in the commenter’s table, the change between the projections presented in the Draft Environmental Impact Statement and the Final Environmental Impact Statement are lower for the Study Area when compared with the entire county. So the effects of the lower projections were of less consequence for the analysis of the project.

The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. The conclusions presented in the Draft Environmental Impact Statement were validated and presented in the Final Environmental Impact Statement (see Chapter 1, Purpose and Need).

In response to long-term trends, while the new projections for 2035 are lower than what was projected previously, the long-term trend still holds that those previously projected levels of population, housing, and employment will be reached, although they will be reached a few years later than originally projected.

The new socioeconomic projections approved by the Maricopa Association of Governments in June 2013 were developed in close coordination with the local jurisdictions of Maricopa County. The assumptions related to land use, occupancy levels, residential and commercial development plans, job centers, and other factors are updated regularly and form the basis for any differences perceived in the modeling results.

Once the Maricopa Association of Governments approved the new socioeconomic projections, they became the basis for the evaluation of purpose and need for the project. The Final Environmental Impact Statement presents the analysis of these new projections with respect to purpose and need and alternatives. While a general comparison between the values used in the Draft Environmental Impact Statement and Final Environmental Impact Statement is provided, a detailed side-by-side comparison is not presented because the values presented in the Draft Environmental Impact Statement no longer represent the best information available; the values in the Final Environmental Impact Statement do.

While nearly built-out, developments are still planned in the Ahwatukee Foothills Village west of 17th Avenue (see Figure 4-4 on page 4-8 of the Final Environmental Impact Statement).
The need for the project is based on socioeconomic factors and regional transportation demand and existing and projected transportation system capacity deficiencies (see text beginning on page 1-11 of the Final Environmental Impact Statement). Socioeconomic forecasts show population, housing, and employment increasing at high rates. Projections for 2035 are of a population of 5.8 million, housing of 2.3 million dwelling units, and an employment level of 2.9 million jobs. Increases in vehicle miles traveled are expected to meet or exceed growth of the three socioeconomic trends. Almost 50 percent of the projected regional growth is expected to occur in areas that will be immediately served by the freeway.

The commenter is focused on the change in values from the Draft Environmental Impact Statement to the Final Environmental Impact Statement instead of the more relevant comparison between 2010 and the new 2035 values presented in the Final Environmental Impact Statement. This comparison still shows an increase of almost 2 million people and over 1 million jobs in the next 25 years. The project is needed to serve that growth. Without a major transportation facility in the Study Area, the region will suffer even greater congestion, travel delays, and limited options for moving people and goods safely through the Phoenix metropolitan region.

The Maricopa Association of Governments continually updates databases containing known development projects and general plan land use amendments. The effects of changes to the known development projects and general plan land use updates, as well as the regional economic downturn and changes to population and employment control totals, are the main drivers of the differences between the socioeconomic data used in the Draft and Final Environmental Impact Statements.

Once the Maricopa Association of Governments approved the new socioeconomic projections, they became the basis for the evaluation of purpose and need for the project. The Final Environmental Impact Statement presents the analysis of these new projections with respect to purpose and need and alternatives (see Chapter 1, Purpose and Need, and Chapter 3, Alternatives). While a general comparison between the values used in the Draft Environmental Impact Statement and Final Environmental Impact Statement is provided, a detailed side-by-side comparison is not presented because the values presented in the Draft Environmental Impact Statement no longer represent the best information available; the values in the Final Environmental Impact Statement do.

The analysis of the new traffic projections based on the new socioeconomic projections and land use plans are presented in Chapter 1 (see page 1-13) and in Chapter 3 (see pages 3-27 and 3-60) of the Final Environmental Impact Statement. As noted on page xi of the Prologue to the Final Environmental Impact Statement, the purpose and need for the project was reevaluated using the new socioeconomic projections related to regional traffic, and the conclusions reached in the Draft Environmental Impact Statement were reconfirmed in the Final Environmental Impact Statement. Similarly, it is noted on page xi that the alternatives development and screening process was validated using the updated socioeconomic and traffic projections.
on an annual basis, in line with the approved datasets for 2030 and 2040. The 2035 dataset conforms to the population control totals contained in the Arizona State Demographer’s Office projections approved in December 2012. A detailed time line for the Maricopa Association of Governments 2013 socioeconomic projections can be found in the documentation available at <azmag.gov/Documents/IS_2013-06-25_MAG-Socioeconomic-Projections-Documentation-June-2013.pdf>.

The Arizona Department of Transportation and Federal Highway Administration elected to continue to use 2035 as its horizon year and not change it to 2040 to keep the Draft Environmental Impact Statement and Final Environmental Impact Statement consistent. Changing the planning horizon would not change the reason the project is needed.

Purpose and Need

While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, Purpose and Need, and Chapter 3, Alternatives). The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13). For example, in 2012, the regional transportation system’s operating capacity was able to meet 84 percent of existing travel demand. Even with the major transportation improvements planned in the Regional Transportation Plan (except for the proposed action), the 2035 system would be able to meet only 69 percent of projected travel demand.

The commenter is focused on the change in values from the Draft Environmental Impact Statement to the Final Environmental Impact Statement instead of the more relevant comparison between 2010 and the new 2035 values presented in the Final Environmental Impact Statement. This comparison still shows an increase of almost 2 million people and over 1 million jobs in the next 25 years. The project is needed to serve that growth.
COMMENT 5

Response to ADOT 10/2014 Response to Comments on the Loop 202 South Mountain Freeway
by
George D. Thurston, Sc.D.

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<td>216</td>
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GEORGE D. THURSTON, Sc.D.

AIR POLLUTION AND ENVIRONMENTAL HEALTH CONSULTANT
3 CATHERINE COURT STATELINE, NY 10918

Professor of Environmental Medicine
New York University School of Medicine
FoCo, NY 10918

Arizona Dept. of Transportation
Environmental Planning Group
1611 W. Jackson Street
Phoenix, Arizona 15007

Re: Response to ADOT 2014 Response to Comments on the Loop 202 South Mountain Freeway
Draft Environmental Impact Statement ("DEIS")

To Whom it May Concern,

This letter provides my responses to the Arizona Dept. of Transportation (ADOT) October, 2014 responses to my earlier comments that were submitted in July 2013, regarding the Draft FEIS.

Those comments, to which I now respond, were contained in the document entitled: "ADOT SPECIAL INTEREST GROUP COMMENTS AND RESPONSES".

My specific responses to those ADOT responses are detailed in the following pages of this letter and, overall, the ADOT has been unresponsive to my earlier comments. In addition, I agree with the U.S. EPA, which stated in a July 27, 2013 letter to the ADOT that: "We also note that no air toxics risk assessment has been provided, even though there is a documented history of local public concern and requests to ADOT and FHWA for analysis of the potential health effects from the proposed new freeway. We do not believe the reasoning provided in the DEIS for not providing such an assessment is compelling, especially in light of the history of requests for such analysis." That EPA criticism is still applicable to the report, and the ADOT should conduct quantitative health effects analyses of the proposed project, as noted in my previous and attached point-by-point comments.

Sincerely,

Dr. George D. Thurston, Sc.D.
3 Catherine Court
Chester, NY 10918

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<td>Specific responses are provided in the following pages.</td>
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<tr>
<td>218</td>
<td>Health Risk Assessment</td>
<td>Specific responses are provided in the following pages.</td>
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The response to code 12 was addressing the introductory information related to emissions. The response was noting where the analysis of mobile source air toxics could be found in the Final Environmental Impact Statement. A more detailed response related to the human health implications of these emissions was provided in subsequent responses (see page B325 in Volume III of the Final Environmental Impact Statement) and in the Final Environmental Impact Statement beginning on page 4-79. For more information, see the following responses to comments 220 and 222, as well as the responses to related comments made by the U.S. Environmental Protection Agency beginning on page A6 of this Appendix A of the Record of Decision.

As indicated in the response, given the uncertainty of a mobile source air toxics health risk assessment, the Federal Highway Administration instead addresses the potential impacts of mobile source air toxics through an emissions assessment in its National Environmental Policy Act documents. For smaller projects with a lower likelihood of a meaningful impact, this discussion is qualitative. For larger projects, emissions analysis is conducted. The Federal Highway Administration approach is consistent with the Council on Environmental Quality's direction in Section 1502.2(b) to discuss impacts in proportion to their significance.

The results of an emissions analysis can be summarized concisely in a National Environmental Policy Act document and provide useful information for decision makers (e.g., an alternative that has lower emissions is likely to be "better" from a mobile source air toxics health risk standpoint than one that has higher emissions). The statement beginning, "Indeed, a small percentage change . . ." is incorrect in the context of highway air quality assessment; concentrations produced by the available dispersion models (CAL3QHCR and AERMOD) are directly proportional to emissions, so a "small percentage change" in emissions would produce an identical percentage change in concentrations, and resulting health impacts. Also note that "factor of 2 uncertainty" also means that the impacts could be half those predicted.

In any event, the Final Environmental Impact Statement does include a quantitative health-based assessment of likely mobile source air toxics impacts using emissions in the project area as an indicator of likely health outcomes. While the comment takes issue with the Federal Highway Administration's explanation of the shortcomings of health risk assessment as it applies in the context of highway projects, it does not contest the Federal Highway Administration's statements that changes in emissions in the area affected by the project are a reasonable indicator of changes in 70-year health risk. The Final Environmental Impact Statement also includes a summary of recent health risk assessments conducted for other highway projects, all of which showed very low risk.

The first part of the response to code 14 addresses the consideration of schools in the noise analysis. The second part, in relation to chemicals, should not have been included in that response because the comment did not discuss chemical exposure. The statements related to the risk of asthma development and exacerbation were addressed in the response to code 15.
Response to Code 15 (pp. 8330-332): The key assumption by this ADOT response that “the National Ambient Air Quality Standards-based assessment ensures adequate consideration of health-based assesses” is incorrect. In fact, even if the EPA NAAQS were to be met after the construction of this major thoroughfare, this would not ensure that adverse human health effects will not occur, as the U.S. EPA has acknowledged. For example, in its 2013 rulemaking adopting the revised annual particulate matter NAAQS standard, EPA explained that “evidence- and risk-based approaches using information from epidemiological studies to inform decisions on PM2.5 standards are complicated by the recognition that no population threshold, below which it can be concluded with confidence that PM2.5-related effects do not occur, can be discerned from the available evidence.” [emphasis added] (Fed. Register, Jan. 15, 2013). Furthermore, in its calculations of the benefits of reducing the PM2.5 NAAQS limit, the U.S. EPA has acknowledged that there can be extant adverse health risks occurring below the NAAQS. For example, in a recent EPA Regulatory Impact Analysis for reducing the annual PM2.5 standard from 15 µg/m³ to 12 µg/m³ (U.S. EPA, 2012), EPA included a figure (Fig. 5-7) summarizing the best, most current science regarding PM2.5 health effects, which clearly documents that air pollution deaths occur below the existing “PM2.5 NAAQS (35 µg/m³ for the daily standard, and 12 µg/m³ for the annual standard). Finally, this comment tries to dismiss the contribution of the proposed increased traffic to toxic compounds, such as benzene, by stating that “indoor air concentrations of benzene are usually higher than outdoor levels and that indoor air in smokers’ homes is a significant contributor to children’s exposures.” However, this is not a cause to dismiss the additional exposures caused by the roadway, but, to the contrary, makes them of greater concern because the road emission impacts are in addition to the other sources already in their lives. This is part of a deeply concerning pattern in the report and comment responses, wherein serious health concerns from the proposed added traffic are dismissed because the residents have potentially greater risks from other sources, but the opposite should be the case. The fact that these populations suffer from other risks should make adding to their woes of even greater concern to the ADOT, not less.

Please see the response in the Final Environmental Impact Statement regarding the air quality health risk assessment. The Arizona Department of Transportation and Federal Highway Administration believe the response adequately addresses the comment.

The Clean Air Act framework requires the U.S. Environmental Protection Agency to adopt National Ambient Air Quality Standards that protect public health with an adequate margin of safety. In turn, the Clean Air Act requires the Federal Highway Administration to demonstrate that its projects do not cause violations of these standards, exacerbate existing violations of the standards, or delay attainment of the standards or any required interim milestones, which the Federal Highway Administration has accomplished for this project. The U.S. Environmental Protection Agency has determined that its National Ambient Air Quality Standards protect public health and the Federal Highway Administration has complied with those National Ambient Air Quality Standards. The Federal Highway Administration does not have authority to address inadequacies with respect to the National Ambient Air Quality Standards themselves.

The Final Environmental Impact Statement accounts for the mobile source air toxic health risk impact of the project through the Study Area and subarea emissions analyses, which best represent the likely net change in 70-year health risk for the reasons described in the Final Environmental Impact Statement. The information on other sources of exposure to mobile source air toxic pollutants was not provided to diminish the impact of project emissions, but to help illustrate the complexity of meaningfully quantifying the health risk attributable to just one source of these pollutants, a source that most people are likely to be exposed to for only a small portion of their nominal 70-year lifetime at a fixed location adjacent to the roadway.
## References


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**COMMENT 6**

Comments on the South Mountain Freeway/202 Loop Final Environmental Impact Statement (FEIS) Air Quality Component by Richard Haddow
The U.S. Environmental Protection Agency issued the transportation conformity regulations (40 Code of Federal Regulations Section 93) to implement the Clean Air Act requirements. The conformity regulations require that the metropolitan planning organization’s transportation plan and Transportation Improvement Program must include the specific federal projects in the regional emissions analysis that must not exceed a certain emissions level for the area. As noted in the Final Environmental Impact Statement on page 4-76, the Preferred Alternative is included in the Maricopa Association of Governments’ conforming plan and program. The Preferred Alternative, now the Selected Alternative, has complied with project level conformity requirements and is included in the Maricopa Association of Government’s conforming plan and transportation improvement program, per the Clean Air Act and 40 Code of Federal Regulations Section 93.

In the Final Environmental Impact Statement, the Arizona Department of Transportation and Federal Highway Administration presented a quantitative particulate matter (PM10) analysis to ensure that a state-of-the-art analysis was completed for the proposed action. The air quality technical report describes the various methodologies, model inputs, and modeled results for the particulate matter (PM10) 24-hour and carbon monoxide hot-spot analyses and the quantitative mobile source air toxics analysis. The determination of models and associated methods was made through an extensive interagency consultation process with local agencies (Arizona Department of Environmental Quality, Maricopa County Air Quality Department, Federal Highway Administration, Arizona Department of Transportation, and Maricopa Association of Governments) and the U.S. Environmental Protection Agency. The Arizona Department of Transportation and Federal Highway Administration specifically consulted with the U.S. Environmental Protection Agency on met data, and the analysis follows the U.S. Environmental Protection Agency’s recommendation for the source of these data.

While the U.S. Environmental Protection Agency’s transportation conformity regulations (40 Code of Federal Regulations Part 93) require localized hot-spot analysis of carbon monoxide and particulate matter (PM2.5) for some projects, no similar localized analysis is required for ozone. This is because ozone is a regional-scale pollutant. Ozone impacts are accounted for in the regional emissions analysis associated with the regional transportation plan and transportation improvement program conformity determination. The transportation conformity rule requires projects such as the South Mountain Freeway to be included in the regional emissions analysis.

The Maricopa Association of Governments is responsible for developing state implementation plans to reduce emissions of ozone precursors in the Maricopa area. The Selected Alternative is included in the regional emissions analysis associated with the Regional Transportation Plan, which was determined by the U.S. Department of Transportation to conform to the State Implementation Plan on February 12, 2014.
The project is included in the Maricopa Association of Governments’ Fiscal Year 2014–2018 Transportation Improvement Program and 2035 Regional Transportation Plan, which were found to conform to the ozone, carbon monoxide, and particulate matter (PM10) State Implementation Plans by the U.S. Department of Transportation on February 12, 2014.

The carbon monoxide and particulate matter (PM10) hot-spot analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones (see text beginning on page 4-74 of the Final Environmental Impact Statement).

Depending on atmospheric conditions such as ambient air temperature inversion strength and duration, Tribal lands and those citizens along the proposed 202 route will experience compounding pollution wash based on South Mountain’s range orientation. PM10, PM2.5 and restrained disturbed surfaces (mostly tribal lands south of the proposed 202) will be a constant source of particular matter insulating the entire 202 route. Heavy loading of particulars, air toxics and ozone precursors will build up along the southern mountain base at the I-10 interchange on the south east corner of the range. Heavy truck traffic and other vehicles will continue to emit pollutants that will be trapped against South Mountain in the morning. The mornings see slight winds pushing pollutants west for a few hours then shifting to the north approximately 10am to noon, then to the east from noon until evening. All the vehicle pollutants that have accumulated from evening and the morning will not have sufficient wind speed to clear the mountain during the northerly shift and all pollutants pushed west and north will return with existing mobile emissions to create enough concentrated ozone precursors and other harmful pollutants to disqualify this route as viable.

Before any route can be considered viable for consideration ADOT must meet transportation conformity requirements. Transportation conformity is a process required by the Clean Air Act Section 176(c) which establishes the framework for improving air quality to protect public health and the environment. The goal of transportation conformity is to ensure that the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) funding and approvals are given to highway and public transportation activities that are consistent with air quality goals.

Clean Air Act Section 176(c)(1) states that the Federal Government cannot support, finance, or approve any activity which does not conform to an EPA-Approved or promulgated State Implementation Plan that would adversely impact Maricopa County, Pinal County and Tribal Lands.

This section also indicates that metropolitan planning organization such as the Maricopa Association of Governments (MAG) can not approve any project, program or plan that does not conform to an EPA-Approved or promulgated State Implementation Plan (SIP).

Conformity to a SIP means that such activities will not cause or contribute to any new violations of the national ambient air quality standards (NAAQS); increase the frequency or severity of NAAQS violations; or delay timely attainment of the NAAQS or any required interim milestones.

Under general conformity 40 CFR Part 95, Subpart B, describes the general conformity requirements of the Federal Government supported, financed, or approved activities which are located in Maricopa eight-hour ozone nonattainment area. Under transportation conformity-40 CFR Part 95, Subpart A, clearly identifies the conformity requirements for plans, programs and projects developed, funded, or approved under federal highway and transit laws.
The consultation requirements described in 40 Code of Federal Regulations Part 93.105 are met by the Maricopa Association of Governments as part of the process of conducting regional transportation conformity analyses. Consultation with the Maricopa Association of Governments Management Committee and other public entities (Federal Transit Administration, Federal Highway Administration, Arizona Department of Transportation, Arizona Department of Environmental Quality, City of Phoenix Public Transit Department, Valley Metro, Maricopa County Air Quality Department, Central Arizona Governments, Pinal County Air Quality Control District, Sun Corridor Metropolitan Planning Organization, U.S. Environmental Protection Agency, and any other interested parties) occurs at the beginning of the conformity analysis process on the transportation projects to be assumed and the proposed models, associated methods, and assumptions for the upcoming analysis. Additional consultation, including a public hearing, occurs on the draft conformity analysis report before the final version is approved by the Maricopa Association of Governments Management Committee and Regional Council and then forwarded to the Federal Highway Administration for approval.

In addition to consultation, to be approved by the Federal Highway Administration, a regional conformity analysis must 1) pass an emissions test with a budget found to be adequate or approved by the U.S. Environmental Protection Agency (or must pass an interim emissions test), 2) use latest planning assumptions and emissions models in force at the time the conformity analysis begins, and 3) ensure that the Transportation Improvement Program and Regional Transportation Plan provide for the timely implementation of transportation control measures contained in the approved air quality plans. The most recent Maricopa Association of Governments conformity analysis, which included the Final Environmental Impact Statement Preferred Alternative in the Fiscal Year 2014–2018 Transportation Improvement Program and 2035 Regional Transportation Plan, was approved by the Federal Highway Administration on February 12, 2014.

The Maricopa Association of Governments is also responsible for preparing the State Implementation Plan revisions that represent air quality plans for the Maricopa carbon monoxide, 8-hour ozone, and particulate matter (PM10) nonattainment and maintenance areas. The U.S. Environmental Protection Agency approved the Maricopa Association of Governments 2003 Carbon Monoxide Redesignation Request and Maintenance Plan on March 9, 2005; the Maricopa Association of Governments 2009 Eight-Hour Ozone Redesignation Request and Maintenance Plan on September 17, 2014; and the Maricopa Association of Governments 2012 Five Percent Plan for PM-10 on May 30, 2014. Each of these plans, as well as the attainment plans for carbon monoxide (also approved on March 9, 2005) and 8-hour ozone (approved on June 13, 2012), established conformity budgets used by the Maricopa Association of Governments in performing regional conformity analyses.

Transportation control measures and other emission control and maintenance measures in the U.S. Environmental Protection Agency-approved air quality plans continue to be implemented in the Maricopa area. The Maricopa Association of Governments also manages the distribution of Congestion Mitigation and Air Quality Improvement funds for the Maricopa area; this process includes evaluating the emission reductions and cost-effectiveness of proposed projects, preparing annual reports submitted to the Federal Highway Administration that assess the air quality benefits of projects that are being implemented, and ensuring that funded projects are being implemented in a timely manner.
The Maricopa Association of Governments 2012 Five Percent Plan for PM-10 did not include the Final Environmental Impact Statement Preferred Alternative because the attainment date in the plan was 2012, which is prior to implementation of the project.

The mobile source air toxics analysis did not show the impact of mobile source air toxics on ozone concentrations because ozone and mobile source air toxics are different pollutants with different health effects. As discussed in the Final Environmental Impact Statement beginning on page 4-72, the mobile source air toxics analysis is designed to present information on the trends in mobile source air toxics emissions with and without the project, providing an indication of likely change in health risks attributable to mobile source air toxics pollutants. Of the seven mobile source air toxics pollutants addressed in the Final Environmental Impact Statement, some are also considered volatile organic compounds, which are a precursor to ozone pollution. Volatile organic compounds are included by the Maricopa Association of Governments in the conformity regional emissions analyses for ozone, discussed above, and in the emissions inventories for the Maricopa Association of Governments ozone state implementation plans. Other mobile source air toxics, including diesel particulate matter, are not volatile organic compounds, but they do contribute to regional particulate matter (PM_{10}) emissions. The mobile source air toxics emissions that exist in particulate form are included in the Maricopa Association of Governments conformity regional emissions analyses for particulate matter (PM_{10}), and in the Maricopa Association of Governments particulate matter (PM_{10}) state implementation plans listed above.

The Selected Alternative meets all project level conformity requirements under the Clean Air Act and transportation conformity (40 Code of Federal Regulations Section 93).

The U.S. Environmental Protection Agency was consulted on the conformity methodology presented in the Final Environmental Impact Statement. Additional details of this methodology and analysis can be found in the air quality technical report available on the project Web site: <azdot.gov/southmountainfreeway>. Page 4-83 of the Final Environmental Impact Statement provides a summary of health effects from mobile source air toxics.
COMMENT 7

Response to South Mountain Freeway (Loop 202) Final Environmental Impact Statement (FEIS) by Aaron Golub, Ph.D.

Title page.
### Purpose and Need


The Arizona Department of Transportation and Federal Highway Administration did disclose that projections could change (see text box on page 4-1 of the Final Environmental Impact Statement).

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Response to South Mountain Freeway (Loop 202) Final Environmental Impact Statement (FEIS)

Aaron Golub, Ph.D. (resume attached to the end of this statement)

Tempe, Arizona

As a Tempe resident, I thank you for the opportunity to comment on the Final Environmental Impact Statement for the South Mountain Freeway (Loop 202). This memo will comment on two items: the ADOT response to comments on page B332 of Vol 3 of Comment Response Appendix, and the alternatives analysis presented on page 3-27 of “Chapter 3 – Alternatives.”

1. ADOT response on page B332 of Vol 3 of Comment Response Appendix (Special Interest Group Comments and Responses).

The commenter, Arizona PIRG, states: “Since transportation infrastructure lasts for decades, the investments we make in transportation infrastructure should be based not only on what is required to meet our needs today, but also on anticipated future needs. For decades, it was assumed that we would drive more miles, necessitating new highways to alleviate the crippling congestion that was sure to follow. For at least the past five years, though, those anticipated increases in driving have failed to materialize in Arizona. It does not appear that this draft EIS has taken those changes into account and instead assumes that Arizonans will continue to drive more and more. Our research indicates that a return to the previous patterns of driving ever more miles is unlikely.” (Page B332 of Comment Response Appendix (Vol 3))

Response this comment (2) includes the following statement: “The comment relies on national trends for travel; however, the local conditions and setting of the Phoenix metropolitan area are not consistent with areas of high-density cities in other parts of the country. In Maricopa County, daily vehicle miles traveled levels increased by almost 2 percent between 2011 and 2012 and the 2012 daily vehicle miles traveled is approaching the prerecession peak in 2007. (Source: Arizona Department of Transportation Multimodal Planning Division Highway Performance Monitoring System data for the Calendar Year 2011 and 2012). Even if the trend of vehicle miles traveled “per capita” decreasing continues, the total vehicle miles traveled in the region would still increase along with increases in total population.” (Page B332 of Comment Response Appendix (Vol 3)).

ADOT incorrectly says AZPPIG’s statement as relying on national statistics. They state clearly in their comment that they are citing statistics from Arizona. Indeed, the data over the last 18 years shows significant stagnation in travel and per-capita travel, with such trends notably beginning before the recession (See figure below). Many of the trends cited by PIRG in their statement and in their report show additional and related demographic shifts in licensure rates which will only increase the rates of decline in travel over the coming decades. ADOT should formally recognize the increased unpredictability of VMT in the county, especially as far out as the planning year (2035) and formally recognize the growing and significant uncertainty with which it can predict the future travel impacts of the proposed project. In fact, the growing
The Arizona Department of Transportation and Federal Highway Administration appreciate the suggestion to use alternative methods to describe the No-Action Alternative and the possibility that future impacts could be different than those presented in the No-Action Alternative analysis in the Final Environmental Impact Statement (if these alternative methods were used). The comment assumes land use patterns, growth rates, and induced travel patterns would be different (from what is described in the Final Environmental Impact Statement) if the freeway were not in place. In essence, the comment is suggesting that the description of the No-Action Alternative (and its related impacts) in the Final Environmental Impact Statement is misleading.

The Arizona Department of Transportation and Federal Highway Administration agree that scenario planning methods have application in some instances; however, in this case, the Arizona Department of Transportation and Federal Highway Administration believe that the methods used to describe the No-Action Alternative as presented in the Draft and Final Environmental Impact Statements are appropriate. At a basic level, the National Environmental Policy Act requires consideration of reasonable alternatives—meaning the No-Action Alternative should be reasonable as well. Speculation about what an alternative and the conditions surrounding the alternative in the future would look like is not appropriate; the effects of alternatives must be reasonably foreseeable. Under this premise, the description of the No-Action Alternative in the Final Environmental Impact Statement is appropriate. The description of this alternative is presented in the section, Alternatives Studied in Detail, in the Final Environmental Impact Statement on page 3-40. Its features include: not extending State Route 202L west of Interstate 10 (Maricopa Freeway), assuming all other projects in the Regional Transportation Plan are completed, and using population, employment, and housing projections officially approved by the Maricopa Association of Governments.

The Arizona Department of Transportation and Federal Highway Administration believe that the depiction of impacts caused by the No-Action Alternative are, therefore, appropriate and correctly presented throughout the Final Environmental Impact Statement. In defining the transportation problem in Chapter 1, Purpose and Need, of the Final Environmental Impact Statement, the analysis illustrates the severity of the breakdown in the transportation network if no action were taken in the area. This is further supported by the impact analyses presented throughout Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, of the Final Environmental Impact Statement. To summarize, durations and physical lengths of congestion would worsen, travel times would become longer over the same distances, congestion would continue to spill over into the arterial street network, and monetary costs to the State and its residents would increase.

Further justification of why the No-Action Alternative description in the Final Environmental Impact Statement is most appropriate includes:

- At certain points in the Phoenix metropolitan area’s history, growth rates prior to planning for the region’s freeway system exceeded growth rates after planning for and construction of the regional freeway system began. Chapter 1, Purpose and Need, and the sections, Land Use and Economic Impacts, in Chapter 4, establish cost of living, livability, mild climate, technological advancement (affordable air conditioning), employment opportunities, a development-oriented regulatory environment, and key location for industry as primary growth drivers in the Phoenix metropolitan area. Therefore, transportation is not the sole driver of growth.
and population (and therefore travel), based on an "agent-based" simulation where, in effect, these activities find their best location among various available locations in the county. Activities choose a place based on market-type processes where existing vacancies and available land, development plans and permits, correspondence with other nearby activities, as well as "accessibility to jobs and shopping opportunities, etc." (page 24) among other things, all contribute to the attractiveness of a location to a particular activity. Furthermore, there is a feedback process (page 25) in their modeling wherein improvements in travel from a particular location, for instance, due to a transportation investment, or increases in congestion, for instance, due to overdevelopment in a location, is then factored in and activities are redistributed the next round of simulation. (This feedback doesn't take place each year, but when major changes are introduced to the travel network (page 25)).

MAG asserts that its socioeconomic forecasting is the state of the art and meets the requirements for estimating impacts of plans on air quality conformity. It appears, however, to be inappropriate for comparing the impacts of a particular project to a no-build scenario.

The MAG socioeconomic model does not include any no-build scenarios. Its projections are shaped strongly by the location of investments such as the SMF locations near projects become more accessible to other locations and thus "attract" activities to it. When a travel model is run without the project, as in ADOT's "no-build" projections, those activities are then stranded (for lack of a better term) in locations in which they would never have ended up without the assumption of the project. The socioeconomic projections bias any performance modeling (congestion, travel times, etc.) in favor of the projects it includes. The socioeconomic model was designed for the project because of the assumptions it must make to meet air quality conformity. This problem in the no-build scenario therefore taints all of the results on level of service, travel time projections, forecasted volumes, effects on other streets and so forth for ADOT. (27.16 of "Chapter 3—Alternatives").

ADOT should have developed a separate build and no-build socioeconomic scenario which would properly isolate the effect of the SMF on travel performance. The MAG socioeconomic model could easily be used to predict activity locations without the SMF investment for the no-build scenario. While it is difficult to estimate the magnitude of differences in the forecasted result of ADOT did so, it would (at least) doubt reduce the differences between the build and the no-build scenarios. This is because in the no-build scenario, activities would have located themselves in various other places with appropriate conditions—in other travel corridors across the valley with room to accept them, for example areas in the West and North valley now served by the recently opened freeways.

To close on this point, this is not a debate about the existence of induced travel. It is well proven that all transportation investments improve access to locations and those locations develop in ways they would not have otherwise, thus inducing demand for the investment. The MAG socioeconomic model appropriately includes this feedback process for the build scenario as they are required. This issue here is that the vary modeling presented by ADOT to

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| 234  | (cont.) | - As established in the Final Environmental Impact Statement, "pre-freeway" land use planning mimics "post-freeway" land use planning. In 1979, the Phoenix Concept Plan 2000 was adopted by the City of Phoenix. The plan called for 25 Phoenix urban villages. Of those, it established 9 villages with instructions for village planning committees to prepare 25-year concept plans. The Laveen and Estrella Villages were included in the list of 25 suggested villages, although they were not among the 9 villages adopted in the initial plan. However, the intent was that Laveen and Estrella Villages would be developed at a later point in time. In the freeway system considered in the plan included only Interstate 10, Interstate 17, and U.S. Route 60— it did not include the regional freeway system. The Phoenix Concept Plan 2000 was replaced by the Phoenix General Plan, 1985–2000. The resolution adopting the General Plan directed the village planning committees to continue in the City of Phoenix's planning process. The resolution included Laveen and Estrella as villages. Planning for the Laveen and Estrella Villages was completed around the same time as the initial planning for the regional freeway system, including the South Mountain Freeway. Therefore, the land use planning and transportation planning were conducted in parallel, not with one effort depending on the other. To conclude that land use patterns would look different than they do today (as inferred in the U.S. Environmental Protection Agency's comment) is not consistent with past planning patterns. It is more reasonable to argue that the City of Phoenix would have continued to plan for the urban village core concept as has been envisioned since the late 1970s.

In this case, scenario planning would be speculative for the following reasons:

- Factors affecting growth vary (see above), and to assume only transportation as a growth driver would be speculative.

- Continuation of "pre-freeway" historical land use planning patterns is reasonable to expect. The section, Land Use, documents the growth scenario under the No-Action Alternative and notes that the area would develop in a similar fashion with or without the project. This is supported by:
  - The Study Area already has good connecting transportation infrastructure (although congested) to support continued development without the freeway.
  - It is also close to downtown Phoenix. Existing infrastructure plus local road development would result in growth without the freeway as described in the Purpose and Need chapter. The freeway is not opening up the area to development because existing roads (for example, Pecos Road, Baseline Road, and 51st Avenue) provide access.
  - To date, approximately 67 percent of the land in the Study Area has already been developed in accordance with the City of Phoenix's General Plan and zoning ordinance. It is assumed that such development would not be torn down and land uses redistributed if the freeway were not built.

- As documented in the section, Land Use, in Chapter 4 of the Final Environmental Impact Statement, agricultural (22 percent) and open space (11 percent) land uses in the Study Area represent only 33 percent of land area (it should be noted the 11 percent of open space is mostly not developable because of topographic challenges and floodplain constraints), while the remainder of the area is in some form of "built" land use. Distribution of zoning further supports the conclusion—12 percent of the Study Area is zoned for agricultural and open space uses while 88 percent is zoned for other more intensive land uses.

- Factors contributing to historical and projected growth are well-documented in the Final Environmental Impact Statement in Chapter 1, Purpose and Need, and in the Chapter 4 sections, Land Use and Economic Impacts. The freeway will be built in an area planned for urban growth as established in local jurisdictions' land use planning activities for at least the last 25 years (see the section, Induced Growth, beginning on page 4-182 of the Final Environmental Impact Statement). |
The sections, *Induced Travel* and *Induced Growth*, beginning on pages 4-179 and 4-182, respectively, of the Final Environmental Impact Statement, establish that the freeway would contribute to minimal induced travel demand (which has, to a large degree, been accounted for in the Maricopa Association of Governments’ model).

Section 93.110 of the U.S. Environmental Protection Agency’s conformity rule requires that population and employment projections (which establish growth rates and distribution) used in a conformity analysis be the most recent estimates that have been officially approved by the Maricopa Association of Governments (as the metropolitan planning organization for the Maricopa County nonattainment and maintenance areas). In accordance with the Governor’s Executive Order 2011-04, county-level population projections used for all State agency planning purposes were updated by the Arizona Department of Administration in December 2012, based on the 2010 U.S. Census. To use projections other than the approved demographic trends would be inconsistent with the projections required for use in the transportation conformity assessment.

Even if one could argue the only reason the development has occurred as it has is because of the planned freeway (which is not the case—see above) for the last 30 years (in other words, if the freeway had not been planned, development would somehow have been different), the argument is irrelevant. Existing development is now there and, therefore, it is reasonable to assume that the land use distribution and related development will be there in the future.

The analysis documented in the Final Environmental Impact Statement leads to the conclusion that the No-Action Alternative and action alternative land uses would be similar, and thus, no “scenario planning” is required. Scenario planning could have application if the area was not developed, but the manner in which the No-Action Alternative was determined and presented in the Final Environmental Impact Statement is “state-of-the-practice.” Defining the No-Action Alternative as including all projected socioeconomic growth and planned transportation projects in the Regional Transportation Plan except the proposed action is common practice.

The approach taken in the Final Environmental Impact Statement has standard application in the transportation industry. In Arizona, this method to describe the No-Action Alternative has been commonplace in National Environmental Policy Act documents dating back to at least 1990. Further, the environmental impact statements for Legacy Parkway and Mountain View Corridor in Utah had a similar approach of using local land use plans, growth projections, and interviews with City representatives to determine whether the No-Action Alternative land use would be different than with the proposed action. All of these projects were in similar high-growth regions, and the conclusions were that the areas would develop with or without the project, although the timing may change.

The No-Action Alternative as defined in the Final Environmental Impact Statement is appropriate. It satisfies reasonableness, withstands a hard look, and was fully disclosed.

Legal summary reviewed.
should be used in the event of new and evolving scientific theories). Accordingly, the final impact statement does not adequately justify its reliance on projected needs and thus fails to observe procedures required by law. 5 U.S.C. § 706(2)(D). Moreover, FHWA’s decision, which does not require defendants to produce an appropriate socioeconomic forecast or to explain adequately why such a forecast is not possible, was arbitrary and capricious. 5 U.S.C. § 706(2)(A).

Defendants respond that even if the final impact statement should not have relied on a single population forecast, the tollroad still is the most effective way to satisfy existing transportation needs. Indeed, a reliance on existing needs is legally sufficient, even if the analysis of future needs is flawed. (Cagigas, 42 F.3d at 526; Piedmont Heights Civic Club, Inc. v. Moreland, 637 F.2d 430, 442 (5th Cir. 1981); National Wildlife Federation v. Lewis, 519 F. Supp. 523, 533-34 (D.Conn.1981).

Plaintiffs rejoin that there is no evidence to support defendants’ assertions as to current needs. Defendants identify six current needs, including the need for: (1) improve local travel; (2) accommodate increasing freight demand; (3) relieve congestion at critical locations on the interstate system; (4) provide a north-south transportation corridor; (5) accommodate shifting locations of employment; and (6) enhance community linkage. Def. 12(M) ¶ 18.

With respect to local travel and the need for community linkage, the final impact statement asserts that the growing regional population needs another way to cross the Des Plaines River because of increased travel times on local roads. Def. 12(M) ¶¶ 19, 23. However, plaintiffs correctly point out that the final impact statement contains no analysis that indicates how or to what extent the tollroad will improve travel times. Moreover, the claim that local travel times need to be improved is inconsistent with defendants’ claim that the tollroad does not depend on current road congestion in Will County for its existence. Def. Resp. to Pl. 12(NV)(V)(A) ¶ 1. Finally, FHWA itself stated that, “if [the tollroad is] going to reduce travel time then additional documentation would be needed in the final impact statement to support that claim.” HY-1-01412. The final impact statement does not contain any such documentation, so there is no evidence of a need to improve local travel or enhance community linkage, and there is no evidence that the tollroad will alleviate any local transportation problems that do exist. Because this essential information is absent, the final impact statement does not provide a basis for analyzing alternatives as to these current needs. 40 C.F.R. § 1502.14.

With respect to regional transportation, the need for a north-south corridor, and the need to accommodate shifting locations of employment, defendants have provided evidence of a substantial increase in the number of jobs in suburban areas and a concomitant increase in vehicular trips to those locations. HY-3-01312-13. However, plaintiffs correctly point out that the final impact statement fails to analyze how and to what extent the tollroad would correct this problem. As mentioned above, FHWA has acknowledged that additional documentation is needed in order to demonstrate that the tollroad will improve travel times. This information is essential to determining whether the tollroad, as opposed to various alternatives, will meet current needs. 40 C.F.R. § 1502.14.

With respect to freight demands, plaintiffs correctly point out that this need is supported by a chart that shows national highway trends but fails to identify any needs in northeastern Illinois. Moreover, the final impact statement does not explain how the tollroad would alleviate any excessive freight demands that do exist. The
### Code Comment Document

- The National Environmental Policy Act is, as its name suggests, aimed at protecting the environmental health of the nation as a whole as well as that of each of its separate parts. In few areas is the importance of this broad policy as clear as it is in the area of highway construction, and in particular the area of major interstate and interurban highways. Such highways have a profound influence on population growth, high-density urbanization, industrial expansion, (and) resource exploitation. 42 U.S.C. § 4331. While highways of this type are often needed desperately by a population with a real and particular need to travel and expand, it is also true that such highways often create demands for travel and expansion by their very existence. Thus, almost any sponsor of a major four lane highway project can rely with some assurance that if the highway is built it will be used and auto travel will be safer, faster, and more efficient because of it. In short, “need” is often a self-fueling prophesy in the area of major highway construction.

- Moreover, the apparent “need” for such a highway project may well seem the greatest to those closest to it. Certainly it can be predicted that for those whose responsibility it is to propose and construct such highways, the tendency will be to develop a dedication or loyalty to projects which have advanced to the public hearing stage or beyond. This can hardly be avoided given human nature. In the present instance, for example, the Lincoln-Pecos project had advanced well beyond the public hearing stage by 1970. In fact, construction had already begun for the northern segment of that project. Under these circumstances, there is at least a grave possibility that the EIS requirement was viewed by the state as merely a procedural hurdle to be contended with in order to complete an ongoing project to which the state had made relatively extensive financial and administrative commitments.

### Code Issue Response

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<tr>
<td>236</td>
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<td>See previous responses to specific comments.</td>
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Appendix A • A233

Code Comment Document

237

Aaron Goldub
Associate Professor
School of Geographical Sciences and Urban Planning and School of Sustainability, Arizona State University
P.O. Box 875302, Tempe, AZ 85287-5302 - Phone: (480) 965-7791 - Email: aaron.golub@asu.edu

Education
- Postdoctoral Researcher, University of California at Berkeley (5/2004 to 12/2006)
- Ph.D., Department of Civil and Environmental Engineering, University of California at Berkeley, 2003.
- M.S. in Mechanical Engineering, Massachusetts Institute of Technology, 1996.

Other Professional Employment
- Transportation Planner, Urban Habitat Program, Oakland, California, (1/2006 to 5/2012)
- Senior Transportation Planner, Transit Resource Center, Oakland, California (Consultancy) (6/2005 to 12/2008
- Brazil Program Director, Institute for Transportation and Development Policy (8/2003 to 6/2004)
- Consultant, World Bank, Mexico City, Mexico (2/2002 to 7/2003)
- Consultant, World Bank, Rio de Janeiro, Brazil (8/1999 to 7/2000)

Research projects as leader or team member
1. Las Vegas Learning from 20 years of neighborhood revitalization programs in Phoenix, Arizona. College of Liberal Arts and Sciences, Seed Funding [Internal to ASU]. Amount: $47,304. Dates: January, 2014 to December, 2014. Role: Co-PI.

Resumé.

237
Project and Consulting Reports

1. Galob, A., Viek, A., et al. (2014) Suite of reports from Affordable Housing and Green System analyses for the WSD-funded Reinvent Phoenix project. For example:

Selected Publications [Graduate student co-authors are noted with an asterisk.]

COMMENT 8

Comments on the South Mountain Freeway Final Environmental Impact Statement (FEIS) and Section 4(F) Evaluation Issued September 2014 Regarding Impacts to Cultural Resources
by
Samantha Skenadore, Of Counsel,
The Shanker Law Firm, PLC

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<th>Code</th>
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<tr>
<td>238</td>
<td></td>
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Consultation with Native American Tribes has been extensive and demonstrates a reasonable and good faith effort to include all interested Native American Tribes in the process to take their concerns seriously in the planning effort.

As discussed on page 4-159 of the Final Environmental Impact Statement, a Programmatic Agreement was developed for the project to establish a process for consultation, review, and compliance with federal and State preservation laws as the effects of the project on historic properties become known. As noted in Table 4-47 on pages 4-151 through 4-153 of the Final Environmental Impact Statement, the Programmatic Agreement for the project was executed in 2006 by the signatories, the Federal Highway Administration and the Arizona State Historic Preservation Officer. For the Programmatic Agreement to be executed, only the signatories and invited signatories need to sign the Programmatic Agreement. The executed Programmatic Agreement can be found in Appendix 4-6 of the Final Environmental Impact Statement. Other stakeholders were offered several opportunities to sign the Programmatic Agreement as a concurring party, but some elected not to do so. Concurring party signatures are not required for the Programmatic Agreement to be executed in compliance with the National Historic Preservation Act or the National Environmental Policy Act.
In summarizing Table 4-47 with the table above, it is clear that the Agencies only initiated consultation with 7 tribes and late consulted varying numbers of tribes from 1 to 22 tribes thereafter, excluding consultation with 95% of tribes for approximately 5 years and 1 month of the project (nearly half of the life of the project under Section 106 review) and acquiring an average of 74% of responses by dates, 19% of courses by dates, an average of all consultation efforts. The summary derived from Table 4-47 evidences that the Agencies failed to make reasonable and good faith efforts to include all interested Native American Tribes in the process to take their concerns seriously in the planning effort (see page 4-145 of the Final Environmental Impact Statement).
The identification of unknown resources in the Study Area is part of the National Environmental Policy Act process and does not represent a failure. As information became known, additional stakeholders were identified and were added to the consultation process.

The survey was performed by the Gila River Indian Community’s Cultural Resource Management Program archaeologists that met the Secretary of the Interior’s Professional Qualification Standards (36 Code of Federal Regulations Part 61; 48 Federal Regulations 44716). None of the consulting parties objected to the scope of the field work, specialized surveys, historic property surveys, or credentials of the field archaeologists in the responses to the consultation on the adequacy of the field survey report.

As noted in Table 4-47 on pages 4-151 through 4-153 of the Final Environmental Impact Statement, the Programmatic Agreement for the project was executed in 2006 by the signatories, the Federal Highway Administration and the Arizona State Historic Preservation Officer (see Appendix 4-6 on page A674 in Volume II of the Final Environmental Impact Statement). Other stakeholders were offered several opportunities to sign the Programmatic Agreement as a concurring party, but some elected not to do so. Concurring party signatures are not required for the Programmatic Agreement to be executed in compliance with the National Historic Preservation Act or the National Environmental Policy Act.

### Table 4-47

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<th>Code</th>
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<tr>
<td>241</td>
<td>Cultural Resources</td>
<td>The identification of unknown resources in the Study Area is part of the National Environmental Policy Act process and does not represent a failure. As information became known, additional stakeholders were identified and were added to the consultation process.</td>
</tr>
<tr>
<td>242</td>
<td>Cultural Resources</td>
<td>The survey was performed by the Gila River Indian Community’s Cultural Resource Management Program archaeologists that met the Secretary of the Interior’s Professional Qualification Standards (36 Code of Federal Regulations Part 61; 48 Federal Regulations 44716). None of the consulting parties objected to the scope of the field work, specialized surveys, historic property surveys, or credentials of the field archaeologists in the responses to the consultation on the adequacy of the field survey report.</td>
</tr>
<tr>
<td>243</td>
<td>Cultural Resources</td>
<td>As noted in Table 4-47 on pages 4-151 through 4-153 of the Final Environmental Impact Statement, the Programmatic Agreement for the project was executed in 2006 by the signatories, the Federal Highway Administration and the Arizona State Historic Preservation Officer (see Appendix 4-6 on page A674 in Volume II of the Final Environmental Impact Statement). Other stakeholders were offered several opportunities to sign the Programmatic Agreement as a concurring party, but some elected not to do so. Concurring party signatures are not required for the Programmatic Agreement to be executed in compliance with the National Historic Preservation Act or the National Environmental Policy Act.</td>
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The commenter has taken this statement out of context. The statement is from footnote ‘g’ of Table 4-46 on page 4-144 of the Final Environmental Impact Statement. The table’s title is “NRHP-eligible Historic Sites (non-TCP), Action Alternatives.” Given the title of the table, this statement was not in reference to the South Mountains Traditional Cultural Property (TCP), but to the park itself and its eligibility for the National Register of Historic Places.

As noted in Table 4-47 on pages 4-151 through 4-153 of the Final Environmental Impact Statement, the Programmatic Agreement for the project was executed in 2006 by the signatories, the Federal Highway Administration and the Arizona State Historic Preservation Officer. For the Programmatic Agreement to be executed, only the signatories and invited signatories need to sign the Programmatic Agreement. The executed Programmatic Agreement can be found in Appendix 4-6 of the Final Environmental Impact Statement. Other stakeholders were offered several opportunities to sign the Programmatic Agreement as a concurring party, but some elected not to do so. Concurring party signatures are not required for the Programmatic Agreement to be executed in compliance with the National Historic Preservation Act or the National Environmental Policy Act.

The project will not preclude access to the South Mountains by any person from any Native American Tribe. Adverse effects on traditional cultural practices, including religious activities, will be mitigated by the development and implementation of the traditional cultural property mitigation program for the project through ongoing National Historic Preservation Act Section 106 consultations and by mitigation identified in Chapter 4 of the Final Environmental Impact Statement that will avoid, reduce, minimize, or otherwise mitigate air, ground, and water-related impacts. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. This applies equally to any impacts during construction of the freeway.

In cases where air, ground, or water attributes were considered important to their eligibility for listing in the National Register of Historic Places, this information would have been addressed during the consultation process. If the Federal Highway Administration had no information suggesting the significance of air, ground, or water attributes, and none of the consulting parties responded to consultation by saying those attributes were important and requesting they be considered, the Federal Highway Administration would have no reason to consider them, and further Section 106 consultation on these attributes would not have been required.
### Code: 248  
### Issue: Cultural Resources  
### Response:

The area of impact presented is specific to the boundary of the Phoenix South Mountain Park/Preserve. As stated in the text box on page 4-141 of the Final Environmental Impact Statement, "...the South Mountains are part of a continuum of life and not an individual entity that can be isolated and analyzed. The South Mountains TCP extends beyond SMPP" (Figure 5-8). The Arizona Department of Transportation has committed to funding a National Register of Historic Places eligibility report for the South Mountains Traditional Cultural Property to be prepared by the Gila River Indian Community (see page 4-159 of the Final Environmental Impact Statement).
Section 106 process will continue beyond the Record of Decision to ensure avoidance, minimization, or mitigation of adverse effects to known historic properties and any historic properties identified during design and construction.

Cultural and religious places of importance, such as the South Mountains, are acknowledged in the Final Environmental Impact Statement in several locations, notably on pages 4-142 and 5-26. Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resource studies and engaging in an ongoing, open dialogue with the Gila River Indian Community Tribal Historic Preservation Office and other Tribes regarding the identification and evaluation of places of religious and cultural importance to Native Americans that may be adversely affected by the freeway.

Specific to the South Mountains Traditional Cultural Property, the Arizona Department of Transportation and Federal Highway Administration will fund a traditional cultural property evaluation of the South Mountains Traditional Cultural Property to be prepared by the Gila River Indian Community. That and other mitigation are presented in Table 3, beginning on page 38, of the Record of Decision.

The Final Environmental Impact Statement on page 2-4 acknowledges that the Gila River Indian Community Council passed Resolution GR-64-96 that strongly opposed any future alignment of the South Mountain Freeway on Gila River Indian Community land. In addition, the comments received from Gila River Indian Community Governor Gregory Mendoza (see letter dated July 11, 2013, on page B38 in Appendix 7, Volume III, of the Final Environmental Impact Statement and letter dated December 15, 2014, on page A24 in this Appendix A) confirm the Gila River Indian Community's position. In a coordinated referendum held in February 2012, Gila River Indian Community members voted in favor of the no-build option. The environmental impact statement process allows these actions to be taken into account as one of many factors to consider in terms of the National Environmental Policy Act decision making intent to promote a more informed decision with regard to the proposed action.

In a letter dated July 3, 2012, the Gila River Indian Community Tribal Historic Preservation Officer concurred with the determinations of eligibility for the traditional cultural properties and archaeological sites that would be affected by the project. While the Tribal Historic Preservation Officer maintained and reinforced the significance of the South Mountains Traditional Cultural Property, the mitigation treatment plan and its recommendations were accepted. In closing, the Gila River Indian Community Tribal Historic Preservation Officer shared appreciation of “the Federal Highway Administration and Arizona Department of Transportation for acknowledging and accepting the GRIC worldview” (see Volume II, page A389, of the Final Environmental Impact Statement).

The commenter is inaccurate in her statements related to the status of the Programmatic Agreement. As stated in previous responses, the Programmatic Agreement for the project was executed in 2006 (see Appendix 4-6 on page A674 in Volume II of the Final Environmental Impact Statement) by the signatories, the Federal Highway Administration and the Arizona State Historic Preservation Office (see Table 4-47 on pages 4-151 through 4-153 of the Final Environmental Impact Statement). For the Programmatic Agreement to be executed, only the signatories and invited signatories need to sign the Programmatic Agreement. The commenter noted that she is an attorney and is currently working on the case. In closing, the commenter made a statement regarding a lawsuit against the project. The commenter is inaccurate in her statements related to the status of the Programmatic Agreement. As stated in previous responses, the Programmatic Agreement for the project was executed in 2006 (see Appendix 4-6 on page A674 in Volume II of the Final Environmental Impact Statement) by the signatories, the Federal Highway Administration and the Arizona State Historic Preservation Office (see Table 4-47 on pages 4-151 through 4-153 of the Final Environmental Impact Statement). For the Programmatic Agreement to be executed, only the signatories and invited signatories need to sign the Programmatic Agreement.
Other stakeholders were offered several opportunities to sign the Programmatic Agreement as a concurring party, but some elected not to do so. Concurring party signatures are not required for the Programmatic Agreement to be executed in compliance with the National Historic Preservation Act or the National Environmental Policy Act.

The commenter is inaccurate in her statements related to the status of the Programmatic Agreement. As stated in previous responses, the Programmatic Agreement for the project was executed in 2006 (see Appendix 4-6 on page A674 in Volume II of the Final Environmental Impact Statement) by the signatories, the Federal Highway Administration and the Arizona State Historic Preservation Officer (see Table 4-47 on pages 4-151 through 4-153 of the Final Environmental Impact Statement). For the Programmatic Agreement to be executed, only the signatories and invited signatories need to sign the Programmatic Agreement. Other stakeholders were offered several opportunities to sign the Programmatic Agreement as a concurring party, but some elected not to do so. Concurring party signatures are not required for the Programmatic Agreement to be executed in compliance with the National Historic Preservation Act or the National Environmental Policy Act.

The response text included a typo. The statement should have said that the Advisory Council on Historic Preservation “concurred” with the development of the Programmatic Agreement. The letter from the Advisory Council on Historic Preservation confirming their support for development of the Programmatic Agreement can be found on page A267 in Appendix 2-1 of Volume II of the Final Environmental Impact Statement. The Advisory Council on Historic Preservation was invited to be a signatory to the Programmatic Agreement, but declined the invitation.

The Final Environmental Impact Statement on page 2-4 acknowledges that the Gila River Indian Community Council passed Resolution GR-64-96 that strongly opposed any future alignment of the South Mountain Freeway on Gila River Indian Community land. In addition, the comments received from Gila River Indian Community Governor Gregory Mendoza (see letter dated July 11, 2013, on page B38 in Appendix 7, Volume III, of the Final Environmental Impact Statement and letter dated December 15, 2014, on page A24 in this Appendix A) confirm the Gila River Indian Community’s position. In a coordinated referendum held in February 2012, and Gila River Indian Community members voted in favor of the no-build option. The environmental impact statement process allows these actions to be taken into account as one of many factors to consider in terms of the National Environmental Policy Act decision making intent to promote a more informed decision with regard to the proposed action.
COMMENT 9

Response to Final Environmental Impact Statement (FEIS) Section 4(F) Resources

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<td>254</td>
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Introductory comments noted. Responses to specific comments are provided in the following rows.

Section 4(f) and Section 6(f)

The map and table in Figure 5-5 on pages 5-8 and 5-9 of the Final Environmental Impact Statement include only those trails that would be directly affected by an action alternative. In this case, the Bursera Trail is not included based on its distance from any of the action alternatives. Figure 5-8 on page 5-15 of the Final Environmental Impact Statement presents the prominent resources of the park, including the Bursera Trail in its alignment as shown in the City of Phoenix trail map (see <phoenix.gov/parks/site/Documents/062880.pdf>).

Section 4(f) and Section 6(f)

Figure 5-8 on page 5-15 of the Final Environmental Impact Statement presents prominent resources of Phoenix South Mountain Park/Preserve (park), including the Bursera Trail in its alignment as shown on a City of Phoenix trail map (see <phoenix.gov/parks/site/Documents/062880.pdf>). The section, Public Parkland Resources (SMPP) Associated with the South Mountains, beginning on page 5-14 of the Final Environmental Impact Statement, acknowledges:

- the high Section 4(f) value of the park in its entirety as the centerpiece of the Phoenix Sonoran Preserve System
- the important contribution of the park's many attributes, like the Bursera Trail, as contributing to the park's value as a Section 4(f) resource—pointing out that the park offers opportunities to over 3 million annual visitors for hiking, bicycling, horseback riding, and interacting with the natural Sonoran Desert adjacent to the metropolitan area, with each park user seeking his or her own benefits from visiting the park.

The discussion of the park as a Section 4(f) resource recognizes that many prominent features of the park contribute to its value. These include its setting as one of the largest urban parks in the country, its function in the Phoenix Sonoran Preserve System, and many prominent features within the park, including its trails. As noted in the response to a comment on page B964 in Volume III of the Final Environmental Impact Statement, "These trails are typically used for high-intensity recreational activities such as running, hiking, and biking, not noise- or viewshed-sensitive activities." To clarify, amenities such as the park's trail system are not the sole contributors to the park's Section 4(f) value, and trails throughout the park are used for both active and passive activities. The Bursera Trail is located in a lesser-used area of the park. Points along the trail allow some trail users to enjoy expansive views to the south and away from the urban setting to the north. Other permitted uses of the trail include more active activities, such as biking. Some trail users seek peaceful solitude while others, perhaps to a lesser extent, seek physical activity. It is important to note that viewsheds are not contributing attributes to a determination of a resource as being afforded protection under Section 4(f). While direct use of the park (the conversion of approximately 31.3 acres of the park for freeway use) is presented, the text also acknowledges the intrusion of the freeway section that would displace parkland, the proximity of other freeway sections that would alter views from certain park locations (see the Visual Resources section beginning on page 4-167 and page 5-14 in the Final Environmental Impact Statement), the introduction of an intensive human-made use into an otherwise passive and natural setting (as evidenced by the remainder of the park to the north and the Gila River Indian Community to the south), and the alteration of biological resources associated with the park's southwestern section.
Sections of the freeway will be visible from certain vantage points along the Bursera Trail. The figure below depicts the scale at which the freeway will likely be viewed. As part of the planning to minimize harm to the park, measures to minimize the effects of altering the views include:

- reducing the freeway’s footprint from the original 40 acres as proposed in 1988 to the 31.3 acres planned for under the current design
- skirting the park as much as possible to avoid bisecting the 16,000-acre park
- providing replacement lands to compensate for the use of 31.3 acres of the park
- using slope treatments, rock sculpting, native vegetation landscaping and buffering, and native vegetation transplanting to blend the appearance of the freeway and slope cuts with the surrounding natural environment, as feasible
- working with park stakeholders through the City of Phoenix in finalizing these improvements

The ADOT response does not conduct an accurate analysis of the impact of the freeway on the views which are known as noise and obtrusive sensitivity. The Bursera Trail follows the ridge of the Guadalupe range which is one of the ridges destroyed by a cut into (the ridge is visible in Figure 2 and 3). While the Bursera Trail ends one mile east of the location where the freeway will be constructed, its position above the surface of the Guadalupe range means that the construction of the freeway into the ridge at the end of the trail will forever destroy the quietness and views that are an important part of the trail’s passive recreational experience. The proposed freeway would introduce and cause a substantial increase in noise and destroy the immediate and distant views currently experienced on the Bursera Trail. Photos below show the views users have on the Bursera Trail while on the ridge. This viewpoint would be significantly and negatively impacted by the proposed freeway on the end of the ridge line. The noise from the construction and subsequent traffic would change the quietness and peacefulness of the Bursera and Pyramid Trail environment.

By Section 4(f) guidelines, there are clear proximity impacts to this Section 4(f) resource, despite the fact that the proposed freeway will not physically use a portion of any of the trails.

The HEIS response demonstrates that a proper and complete assessment of the Section 4(f) resource as well as the impacts of the proposed freeway on the trails has not been conducted. ADOT has not followed Section 4(f) guidance for assessing proximity impacts to a noise and obtrusive sensitive resource. ADOT demonstrated that it does not have an understanding of the project area where this 4(f) resource is located nor the ability to accurately assess the real impacts of the freeway on the trails within this public presence.

The ADOT response does not conduct an accurate proximity impacts assessment and therefore is fails in its assessment of the impact to the resource. This needs to be completed.

4. The ADOT response does not conduct an accurate analysis of the impact of the freeway on the trails which are known as noise and obtrusive sensitivity. The Bursera Trail follows the ridge of the Guadalupe range which is one of the ridges destroyed by a cut into (the ridge is visible in Figure 2 and 3). While the Bursera Trail ends one mile east of the location where the freeway will be constructed, its position above the surface of the Guadalupe range means that the construction of the freeway into the ridge at the end of the trail will forever destroy the quietness and views that are an important part of the trail’s passive recreational experience. The proposed freeway would introduce and cause a substantial increase in noise and destroy the immediate and distant views currently experienced on the Bursera Trail. Photos below show the views users have on the Bursera Trail while on the ridge. This viewpoint would be significantly and negatively impacted by the proposed freeway on the end of the ridge line. The noise from the construction and subsequent traffic would change the quietness and peacefulness of the Bursera and Pyramid Trail environment.

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The ADOT response does not conduct an accurate proximity impacts assessment and therefore is fails in its assessment of the impact to the resource. This needs to be completed.

Figure 1. Response from ADOT to citizen comment B94A

View from the Bursera Trail southwest across the valley between Main Ridge North and Main Ridge South, with the Sierra Estrella in the background. The freeway passes through the far western end of the ridges and is represented by the dark shading next to the towers for the high-voltage overhead power lines.

The comment infers that the expansive views to the south and west are unencumbered open space. Where the Bursera Trail would be closest to the freeway (at a distance of approximately 4,000 feet), a private land developer has submitted plans to the City of Phoenix to construct over 100 homes in the area immediately south of the park limits between two ridgelines. As of February 2015, the developer had begun developing a road across the mountain ridgeline to the east to access the area for home development. This development, along with others such as the recent expansion of the Vee Quiva Casino on Gila River Indian Community land southwest of the park, illustrate the planned growth that is turning undeveloped lands into urbanizing areas in the Study Area. This
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<td>urbanization is discussed in the section, Land Use, in Chapter 4 of the Final Environmental Impact Statement. The freeway will also generate noise that will be audible from certain points along the trail as acknowledged in the Final Environmental Impact Statement; however, based on the distance of the freeway to the closest trail points (for example, the National Trail is 2,000 feet away and the Bursera Trail is 4,000 feet away), noise levels are not likely to be above the noise abatement criteria levels for recreational activities. Trail users located 2,000 feet or more away from the freeway will hear an increased hum, but the decibel levels will not be above noise abatement criteria levels for recreational activities. While noise mitigation was evaluated to minimize harm, the use of mitigation, such as noise barriers, would have little effect for receptors 2,000 feet or more away from the freeway (and at elevated positions). Even if it were shown that noise levels are higher on the trail, noise impacts would be temporary because trail users would be moving along the trail and because only a short portion of the trail is in a direct line to the freeway. Although noise barriers were not feasible in this case, the Arizona Department of Transportation has decided to use quiet pavement on the South Mountain Freeway to minimize noise along the corridor.</td>
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260

Figure 2. View South from the Burnt Trail

Figure 3. View West from the Burnt Trail. The view on the right of center would have flown over Figure 3.

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COMMENT 10

Lakewood Community Association's Concerns & Response to FEIS for Loop 202 (South Mountain Freeway)

by

Lakewood Community Association Board of Directors

Title page.
LAKewood community association’s concerns & response to Feis for loop 202 (South Mountain freeway)

Prepared for
Protect Arizona’s resources and children (PARC) et al.
Phoenix, Arizona

by
Lakewood Community Association Board of Directors
November 17, 2014
In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the systematic alternatives development and screening process presented in Chapter 3 of the Draft and Final Environmental Impact Statements. This process, which occurred early in the environmental impact statement process, was revisited and validated in the Final Environmental Impact Statement (see page 3-2).

As discussed on page 5-18 of the Final Environmental Impact Statement, many alternatives were examined to avoid use of the South Mountains; however, none of these alternatives are feasible and prudent.

As stated on page 3-40 of the Final Environmental Impact Statement, the No-Action Alternative would not satisfy the purpose and need of the freeway because it would result in further difficulty in gaining access to adjacent land uses, increased difficulty in gaining access to Interstate and regional freeway systems from the local arterial street network, increased levels of congestion-related impacts, continued degradation in performance of regional freeway-dependent transit services, increased trip times, and higher user costs. Further, the No-Action Alternative would be inconsistent with Maricopa Association of Governments’ and local jurisdictions’ long-range planning and policies. The No-Action Alternative was included in the Draft and Final Environmental Impact Statements for detailed study to compare impacts of the action alternatives with the consequences of doing nothing (as impacts can result from choosing to do nothing). The impacts associated with the No-Action Alternative are discussed in each section of Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, in the Final Environmental Impact Statement. These impacts are also summarized in Table S-3 beginning on page S-10 of the Summary chapter of the Final Environmental Impact Statement.

The comparison of traffic operational characteristics between the action alternative and the No-Action Alternative is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternatives are responsive to the project’s purpose and need and will:

- reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13)
- optimize travel on the region’s freeway system (see Figure 3-12)
- reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14)
- reduce the duration of level of service E or F conditions in key areas of the region’s freeway system (see Figure 3-15)
- improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8)
- provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18)

When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits total approximately $200 million per year (see Table 4-27).

Responses to specific comments follow.
In the specific case of the Lakewood wells, it is anticipated that because the wells are located south of Pecos Road, they may not be directly affected by the freeway and could remain in place. The pipes associated with the water delivery system would need to be protected as they pass under the freeway, but production would not be affected.

Page 4-108 of the Final Environmental Impact Statement defines the procedure that the Arizona Department of Transportation will use to replace adversely affected wells, and also identifies the general costs the Arizona Department of Transportation will incur to replace the lost water sources. As noted in this discussion, if it were necessary to provide replacement water instead of a new well, the Arizona Department of Transportation would, in negotiations with the well owner, include the difference between the costs of pumping the well and the costs of the new replacement water source.

The Arizona Department of Transportation compensates only for properties that are within the project right-of-way and are acquired (see Final Environmental Impact Statement page 4-52). A review of the literature revealed few detailed and comprehensive analyses of the relationship between transportation infrastructure and residential property values (Transportation Research Record: Journal of the Transportation Research Board, No. 2174, Transportation Research Board of the National Academies, Washington, D.C., 2010, pp. 138-47; “Residential Property Values and the Build Environment; Empirical Study in the Boston Massachusetts Metropolitan Area”). A local case study from the U.S. Route 60 (Superstition Freeway) found that 1) freeway construction may have an adverse impact on some properties but, in the aggregate, property values tend to increase with freeway development; 2) freeways do not affect all properties’ values in the same way (proximity to the freeway was observed to have a negative effect on the value of detached single-family homes in the corridor but a positive effect on multifamily residential developments and most commercial properties); 3) the most important factor in determining negative impact on property values appears to be the level of traffic on any major roads in the proximate area, which implies that regional traffic growth is more significant than the presence of a freeway per se (Journal of the Transportation Research Board, No. 1839, Transportation Research Board of the National Academies, Washington, D.C., 2003, pp. 128-135; “Impact of Highways on Property Values: Case Study of Superstition Freeway Corridor”). The California Department of Transportation has studied this subject for a number of years. Its Standard Environmental Reference Handbook, Volume 4, Appendix D, Transportation Effects on Property Value concludes that while a majority of studies found that properties abutting the freeway do not appreciate as rapidly as other properties a little farther away from the freeway, there is a net gain in value in the general vicinity of the freeway attributable to increased accessibility to the regional freeway system. In other words, houses in both the abutting and the nearby zones appreciated more than comparable properties a few miles away from the freeway. Further clarification related to individual aspects identified in the comment follow.

The Arizona Department of Transportation compensates only for properties that are within the project right-of-way and are acquired (see Final Environmental Impact Statement page 4-52).
The results of the air quality and noise analyses are described in the representative sections in the Final Environmental Impact Statement (see page 4-68 for Air Quality and page 4-88 for Noise). Mitigation for noise impacts and construction-related air quality impacts will be provided in accordance with relevant federal and State laws, regulations, and policy. These commitments are confirmed in the Record of Decision in Table 3, beginning on page 38.
As stated previously, in the specific case of the Lakewood wells, it is anticipated that because the wells are located south of Pecos Road, they may not be directly affected by the freeway and could remain in place. The pipes associated with the water delivery system would need to be protected as they pass under the freeway, but production would not be affected.

However, in the extreme situation where avoidance is not possible, page 4-108 of the Final Environmental Impact Statement defines the procedure that the Arizona Department of Transportation will use to replace adversely affected wells, and also identifies the general costs the Arizona Department of Transportation will incur to replace the lost water sources. As noted in this discussion, if it were necessary to provide replacement water instead of a new well, the Arizona Department of Transportation would, in negotiations with the well owner, include the difference between the costs of pumping the well and the costs of the new replacement water source.
The Arizona Department of Transportation compensates only for properties that are within the project right-of-way and are acquired (see Final Environmental Impact Statement page 4-52).

The results of the air quality and noise analysis and the proposed mitigation measures to minimize harm from these impacts are described in the representative sections in the Final Environmental Impact Statement (see page 4-68 for Air Quality and page 4-88 for Noise). Mitigation for each will be provided in accordance with relevant federal and State laws, regulations, and policy. These commitments are confirmed in the Record of Decision in Table 3, beginning on page 38.
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<th>Lakewood Item Number</th>
<th>ADOT Response Number</th>
<th>Lakewood Comment on Draft EIS</th>
<th>ADOT Responses to Comments on Draft EIS</th>
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<td>269</td>
<td>0-12</td>
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<td>470</td>
<td>Acquisitions and Relocations</td>
<td>X255 A255 Code Comment Document Code Issue Response</td>
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As stated in the response to the comment on the Draft Environmental Impact Statement, there will be no home displacements in the Lakewood community.
The Arizona Department of Transportation compensates only for properties that are within the project right-of-way and are acquired (see Final Environmental Impact Statement page 4-52).

While the E1 Alternative is adjacent to the largely residential areas of Ahwatukee Foothills Village (to the north), a freeway has been planned in this location for many years (see Final Environmental Impact Statement pages 4-17 and 4-21). Where existing residential uses are adjacent to the freeway, noise mitigation will be implemented according to Arizona Department of Transportation policy (see Final Environmental Impact Statement page 4-91 and Table 3 in the Record of Decision, beginning on page 38).

The study has considered concepts for parallel multiuse paths; however, the main line of the freeway will not have a bicycle route as part of the design. While not currently included, enhancements such as pedestrian bridges or multiuse paths may be added as a separate project by the City of Phoenix (see page 3-60 of the Final Environmental Impact Statement). The cost and maintenance of these enhancements would be the responsibility of the City of Phoenix.

In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the freeway on the local street system. The City of Phoenix study found no adverse effects on the local street system from the freeway (see Appendix 3-1 of the Final Environmental Impact Statement).

Page 4-170 in the Final Environmental Impact Statement lists measures that should help to avoid, reduce, or mitigate aesthetic impacts. Larger saguaro cacti, mature trees, and large shrubs that would likely survive the transplanting and sitting-in period would help in visually sensitive or critical roadway areas. These commitments are confirmed in the Record of Decision in Table 3, beginning on page 38.
As stated previously, in the specific case of the Lakewood wells, it is anticipated that because the wells are located south of Pecos Road, they may not be directly affected by the freeway and could remain in place. The pipes associated with the water delivery system would need to be protected as they pass under the freeway, but production would not be affected.

The potential cumulative impacts on groundwater and water availability are described on page 4-186 of the Final Environmental Impact Statement.

As stated in the response to the comment on the Draft Environmental Impact Statement, there will be no home displacements in the Lakewood community.
### Acquisitions and Relocations

As stated in the response to the comment on the Draft Environmental Impact Statement, there will be no home displacements in the Lakewood community. The Arizona Department of Transportation compensates only for properties that are within the project right-of-way and are acquired (see Final Environmental Impact Statement page 4-52). The homeowner association has legal authority to collect assessments. The references provided were in response to concerns expressed and reveal few clear conclusions related to the relationship between transportation infrastructure and residential vacancy rates.

### Air Quality

As explained in the Final Environmental Impact Statement and response to comments, Federal Highway Administration mobile source air toxics emissions assessments in the agency’s National Environmental Policy Act documents are designed to evaluate emissions changes within a study area, including roadway segments where traffic volumes change as a result of the project. The U.S. Environmental Protection Agency’s risk estimates for mobile source air toxics pollutants are based on 70-year lifetime exposure. As explained in the Final Environmental Impact Statement and response to comments, it is more likely that a person will be within a study area for 70 years than at a fixed location near the proposed corridor for 70 years. Thus, emissions changes in a study area are a more reliable indicator of potential changes in health risk. Emissions from Interstate 10 and other roadway segments affected by the project are included because people will be exposed to changes in emissions from those roadway segments as well as those from the South Mountain Freeway.

The Final Environmental Impact Statement mobile source air toxics analysis covers a study area including all roadways affected by the project, which is standard practice for mobile source air toxics analysis for Federal Highway Administration projects. The analysis also presents results for two smaller subareas, given community interest in those areas. The commenter is correct in stating that if the analysis areas were made even smaller, the changes in emissions would become more pronounced. However, as the analysis areas become smaller, they also become less representative of changes in 70-year exposure (because the estimated changes in emissions would be meaningful only if a person stayed in that smaller area 24 hours a day for 70 years).

The most important health finding of the mobile source air toxics analysis is that mobile source air toxic emissions will decline by at least 80 percent between 2012 and 2025 and between 2012 and 2035 under both the Preferred and No-Action Alternatives. This is true for the Eastern Subarea as well as for the larger mobile source air toxics study area.
The Arizona Department of Transportation and Federal Highway Administration position has not changed regarding how the analysis was performed and regarding our responses to similar comments made on the Draft Environmental Impact Statement.

The noise analysis conducted for and documented in the Draft and Final Environmental Impact Statements complied with the Federal Highway Administration's regulations for conducting noise analyses in 23 Code of Federal Regulations § 772. The statement made in the Final Environmental Impact Statement related to the No-Action Alternative was generalized for the entire Study Area. The commenter is focused on only the Pecos Road area, which under the No-Action Alternative would continue to experience similar noise levels as today because the area is already relatively built-out.
Comment noted.

Design

As noted beginning on page 3-15 of the Final Environmental Impact Statement, depressing the Pecos Road sections would entail installation of pump stations to drain the main line freeway. A depressed freeway would also need a drainage channel to capture the off-site flows to prevent their entering the freeway. Pump stations were not used because of the high cost of construction and maintenance needed for their operation. The recommended freeway configuration has the E1 Alternative aboveground and the existing culverts extending to pass the drainage under the freeway. Pecos Road currently has numerous existing culvert crossings. Depressing the freeway in this area would eliminate the existing culvert crossings and potentially have adverse flooding impacts on adjacent properties. Extending the existing culverts or upsizing the culverts would maintain or improve drainage flows. This would ensure that there would be no adverse flooding impacts on adjacent properties. To reduce impacts by depressing the freeway in the Eastern Section, the Arizona Department of Transportation would:

- need to spend an additional $400 million for right-of-way acquisition and construction
- displace an additional 300 residences
- maintain additional pump stations and detention basins for the life of the freeway
- would still have noise-related impacts requiring mitigation (i.e., noise barriers and their associated costs and visual impacts)

Because the below-ground option would result in substantially greater costs and residential displacements, this option was eliminated from further study.

Community Impacts

The study has considered concepts for parallel multiuse paths; however, the main line of the freeway will not have a bicycle route as part of the design. While not currently included, enhancements such as pedestrian bridges or multiuse paths may be added as a separate project by the City of Phoenix (see page 3-60 of the Final Environmental Impact Statement). The cost and maintenance of these enhancements would be the responsibility of the City of Phoenix.

Traffic

The Arizona Department of Transportation and Federal Highway Administration position has not changed regarding how the analysis was performed and regarding our responses to similar comments made on the Draft Environmental Impact Statement.
COMMENT 11
Comments on the FEIS and Specific Responses to Lawlis DEIS comments (FEIS pages B545-B592)
Appendix A • A263

Code Comment Document

Comments on the FEIS and Specific Responses to Lawlis DEIS Comments (FEIS Pages B545 – B592)

Introduction

The FEIS appears to be a blatant attempt to overload the reader with so much verbiage (including a plethora of repeated material) that it is difficult for the average reader to be able to sort through the FEIS to find what is pertinent to a thoughtful analysis and review. Rather than provide enlightenment, especially in those areas where DEIS reviewers expressed repeated concerns, the FEIS provides generalizations, justifications, and faulty modeling.

Overarching Issues

In general, the FEIS failed to address specific concerns with respect, interest, or acknowledgement that they may, indeed, be reasons for concern. Continuing denial of concerns is contrary to the intent of the review cycle.

There are a number of areas where analyses are insufficient to support the cost expectations of this proposed action. Expressed concerns make clear that sufficient mitigation may not be possible or the extent of sufficient mitigation may be very costly. Yet the FEIS indicates that detailed analyses will be performed during design to determine how to mitigate these concerns. The putting off of addressing significant issues is but one of the ways the FEIS fails to address specific concerns.

The public will bear the cost of overruns caused by insufficient analyses. And the actual cost would likely be close to double the current estimate – based on my experience of typical results from analyses completed after final decisions have been made prematurely on other projects with unacknowledged complexities.

With continued concerns being submitted about the SMF becoming a truck bypass, truck traffic is never treated as a legitimate concern in the FEIS even after being pointed out as a major concern in comments to the DEIS [365, Pp. B552-3]. Trucking companies located near the western path of the proposed freeway would realize shortcuts and/or improved roadway (limited access freeway as opposed to open access roads) with the SMF. Trucks servicing Union Pacific’s new “inland port” near Picacho Peak would benefit from use of the SMF as a shortcut. Failure to plan for a freeway on the official “truck bypass” route (providing amenities and limited access) would encourage trucks to use SMF instead as a shortcut. Sun Corridor plans that include lack of funding for a dedicated CANAMEX route could result in SMF becoming the de facto CANAMEX route because of better roadways than the existing official truck bypass. Significant dangers are posed by hazmat trucks traveling next to a highly populated area in Ahwatukee where there is a great potential for sickening or deadly fumes being “trapped” in the community and evacuation from the community would be difficult or impossible because of the geography of the

Code Issue Response

282 Project Costs, Total Cost

The current level of engineering is used to determine the limits of environmental and construction impacts attributable to the freeway. The location and profile of the freeway are evaluated to minimize potential changes to the freeway as the design level would progress. The current level of engineering is an accepted industry standard for determining impacts. (See Final Environmental Impact Statement sidebar on page 3-40 for more discussion.)

As noted on page 3-59 and in the text box on page 3-60 of the Final Environmental Impact Statement, planning-level cost estimates are used in the preparation of environmental documents. Figure 3-36 summarizes overall planning-level cost estimates for each action alternative. These estimates include design, right-of-way acquisition, and construction. Costs will be updated during the design phase and will be reflected in the Regional Transportation Plan update process. Updating costs is critical to account for cost fluctuations for materials, land acquisition, and design refinements.

From October 28 through October 30, 2014, a formal cost estimate review was conducted in accordance with Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users guidelines. The official review determined a probability and range for the cost of the Selected Alternative in the expected year of expenditure and in current year dollars. The year of expenditure total cost was $1.9 billion. The costs associated with planned mitigation are included in the total project cost.

283 Trucks, Hazardous Materials

The Maricopa Association of Governments regional travel demand model projects that truck traffic will represent approximately 10 percent of the total traffic on the freeway. As with all other freeways in the region, trucks will use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the freeway will be automobiles. The purpose of the project is not to create a truck bypass and the freeway will not be part of the CANAMEX corridor.

Issues related to a severe accident exist for many portions of the Phoenix metropolitan area. A fast and effective response is critical in the emergency response plans prepared by emergency service providers and is discussed on page 4-166 of the Final Environmental Impact Statement.
284 Trucks, Hazardous Materials

The Maricopa Association of Governments regional travel demand model projects that truck traffic will represent approximately 10 percent of the total traffic on the freeway. As with all other freeways in the region, trucks will use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the freeway will be automobiles. The analysis of potential freeway impacts, such as noise and air quality, included the influence from truck traffic.

The purpose of the project is not to create a truck bypass, and the freeway will not be part of the CANAMex corridor.

Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The South Mountain Freeway will operate under the same rules as other similar facilities in the state; truck traffic will be permissible (see text box on Final Environmental Impact Statement page 4-166).

Issues related to a severe accident exist for many portions of the Phoenix metropolitan area. A fast and effective response is critical in the emergency response plans prepared by emergency service providers and is discussed on page 4-166 of the Final Environmental Impact Statement.

285 Purpose and Need

The comparison of traffic operational characteristics between the action alternative and the No-Action Alternative is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternative would:

- reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13)
- optimize travel on the region’s freeway system (see Figure 3-12)
- reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14)
- reduce the duration of level of service E or F conditions in key areas of the region’s freeway system (see Figure 3-15)
- improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8)
- provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18)

When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits approximate $200 million per year (see Table 4-27). The study has considered a variety of transportation modes: transportation system management/transportation demand management, mass transit (commuter rail, light rail, expanded bus service), arterial street improvements, land use controls, new freeways, and a No-Action Alternative. These alternatives alone or in combination would have limited effectiveness in reducing overall traffic congestion in the Study Area and, therefore, would not meet the purpose and need criteria; specifically, they would not adequately address projected capacity and mobility needs of the region.
Community Impacts

Each of these topics is appropriately analyzed and disclosed in the Final Environmental Impact Statement. The topic of hazardous materials transport can be found on page 4-166, air quality beginning on page 4-68, noise beginning on page 4-88, crime and other community concerns beginning on page 4-20, and wells on page 4-108.

Section 4(f) and Section 6(f)

If feasible, avoidance of Section 4(f) resources is always the Federal Highway Administration and Arizona Department of Transportation’s first option. As summarized in Figure 5-2 on page 5-4 of the Final Environmental Impact Statement, numerous alignment adjustments were made to avoid use of existing and planned Section 4(f) resources. As discussed on page 5-18 of the Final Environmental Impact Statement, many alternatives were examined to avoid the use of the South Mountains; however, none of these alternatives are prudent and feasible. The Department of the Interior reviewed the Final Environmental Impact Statement and commented, “The Department agrees that the South Mountain Park and Preserve (SMPP) is a Land and Water Conservation Fund (LWCF) assisted site that will be directly impacted by the subject project. These documents assess the direct use of park land for freeway purposes to be 31.3 acres. We agree with the conclusions stated. We note that the “Measures to Minimize Harm” on the Section 4(f) Statement pages 5-23, 5-24, and 5-25 have annotated a commitment to provide replacement land for the converted park land. The Department concurs with the assessment of the impacts to the LWCF-assisted resource and acknowledges the mitigation commitment.” The complete letter can be found in page A5 of this Appendix A.
The study has considered a variety of transportation modes: transportation system management/transportation demand management, mass transit (commuter rail, light rail, expanded bus service), arterial street improvements, land use controls, new freeways, and a No-Action Alternative. These alternatives alone or in combination would have limited effectiveness in reducing overall traffic congestion in the Study Area and, therefore, would not meet the purpose and need criteria; specifically, they would not adequately address projected capacity and mobility needs of the region.

In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the systematic alternatives development and screening process presented in Chapter 3 of the Draft and Final Environmental Impact Statements. This process, which occurred early in the environmental impact statement process, was revisited and validated in the Final Environmental Impact Statement (see page 3-2).

As discussed on page 5-18 of the Final Environmental Impact Statement, many alternatives were examined to avoid the use of the South Mountains; however, none of these alternatives are prudent and feasible.

The Federal Highway Administration has not identified any adverse health impacts associated with the project. For a detailed discussion, refer to the information on air quality impacts on pages 4-75 through 4-85 of the Final Environmental Impact Statement, along with related summary information in the Responses to Frequently Submitted Public Comments beginning on page A371 of this Appendix A of the Record of Decision.

Land acquisition and relocation assistance services for the project shall be available to all individuals without discrimination in accordance with Title VI of the Civil Rights Act of 1964 and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, which provides uniform, fair, and equitable treatment of people whose property is affected or who are displaced as a result of the project, including those with special needs. Advisory assistance services and compensation practices are described in detail in the Arizona Department of Transportation's Right-of-Way Procedures Manual, located at <azdot.gov/business/RightofWay_Properties/booklets-and-manuals>. For further discussion, see page 4-51 of the Final Environmental Impact Statement and Appendix 4-1. For questions on specific properties, contact the Arizona Department of Transportation Right-of-Way Group at (602) 712-7316.
design has been left to be done after project approval. There is no consideration whatsoever for the lives that would be lost by the creation of a new freeway rather than by using a different mode of transportation for “regional” mobility. There is no serious consideration for the health issues that would be generated by the creation of a new freeway rather than by using a different mode of transportation for “regional” mobility. There is no serious consideration for the property damage and harm caused by freeway traffic that would not occur if using a different mode of transportation for “regional” mobility.

All these fail to point to one conclusion. The FEIS is an excuse for the completion of a predetermined plan for a freeway.

A freeway is not needed in the South Mountain corridor. Further, a freeway would be detrimental to the corridor in a number of ways.

Specific Issues

The FEIS provides no compelling case for a freeway to go through the South Mountain corridor.

1. ADOT must consider that the “region” does not just include Maricopa County and that the region is much larger now than it was 10 years ago when this freeway plan was conceived, so travel needs in the southern part of the region are better served by a highway far to the south of the South Mountain Corridor.

2. The part of the region surrounding South Mountain is much more of a need of alternative forms of transportation to get around the area – such as light rail and more and better bus service. If the VMT is still increasing in the study area while decreasing elsewhere across the country (PP56, P. BS9), that is a good indication that ADOT is not doing its job of making alternative forms of transportation available in the study area.

3. Incurred or not, the South Mountain Freeway as currently proposed in the FEIS would be a major truck bypass, and the region does not need a new truck bypass, especially not one in the Phoenix metropolitan area.

The FEIS claims that the South Mountain Freeway would ease traffic congestion. Yet Table 3.14 on Page 3.34 shows that improvement in travel times on existing freeways would be no more than a couple of minutes! The claim of improving traffic congestion is misleading at best! Even if one believes that the small travel time improvements shown in Table 3.18 would really occur, they do not justify the expense of building a new freeway.

The air quality calculations in the FEIS are woefully inadequate [PP. 4-68 – 4-74]. ADOT has still not completed the calculations as specified by the EPA in their

Air Quality

Since the release of the Draft Environmental Impact Statement, the Arizona Department of Transportation and the Federal Highway Administration have consulted extensively with the U.S. Environmental Protection Agency on the air quality analytical approach and methods used in the Final Environmental Impact Statement. This consultation has resulted in agreement on the analysis methodologies and the results of these analyses. The carbon monoxide and particulate matter (PMX) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.
Children’s and Seniors’ Health

As noted throughout the Final Environmental Impact Statement, potential impacts on and subsequent mitigation for human health are disclosed and identified, as inherent in the environmental impact statement process. The Final Environmental Impact Statement incorporates an assessment of the potential impacts of the project on all populations, including children, in the Chapter 4 environmental consequences analyzes. A discussion addressing children’s health was added to page 4-83 of the Final Environmental Impact Statement.

The Final Environmental Impact Statement evaluates Clean Air Act criteria air pollutant concentrations in Maricopa County and the Phoenix area (see pages 4-75 to 4-77). With regard to air quality impacts, the Final Environmental Impact Statement addresses children’s and seniors’ health impacts within the broader discussion regarding health impacts under the National Ambient Air Quality Standards. Clean Air Act Section 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety and that are requisite to protect the public health. As noted by the U.S. Environmental Protection Agency in its 2013 rulemaking for particulate matter, Clean Air Act Section 109’s legislative history demonstrates that the primary standards are “to be set at the maximum permissible ambient air level … which will protect the health of any [sensitive] group of the population” (78 Federal Register 3086 and 3090) (quoting S. Rep. No. 91-1196, 91st Cong., 2 Sess. 10 [1970]) (alterations in original).

Accordingly, the Final Environmental Impact Statement’s National Ambient Air Quality Standards-based evaluation of criteria air pollutants includes a health-based review of sensitive populations, including children and seniors, given the National Ambient Air Quality Standards inherent consideration of those factors. Furthermore, the National Ambient Air Quality Standards-based assessment ensures adequate consideration of health-based issues as “[the requirement that primary standards provide an adequate margin of safety was intended to address uncertainties associated with inconclusive scientific and technical information … and to protect against hazards that research has not yet identified” (78 Federal Register 3090).
Water Resources

Page 4-108 of the Final Environmental Impact Statement provides details on the well acquisition, condition assessment, and replacement process used by the Arizona Department of Transportation. Costs at this point are unknown because an analysis will be performed later in the design process to determine whether it is possible to keep certain wells in their current location while moving the well controls and associated piping to outside of the right-of-way.

Hazardous Materials

According to 46 Federal Register 18026 (March 23, 1981), the environmental impact statement must discuss reasonably foreseeable actions. These are actions that are likely to occur or probable, rather than those that are merely possible. There are no requirements in 23 Code of Federal Regulations Part 771, Environmental Impact and Related Procedures, or in the Federal Highway Administration’s Technical Advisory T 6640.8A, Guidance for Preparing and Processing Environmental and Section 4(f) Documents, to address releases of hazardous chemicals resulting from a transportation incident in National Environmental Policy Act documents for transportation projects such as the South Mountain Freeway. Reasonably foreseeable actions are those that are likely to occur or probable, rather than those that are merely possible. Planning for emergency situations will be initiated as the project moves into design.

Section 4(f) and Section 6(f)

The context and attributes of the South Mountains are described in the Final Environmental Impact Statement. Cultural and religious places of importance, such as the South Mountains, are acknowledged in the Final Environmental Impact Statement in several locations, notably on pages 4-141 and 5-26. As discussed on page 5-18 of the Final Environmental Impact Statement, many alternatives were examined to avoid the use of the South Mountains; however, none of these alternatives are prudent and feasible.
The Maricopa Association of Governments is the local government agency responsible for traffic forecasting. The Maricopa Association of Government's travel demand model is a state-of-the-practice model that predicts traffic movement and is used by the Maricopa Association of Governments and Arizona Department of Transportation to determine the need for transportation projects. The model is calibrated to actual, observed traffic conditions and meets an advanced practice guideline by the Federal Highway Administration for similarly sized areas. The Federal Highway Administration and the U.S. Environmental Protection Agency approved the air quality conformity determination that includes the Maricopa Association of Governments regional travel demand model that produced the traffic projections used in the traffic analysis for the project (see page 3-27 of the Draft Environmental Impact Statement).

The Final Environmental Impact Statement notes matters of uncertainty throughout the entire document. Examples include study findings in the sections Air Quality, Noise, Visual Resources, Land Use, Displacements and Relocations, and Cultural Resources in Chapter 4. In Chapter 3, Alternatives, reference is made to continued monitoring of design and cost to account for needed updates. On page 4-1, in the text box, "Can the Impacts Change and, If So, How?", text is presented on how such dynamics are tracked.
The comment suggests that the projected population of 5.8 million for Maricopa County in 2035 could be off by as much as 3 million, or as low as 2.8 million. This conclusion is not rational, because as noted previously in the comment, the 2010 population was over 3.8 million. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, Purpose and Need, and Chapter 3, Alternatives). The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13).

The commenter is focused on the change in values from the Draft Environmental Impact Statement to the Final Environmental Impact Statement instead of the more relevant comparison between 2010 and the new 2035 values presented in the Final Environmental Impact Statement. This comparison still shows an increase of almost 2 million people and over 1 million jobs in the next 25 years. The project is needed to serve that growth.
The new socioeconomic projections approved by the Maricopa Association of Governments in June 2013 were developed in close coordination with the local jurisdictions of Maricopa County. The assumptions related to land use, occupancy levels, residential and commercial development plans, job centers, and other factors are updated regularly and form the basis for the model inputs.

The comparison of traffic operational characteristics between the action alternative and the No-Action Alternative is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternative would:

- reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13)
- optimize travel on the region’s freeway system (see Figure 3-12)
- reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14)
- reduce the duration of level of service E or F conditions in key areas of the region’s freeway system (see Figure 3-15)
- improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8)
- provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18)

When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits approximate $200 million per year (see Table 4-27).

The Maricopa Association of Governments is the local government agency responsible for traffic forecasting. The Maricopa Association of Government’s travel demand model is a state-of-the-practice model that predicts traffic movement and is used by the Maricopa Association of Governments and Arizona Department of Transportation to determine the need for transportation projects. The model is calibrated to actual, observed traffic conditions and meets an advanced practice guideline by the Federal Highway Administration for similarly sized areas. The Federal Highway Administration and the U.S. Environmental Protection Agency approved the air quality conformity determination that includes the Maricopa Association of Governments regional travel demand model that produced the traffic projections used in the traffic analysis for the project (see page 3-27 of the Draft Environmental Impact Statement).

The Federal Highway Administration and Arizona Department of Transportation agree that there are uncertainties associated with air quality modeling, and many of these are discussed in the context of health risk assessment in the Draft and Final Environmental Impact Statements. The uncertainties are reduced somewhat in the context of National Ambient Air Quality Standards modeling, because of the shorter time-frames involved (8 hours for carbon monoxide, and 24 hours for particulate matter \( \text{PM}_{10} \), as compared to 70 years for mobile source air toxic health risk assessments). Nevertheless, the U.S. Environmental Protection Agency’s regulations and guidance require use of air quality models to predict carbon monoxide and particulate matter \( \text{PM}_{10} \) concentrations, and to demonstrate compliance with the National Ambient Air Quality Standards. The project’s modeling complied with the applicable regulations and guidance.
300 Air Quality
The modeling for the project complied with specific recommendations from the U.S. Environmental Protection Agency for sources of monitored background data and meteorological data. Data from various Maricopa County Air Quality Department monitoring sites were used in the air quality analyses. Siting, operation, and recording information from monitoring sites are the responsibility of the Maricopa County Air Quality Department. See <maricopa.gov/aq/>. The monitoring information used in the air quality analyses is discussed in greater detail in the air quality technical report prepared for the project, which is available on the project Web site at <azdot.gov/southmountainfreeway>. The results of the analyses are summarized in the Final Environmental Impact Statement.

301 Air Quality
As indicated in the Final Environmental Impact Statement, the project complies with the transportation conformity regulations at 40 Code of Federal Regulations Part 93 and with the conformity provisions of Section 176(c) of the Clean Air Act. The U.S. Environmental Protection Agency was consulted on the conformity methodology presented in the Final Environmental Impact Statement. Additional details of the air quality analysis can be found in the air quality technical report, which is available to the public (see <azdot.gov/southmountainfreeway>). The actual model files are also publicly available and have been provided to at least one reviewer upon request. Technical reports are designed to support the environmental impact statement, not to be reproduced in the environmental impact statement.

302 Traffic and Air Quality Modeling
Since the release of the Draft Environmental Impact Statement, the Arizona Department of Transportation and the Federal Highway Administration have consulted extensively with the U.S. Environmental Protection Agency on the air quality analytical approach and methods used in the Final Environmental Impact Statement. This consultation has resulted in agreement on the analysis methodologies and the results of these analyses. The modeling has been reviewed by national experts in air quality modeling and was found to be consistent with the national state of the practice.

303 Traffic and Air Quality Modeling
As noted previously, the models being criticized throughout this comment are the same models that the U.S. Environmental Protection Agency reviewed and subsequently has accepted in regional air quality conformity determinations. Also, the actual traffic model and air quality model files are publicly available and have been provided to at least one reviewer upon request. Based on the U.S. Environmental Protection Agency’s previous comments on the Draft and Final Environmental Impact Statements, it is clear this is not an agency with a bias or stake in building the South Mountain Freeway.
The comparison of traffic operational characteristics between the action alternative and the No-Action Alternative is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternative would:

- reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13)
- optimize travel on the region's freeway system (see Figure 3-12)
- reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14)
- reduce the duration of level of service E or F conditions in key areas of the region's freeway system (see Figure 3-15)
- improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8)
- provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18)

When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits approximate $200 million per year (see Table 4-27).
PATRICIA K. LAWLIS
Resume

Work Experience

Engineering duties included providing critical enterprise architecture and information technology skills in support of the development and integration of the Headquarters Air Education and Training Command (HQ AETC) enterprise
information system for the JPATS (T-6), F-22, CV-22, JSF (F-35), technical training, education, and decision support. Day to day activities included independent verification and validation, process analysis and evaluation, information assurance, testing, data collection, requirements analysis, performance measurement, trade studies, hands on evaluations of COTS software, risk analysis, and computer system modeling.

1983 – 2003, c.j. kemp systems, inc., President and Senior Software Engineer
Engineering duties included providing critical enterprise architecture and information technology skills in support of the development and integration of the Headquarters Air Education and Training Command (HQ AETC) enterprise information system for the JPATS (T-6), F-22, CV-22, JSF (F-35), technical training, education, and decision support. Day to day activities included independent verification and validation, process analysis and evaluation, information assurance, testing, data collection, requirements analysis, performance measurement, trade studies, hands on evaluations of COTS software, risk analysis, and computer system modeling.
Work was as a subcontractor to Jacobs Technology, Inc.

1974 – 1994, Air Force officer, retiring at the rank of Lieutenant Colonel
Work experience below. Breaks are periods as a full time student in graduate degree programs.

1989 – 1994, Air Force Institute of Technology, Graduate School of Engineering, Department of Electrical and Computer Engineering, Assistant Professor of Software Engineering, and Chief, Computer Science and Engineering Division
Responsible for the development and administration of all computer science and engineering curricula at the institute. Responsible for teaching, student advising, course development, and research development in the area of software engineering at the graduate level. Developed and managed the Air Force program for professional continuing education that provided the qualifications for an Air Force specialty in software engineering. Conducted and directed research that developed a software architecture for visual simulation supporting modeling and simulation of F-15 aircraft, orbiting satellites, and battlefield management.

Résumé.
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1982 – 1986, Air Force Institute of Technology, Graduate School of Engineering, Department of Mathematics and Computer Science, Instructor in Computer Science
Responsible for teaching, student advising, course development, and research development in the area of computer science at the graduate level.

1977 – 1980, United States Air Forces in Europe (USAFE), Heilrich Hertz Kasern, Programming Center Birkfeld, Software Maintainer
Responsible for maintaining the mathematical portions of the software for a North Atlantic Treaty Organization (NATO) air defense radar system in central Europe. Found and corrected errors in the radar registration program for aligning system radar inputs, as well as in the latitude-longitude conversion program. Cut the time required for a sine/cosine calculation to an average of one-third of the original computer time, significantly speeding up critical programs that used on the order of thousands of sine/cosine calls in one calculation.

1974 – 1977, Aerospace Defense Command (ADCOM), NORAD Cheyenne Mountain Complex, Software Requirements Engineer and Database Administrator
Responsible for reviewing system requirements for the satellite tracking portion of the developing NORAD command and control computer system. Maintained the satellite database and developed the procedures for transferring the database of the old satellite tracking system to the new one in near real time.

**Education**

Ph.D., Software Engineering, Arizona State University – 1989
M.S., Computer systems, Air Force Institute of Technology – 1982
B.S., Mathematics, East Carolina University – 1987

**Awards**

- Professor Ezra Kotcher Award for outstanding faculty achievement, Air Force Institute of Technology, 1984
- Merwin E. Gross Award for outstanding scholarship, Air Force Institute of Technology, 1982
- Meritorious Service Medal with 2 oak leaf clusters
- Joint Service Commendation Medal
- Air Force Commendation Medal

**Professional Affiliations**

- Computer Society of the Institute for Electrical and Electronics Engineers (IEEE)
- Tau Beta Pi
Publications

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COMMENT 12

Don’t Waste Arizona, Inc. Response to South Mountain Freeway FEIS
by
President Stephen M. Brittle
According to 46 Federal Register 18026 (March 23, 1981), the environmental impact statement must discuss reasonably foreseeable actions. These actions are likely to occur or probable, rather than those that are merely possible. There are no requirements in 23 Code of Federal Regulations Part 771, Environmental Impact and Related Procedures, or in the Federal Highway Administration’s Technical Advisory T 6640.8A, Guidance for Preparing and Processing Environmental and Section 4(f) Documents, to address releases of hazardous chemicals resulting from a transportation incident in National Environmental Policy Act documents for transportation projects such as the South Mountain Freeway. Reasonably foreseeable actions are those that are likely to occur or probable, rather than those that are merely possible. Planning for emergency situations will be initiated as the project moves into design.
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Rebuttal and Responses regarding DEIS for the South Mountain Freeway

by
Hugh S. Mason, Ph.D., Associate Professor,
Arizona State University

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308 Air Quality
The U.S. Environmental Protection Agency agreed with the Federal Highway Administration, Arizona Department of Transportation, and the other interagency consultation partners that construction-related emissions did not need to be analyzed as part of the particulate matter analysis. The section, Temporary Construction Impacts, on page 4-173 of the Final Environmental Impact Statement, discusses potential air quality impacts during construction as well as mitigation measures that will be followed during construction. These commitments are confirmed in the Record of Decision in Table 3, beginning on page 38. The air pollution produced during any potential blasting activities would be covered in these mitigation measures.

309 Air Quality
The Federal Highway Administration and Arizona Department of Transportation specifically consulted with the U.S. Environmental Protection Agency regarding the meteorological data to use to represent air flow in the project area, and followed the U.S. Environmental Protection Agency’s recommendation. As indicated in the Final Environmental Impact Statement, the project complies with the transportation conformity regulations at 40 Code of Federal Regulations Part 93 and with the conformity provisions of Section 176(c) of the Clean Air Act.

310 Health Effects
The Federal Highway Administration and Arizona Department of Transportation acknowledge that there is disagreement about the conclusions of Health Effects Institute Special Report #16; however, the summary of this report is presented in the nature of background information, and does not have a bearing on the actual analysis of the project, or the other information provided in the Final Environmental Impact Statement regarding likely mobile source air toxic health impacts. The mobile source air toxics emissions analysis for the project indicates that emissions will decline by over 80 percent in the mobile source air toxics study area irrespective of whether the project is constructed or not, and that the project only makes a very small difference in this decline; the summary of prior health risk assessments for other highway projects indicate that these projects were estimated to have a very small incremental health risk.

The information on other sources of exposure to mobile source air toxics pollutants was not provided to diminish the impact of mobile source emissions, but to help illustrate the complexity of meaningfully quantifying the health risk attributable to just one source of these pollutants, a source that most people are likely to be exposed to for only a small portion of their nominal 70-year lifetime at a fixed location adjacent to the roadway.
4. **Air Quality (Response 12)** Your response to my concern about greenhouse gases was trivial. MAP is a regional organization that should be assessing area contributions to regional contaminants like ozone and greenhouse gas emissions. As a practical matter, the impact (whether direct, indirect, and/or cumulative) that the proposed SMF would have on regional air quality should have been analyzed under the National Environmental Policy Act (NEPA), and was not. Notwithstanding the foregoing, my earlier point was to also address the larger issue of the need to modify our modes of transportation such that we can minimize automobile traffic, thus limiting greenhouse gas emissions. U.S. Public Interest Research Group (PIRG), in their report issued September 18, 2014, on Highway Boomdoggles (USPIRG: 2014. Highway Boomdoggles: Wasted Money and America’s Transportation Future) notes that “Americans drive no more now than we did in 2005, and no more on average than we did at the end of Bill Clinton’s first term as president. The recent stagnation in driving comes on the heels of a six decade-long Driving Boom that saw steady, rapid increases in driving and congestion … along with the investment of more than $1 trillion of public money in highways.” (USPIRG 2014, p. 1). They note that the number of cars and licensed drivers have declined since peaking in the 2000s, with the use of non-driving modes of transportation on the rise. The Arizona PIRG similarly states in their Summer 2014 publication, Transportation Trends in Arizona 2014 that there has been a 10.5% decline in annual driving miles per capita in Arizona from 2005–2012. The number of registered vehicles in AZ dropped by 0.5% between 2007 and 2012. The ADOT growth projections are inconsistent with these more recent data (AZ PIRG 2014, p.3), and therefore are inaccurate.

I strongly reiterate my opposition and urge the ADOT to abandon the SMF plan and intensify studies of other transportation options that are more environmentally friendly.

Sincerely yours,
Hugh S. Mason, Ph.D.
Associate Professor, Arizona State University

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<tr>
<td>311</td>
<td>Climate Change</td>
<td>Table 4-37 on page 4-86 of the Final Environmental Impact Statement presents the statewide and project greenhouse gas emissions potential, relative to global totals. The climate change/greenhouse gas discussion in the Final Environmental Impact Statement was an attempt to place the likely emissions burden from the project into context with the scope of the global problem. The Federal Highway Administration agrees that climate change is a serious problem, and has many activities underway to address this issue, as described in the Final Environmental Impact Statement and on the Federal Highway Administration’s Web site. The energy analysis for the project (see page 4-172 of the Final Environmental Impact Statement) showed that the project would slightly reduce energy consumption, which also implies a slight reduction in greenhouse gas emissions compared to No-Action Alternative.</td>
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<td>312</td>
<td>Traffic Projections</td>
<td>Two of the key model inputs used to forecast travel demand (see Final Environmental Impact Statement page 3-27) account for the trends identified in the comment and in the Arizona PIRG findings: 1) the anticipated average number of vehicle trips within the region (including those to and from the region’s households) on a daily basis (this number is tracked regularly by the Maricopa Association of Governments), and 2) the distribution of transportation modes used by travelers in the Maricopa Association of Governments region (also tracked regularly by the Maricopa Association of Governments). While per capita travel is decreasing or stagnant, total travel is still increasing as the population increases.</td>
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**COMMENT 14**

Reply Comments on FEIS from
Nicolai V. Kuminoff
November 3, 2014

South Mountain Study Team
Arizona Department of Transportation
1655 West Jackson Street, MD 1206
Phoenix, Arizona 85007

RE: Reply Comments on FEIS

Dear South Mountain Study Team,

Your responses to my comments on the DEIS were completely inadequate. The FEIS fails to address the concerns I raised. In some cases, you dismissed my comments by referring me to sections of the DEIS that addressed related issues, but did not address my specific concerns. In other cases, you provided boilerplate responses that either completely missed the point of my comment or failed to address my comment in any substantive way.

I am also concerned by the continued inconsistency in your treatment of livability benefits and costs of the Pecos Road alignment. Your responses to my comments on the DEIS assert that significant negative livability impacts can be ignored because they are difficult to model. In contrast, you have gone to great lengths to develop models that predict difficult-to-model benefits. Further, the air quality and transportation models that you use systematically omit key details that could undermine your conclusions, and you claim that any serious effort to address uncertainty in your analysis would be “redundant detail.”

The EIS process now appears to have been a sham. Your support of the Pecos Road alignment is not supported by credible scientific evidence. You failed to demonstrate that the social benefits of the Pecos Road Alignment outweigh the social costs. Your approach to conducting the EIS made a falling in favor of the Pecos Road alignment a foregone conclusion. I strongly urge you and FHWA to re-start the planning process under new leadership.

I have attached a point-by-point reply to pages B2175-B2183 of the FEIS with the hope of calling attention to the inadequacies in your responses to my comments.

Sincerely,

[Signature]

Nicola V. Kunniff
kunniff@gmail.com

Code Comment Document

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<tr>
<td>314</td>
<td></td>
<td>Comment noted. Responses to specific comments are provided in the following pages.</td>
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Appendix A

Public Involvement

No public vote was held as part of the Draft Environmental Impact Statement review process. Members of the public were encouraged to participate and submit their comments on the Draft Environmental Impact Statement during the 90-day comment period. Based on the number of supportive comments received during the public comment period for the Draft Environmental Impact Statement, the Arizona Department of Transportation and Federal Highway Administration believe there is still broad regional support for the project.

The South Mountain Freeway has been a critical part of the Maricopa Association of Governments’ Regional Freeway and Highway System since it was first included in funding approved by Maricopa County voters in 1985. It was also part of the Regional Transportation Plan funding passed by Maricopa County voters in 2004 through Proposition 400.

Comment #1: The DEIS implies that a majority of Maricopa County residents support building the proposed South Mountain Freeway without having any factual basis to support this implication. There are numerous examples of this, especially in the early chapters of the DEIS. One example is in the “What do the results of Propositions 300 and 400 tell us” sidebar on page 1-9. The problem is that the proposed South Mountain Freeway was a fairly minor detail in the information provided to voters on the broader regional transportation plan. Voters have never had an opportunity to express their opinions on the South Mountain Freeway separately from other regional transportation projects that were bundled as part of these propositions and were in more immediate need of funding at the time the propositions were presented to voters.

Furthermore, neither proposition provided voters with basic details on the South Mountain Freeway such as the expected construction cost and the number of lanes. Furthermore, at the time people voted on proposition 300 the town of Ahwatukee was largely undeveloped.

Likewise, the regional transportation plan provided to voters as part of the Proposition 400 election of 2004 failed to anticipate the location, size, use, financial cost and social costs of building the freeway. It is also noteworthy that both votes occurred before the onset of the great recession. The bottom line is that there is no reason to expect that Maricopa county voters would support building the South Mountain Freeway, if they were given the opportunity to vote today.

In addition, the question of whether or not voters liked the idea of a new freeway extension 30 years ago or 10 years ago is entirely irrelevant to the question of whether or not it makes sense to build the freeway today.

Inadequacies in AZ DOT's response: The response fails to address the substance of my comment. For example, it ignores my comments about the outdated nature of the claimed support for the SMF and the fact that the SMF was bundled as part of the broader transportation plan.
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<th>Code</th>
<th>Comment Document</th>
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<tr>
<td>316</td>
<td><strong>Air Quality</strong></td>
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<tr>
<td></td>
<td>Since the release of the Draft Environmental Impact Statement, the Arizona Department of Transportation and the Federal Highway Administration have consulted extensively with the U.S. Environmental Protection Agency on the air quality analytical approach and methods used in the Final Environmental Impact Statement, including the locations of monitors to be used in the analysis. This consultation has resulted in agreement on the analysis methodologies and the results of these analyses. While there are no air quality monitors in the Ahwatukee Foothills Village, the Federal Highway Administration followed the U.S. Environmental Protection Agency’s recommendations for other monitors to use for purposes of background concentrations and meteorological data. As indicated in the Final Environmental Impact Statement, the project complies with the transportation conformity regulations at 40 Code of Federal Regulations Part 93 and with the conformity provisions of Section 176(c) of the Clean Air Act. The U.S. Environmental Protection Agency was consulted on the conformity methodology presented in the Final Environmental Impact Statement.</td>
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<tr>
<td>317</td>
<td><strong>Health Effects</strong></td>
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<td>Ozone is a regional pollutant, and under the Clean Air Act conformity requirements, ozone precursor emissions are addressed at the regional level through emissions analysis of the Maricopa Association of Government’s long range transportation plan. As long as projects are included in a conforming plan, as is the case for the South Mountain Freeway, then they are considered to have complied with the Clean Air Act requirements applicable to ozone. Analysis of the alternatives for National Environmental Policy Act purposes is not necessary, because any alternative would have to meet this same conformity test in order to proceed (the Arizona Department of Transportation and Federal Highway Administration could not approve any alternative that did not meet regional conformity requirements for demonstrating compliance with the ozone National Ambient Air Quality Standards). The question of whether one alternative is “better” than another from an ozone standpoint is moot, because all alternatives are required to be consistent with attainment of the ozone standard.</td>
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<tr>
<td>318</td>
<td><strong>Air Quality</strong></td>
</tr>
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<td></td>
<td>Since the release of the Draft Environmental Impact Statement, the Arizona Department of Transportation and the Federal Highway Administration have consulted extensively with the U.S. Environmental Protection Agency on the air quality analytical approach and methods used in the Final Environmental Impact Statement, including the locations of monitors to be used in the analysis. This consultation has resulted in agreement on the analysis methodologies and the results of these analyses. While there are no air quality monitors in the Ahwatukee Foothills Village, the Federal Highway Administration followed the U.S. Environmental Protection Agency’s recommendations for other monitors to use for purposes of background concentrations and meteorological data. As indicated in the Final Environmental Impact Statement, the project complies with the transportation conformity regulations at 40 Code of Federal Regulations Part 93 and with the conformity provisions of Section 176(c) of the Clean Air Act. The U.S. Environmental Protection Agency was consulted on the conformity methodology presented in the Final Environmental Impact Statement.</td>
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Since the release of the Draft Environmental Impact Statement, the Arizona Department of Transportation and Federal Highway Administration have consulted extensively with the U.S. Environmental Protection Agency on the air quality analytical approach and methods described in the Final Environmental Impact Statement, including the locations of monitors to be used in the analysis. This consultation has resulted in agreement on the analysis methodologies and the results of these analyses.

As shown in Table 4-33 on page 4-77 of the Final Environmental Impact Statement, the contribution of particulate matter ($PM_{10}$) emissions from the project to the overall total is less than 3 percent at the 40th Street traffic interchange. The project contribution would not change even if the background monitors were located in Ahwatukee Foothills Village. The air quality analysis for particulate matter ($PM_{10}$) assessed the worst-case conditions (locations immediately adjacent to the freeway) and did not result in any violations of the National Ambient Air Quality Standards. The receptor diagrams in the air quality technical report demonstrate that concentrations drop to zero or near zero within a few hundred meters of the project.

The U.S. Office of Management and Budget’s Circular A-4 covers analysis of regulatory actions, while the U.S. Environmental Protection Agency’s Guidelines for Preparing Economic Analyses covers policies and environmental regulations. While each is informative, neither represents requirements to fulfill the National Environmental Policy Act process. Treatment of uncertainty in the National Environmental Policy Act is governed by the Council of Environmental Quality regulation 40 Code of Federal Regulations 1502.22.

The Final Environmental Impact Statement notes matters of uncertainty throughout the entire document. Examples include study findings in the sections Air Quality, Noise, Visual Resources, Land Use, Displacements and Relocations, and Cultural Resources in Chapter 4. In Chapter 3, Alternatives, reference is made to continued monitoring of design and cost to account for needed updates. On page 4-1, in the text box, “Can the Impacts Change and, If So, How?”, text is presented on how such dynamics are tracked.
provided with information on health outcomes of building the freeway because the magnitudes of those outcomes are judged by DOT to be highly uncertain. I will explain three problems with
this logic:

A. Ignoring uncertainty violates federal standards for evaluating public projects, as outlined by the United States Office of Management and Budget’s Circular A-4 (http://www.whitehouse.gov/omb/circulars_a004-a007) and the United States Environmental Protection Agency’s Guidelines for Preparing Economic Analysis. For example, OMB Circular A-4 has a special section devoted to the appropriate treatment of uncertainty in the evaluation of public projects. It clearly states that uncertainty outcomes should be quantified and this information should be provided for public
review and to decision makers. For example, it instructs analysts involved in the
preparation of impact statements that “the important uncertainties connected with your regulatory decisions need to be analyzed and presented as part of the overall regulatory analysis” and that “by assessing the sources of uncertainty and the way in which benefit and cost estimates may be affected under plausible assumptions, you can shape your analysis to inform decision makers and the public about the effects and the uncertainties of alternative regulatory actions” and that “wherever possible, you should use appropriate statistical techniques to determine a probability distribution of the relevant outcomes.” It also states that “when uncertainty has significant effects on the final conclusion about net benefits, your agency should consider additional research prior to rulemaking. The cost of being wrong may outweigh the benefits of a faster decision. This is true especially for cases with irreversible or large upfront investments.”

Inadequacies in AZ DOT’s response: The response notes my comment and then ignores it. AZ DOT refers me to sections of the DEIS that do not address my comment.
The U.S. Office of Management and Budget’s Circular A-4 covers analysis of regulatory actions, while the U.S. Environmental Protection Agency’s Guidelines for Preparing Economic Analyses covers policies and environmental regulations. The environmental impact statement process followed the National Environmental Policy Act and Federal Highway Administration’s implementing regulations for conducting social and economic evaluations. The proposed action is not a regulatory action or policy action and is not governed by the noted guidelines. The Final Environmental Impact Statement provides a summary of health risk assessments for past highway projects, all of which show very low risk (see page 4-79), not “large negative health effects.” Treatment of uncertainty in the National Environmental Policy Act is governed by the Council of Environmental Quality regulation 40 Code of Federal Regulations 1502.22. The Final Environmental Impact Statement notes matters of uncertainty throughout the entire document. Examples include study findings in the sections Air Quality, Noise, Visual Resources, Land Use, Displacements and Relocations, and Cultural Resources in Chapter 4. In Chapter 3, Alternatives, reference is made to continued monitoring of design and cost to account for needed updates. On page 4-1, in the text box, “Can the Impacts Change and, If So, How?”, text is presented on how such dynamics are tracked.

Inadequacies in AZ DOT’s response: AZ DOT provides a boilerplate response that fails to address the substance of my comment of monitoring effects using the value of a statistical life.

Inadequacies in AZ DOT’s response: AZ DOT provides a boilerplate response that ignores the substance of my comment on the inconsistent treatment of uncertainty surrounding benefits and costs.
The Maricopa Association of Governments is constantly studying and monitoring trends in travel demand and incorporating this information into the regional travel demand (see page 3-27 of the Final Environmental Impact Statement). The models, methods, and assumptions used throughout the Final Environmental Impact Statement account for reasonably foreseeable future conditions and dismiss speculative considerations.

323 Traffic

The models, methods, and assumptions used throughout the Final Environmental Impact Statement account for reasonably foreseeable future conditions and rightfully dismiss speculative considerations. As an example, the Maricopa Association of Governments, as the federally designated regional transportation planning agency, is nationally recognized as a leader in air quality modeling and traffic modeling and forecasting. The models used account for the assumptions made in the comment.
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<td>324</td>
<td>Traffic</td>
<td>The Maricopa Association of Governments is constantly studying and monitoring trends in travel demand and incorporating this information into the regional travel demand (see page 3-27 of the Final Environmental Impact Statement). The models, methods, and assumptions used throughout the Final Environmental Impact Statement account for reasonably foreseeable future conditions and dismiss speculative considerations.</td>
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opportunity cost of time used to quantify the value of reduced commute times are not consistently linked to the actual commuters who use the freeway during peak hours, but are likely driven by high-income commuters living in places such as Scottsdale who will not use the new freeway if it is build. In addition, the models of traffic congestion in the DEIS are inadequate for estimating the impact of the freeway on commute times. The DEIS fails to provide even the most basic facts about commuting. For example, what fraction of today’s metro area commuters would experience a shorter commute (in terms of physical distance) if the South Mountain Freeway were built? This information can easily be obtained from the U.S. Census Bureau’s annual Public Use Microdata Sample of respondents to the American Community Survey, which provides information on workers’ house locations, job locations, time leaving home to go to work, and travel times.

Inadequacies in AZ DOT’s response: AZ DOT fails to address any of my specific comments. Their boilerplate reply is completely lacking in substance. It basically says “trust us”.

Comment #2: Throughout the DEIS, the analysis of benefits of building the freeway is based on a false premise that the demand for transportation will be the same whether or not the freeway is built. This results in overstatement of the benefits of building the freeway. In reality, building the freeway is likely to change residential development patterns which, in turn, will increase the demand for using the freeway relative to the demand if the freeway had not been built. In other words, building the freeway will increase the demand for using the freeway due to increases in driving by current residents, increases in commercial traffic, and increased migration to areas near the freeway. These “feedback effects” will increase congestion on the freeway, diminishing its benefits, especially for existing residents of Phoenix. This effect is well known to transportation economists as “The Fundamental Law of Road Congestion”. Yet recognition of this effect is completely missing from the transportation models throughout the DEIS. In perhaps the most comprehensive empirical study of the causal relationship between road projects and traffic congestion, Duranton and Turner (2011) concluded that adding a new road with the
The California Department of Transportation study referred to in the original comment was the Standard Environmental Reference Handbook, Volume 4, Appendix D, Transportation Effects on Property Value, which concludes that while a majority of studies found that properties abutting the freeway do not appreciate as rapidly as other properties a little farther away from the freeway, there is a net gain in value in the general vicinity of the freeway attributable to increased accessibility to the regional freeway system. In other words, houses in both the abutting and the nearby zones appreciated more than comparable properties a few miles away from the freeway.

The references provided were in response to concerns expressed and reveal few clear conclusions related to the relationship between the transportation infrastructure and residential property values.

The environmental impact statement process followed the National Environmental Policy Act and Federal Highway Administration’s implementing regulations for conducting social and economic evaluations. The proposed action is not a regulatory action or policy action and is not governed by the noted guidelines.
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<td>325</td>
<td>Inadequacies in AZ DOT's response: There are several problems here. First is the claim that negative effects of the SFM can be ignored because they are difficult to measure. In contrast AZ DOT has gone to great effort to support models designed to produce evidence in favor of benefits that are at least as difficult to measure. Second is the fact that the California Department of Transportation study is not cited. Third is the fact that AZ DOT appears ignorant of peer reviewed scientific evidence on best practices in benefit transfer methods. The premise of the AZ DOT response—that findings from some property value study in California can simply be transferred to the Ahwatukee area—is deeply flawed due to likely differences in topography, tree cover, humidity, and many other factors that generally cause the property value impacts of similar disamenities to vary over large spatial areas. For examples and citations to the peer-reviewed scientific literature, see EPA's guidelines for performing benefit-cost analysis, or the following journal article: Boyko, Kevin J., Nicola K. Kurniout, Christopher F. Bart, and Javen C. Pope. &quot;The benefit-transfer challenges.&quot; Annual Review of Resource Economics 2, no. 1 (2010): 191-192.</td>
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freeway often claim that Ahwatukee residents should have known that these effects might eventually occur as a result of the freeway when they first purchased property in the area and that, as a result, the negative externalities are already capitalized into property values. This claim is false. The conventional wisdom of real estate agents and homebuyers in Ahwatukee is that the freeway would never be built and that the original 1985 plan to build the freeway was simply a relic of “pre-Ahwatukee” regional planning. As a result, the freeway will act as a shock to the local housing market and depress property values.

Comment #11: In the event of heavy traffic, road work, or accidents, drivers on the South Mountain Freeway are likely to use Chandler Blvd. as a bypass. GPS devices will mechanically divert drivers off the freeway and onto Chandler. This is especially true for the Chandler Blvd segment from S 17th Ave to Desert Foothills Parkway because this segment has 4 lanes, a speed limit of 45mph, and no stop signs or traffic lights. This will create a serious public health hazard because the aforementioned segment of Chandler goes right through the residential
neighborhood of “Club West”. Joggers, bicyclists, families and children use Chandler Blvd during the morning and evening commute hours for recreation and to walk/bicycle in/from school and parks. Young children on foot or on bicycle and joggers with headphones are often seen crossing the street. The lack of stop signs and crosswalks is not currently a problem because traffic is light. However, with some freeway commuters using the Chandler Blvd corridor as a bypass, there is likely to be a surge in traffic accidents and traffic-related pedestrian deaths in this family-oriented residential neighborhood. These efforts are entirely ignored in the DEIS.

**Inadequacies in AZ DOT’s response:** The 2006 analysis that AZ DOT refers to could not have anticipated the huge impact that GPS devices and smartphone apps such as “Waze” now have on the ways in which drivers respond to delays. More broadly, the response ignores the substance of my comment.

**Comment #12:** The DEIS violates the spirit of Presidential Executive Order #13045 by failing to identify and assess the environmental health risks and safety risks that may disproportionately affect children as a result of the freeway. An example of the environmental health risk is the increase in ambient ozone concentrations that will affect children living in Alważanee, particularly those who use the numerous public schools and public parks located between South Mountain Park and the proposed Pecos Road alignment of the freeway. The EPA identifies children as a “sensitive group” for ambient ozone. An example of the safety risk is the increase in traffic on arterial streets that wind through residential neighborhoods in Alważanee, particular during periods of heavy traffic, road work, or freeway accidents when drivers will naturally use Chandler Blvd as a bypass. The traffic poses a safety risk because children frequently walk / bike / run / play on the streets that will experience increased traffic, such as Chandler Blvd from S. 17th Ave through Desert Foothills Parkway. This will increase the risk of accidental deaths of children.
While the U.S. Environmental Protection Agency has provided ample evidence that air pollution has the potential for greater adverse impacts on children compared with the population at large, this does not imply that the project will have disproportionate impacts on children. The project itself will affect all near-road populations equally; it does not include elements that would lead to higher air pollutant concentrations near children compared with other receptors. For example, a review of the project maps at <smfonlinehearing.com/maps/> indicates that while some schools are near the project corridor, the proposed freeway is not located closer to schools than it is to other nearby receptors.

The U.S. Environmental Protection Agency’s comment focuses entirely on children’s health impacts related to air pollution. The project study area is designated as attainment for the sulfur dioxide, nitrogen dioxide, lead, and particulate matter (PM2.5) National Ambient Air Quality Standards. The carbon monoxide and particulate matter (PM10) hot-spot analyses (developed in consultation with the U.S. Environmental Protection Agency) demonstrate that no violations of those National Ambient Air Quality Standards will occur, and the project is included in the regional emissions analysis of a conforming plan and transportation improvement program, meeting the conformity requirements related to the ozone National Ambient Air Quality Standards. The U.S. Environmental Protection Agency and Federal Highway Administration agree that the project has met all applicable Clean Air Act and regulatory requirements related to compliance with the National Ambient Air Quality Standards.

Clean Air Act Section 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety and that are requisite to protect the public health. As noted by the U.S. Environmental Protection Agency in its 2013 rulemaking for particulate matter, Clean Air Act Section 109’s legislative history demonstrates that the primary standards are “to be set at the maximum permissible ambient air level … which will protect the health of any [sensitive] group of the population” (78 Federal Register 3086 and 3090) (quoting S. Rep. No. 91-1196, 91st Cong., 2 Sess. 10 [1970]) (alterations in original). Accordingly, the Final Environmental Impact Statement’s National Ambient Air Quality Standards-based evaluation of criteria air pollutants includes a health-based review of sensitive populations, including children and seniors, given the National Ambient Air Quality Standards’ inherent consideration of those factors. Furthermore, the National Ambient Air Quality Standards-based assessment ensures adequate consideration of health-based issues as “[t]he requirement that primary standards provide an adequate margin of safety was intended to address uncertainties associated with inconclusive scientific and technical information … and to protect against hazards that research has not yet identified” (78 Federal Register 3090). By definition, if a project demonstrates that all National Ambient Air Quality Standards are met, as this project has done, then there cannot be any adverse National Ambient Air Quality Standards-related effects on the health of children or any other segment of the population.

For mobile source air toxics, the net emissions impacts of the project affect children in the same manner that they affect the remainder of the population. Emissions will likely be higher along the project corridor and lower elsewhere in the Study Area. Regardless of the alternative selected, emissions are expected to decline by over 80 percent in the project study area over the life of the project. In addition, the summary of health risk assessments for past highway projects presented in the Final Environmental Impact Statement suggests that the mobile

(Response 327 continues on next page)
source air toxics health risks for this project are negligible, especially for the
very short exposure time frames (as a fraction of a 70-year lifetime) occurring at
schools and day care centers.

The Federal Highway Administration also reviewed a recent sampling of the
U.S. Environmental Protection Agency’s own National Environmental Policy Act
documents to gain a better understanding of the U.S. Environmental Protection
Agency’s preferred approach for addressing children’s health under the National
Environmental Policy Act.

The South Mountain Freeway Final Environmental Impact Statement includes
a full page of discussion of impacts on children’s health. An example document
from the U.S. Environmental Protection Agency with a more extensive discussion
of children’s health than what is provided in the South Mountain Freeway Final
Environmental Impact Statement was not found. After a review of the approach
the U.S. Environmental Protection Agency uses to address Executive Order 13045
in its own National Environmental Policy Act documents, the Federal Highway
Administration considers the Final Environmental Impact Statement discussion
sufficient.

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COMMENT 15
Comments on FEIS from Scott Herman

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<th>Code</th>
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The noise analysis conducted for and documented in the Draft and Final Environmental Impact Statements complied with the Federal Highway Administration’s regulations for conducting noise analyses in 23 Code of Federal Regulations 0772. The noise analysis was updated for the Final Environmental Impact Statement using the most recent Federal Highway Administration and Arizona Department of Transportation policy and traffic projections provided by the Maricopa Association of Governments. Discussion of this updated analysis begins on page 4-88 of the Final Environmental Impact Statement. No substantial differences between the analyses presented in the Draft and the Final Environmental Impact Statements resulted. The noise report may also be found on the project Web site at <azdot.gov/southmountainfreeway>.

Without noise mitigation, noise levels from the freeway are predicted to range from 61 A-weighted decibels to 78 A-weighted decibels at the nearest homes, depending on the distance from the freeway. Noise mitigation was estimated to reduce those noise levels to a range of 55 A-weighted decibels to 64 A-weighted decibels for most of the areas (see Final Environmental Impact Statement page 4-93). Because of topography, local street traffic, or other engineering constraints in a few areas, estimated noise levels will not be reduced as much and will be as high as 64 A-weighted decibels to 70 A-weighted decibels (see Final Environmental Impact Statement page 4-93).

Since the release of the Draft Environmental Impact Statement, the Arizona Department of Transportation and the Federal Highway Administration have consulted extensively with the U.S. Environmental Protection Agency on the air quality analytical approach and methods used in the Final Environmental Impact Statement. This consultation has resulted in agreement on the analysis methodologies and the results of these analyses. The carbon monoxide and particulate matter (PM10) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

For mobile source air toxics, the updated analysis showed that for the Study Area, constructing the freeway will have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-78 of the Final Environmental Impact Statement). Congestion relief resulting from the freeway will provide localized air quality emissions reductions on area freeways, arterial streets, and at interchanges, benefiting users of area highways and those living near or using congested roads.
**Appendix A • A301**

**Code Comment Document**

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331 | Section 4(f) and Section 6(f) | The context and attributes of the South Mountains are described in the Final Environmental Impact Statement. The acreage of parkland to be converted to a transportation use is reported on page 5-14 in the section, Direct Use. It is reported that 31.3 acres—or just less than 0.2 percent of the parkland—will be converted to a transportation use (this is a reduction in the amount of use planned for in 1988). The text goes on to point out other concerns associated with the direct use reported, and text on page 5-14, in the sidebar, “The South Mountains in Phoenix’s Sonoran Preserve System,” describes the importance of Phoenix South Mountain Park/Preserve in the region. Beginning on page 5-23 in the section, Measures to Minimize Harm, measures are presented to be undertaken to address the use impacts, including land replacement, on properties adjacent to the park.

City of Phoenix planning efforts since the mid-1980s illustrate an awareness of the potential for the freeway to affect Phoenix South Mountain Park/Preserve. In 1989, the South Mountain Park Master Plan was adopted by the Phoenix City Council. The master plan shows the freeway alignment as adopted by the State Transportation Board in 1988. In 1990, the Phoenix Mountain Preserve Act was ratified by the Arizona Legislature. The Act did not apply to roadways through a designated mountain preserve if the roadway was in the State Highway System prior to August 15, 1990. The proposed freeway was in the State Highway System prior to 1990. Records prior to the Act suggest a primary reason for the exception was to allow the proposed freeway to go through Phoenix South Mountain Park/Preserve (see page 5-14 of the Final Environmental Impact Statement). The project team examined alternatives to avoid the park, but did not identify any feasible and prudent alternatives to avoid impacts. The Arizona Department of Transportation continues to work with park stakeholders to minimize impacts and address concerns. Measures to minimize harm to the park were developed (see Final Environmental Impact Statement, starting on page 5-23). These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision.

The U.S. Department of the Interior reviewed the Final Environmental Impact Statement and commented, “The Department agrees that the South Mountain Park and Preserve (SMPP) is a Land and Water Conservation Fund (LWCF) assisted site that will be directly impacted by the subject project These documents assess the direct use of park land for freeway purposes to be 31.3 acres. We agree with the conclusions stated. We note that the “Measures to Minimize Harm” on the Section 4(f) Statement pages 5-23, 5-24, and 5-25 have annotated a commitment to provide replacement land for the converted park land. The Department concurs with the assessment of the impacts to the LWCF-assisted resource and acknowledges the mitigation commitment.”

**Alternatives**

The Interstate 8/State Route 85 Alternative is in place today and will be in place in the future as an alternative route for motorists to use to bypass the entire Phoenix metropolitan area. The alternative serves that purpose, but provides no benefits to support regional travel within the Phoenix metropolitan area. For this reason, it was eliminated from further study.

**Alternatives, No-Action Alternative**

As stated on page 3-40 of the Final Environmental Impact Statement, the No-Action Alternative would not satisfy the purpose and need of the proposed freeway because it would result in further difficulty in gaining access to adjacent land uses, increased difficulty in gaining access to Interstate and regional freeway systems from the local arterial street network, increased levels of congestion-related impacts, continued degradation in performance of regional freeway-
dependent transit services, increased trip times, and higher user costs. Further, the No-Action Alternative would be inconsistent with Maricopa Association of Governments' and local jurisdictions' long-range planning and policies. The No-Action Alternative was included in the Draft and Final Environmental Impact Statements for detailed study to compare impacts of the action alternatives with the consequences of doing nothing (as impacts can result from choosing to do nothing). The impacts associated with the No-Action Alternative are discussed in each section of Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, in the Final Environmental Impact Statement. These impacts are also summarized in Table S-3 on page S-10 of the Summary chapter of the Final Environmental Impact Statement.

The comparison of traffic operational characteristics between the action alternative and the No-Action Alternative is presented in the Final Environmental Impact Statement, beginning on page 3-27. The analysis shows that the action alternative would:

- reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13)
- optimize travel on the region's freeway system (see Figure 3-12)
- reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14)
- reduce the duration of level of service E or F conditions in key areas of the region's freeway system (see Figure 3-15)
- improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8)
- provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18)

When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits total approximately $200 million per year (see Table 4-27).

Crime

While the City of Phoenix Police Department reported in 2005 that it did not have any statistics specific to crime adjacent to freeways, it did note that based on its experience there does not appear to be a correlation between crime rates and freeways.
Within the context of overall vegetation, wildlife, and wildlife habitat, the freeway will result in a decrease in the amount of cover, nesting areas, and food resources for wildlife species caused by construction of the project. See the section, General Impacts on Vegetation, Wildlife, and Wildlife Habitat, beginning on page 4-136 of the Final Environmental Impact Statement, for additional details on potential effects on vegetation, wildlife, and wildlife habitat.

The Arizona Department of Transportation and Federal Highway Administration completed a Biological Evaluation containing an analysis of the project effects on listed and candidate species under the Endangered Species Act. The Biological Evaluation was completed in May 2014 following identification of the Preferred Alternative in the Draft Environmental Impact Statement. The Biological Evaluation was sent to the U.S. Fish and Wildlife Service, the Arizona Game and Fish Department, and the Gila River Indian Community Department of Environmental Quality. The U.S. Fish and Wildlife Service was asked for technical assistance with minimizing impacts on candidate species prior to completion of the Final Environmental Impact Statement. In a letter dated July 18, 2014, the Gila River Indian Community provided comments on the Biological Evaluation for the freeway and expressed that the Gila River Indian Community holds all animals in the highest regard and recognizes animals as culturally important. The letter included a list of plant and animal species that are culturally important to the Gila River Indian Community. The Biological Evaluation for the freeway was revised to incorporate an evaluation of the identified species (see page 4-127 of the Final Environmental Impact Statement). The Arizona Department of Transportation and Federal Highway Administration have committed to continue coordination with the Arizona Game and Fish Department, the Gila River Indian Community Department of Environmental Quality, and U.S. Fish and Wildlife Service regarding wildlife concerns as a result of the freeway’s implementation. The analysis of biological resources may be found beginning on page 4-125 of the Final Environmental Impact Statement. The Federal Highway Administration made “no effect” findings for all listed and candidate species except for the Tucson shovel-nosed snake and Sonoran desert tortoise, which could potentially be affected by the project. The Tucson shovel-nosed snake was subsequently removed from the candidate species list in a decision by the U.S. Fish and Wildlife Service on September 23, 2014. Mitigation measures to conduct preconstruction surveys for the Sonoran desert tortoise, where appropriate and after consultation with the Arizona Game and Fish Department, are included in the Record of Decision in Table 3, beginning on page 38.
construction of the freeway. The religious, spiritual, and cultural importance of the South Mountains is acknowledged in the Draft and Final Environmental Impact Statements in several locations, notably on page S-26. The project will accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. For more discussion of traditional cultural properties, see the section, Cultural Resources, beginning on page 4-140 of the Final Environmental Impact Statement and pages S-26 through S-28.

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the federal government and Native American Tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with State Historic Preservation Officers and tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation regarding all historic properties in the area of potential effects has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office, other tribal authorities, and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until commitments made in the Record of Decision are completed.
Appendix A • A305

I am not sure you know what you are building and how it will ruin one of Arizona's great communities here in Phoenix, Ahwatukee, the Foothills and the Club West communities and many others will all suffer from this loop 202 South Mountain Freeway.

- Let's begin with Noise, it will grow exponentially versus what we have today, a quiet community virtually void of traffic noise.
- Pollution, trucks and cars running circles around a mountain top, cause the air to stagnate and eventually cover the top of the mountain with permanent pollution.
- What part of Mountain Preserve do you not understand? A preserve is PROTECTED environment that is not supposed to be used for a freeway. Why not move the freeway west along the highway 19 path and your connection west is built? Or just know well-enough stone, your facts are wrong and traffic, pollution and haz mat models are based upon wrong information too.
- We do not want to have access to the west side of Phoenix, via a freeway which will only cause additional crime in our great communities. We have an almost secure cul-de-sac affect today that all be ruined with this freeway as you will open up a crime corridor to the west side.
- Many animals who will get crushed, plus extremely fragile and diverse plant life that will never recover from your freeway.
- Sacred grounds of tribal nations will also be affected.

Did you know Section 4(f) of the Transportation Act mandates "the rejection of any project that requires the use of preserves and park land" unless there is no feasible or prudent alternative... or such a project includes all possible planning to "maintain them as a park and preserve. You have done neither.

Just because private entities think that this path is a good idea it's not. Your paving paradis for the profits of Swift Transportation and Union Pacific Railroad. I hope you all choke on the pollution this will cause.

I, as a member of PARC Protecting Arizona's Resources and Children, realize you will vote and pass your own record of decision and leave us all with a ruined community. I want to point out, you will be legally challenged by PARC and others. I have copied some PARC members and Mayor Greg Stanton and representative Sal DiCiccio so they realize what is happening to our community, before the first bulldozer moves the precious parts of South Mountain. Although they won't say they oppose the freeway, I still wish they would as their supporters in this area are keeping tabs on their lack of a opinion. Maybe now they will generate one because it must be soon.

I hope that you realize your building something no community member wants.

Thank you for your time.

Scott Herrmann
Director Mobile Solutions
20+ years living in Ahwatukee
Direct: 400.796.7030
sherarmann@agporocura.com

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**COMMENT 16**

Comments on FEIS Patti Mason

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The purpose and need identified in Chapter 1 of the Final Environmental Impact Statement is based on socioeconomic factors and regional transportation demand and existing and projected transportation system capacity deficiencies. The Interstate 8/State Route 85 Alternative is in place today and will be in place in the future as an alternative route for motorists to use to bypass the entire Phoenix metropolitan area. The alternative serves that purpose, but does not address the need related to transportation demand and existing and projected transportation system capacity deficiencies in the Phoenix metropolitan area. For this reason, it was eliminated from further study.

In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the systematic alternatives development and screening process presented in Chapter 3 of the Draft and Final Environmental Impact Statements. This process, which occurred early in the environmental impact statement process, was revisited and validated in the Final Environmental Impact Statement (see page 3-2). The alternatives development and screening process considered the ability of an alternative to minimize impacts on the human and natural environments (see page 3-3 of the Final Environmental Impact Statement). Throughout the process described beginning on page 3-3, environmental impacts are used to eliminate alternatives. In the evaluation of action alternatives (see text beginning on page 3-62 of the Final Environmental Impact Statement), environmental and societal impacts play a substantial role in the identification of the W59 and E1 Alternatives as the Preferred Alternative. In comparison with the other action alternatives studied in detail, the Preferred Alternative is the least harmful alternative.
339 Purpose and Need

The analysis of the purpose and need is based on today’s conditions, not the conditions of 1985. In June 2013, the Maricopa Association of Governments approved new socioeconomic projections for Maricopa County. The purpose and need analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. The conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives).

The road network for the Maricopa Association of Governments regional travel demand model includes all of Maricopa and Pinal counties as well as small portions of Yavapai and Gila counties. While a road may not be within the Study Area for the proposed action, because it is included in the Maricopa Association of Governments travel demand model road network, its influence is considered in the traffic analysis for the proposed action.

The South Mountain Freeway will be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks will use it for the through-efficient transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the freeway will be automobiles.

340 Traffic Projections

The study has considered a variety of transportation modes: transportation system management/transportation demand management, mass transit (commuter rail, light rail, expanded bus service), arterial street improvements, land use controls, new freeways, and a No-Action Alternative. These alternatives alone or in combination would have limited effectiveness in reducing overall traffic congestion in the Study Area and, therefore, would not meet the purpose and need criteria; specifically, they would not adequately address projected capacity and mobility needs of the region. Mass transit modes such as light rail and an expanded bus system were reexamined in the Final Environmental Impact Statement and were eliminated from further study because even better-than-planned performance of transit would not adequately address the projected 2035 travel demand (see Final Environmental Impact Statement page 3-4). For example, the average daily ridership for the light rail system connecting downtown Phoenix and the Arizona State University campus was approximately 44,000 in 2014. This is only approximately 25 percent of the total daily vehicles projected to use the freeway in 2035. Two high-capacity transit corridors are being considered near the western and eastern extents of the Study Area, but such extensions would not adequately address the projected 2035 travel demand. A freeway/light rail system is planned at two locations: along Interstate 10 (Papago Freeway) and along State Route 51 (Piestewa Freeway). These two segments would connect to the light rail system currently in operation. With these two freeway/light rail segments already in planning stages, members of the public identified a similar opportunity along the freeway. Most freeway/light rail combinations, however, radiate from a central travel demand generator such as a business district or airport. No such systems are known to follow a circumferential route, as the freeway would. Furthermore, the additional right-of-way needed for light rail (generally, a 50-foot-wide corridor) would have substantial community impacts such as displaced residences and businesses and parkland impacts. Therefore, the light rail alternative and light rail and freeway combination would

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<td>not be prudent and were eliminated from further study. The freeway mode was determined to be an appropriate response to the project's purpose and need. The freeway is part of the Regional Transportation Plan for the Maricopa Association of Governments region. The Regional Transportation Plan, as described on pages 1-5 and 1-10 of the Final Environmental Impact Statement, addresses freeways, streets, transit, airports, bicycle and pedestrian facilities, freight, demand management, system management, and safety. The freeway is only one part of the overall multimodal transportation system planned to meet the travel demand needs of the Maricopa Association of Governments region. As noted on page 3-4 of the Final Environmental Impact Statement, however, even better-than-planned performance of transit and other modes would not adequately address the projected 2035 travel demand. Two of the key model inputs used to forecast travel demand (see Final Environmental Impact Statement page 3-27) account for the trends identified in the comment and in the Arizona PIRG findings: 1) the anticipated average number of vehicle trips within the region (including those to and from the region's households) on a daily basis (this number is tracked regularly by the Maricopa Association of Governments), and 2) the distribution of transportation modes used by travelers in the Maricopa Association of Governments region (also tracked regularly by the Maricopa Association of Governments). While per capita travel is decreasing or stagnant, the total travel is still increasing as the population increases. The Maricopa Association of Governments approved new population, employment, and housing projections in June 2013, and the project team obtained new traffic projections based on the approved socioeconomic projections. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower projected population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 1, Purpose and Need, and Chapter 3, Alternatives). The traffic analysis demonstrated that the project is needed today and will continue to be needed into the future (see Final Environmental Impact Statement beginning on page 1-13). The Maricopa Association of Governments regularly updates its regional transportation planning studies that evaluate the travel demand across all modes of travel. The most recent study, the 2035 Regional Transportation Plan, supports the need for the freeway along with other multimodal (freeway, light rail, bus, etc.) improvements to meet the region's future travel needs.</td>
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343 Air Quality

The U.S. Environmental Protection Agency agreed with the Federal Highway Administration, Arizona Department of Transportation, and the other interagency consultation partners that construction-related emissions did not need to be analyzed as part of the particulate matter analysis. The section, Temporary Construction Impacts, on page 4-173 of the Final Environmental Impact Statement, discusses potential air quality impacts during construction as well as mitigation measures that will be followed during construction, including pollution produced during blasting activities. These measures are confirmed in the Record of Decision in Table 3, beginning on page 38.

344 Health Effects

The Federal Highway Administration and Arizona Department of Transportation acknowledge that there is disagreement about the conclusions of Health Effects Institute Special Report #16; however, the summary of this report is presented in the nature of background information, and does not have a bearing on the actual analysis of the project, or the other information provided in the Final Environmental Impact Statement regarding likely mobile source air toxic health impacts. The mobile source air toxics emissions analysis for the project indicates that emissions will decline by over 80 percent in the mobile source air toxics study area irrespective of whether the project is constructed or not, and that the project only makes a very small difference in this decline; the summary of prior health risk assessments for other highway projects indicate that these projects were estimated to have a very small incremental health risk.

The information on other sources of exposure to mobile source air toxics pollutants was not provided to diminish the impact of mobile source emissions, but to help illustrate the complexity of meaningfully quantifying the health risk attributable to just one source of these pollutants, a source that most people are likely to be exposed to for only a small portion of their nominal 70-year lifetime at a fixed location adjacent to the roadway.
According to 46 Federal Register 18026 (March 23, 1981), the environmental impact statement must discuss reasonably foreseeable actions. These are actions that are likely to occur or probable, rather than those that are merely possible. There are no requirements in 23 Code of Federal Regulations Part 771, Environmental Impact and Related Procedures, or in the Federal Highway Administration’s Technical Advisory T-6640.8A, Guidance for Preparing and Processing Environmental Impact Statements and Section 4(f) Documents, to address releases of hazardous chemicals resulting from a transportation incident in National Environmental Policy Act documents for transportation projects such as the South Mountain Freeway. Reasonably foreseeable actions are those that are likely to occur or probable, rather than those that are merely possible. Planning for emergency situations will be initiated as the project moves into design. Issues related to a severe accident exist for many portions of the Phoenix metropolitan area. A fast and effective response is critical in the emergency response plans prepared by emergency service providers and is discussed on page 4-166 of the Final Environmental Impact Statement.

Arizona highways, as with most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The Arizona Department of Transportation has a few locations in the state with hazardous cargo restrictions, but these restrictions are based on emergency response issues or roadway design limitations specific to that location. For example, the Interstate 10 Deck Park Tunnel has certain hazardous cargo transport restrictions because of the limited ability for emergency responders to address a hazardous materials incident in the tunnel. The South Mountain Freeway is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be allowed (see text box on page 4-166 of the Final Environmental Impact Statement).

Trucks crossing from Mexico to Arizona are restricted to the commercial zones within 25 miles of the border. The Federal Motor Carrier Safety Administration is administering a United States-Mexico cross-border, long-haul trucking program. The program tests and demonstrates the ability of Mexico-based motor carriers to operate safely in the United States beyond the municipalities and commercial zones along the United States-Mexico border (see <fmcsa.dot.gov/intl-programs/trucking/trucking-program.aspx>). Petróleos Mexicanos (better known as Pemex), the Mexican state-owned petroleum company that serves all of Mexico, provides 15 parts per million in its sulfur diesel fuel in the border region, which is consistent with the U.S. Environmental Protection Agency requirements for American diesel fuel (see <transportpolicy.net/index.php?title=Mexico:_Fuels:_Diesel_and_Gasoline>).

Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The South Mountain Freeway will operate under the same rules as other similar facilities in the state; truck traffic will be permissible (see text box on Final Environmental Impact Statement page 4-166).

The CANAMEX and Phoenix truck bypass (Interstate 8/State Route 85) routes are not mandatory for truck traffic; they are recommended. The Arizona Department of Transportation does not enforce these routes. It is not anticipated that these routes would be enforced as mandatory in the future.
Because Mexican trucks are currently restricted to the border region, they are not operating in the Study Area and were not included in the air quality analyses, but the analyses included projected truck traffic. The carbon monoxide and particulate matter (PM10) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards for these pollutants. As a result, the Federal Highway Administration analyzes these pollutants using emissions analyses. The mobile source air toxics emissions analysis for the Study Area found little difference in total annual emissions of mobile source air toxics emissions between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions will decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-78 of the Final Environmental Impact Statement).
City of Phoenix planning efforts since the mid-1980s illustrate an awareness of the potential for the proposed freeway to affect Phoenix South Mountain Park/Preserve. In 1989, the South Mountain Park Master Plan was adopted by the Phoenix City Council. The master plan shows the freeway alignment as adopted by the State Transportation Board in 1988. In 1990, the Phoenix Mountain Preserve Act was ratified by the Arizona Legislature. The Act did not apply to roadways through a designated mountain preserve if the roadway was in the State Highway System prior to August 15, 1990. The proposed freeway was in the State Highway System prior to 1990.

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Design
As noted beginning on page 3-15 of the Final Environmental Impact Statement, depressing the Pecos Road sections would entail installation of pump stations to drain the main line freeway. A depressed freeway would also need a drainage channel to capture the off-site flows to prevent their entering the freeway. Pump stations were not used because of the high cost of construction and maintenance needed for their operation. The recommended freeway configuration has the E1 Alternative aboveground and the existing culverts extending to pass the drainage under the freeway. Pecos Road currently has numerous existing culvert crossings. Depressing the freeway in this area would eliminate the existing culvert crossings and potentially have adverse flooding impacts on adjacent properties. Extending the existing culverts or upsizing the culverts is uneconomical. To reduce impacts by depressing the freeway in the Eastern Section, the Arizona Department of Transportation would:

- need to spend an additional $400 million for right-of-way acquisition and construction
- displace an additional 300 residences
- maintain additional pump stations and detention basins for the life of the freeway
- still have noise-related impacts requiring mitigation (i.e., noise barriers and their associated costs and visual impacts)

Because the belowground option would result in substantially greater costs and residential displacements, this option was eliminated from further study.
The determination to not include an interchange at 32nd Street was not dictated by the use of the rolling profile or the depressed profile. The interchange would have required the displacement of over 100 homes and would have been located near an existing high school. The City of Phoenix recommended that, based on these impacts, the interchange be removed from the study. The recommendation was made regardless of the freeway profile.

There is no reason to assume that traffic conditions would have changed substantially since 2006 because no additional developments have been approved in the area.

The noise analysis conducted for and documented in the Draft and Final Environmental Impact Statements complied with the Federal Highway Administration’s regulations for conducting noise analyses in 23 Code of Federal Regulations § 772. The noise analysis was updated for the Final Environmental Impact Statement using the most recent Federal Highway Administration and Arizona Department of Transportation policy and traffic projections provided by the Maricopa Association of Governments. Discussion of this updated analysis begins on page 4-88 of the Final Environmental Impact Statement. No substantial differences between the analyses presented in the Draft and the Final Environmental Impact Statements resulted. The noise report may be found on the study Web site at <azdot.gov/southmountainfreeway>.

Without noise mitigation, noise levels from the freeway are predicted to range from 61 A-weighted decibels to 78 A-weighted decibels at the nearest homes, depending on the distance from the freeway. Noise mitigation was estimated to reduce these noise levels to a range of 55 A-weighted decibels to 64 A-weighted decibels for most of the areas (see Final Environmental Impact Statement page 4-93). Because of topography, local street traffic, or other engineering constraints in a few areas, estimated noise levels will not be reduced as much and will be as high as 64 A-weighted decibels to 70 A-weighted decibels (see Final Environmental Impact Statement page 4-93). Although not recognized by the Federal Highway Administration as mitigation, rubberized asphalt will be used as the top level of paving; it is discussed beginning on Final Environmental Impact Statement page 4-99.

As noted on page 4-13 of the Final Environmental Impact Statement, the City of Phoenix first documented a future major transportation facility to serve the southwestern part of Phoenix in a 1980 planning report, Annexation Implications in the Area South of South Mountain Park. The City of Phoenix recommended constructing a six-lane freeway interchange on Pecos Road and a six-lane street from Interstate 10 (Maricopa Freeway) west on Pecos Road and continuing northwest to 51st Avenue (City of Phoenix 1980). In 1985, the Maricopa Association of Governments modified the proposal by proposing a future six-lane freeway on a similar alignment (instead of the six-lane street). The Maricopa Association of Governments proposal was included in the 1985 Long-Range Transportation Plan, and the evolved South Mountain Freeway has been included in adopted long-range plans ever since.

With the Study Area subject to continued land development projects, the proposed action will require acquisition of developed properties and relocation of property owners for right-of-way where there was once mostly vacant land. Public comments received from potentially affected property owners as part of the environmental impact statement process suggest the City of Phoenix, land...
developers, and Arizona Department of Transportation did not disclose the future freeway project. Review of previously published Arizona Department of Transportation, City of Phoenix, Maricopa Association of Governments, and developer documents confirms freeway project and alignment disclosure has occurred since 1980, when the Study Area was still primarily vacant land. Since original adoption of the South Mountain Freeway alignment (an alignment similar to the W59 and E1 Alternatives) in 1984, the Arizona Department of Transportation has purchased some right-of-way in the Western and Eastern Sections (the original alignment and locations of property owned by the Arizona Department of Transportation in 2000 are shown in maps on pages 4-12 and 4-13 of the Final Environmental Impact Statement). In the same time period, the City of Phoenix has approved six planned community districts adjacent to the proposed eastern alignment. These developments are Lakewood, Foothills, Pecos Road, Goldman Ranch, Foothills Reserve, and South Mountain 620. Approvals for these require developers to inform potential buyers of conflicts with planned transportation projects such as the proposed action. These mechanisms include:

**City of Phoenix responsibility** - Stipulations referring to the freeway alignment were included in the zoning cases for each of the developments, except for the Lakewood Planned Community District. The Circulation Master Plan for the Lakewood Planned Community District identifies the clean take line (the line where subdivisions are severed for the freeway and the remaining properties continue to function as intended) for the future freeway. The City of Phoenix makes available a published media guide disclosing the freeway awareness stipulations or plan reference for each planned community district.

**Developer responsibility** - Arizona real estate law requires developers to disclose adverse conditions such as construction of a future freeway in a public document (5 Arizona Administrative Code 650, R4-28-A1203). Additionally, Arizona State Law states that subsequent purchasers have the right to "receive a copy of the public report" and "any contract, agreement or lease which fails to make disclosures . . . shall not be enforceable against the purchaser" (5 Arizona Revised Statutes 32-2185.06). Developers typically disclose adverse conditions in the covenants, conditions, and restrictions document, which is provided to potential buyers who in turn are required to acknowledge they have received and read the covenants, conditions, and restrictions by signing documents provided during the closing period of the sale.

**Arizona Department of Transportation responsibility** - The Arizona Department of Transportation uses the "Red Letter" process to coordinate planned transportation projects with proposed developments within local jurisdictions. Local jurisdictions are requested to notify the Arizona Department of Transportation of potential development plans within 1/4 mile of established or proposed project corridors. The Arizona Department of Transportation assigns a Red Letter Coordinator to review the proposed development projects and to provide a written response explaining the transportation project’s potential effects on the proposed developments.

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While then Phoenix Mayor Gordon was on record (at the ADOT website) as lauding the infrastructure ensured by Prop 400’s passage, he is also on record as saying that he did not support the Pecos Road alignment.

(Phoenixville Post-Herald, March 9, 2007). There has never been a mandate for the construction of Loop 202 on Pecos Road, and yet, it continually is presented as the only possible route.

Other alternatives such as the SR 85-88 truck bypass are dismissed in the Draft Environmental Impact Statement (DEIS) as not meeting “the proposed action purpose and need as a regional transportation network.” This is a waiting explanation of its elimination from consideration; empty words to fill the page. While the DEIS discourses the idea that the proposed South Mountain Freeway will be a truck bypass, or alternative to the Cave Creek route, there are no proposed restrictions to prevent trucks from Mexico, with high-visibility dice from choosing this route past schools and homes. There is also no serious discussion in the DEIS about hazardous waste accidents resulting from an accident on the proposed freeway. The layout of Alhambra truck – “the world’s largest col-de-sac” – means that any evacuation necessary would be difficult to execute. Will trucks carrying hazardous cargo be removed? There is certainly no discussion or plan for this contingency.

This freeway will be destructive to the Alhambra community, to the sacred South Mountains (of the O’odham tribe) and the generally beloved South Mountains in the largest urban park nationally. It will be a financial disaster as well as an environmental one. In ADOT’s wisdom on building this boondoggle will result in the allocation of regional funds to purchase expensive homes in Alhambra for destruction and in costs to help the town out, with other projects going unfunded. The DEIS notes, in response to feedback for more light rail, that “no funds are available or anticipated to support a combined system through the Study area.” Despite the public’s approval of a regional transit plan, the “plan” cannot consider light rail because it has allocated all of its funding toward implementing the outland freeway. Not only alternative alignments, but alternative uses of transportation modes to meet the region’s infrastructural needs have all been eliminated here in order to present this project as inevitable. It is not.

The impact will not only be this community—in terms of increased noise and air pollution, risks of greater environmental diseases with increased truck traffic, and loss of tax revenues with home, church, and business destruction, lowered property values of remaining homes, and increased crime—but have effects on the entire region.

Those who voted for a regional transportation plan may have believed that other areas of the region would also be well served, as opposed to one area being ill-served. Solutions to the traffic congestion, for instance, in the Broadway Corridor, would be better handled in engineering projects wisely addressed by civic planners than in a truck bypass in Alhambra. Not only would the community of Alhambra be blighted by the extension of 202, the entire region would suffer the consequences of this ill-planned, poorly executed projects. The proposed project will be funded, as ADOT and MAG continue to push for 25-year old plans to be implemented, with no forward-looking planning.

Suggestion for a depressed freeway instead of an at-grade rolling profile to possibly reduce some of the noise and visual impact were quickly dismissed, primarily due to cost factors. In other words, there is not sufficient funds to protect the neighborhood through improved engineering plans, to do the job right. The suggestion that there would be more residential displacements is not contradicted against whether the residents whose homes are saved to front an at-grade rolling freeway would perhaps have rather been saved this way. And, the final piece of “logic” offered by the DEIS that even with a depressed freeway, there would still be visual and noise impacts that would require mitigation is not an argument for the rolling profile, but for a no-build option.

The proposed rolling profile would limit the access necessary, and one proposed elimination would be at 12th Street. This would serve to increase traffic on Liberty Lane, already congested in school opening and closing hours, to enable transportation to these schools. The schools and homes “saved” by the cost-cutting measures for freeway construction would suffer greatly.

Conclusions drawn concerning “2035 traffic conditions” in the DEIS are based on faulty reasoning as well. To suggest that nonfreeway alternatives would capture only a small percentage of the capacity deficiency does not consider that the alternative could be the wiser use of scarce resources to fund light rail and other forms of transportation that do not rely upon the per capita car formula now that congests our region’s network and creates more and more air pollution advisories. Rather this argument can only envision a future that is exactly like the present, and the Loop 202 would just be another congested area to further impede the living quality for Phoenix. Surely, the concepts and proponents of the 1985 plan have moved on by 2035, and we can only hope that the civic planners in 2035 are not left with a terrible mess to try to rectify.
The No Action alternative is included in this DEIS, unlike in the Citizen’s Advisory Group discussions, only because NEPA requires the comparison of alternatives. Again, the logic employed for assessing the impacts of No Action assumes that No Action means only not building the freeway, and not the use of the funds for the freeway to be used for alternative means of transportation to meet future needs. The argument that other transportation planning might need to be reassessed if the plan is not implemented is in a similar argument in which one is being told that no action is “investment” because MAG and ADOT intend to build this freeway. The No Action option, a maneuver that should be written as “No Build” does “not satisfy” MAG’s and ADOT’s needs to implement this out-of-date plan. We do not need this lengthy document to understand this much.

Similarly, in the discussion of the impact of the proposed freeway on the cultural and historical resources, while it is admitted that all build options will cause negative impacts, and the “No Action” alternative leaves these undisturbed, the DEIS is quick to point out that “continuing urban development from projected growth in the Study Area” could result in issues as well. That’s like telling the jury in a murder trial that if a murder victim had not been killed by the defendant, he might have been hit by a car anyway trying to get away.

Although the DEIS has an ADOIT’s mission “to provide a safe, efficient, cost-effective transportation system that links Arizona to the global economy [Mexican truck traffic],” promotes economic prosperity, and “demonstrates a respect for Arizona’s environment and quality of life” [my italics added], this project to extend the Loop 202, the South Mountain Freeway, fails miserably on all counts. The demonstration of respect would be laughable, indeed, if it were not such a serious threat to the residents of this area.

Sincerely,

Patricia Mason

16839 S. 24th Place

Phoenix, AZ 85048

9
COMMENT 17

Comments on the South Mountain Freeway (Loop 202) Final Environmental Impact Statement and Section 4 (f) Evaluation (“FEIS”)  
By  
James E. Jochim
The map reflects the right-of-way footprint developed as part of the 1988 State-level environmental assessment and design concept report prepared for what was then called the Southwest Loop Highway (see references on page 1-8 of the Final Environmental Impact Statement).

At the outset of the environmental impact statement’s alternatives development and screening process, the 1988 alignment was considered along with other modes and alignments (see text beginning on page 3-3 of the Final Environmental Impact Statement).
357

Map reviewed.
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<td>1</td>
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<td>Comment noted. Responses to specific comments are provided on the following pages.</td>
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liability for any loss or damage arising from the use of this e-mail or attachments, or for any delay or errors or omissions in the contents which result from e-mail transmission.
The context and attributes of the South Mountains are described in the Final Environmental Impact Statement, beginning on page 5-14. The acreage of parkland to be converted to a transportation use is reported on page 5-14 in the section, Direct Use. It is reported that 31.3 acres—or just less than 0.2 percent of the parkland—will be converted to a transportation use (this is a reduction in the amount of use planned for in 1988). The text goes on to point out other concerns associated with the direct use reported, and text on page 5-14, in the sidebar, “The South Mountains in Phoenix’s Sonoran Preserve System,” describes the importance of Phoenix South Mountain Park/Preserve in the region. Beginning on page 5-23 in the section, Measures to Minimize Harm, measures are presented to be undertaken to address the use impacts, including land replacement, on properties adjacent to the park.

City of Phoenix planning efforts since the mid-1980s illustrate an awareness of the potential for the proposed freeway to affect Phoenix South Mountain Park/Preserve. In 1989, the South Mountain Park Master Plan was adopted by the Phoenix City Council. The master plan shows the freeway alignment as adopted by the State Transportation Board in 1988. In 1990, the Phoenix Mountain Preserve Act was ratified by the Arizona Legislature. The Act did not apply to roadways through a designated mountain preserve if the roadway was in the State Highway System prior to August 15, 1990. The proposed freeway was in the State Highway System prior to 1990. Records prior to the Act suggest a primary reason for the exception was to allow the proposed freeway to go through Phoenix South Mountain Park/Preserve (see page 5-14 of the Final Environmental Impact Statement). The project team examined alternatives to avoid the park, but did not identify any feasible and prudent alternatives to avoid impacts. The Arizona Department of Transportation continues to work with park stakeholders to minimize impacts and address concerns. Measures to minimize harm to the park were developed (see Final Environmental Impact Statement, starting on page 5-23).

The Department of the Interior reviewed the Final Environmental Impact Statement and commented, “The Department agrees that the South Mountain Park and Preserve (SMPP) is a Land and Water Conservation Fund (LWCF) assisted site that will be directly impacted by the subject project. These documents assess the direct use of park land for freeway purposes to be 31.3 acres. We agree with the conclusions stated. We note that the “Measures to Minimize Harm” on the Section 4(f) Statement pages 5-23, 5-24, and 5-25 have annotated a commitment to provide replacement land for the converted park land. The Department concurs with the assessment of the impacts to the LWCF-assisted resource and acknowledges the mitigation commitment.” The complete letter can be found in page A5 of this Appendix A.
PMPC members and people not only from Arizona, but from around the world, heavily use the Phoenix Preserve to recreate for physical and mental health in a unique Sonoran Desert environment that is quickly disappearing as the result of development and growth. The serene and close proximity to a large urban area makes South Mountain Park/Preserve a convenient place for everyone to reflect, hike, bike, horseback ride, and study flora and fauna within minutes of our homes. Destruction of any part of this natural resource will disrupt and destroy the plant and wildlife as well the visual, tranquil recreation experience.

The PMPC Board is made up of an Executive Board consisting of a president, vice-president, treasurer, secretary and recording secretary and supported by 15 board members. Monthly meetings are held January through September and are open to the public. Committees are regularly formed to address specific projects and meet as needed. Annual dues are collected to support a quarterly newsletter, webpage and North Mountain Visitor Center rental. Membership is open to anyone.

As discussed in greater detail below and in our prior comments on this project, ADOT and the FHWA (collectively, "the Departments") have failed to fulfill their statutory obligations under NEPA, Sec. 4(f) and other applicable provisions of law. For this reason, PMPC urges the Departments to take a step back and revisit the IFEIS and the Section 4(f) process in order to meaningfully address the serious failings in those documents that do not adequately identify, analyze, minimize or mitigate for the impacts of this project.

PMPC reserves the right to submit additional comments to any supplemental materials or new information or analysis prepared by the Departments in relation to this project. In addition, PMPC expressly incorporates the comments of Protecting Arizona’s Resources and Children (PARC), as well as those comments submitted on behalf of our individual members, including but not limited to those filed by Robin Saltzburger, Sally Lindsay, Jan Hancock, Wendy Hodgson, Patrick McMullen, and Susanne Rothwell.

I. The South Mountain Park/Preserve is a Unique and Valuable Public Resource

“The natural beauty of our horizon, our close-in mountain slopes and natural areas — this is the very essence of the natural environment that has been so instrumental in the population and economic growth of this region. The grand scale and rugged character of these mountains have set our lifestyle, broadened our perspective, given us space to breathe, and sharpened our outlook. These mountains are the plus that still outweighs the growing minuses in our environmental account.” In Luckingham, preserve advocate (1988).
South Mountain Park/Preserve is one of the largest municipally operated parks in the country. It has been called the "centerpiece" of the Phoenix Sonoran Preserve System. FEIS at 8-14. The Park's roots date back to 1924, when local citizens, who recognized the unique value and importance of the area, first started the process to obtain 13,000 acres of the Park from the United States. Later, under the Civilian Conservation Corps programs, trails were improved and recreational and other structures were built in the Park. The National Park Service drafted a park plan in 1933 that included a myriad of uses for the Park, including hiking, riding, picnic areas, and scenic overlooks. Both the Phoenix Historic Preservation Office and the State Historic Preservation Office (SHPO) agree that SMPP is eligible for listing on the National Historic Register of Historic Places under Section 106 of the National Historic Preservation Act, 16 U.S.C. §470, ef sec. (NHPA).

With more than 10,000 acres of rugged, biologically diverse and beautiful desert habitat preserved in the urban environment, SMPP is known by both locals and travelers from around the world as a recreation gem and tourist destination. With more than 51 miles of primary trails for horseriding, hiking and mountain biking, SMPP was wisely set aside for human enjoyment and the protection of wildlife and natural habitats.

Today, SMPP remains a place of profound solitude and peace in our often noisy and hectic lives, while its steep ranges, rocks, soil, plants and animals—as they exist in the natural world—continue to play a role in the spiritual and cultural identity of tribal members of the Gila River Indian Community and other Indian tribes in the region.

From the Park's main entrance, you can drive up the Summit Road 5.5 miles to Dobbins Lookout and spectacular valley wide views or you can continue to the Gila Lookout for a view of the Gila River Valley. The main entrance also offers access to hiking, picnicking, interpretive centers and many other recreational uses. From its rugged south side, visitors have access to multiple historic and newly created trails that offer everything from a short hike or mountain bike ride, to a long day on horseback, all of which provide an opportunity to enjoy beautiful scenery and great horizon views in virtually every direction.

SMPP also protects important cultural, archaeological and historic resources and is a place where people of all ages can learn about the Sonoran desert and the rich cultural history of the area. Indeed, the SMPP embodies virtually all of the goals found within the Sonoran Preserve Master Plan which was prepared in 1988 by the City of Phoenix Parks, Recreation and Library Department and which received enthusiastic support from City of Phoenix and many urban village planning committees throughout the region. The Master Plan at 14, explains that the goals of Phoenix's mountain preserves, are to:

1 https://www.phoenix.gov/parks/trails/locations/south-mountain/civilian-conservation-corps

The context and attributes of the South Mountains are described in the Final Environmental Impact Statement, beginning on page 5-14. Mitigation and measures to minimize harm to the South Mountains are presented in the Record of Decision Table 3, beginning on page 38.
Chapter 5 of the Draft and Final Environmental Impact Statements presents the Section 4(f) Evaluation for the South Mountains in terms of the resource’s protection as a Section 4(f) resource in terms of a regional park, historic property and traditional cultural property. The evaluation included examination of feasible and prudent avoidance alternatives which concluded no such alternatives were available to the direct use of the resource.

As noted in response code 2, the Department of the Interior reviewed the Final Environmental Impact Statement and agreed with the conclusions presented. The complete letter can be found in page A5 of this Appendix A.

The National Environmental Policy Act procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing the National Environmental Policy Act. Most important, National Environmental Policy Act documents must concentrate on the issues that are truly significant. The South Mountain Freeway Final Environmental Impact Statement is a high quality, scientific analysis and included the involvement of agency experts and the public throughout the process.

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The Arizona Department of Transportation and Federal Highway Administration completed a Biological Evaluation containing analysis of the project effects on listed and candidate species under the Endangered Species Act. The Biological Evaluation was completed in May 2014 following identification of the Preferred Alternative in the Draft Environmental Impact Statement.


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Chapter 6 outlines the extensive public outreach undertaken throughout the environmental impact statement process to make environmental information available.

The Arizona Department of Transportation, the project sponsor, working in close consultation with the Federal Highway Administration, the lead federal agency for the project, and in cooperation with the U.S. Army Corps of Engineers, the U.S. Bureau of Indian Affairs, and the Western Area Power Administration, prepared and the Draft and Final Environmental Impact Statements and Section 4(f) Evaluations for the South Mountain Freeway in accordance with: the National Environmental Policy Act of 1969 [42 United States Code Section 4332(2)(c)], Section 4(f) of the Department of Transportation Act of 1966 (49 United States Code Section 303), as amended, and Section 404 of the Clean Water Act of 1977 (33 United States Code Section 1251). The Draft and Final Environmental Impact Statements and Section 4(f) Evaluations: 1) satisfy the Federal Highway Administrator’s and Arizona Department of Transportation’s environmental analysis requirements; 2) provide a comparison of the social, economic, and environmental impacts that may result from implementation of the proposed project—construction and operation of a major transportation facility; and 3) identify measures to avoid, reduce, or otherwise mitigate adverse impacts. The Draft and Final Environmental Impact Statements include sufficient preliminary design information to compare alternatives.

Figure 5-8 on page 5-15 of the Final Environmental Impact Statement presents prominent resources of Phoenix South Mountain Park/Preserve (park), including the Bursera Trail in its alignment as shown on a City of Phoenix trail map (see <phoenix.gov/parks/site/Documents/062880.pdf>).

The section, Public Parkland Resources (SMPP) Associated with the South Mountains, beginning on page 5-14 of the Final Environmental Impact Statement, acknowledges:

- the high Section 4(f) value of the park in its entirety as the centerpiece of the Phoenix Sonoran Preserve System
- the important contribution of the park’s many attributes, like the Bursera Trail, as contributing to the park’s value as a Section 4(f) resource—pointing out that the park offers opportunities to over 3 million annual visitors for hiking, bicycling, horseback riding, and interacting with the natural Sonoran Desert adjacent to the metropolitan area, with each park user seeking his or her own benefits from visiting the park

The discussion of the park as a Section 4(f) resource recognizes that many prominent features of the park contribute to its value. These include its setting as one of the largest urban parks in the country, its function in the Phoenix Sonoran Preserve System, and many prominent features within the park, including its trails. As noted in the response to a comment on page B964 in Volume III of the Final Environmental Impact Statement, “These trails are typically used for high-intensity recreational activities such as running, hiking, and biking, not noise- or viewshed-sensitive activities.” To clarify, amenities such as the park’s trail system are not the sole contributors to the park’s Section 4(f) value, and trails throughout the park are used for both active and passive activities. The Bursera Trail is located in a lesser-used area of the park. Points along the trail allow some trail users to enjoy expansive views to the south and away from the urban setting to the north. Other permitted uses of the trail include more active activities, such as biking. Some trail users seek peaceful solitude while others, perhaps to a lesser extent, seek physical

8 (Response 8 continues on next page)
activity. It is important to note that viewsheds are not contributing attributes to a
determination of a resource as being afforded protection under Section 4(f).

While direct use of the park (the conversion of approximately 31.3 acres of the
park for freeway use) is presented, the text also acknowledges the intrusion of
the freeway section that would displace parkland, the proximity of other freeway
sections that would alter views from certain park locations (see the Visual Resources
section beginning on page 4-167 and page 5-14 in the Final Environmental Impact
Statement), the introduction of an intensive human-made use into an otherwise
passive and natural setting (as evidenced by the remainder of the park to the north
and the Gila River Indian Community to the south), and the alteration of biological
resources associated with the park’s southwestern section.

Sections of the freeway will be visible from certain vantage points along the
Bursera Trail. The figure below depicts the scale at which the freeway will likely
be viewed. As part of the planning to minimize harm to the park, measures to
minimize the effects of altering the views include:

- reducing the freeway’s footprint from the original 40 acres as proposed in 1988
to the 31.3 acres planned for under the current design
- skirting the park as much as possible to avoid bisecting the 16,000-acre park
- providing replacement lands to compensate for the use of 31.3 acres of the park
- using slope treatments, rock sculpting, native vegetation landscaping and
  buffering, and native vegetation transplanting to blend the appearance of the
  freeway and slope cuts with the surrounding natural environment, as feasible
- working with park stakeholders through the City of Phoenix in finalizing these
  improvements.

View from the Bursera Trail southwest across the valley between Main Ridge North and
Main Ridge South, with the Sierra Estrella in the background. The freeway passes through
the far western end of the ridges and is represented by the dark shading next to the towers
for the high-voltage overhead power lines.
The comment infers that the expansive views to the south and west are unencumbered open space. Where the Bursera Trail would be closest to the freeway (at a distance of approximately 4,000 feet), a private land developer has submitted plans to the City of Phoenix to construct over 100 homes in the area immediately south of the park limits between two ridgelines. As of February 2015, the developer had begun developing a road across the mountain ridgeline to the east to access the area for home development. This development, along with others such as the recent expansion of the Vee Quiva Casino on Gila River Indian Community land southwest of the park, illustrate the planned growth that is turning undeveloped lands into urbanizing areas in the Study Area. This urbanization is discussed in the section, Land Use, in Chapter 4 of the Final Environmental Impact Statement.

The freeway will also generate noise that will be audible from certain points along the trail as acknowledged in the Final Environmental Impact Statement; however, based on the distance of the freeway to the closest trail points (for example, the National Trail is 2,000 feet away and the Bursera Trail is 4,000 feet away), noise levels are not likely to be above the noise abatement criteria levels for recreational activities. Trail users located 2,000 feet or more away from the freeway will hear an increased hum, but the decibel levels will not be above noise abatement criteria levels for recreational activities. While noise mitigation was evaluated to minimize harm, the use of mitigation, such as noise barriers, would have little effect for receptors 2,000 feet or more away from the freeway (and at elevated positions). Even if it were shown that noise levels are higher on the trail, noise impacts would be temporary because trail users would be moving along the trail and because only a short portion of the trail is in a direct line to the freeway. Although noise barriers were not feasible in this case, the Arizona Department of Transportation has decided to use quiet pavement on the South Mountain Freeway to minimize noise along the corridor.

Since the release of the Draft Environmental Impact Statement, the Arizona Department of Transportation and Federal Highway Administration have consulted extensively with the U.S. Environmental Protection Agency on the air quality analytical approach and methods used in the Final Environmental Impact Statement. This consultation has resulted in agreement on the analysis methodologies and the results of these analyses. The extensive air quality analyses for the project are documented in pages 4-75 through 4-85 of the Final Environmental Impact Statement and in the air quality technical report. The Federal Highway Administration identified no adverse health impacts from the project related to the National Ambient Air Quality Standards or mobile source air toxic pollutants.
As stated on page 5-3 of the Final Environmental Impact Statement, the ¼ mile distance is used because it is the approximate maximum distance from which traffic noise would be disruptive to human or wildlife uses. All other proximity impacts, such as those to the viewshed, would be detected at distances less than ¼ mile. In terms of noise analyses, several reasons support why the analysis did not extend beyond ¼ mile: noise impacts at 2,000 feet or greater from the freeway would be minimal (decibels would not be above minimum thresholds); the Federal Highway Administration Traffic Noise Model has limitations for predicting noise levels beyond approximately 500 feet; mitigation, such as noise walls, would not be effective for receptors at 2,000 feet or greater (and at elevated positions) away from the freeway; and, even if it were shown that noise levels are higher on the trail, the impacts would be temporary in nature because trail users would be moving along the trail and because only a short portion of the trail is in a direct line to the freeway (no picnic areas appear to be located along this trail).

The section, Public Parkland Resources (SMPP) Associated with the South Mountains, beginning on page 5-14 of the Final Environmental Impact Statement, acknowledges:
- the high Section 4(f) value of the park in its entirety as the centerpiece of the Phoenix Sonoran Preserve System
- the important contribution of the park’s many attributes, like the Bursera Trail, as contributing to the park’s value as a Section 4(f) resource—pointing out that the park offers opportunities to over 3 million annual visitors for hiking, bicycling, horseback riding, and interacting with the natural Sonoran Desert adjacent to the metropolitan area, with each park user seeking his or her own benefits from visiting the park

The discussion of the park as a Section 4(f) resource recognizes that many prominent features of the park contribute to its value. These include its setting as one of the largest urban parks in the country, its function in the Phoenix Sonoran Preserve System, and many prominent features within the park, including its trails. As noted in the response to a comment on page B964 in Volume III of the Final Environmental Impact Statement, “These trails are typically used for high-intensity recreational activities such as running, hiking, and biking, not noise- or viewshed-sensitive activities.” To clarify, amenities such as the park’s trail system are not the sole contributors to the park’s Section 4(f) value, and trails throughout the park are used for both active and passive activities. The Bursera Trail is located in a lesser-used area of the park. Points along the trail allow some trail users to enjoy expansive views to the south and away from the urban setting to the north. Other permitted uses of the trail include more active activities, such as biking. Some trail users seek peaceful solitude while others, perhaps to a lesser extent, seek physical activity. It is important to note that viewsheds are not contributing attributes to a determination of a resource as being afforded protection under Section 4(f).

While direct use of the park (the conversion of approximately 31.3 acres of the park for freeway use) is presented, the text also acknowledges the intrusion of the freeway section that would displace parkland, the proximity of other freeway
sections that would alter views from certain park locations (see the Visual Resources section beginning on page 4-167 and page 5-14 in the Final Environmental Impact Statement), the introduction of an intensive human-made use into an otherwise passive and natural setting (as evidenced by the remainder of the park to the north and the Gila River Indian Community to the south), and the alteration of biological resources associated with the park’s southwestern section.

Sections of the freeway will be visible from certain vantage points along the Bursera Trail. The figure below depicts the scale at which the freeway will likely be viewed. As part of the planning to minimize harm to the park, measures to minimize the effects of altering the views include:

- reducing the freeway’s footprint from the original 40 acres as proposed in 1988 to the 31.3 acres planned for under the current design
- skirting the park as much as possible to avoid bisecting the 16,000-acre park
- providing replacement lands to compensate for the use of 31.3 acres of the park
- using slope treatments, rock sculpting, native vegetation landscaping and buffering, and native vegetation transplanting to blend the appearance of the freeway and slope cuts with the surrounding natural environment, as feasible
- working with park stakeholders through the City of Phoenix in finalizing these improvements

View from the Bursera Trail southwest across the valley between Main Ridge North and Main Ridge South, with the Sierra Estrella in the background. The freeway passes through the far western end of the ridges and is represented by the dark shading next to the towers for the high-voltage overhead power lines.

The comment infers that the expansive views to the south and west are unencumbered open space. Where the Bursera Trail would be closest to the freeway (at a distance of approximately 4,000 feet), a private land developer has
submitted plans to the City of Phoenix to construct over 100 homes in the area immediately south of the park limits between two ridgelines. As of February 2015, the developer had begun developing a road across the mountain ridgeline to the east to access the area for home development. This development, along with others such as the recent expansion of the Vee Quiva Casino on Gila River Indian Community land southwest of the park, illustrate the planned growth that is turning undeveloped lands into urbanizing areas in the Study Area. This urbanization is discussed in the section, Land Use, in Chapter 4 of the Final Environmental Impact Statement.

The freeway will also generate noise that will be audible from certain points along the trail as acknowledged in the Final Environmental Impact Statement; however, based on the distance of the freeway to the closest trail points (for example, the National Trail is 2,000 feet away and the Bursera Trail is 4,000 feet away), noise levels are not likely to be above the noise abatement criteria levels for recreational activities. Trail users located 2,000 feet or more away from the freeway will hear an increased hum, but the decibel levels will not be above noise abatement criteria levels for recreational activities. While noise mitigation was evaluated to minimize harm, the use of mitigation, such as noise barriers, would have little effect for receptors 2,000 feet or more away from the freeway (and at elevated positions). Even if it were shown that noise levels are higher on the trail, noise impacts would be temporary because trail users would be moving along the trail and because only a short portion of the trail is in a direct line to the freeway. Although noise barriers were not feasible in this case, the Arizona Department of Transportation has decided to use quiet pavement on the South Mountain Freeway to minimize noise along the corridor.

The portion of the park that will be used for the freeway will be 31.3 acres, or approximately 0.2 percent of the park’s approximately 16,600 acres (see Final Environmental Impact Statement pages S-39 and 5-31). The activities that make the park such a highly valued resource (recreational activities, interaction with the Sonoran Desert) will remain.

As noted in response code 2, the Department of the Interior reviewed the Final Environmental Impact Statement and agreed with the conclusions presented. The complete letter can be found in page A5 of this Appendix A.

The section, Public Parkland Resources (SMPP) Associated with the South Mountains, beginning on page 5-14 of the Final Environmental Impact Statement, acknowledges:

- the high Section 4(f) value of the park in its entirety as the centerpiece of the Phoenix Sonoran Preserve System
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While direct use of the park (the conversion of approximately 31.3 acres of the park for freeway use) is presented, the text also acknowledges the intrusion of the freeway section that would displace parkland, the proximity of other freeway sections that would alter views from certain park locations (see the Visual Resources section beginning on page 4-167 and page 5-14 in the Final Environmental Impact Statement), the introduction of an intensive human-made use into an otherwise passive and natural setting (as evidenced by the remainder of the park to the north and the Gila River Indian Community to the south), and the alteration of biological resources associated with the park’s southwestern section.

For example, sections of the freeway will be visible from certain vantage points along some trails within the park. The figure below depicts the scale at which the freeway will likely be viewed. As part of the planning to minimize harm to the park, measures to minimize the effects of altering the views include:

- reducing the freeway’s footprint from the original 40 acres as proposed in 1988 to the 31.3 acres planned for under the current design
-_skirting the park as much as possible to avoid bisecting the 16,000-acre park
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- working with park stakeholders through the City of Phoenix in finalizing these improvements

View from the Bursera Trail southwest across the valley between Main Ridge North and Main Ridge South, with the Sierra Estrella in the background. The freeway passes through the far western end of the ridges and is represented by the dark shading next to the towers for the high-voltage overhead power lines.
As with all other freeways in the region, trucks will use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the freeway will be automobiles. The Maricopa Association of Governments regional travel demand model projects that truck traffic will represent approximately 10 percent of the total traffic on the freeway.

The analysis of direct impacts, such as noise and air quality, presented in the Final Environmental Impact Statement included the impacts associated with projected truck traffic on the freeway.
animal and plant species, just to name a few issues. And yet, the FEIS contains no substantive analysis of the direct, indirect, and cumulative impacts to these important uses and values stemming from the project.11

In addition, even for people who do not use the SMPP, the sweeping and rugged presence of the South Mountains, whether on the horizon or just outside one’s backdoor, plays an important role in the fabric and culture of our City. It is a landmark, a sacred site and an icon that represents part of the cultural identity of Phoenix. To damage South Mountain by blasting through its ridges is to damage Phoenix and the people who live here. Indeed, such an action would strongly indicate to all who look that we do not value our natural resources in Phoenix, and in a way, our own well-being. The failure of the Departments to consider this important aspect in the FEIS further demonstrates their overall failure to take the “hard look” required by NEPA.

Furthermore, because the FEIS fails to analyze the potential impacts to recreational uses and values and the integrity of the South Mountain as a whole in any substantive way, it similarly fails to meaningfully consider or offer sufficiently mitigating measures that might reduce these impacts as required by NEPA.12

For example, while it is true that the FEIS generally examines noise impacts as part of the affected environment, it does not examine or consider mitigation in any specific way relative to the SMPP. To be sure, the increased noise levels resulting from the freeway construction project and the freeway itself would have a significant impact on recreational values and uses and the overall purpose of the SMPP as a place of solitude and quiet enjoyment. While the FEIS discusses noise impacts in Chapter 4, it does not meaningfully model or consider noise impacts on these important resources. Interestingly, while the Departments explain that noise receivers were modeled adjacent to “noise-sensitive locations” along the E1 Alternative, Figure 4-29 and Table 4-38

the additional noise caused by the increased truck traffic, which could include restricting truck traffic on the freeway, reducing the posted speed limit for semi-trucks or reducing weight limits. ADOT and FHWA refuses to consider these options, essentially noting they are not “consistent with the purpose and need for the proposed action...” See FEIS at 4-199. This too violates NEPA.

ai Table 4-54 (FEIS at 4-180), the Departments erroneously conclude (without explanation) that indirect (secondary) effects to “recreational land” need not be considered in the secondary impact analysis.

11 The Departments’ broad generalizations and vague references in the FEIS to potential mitigation measures that might be used to reduce visual impacts due to the cuts through the ridges in and near the SMPP or to allow connectivity of trails through crossings, (a) do not address all of the known impacts of the project to the variety of recreational uses and values, discussed above; and (b) nevertheless fail to provide sufficient detail and certainty relative to the mitigation measures as required by NEPA. See, e.g., Neighbors of Cuddy Mountain v. USFS, 137 F.3d 1372, 1381 (9th Cir. 1998). This is discussed further in Section 10(b) of this Letter.

Figure 5-8 on page 5-15 of the Final Environmental Impact Statement presents prominent resources of Phoenix South Mountain Park/Preserve (park), including the Bursera Trail in its alignment as shown on a City of Phoenix trail map (see <phoenix.gov/parkssite/Documents/062880.pdf>).

The section, Public Parkland Resources (SMPP) Associated with the South Mountains, beginning on page 5-14 of the Final Environmental Impact Statement, acknowledges:

• the high Section 4(f) value of the park in its entirety as the centerpiece of the Phoenix Sonoran Preserve System
• the important contribution of the park’s many attributes, like the Bursera Trail, as contributing to the park’s value as a Section 4(f) resource—pointing out that the park offers opportunities to over 3 million annual visitors for hiking, bicycling, horseback riding, and interacting with the natural Sonoran Desert adjacent to the metropolitan area, with each park user seeking his or her own benefits from visiting the park

The discussion of the park as a Section 4(f) resource recognizes that many prominent features of the park contribute to its value. These include its setting as one of the largest urban parks in the country, its function in the Phoenix Sonoran Preserve System, and the many prominent features within the park, including its trails.

Amenities, such the park’s trail system, are not the sole contributors to the park’s Section 4(f) value, and trails throughout the park are used for both active and passive activities. The Bursera Trail is located in a lesser-used area of the park. Points along the trail allow some trail users to enjoy expansive views to the south and away from the urban setting to the north. Other permitted uses of the trail include more active activities, such as bicycling. Some trail users seek peaceful solitude while others, perhaps to a lesser extent, seek physical activity. It is important to note that viewsheds are not contributing attributes to a determination of a resource as being afforded protection under Section 4(f). While direct use of the park (the conversion of approximately 31.3 acres of the park for freeway use) is presented, the text also acknowledges the intrusion of the freeway section that would displace parkland, the proximity of other freeway sections that would alter views from certain park locations (see the Visual Resources section beginning on page 4-167 and page 5-14 in the Final Environmental Impact Statement), the introduction of an intensive human-made use into an otherwise passive and natural setting (as evidenced by the remainder of the park to the north and the Gila River Indian Community to the south), and the alteration of biological resources associated with the park’s southwestern section.

Sections of the freeway will be visible from certain vantage points along some trails within the park. The figure below depicts the scale at which the freeway will likely be viewed. As part of the planning to minimize harm to the park, measures to minimize the effects of altering the views include:

• reducing the freeway’s footprint from the original 40 acres as proposed in 1988 to the 31.3 acres planned for under the current design
• skirting the park as much as possible to avoid bisecting the 16,000-acre park
• providing replacement lands to compensate for the use of 31.3 acres of the park

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View from the Bursera Trail southwest across the valley between Main Ridge North and Main Ridge South, with the Sierra Estrella in the background. The freeway passes through the far western end of the ridges and is represented by the dark shading next to the towers for the high-voltage overhead power lines.

The freeway will also generate noise that will be audible from certain points along the trail as acknowledged in the Final Environmental Impact Statement; however, based on the distance of the freeway to the closest trail points (for example, the National Trail is 2,000 feet away and the Bursera Trail is 4,000 feet away), noise levels are not likely to be above the noise abatement criteria levels for recreational activities. Trail users located 2,000 feet or more away from the freeway will hear an increased hum, but the decibel levels will not be above noise abatement criteria levels for recreational activities. While noise mitigation was evaluated to minimize harm, the use of mitigation, such as noise barriers, would have little effect for receptors 2,000 feet or more away from the freeway (and at elevated positions). Even if it were shown that noise levels are higher on the trail, noise impacts would be temporary because trail users would be moving along the trail and because only a short portion of the trail is in a direct line to the freeway.

The noise and visual resources analyses did consider the impacts from trails within the corridor, as applicable (see text beginning on pages 4-88 and 4-167, respectively, of the Final Environmental Impact Statement).
The map and table in Figure 5-5 on pages 5-8 and 5-9 of the Final Environmental Impact Statement disclose impacts on recreational trails outside of Phoenix South Mountain Park/Preserve (park) by an action alternative. The freeway will not have a direct impact on these trails because it will span the trails. The trails’ importance as Section 4(f) resources is based on their recreational value and is not based on any noise-sensitive activities or viewshed characteristics. As correctly noted in Figure 5-5, “These trails are typically used for high-intensity recreational activities such as running, hiking, and biking, not noise and viewshed-sensitive activities.”

Within the park, the Final Environmental Impact Statement acknowledges the important contribution of the park’s many attributes, such as its trail system, as contributing to the park’s value as a Section 4(f) resource—pointing out that the park offers opportunities to over 3 million annual visitors for hiking, bicycling, horseback riding, and interacting with the natural Sonoran Desert adjacent to the metropolitan area, with each park user seeking his or her own benefits from visiting the park.

To clarify, the park is used for both active and passive activities. As an example, the Bursera Trail is located in a lesser-used area of the park. Points along the trail allow some trail users to enjoy expansive views to the south and away from the urban setting to the north. Other permitted uses of the trail include more active activities, such as bicycling. Some trail users seek peaceful solitude while others, perhaps to a lesser extent, seek physical activity. It is important to note that viewsheds are not contributing attributes to a determination of a resource as being afforded protection under Section 4(f).

While direct use of the park (the conversion of approximately 31.3 acres of the park for freeway use) is presented, the text also acknowledges the intrusion of the freeway section that would displace parkland, the proximity of other freeway sections that would alter views from certain park locations, the introduction of an intensive human-made use into an otherwise passive and natural setting, and the alteration of biological resources associated with the park’s southwestern section.

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(Next page continues)
View from the Bursera Trail southwest across the valley between Main Ridge North and Main Ridge South, with the Sierra Estrella in the background. The freeway passes through the far western end of the ridges and is represented by the dark shading next to the towers for the high-voltage overhead power lines.

Sensitive receivers for noise were included in the noise analyses in accordance with State and federal guidance. The section, Noise, beginning on Final Environmental Impact Statement page 4-88, has addressed requirements under the National Environmental Policy Act. As stated on page 4-89 of the Final Environmental Impact Statement, over 220 sensitive receivers were evaluated at exterior locations from a traffic noise perspective. All of the receivers represent noise-sensitive land uses in proximity to the proposed project, including homes, schools, and parks, and these receivers would have higher noise levels than similar facilities more distant from the proposed action. The existing trails within the park nearest the freeway are 2,000 feet or more away (for example, the National Trail is 2,000 feet away and the Bursera Trail is 4,000 feet away). In terms of noise analyses, several reasons support why the analysis did not extend beyond ¼ mile: noise impacts at 2,000 feet or greater from the freeway would be minimal (decibels would not be above minimum thresholds); the Federal Highway Administration Traffic Noise Model has limitations for predicting noise levels beyond approximately 500 feet; mitigation, such as noise walls, would not be effective for receptors at 2,000 feet or greater (and at elevated positions) away from the freeway; and, even if it were shown that noise levels are higher on trails, such as the Bursera Trail, the impacts would be temporary in nature because trail users would be moving along the trail and because only a short portion of the trail is in a direct line to the freeway (no picnic areas appear to be located along this trail).
Comment noted. Responses to specific comments are provided on the following pages.

**Biology, Plants, and Wildlife**

The Arizona Department of Transportation regularly implements mitigation measures to control and minimize the presence of invasive and noxious species on its facilities and would do the same for this project, in compliance with Executive Order 13112. This requirement is described on page 4-127 of the Final Environmental Impact Statement and confirmed in the Record of Decision in Table 3, beginning on page 38. This includes identifying, controlling, and monitoring for invasive species as well as preventing their incidence in areas where they are not presently found. The Executive Order also includes restoration of native plant species where invasive plant species are found.

The freeway will be designed to protect and maintain opportunities for wildlife movement between the South Mountains, Gila River, and Sierra Estrella. These crossing structures and associated fences will be designed to reduce the incidence of vehicle-wildlife collisions and to reduce the impact of the freeway on wildlife connectivity between the South Mountains, Gila River, and Sierra Estrella. The Arizona Department of Transportation will coordinate with the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Gila River Indian Community’s Department of Environmental Quality during the design phase regarding the potential for locating and designing wildlife-sensitive roadway structures.

**Health Effects**

Lead is discussed on page 4-69 of the Final Environmental Impact Statement. Since the ban on the sale of leaded gasoline, lead emissions have declined significantly. Motor vehicles are no longer considered a significant source of lead, and lead is not regulated under the U.S. Environmental Protection Agency’s transportation conformity regulations.

Regarding the potential for cancer-causing emissions from asphalt, the U.S. Environmental Protection Agency provided recommendations for mobile source air toxics analysis prior to the Draft Environmental Impact Statement, and also discussed air toxics in its comments on both the Draft and Final Environmental Impact Statements. At no time did the agency suggest or recommend that the Federal Highway Administration evaluate the impacts of emissions from asphalt.

**Air Quality**

Under the Clean Air Act, the U.S. Environmental Protection Agency is responsible for establishing National Ambient Air Quality Standards to protect public health and the environment from adverse effects of air pollutants. As explained in the Responses to Frequently Submitted Public Comments (see page A371), the U.S. Environmental Protection Agency’s National Ambient Air Quality Standards are required by law to protect public health with an adequate margin of safety. For the South Mountain Freeway project, modeling for carbon monoxide and particulate matter (PM10) was conducted using worst-case (most congested or highest traffic) modeling locations at discrete receptor locations around each analysis location (primarily residences near the interchanges). Black carbon emissions are a component of particulate matter (PM2.5) and were included in the particulate matter (PM2.5) analysis. The carbon monoxide and particulate matter (PM2.5) analyses demonstrated that the freeway will not contribute to any new pollutants.
21 (cont.)

• With increase in pollutants, increased hazard to humans who hike and bike in South Mountain Park, particularly the west end – bicycling and walking increase exposure to air pollutants.

• Air pollutants negatively affect many plants whether airborne or in the soil (most particles fall to ground) – loss of photosynthetic ability, reduced plant health and vigor; those plants that can exist near highways have increased susceptibility to environmental stresses when compared to plants further away from highway.

• Construction kills plants including such iconic plants as ironwood, saguaro, Arizona Queen of the Night, elephant tree, coyote, those that are removed to be replanted, such as saguaro and littleleaf palo verde, historically experience a very high mortality rate; and

• Roads are highly correlated with changes in species composition and population sizes – populations of the more specialized species such as elephant tree, saguaro, Arizona escheverias, will respond negatively due to loss of habitat, including appropriate substrate.

The FEIS fails to meaningfully address these prior comments or to adequately analyze or mitigate for the cumulative effects of these impacts. See Section III(C) of our Comment Letter (addressing cumulative effects). In addition to the foregoing, a number of key failures found in the FEIS related to the natural environment are discussed further, below.

First, while the FEIS at least discloses some of the potential impacts of the project to wildlife, it makes few references (other than noting potential “vegetation removal” and the possible introduction and spread of invasive species) to the profound and irreparable direct, indirect and cumulative impacts that the construction and ultimate presence of the freeway project will have on important plants and plant communities within the Study Area and in particular, in and around SNPP. See Comments of Wendy C. Hodgson, Desert Botanical Garden, Phoenix Arizona, attached here as Attachment A, and fully incorporated by reference.

These impacts include, among others things, impacts that extend far beyond the immediate road and vegetation clearing activities needed for the freeway. These impacts are direct, indirect and/or cumulative effects of the proposed action. For example, roads and freeways decrease genetic diversity of affected populations (due to population size and genetic drift); fragment plant corridors that provide genetic conduits between individuals and populations for plant species, introduce and serve as dispersal corridors for invasive plants and exotic species, and increase the possibility of fire, localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones (see discussion beginning on pages 4-75 and 4-76 of the Final Environmental Impact Statement, respectively).

The U.S. Environmental Protection Agency has also established National Ambient Air Quality Standards for nitrogen dioxide. The U.S. Environmental Protection Agency has designated the entire state of Arizona as “unclassifiable/attainment” for nitrogen dioxide (77 Federal Register 9532, February 17, 2012) and, because of this, the transportation conformity regulations at 40 Code of Federal Regulations Part 93 do not require analysis of nitrogen dioxide concentrations near the project area. The Federal Highway Administration and Arizona Department of Transportation consulted extensively with the U.S. Environmental Protection Agency on the air quality analysis for the South Mountain Freeway project, and the U.S. Environmental Protection Agency did not suggest or recommend that the Federal Highway Administration evaluate nitrogen dioxide impacts from the project. There are no National Ambient Air Quality Standards for “nitrogen oxides,” a class of pollutants that includes nitrogen dioxide along with other oxides of nitrogen, but emissions of these pollutants are accounted for by the Maricopa Association of Governments in the regional emissions analyses for ozone as part of its conformity determination and in the emissions inventories for the Maricopa Association of Governments ozone state implementation plans.

22 Air Quality

The carbon monoxide and particulate matter (PM10) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. All locations immediately adjacent to the modeled interchanges demonstrated compliance with the National Ambient Air Quality Standards, and the receptor diagrams in Figures 2 through 4 of the air quality technical report show that concentrations decrease rapidly as distance from the roadway increases. Since the U.S. Environmental Protection Agency’s National Ambient Air Quality Standards are required to protect public health with an adequate margin of safety, and since the project meets these National Ambient Air Quality Standards, there is no increased hazard to public health in the project area related to the National Ambient Air Quality Standards.

For mobile source air toxics, the updated analysis showed that for the Study Area, constructing the freeway will have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions will decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-78 of the Final Environmental Impact Statement).

23 Biology, Plants, and Wildlife

Within the context of overall vegetation, wildlife, and wildlife habitat, all action alternatives and options would decrease the amount of cover, nesting areas, and food resources for wildlife species caused by habitat loss, fragmentation, and traffic disturbance. See the section, General Impacts on Vegetation, Wildlife, and Wildlife Habitat, beginning on page 4-136 of the Final Environmental Impact Statement, for additional details on potential effects on vegetation, wildlife, and wildlife habitat. The conclusion for diminished wildlife resources accounts for (Response 23 continues on next page)
• With increase in pollutants, increased hazard to humans who hike and bike in South Mountain Park; particularly the west end – bicycling and walking increase exposure to air pollutants.

• Air pollutants negatively affect many plants whether airborne or in the soil (most particles fall to ground) – loss of photosynthetic ability, reduced plant health and vigor; those plants that can exist near highways have increased susceptibility to environmental stresses when compared to plants further away from highway.

• Construction kills plants including such iconic plants as ironwood, saguaro, Arizona Queen of the Night, elephant tree, ocotillo; those that are removed to be replanted, such as saguaro and littleleaf paloverde, historically experience a very high mortality rate; and

• Roads are highly correlated with changes in species composition and population sizes – populations of the more specialized species such as elephant tree, saguaro, Arizona escheveria, will respond negatively due to loss of habitat, including appropriate substrate.

The FEIS fails to meaningfully address these prior comments or to adequately analyze or mitigate for the cumulative effects of these impacts. See Section II(C) of our Comment Letter (addressing cumulative effects). In addition to the foregoing, a number of key failures found in the FEIS related to the natural environment are discussed further, below.

First, while the FEIS at least discloses some of the potential impacts of the project to wildlife, it makes few references (other than noting potential “vegetation removal” and the possible introduction and spread of invasive species) to the profound and irreparable direct, indirect and cumulative impacts that the construction and ultimate presence of the freeway project will have on important plants and plant communities within the Study Area and in particular, in and around SMPP. See Comments of Wendy C. Hodgkin, Desert Botanical Garden, Phoenix Arizona, attached here as Attachment “A”, and fully incorporated by reference.

These impacts include, among others things, impacts that extend far beyond the immediate road and vegetation clearing activities needed for the freeway. These impacts are direct, indirect and/or cumulative effects of the proposed action. For example, roads and freeways decrease genetic diversity of affected populations (due to population size and genetic drift), fragment plant corridors that provide genetic conduits between individuals and populations for plant species, introduce and serve as dispersal corridors for invasive plants and exotic species, and increase the possibility of fire.

The Arizona Department of Transportation has conducted studies on the best methods to use for transplanting desert species, particularly ironwood trees and saguaro, and was honored by the American Society of Landscape Architects in 2012 for this work. The research results have been incorporated in the procedures for plant salvage for Arizona Department of Transportation projects and throughout the industry. Reports on the research findings are available from the Arizona Department of Transportation Research Center at <azdot.gov/planning/researchcenter/research/research-reports>.

Roads, development, or agricultural lands occur along almost the entire lengths (except for less than 2 miles) of the action alternatives, with nearly 1.3 miles of the 2 miles on private property affected by dirt trails. Species composition has already changed along a majority of the action alternative corridors, and the conditions for affecting species composition currently exist. Secondary and cumulative impacts of the freeway are disclosed beginning on page 4-179 of the Final Environmental Impact Statement. Specific comments from Attachment A are addressed in that section of the comment document.
Candidate species, the Arizona Native Plant Act, and other wildlife species of special concern, including those protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act, are described beginning on page 4-127 of the Final Environmental Impact Statement. In addition, the Arizona Department of Transportation and Federal Highway Administration completed a Biological Evaluation containing analysis of the project effects on listed and candidate species under the Endangered Species Act. The Biological Evaluation was completed in May 2014 following identification of the Preferred Alternative in the Draft Environmental Impact Statement and is available for public review on the project Web site: <azdot.gov/southmountainfreeway>. The Biological Evaluation was sent to the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and Gila River Indian Community Department of Environmental Quality. The U.S. Fish and Wildlife Service was asked for technical assistance with minimizing impacts on candidate species prior to completion of the Final Environmental Impact Statement. In a letter dated July 18, 2014, the Gila River Indian Community provided comments on the Biological Evaluation and included a list of plant and animal species that are culturally important to the Gila River Indian Community. The Biological Evaluation was revised to incorporate an evaluation of the identified species (see page 4-127 of the Final Environmental Impact Statement). The Arizona Department of Transportation and Federal Highway Administration have committed to continue coordination with the Arizona Game and Fish Department, Gila River Indian Community Department of Environmental Quality, and U.S. Fish and Wildlife Service regarding wildlife concerns as a result of the freeway’s implementation. Mitigation measures for biological resources are presented in Table 3, beginning on page 38, of the Record of Decision.
Mitigation measures and measures to minimize harm as the result of extensive consultation, avoidance alternatives analyses, and efforts in developing mitigation strategies are presented throughout the Final Environmental Impact Statement to sufficient detail to demonstrate actions leading to impact reduction. Some specifics remained unknown upon publication of the Final Environmental Impact Statement because the design detail was not yet available or because it was procedurally necessary to do so. Table 3, beginning on page 38 of the Record of Decision, contains specific mitigation measures related to biological resources, including species afforded federal protection under the Migratory Bird Treaty Act, for the Sonoran desert tortoise, for salvage of native plants, for prevention of introduction and spread of invasive plants, and for maintenance of habitat connectivity. Measures were included to coordinate with others following the Record of Decision regarding the potential for additional mitigation for sensitive species and for determining the location and design of wildlife crossings as the final design proceeds. The surveys for Sonoran desert tortoise are already underway and are being conducted by the Arizona Game and Fish Department. The resulting documentation will include recordings of all species observed. If other species are determined to exist in the project area and will be affected by the project, additional coordination with the Arizona Game and Fish Department will occur. The Arizona Department of Transportation and Federal Highway Administration, through signing the Record of Decision, commit to fulfill all commitments and mitigation measures in the Record of Decision.

Pollution Clearinghouse (2004). An increase in traffic noise may affect the ability of some animals to hear at a level necessary for survival when near the proposed action. In addition, hearing loss resulting from vehicle noise has been shown to occur in some desert animals (Bondello and Brattstrom 1979).

The FEIS also states (at least in passing) that the project will result in impacts to wildlife movement and habitat connectivity, explaining at 4-138:

Impacts on biological resources caused by construction and operation of public roads include vehicle-wildlife collisions, habitat loss, and habitat fragmentation (FHWA 2011) as well as disturbances caused by traffic noise (Barber et al. 2010). A report supported by AGFD and the Arizona Wildlife Linkages Working Group summarizes a workshop attended by a broad range of organizations and interests that interactively provided input and mapping for important wildlife linkages across Maricopa County (AGFD 2012). The report identifies the area between SMPP and the Sierra Estrella as a landscape movement area.

The Departments, having disclosed the above described adverse impacts on wildlife and plants throughout the range of the study area, including within and adjacent to the SMPP, see 2 U.S.C. § 4332(2)(C)(ii), were required to describe what mitigating efforts will be used to offset the harms that would result from the project. See 40 C.F.R. § 1502.10(h) (stating that an EIS “shall include discussions of . . . means to mitigate adverse environmental impacts”). The FEIS fails to do this.

Instead, the FEIS repeatedly suggests that the specifics of the mitigation measures will be developed at a later time, either during the design phase or just prior to or during construction activities. This approach is devoid of specifics or even a firm commitment to actually conduct the mitigation measures at all in many cases. This is a significant failure that permeates the entire FEIS document and is used repeatedly to essentially “put off” specifics regarding mitigation until after the FEIS process is complete. This tactic is used when discussing a myriad of currently vague (but crucial) mitigation measures, such as the potential use of multi-functional road crossings and culverts for wildlife movement and to reduce vehicle-wildlife collisions, mitigating for impacts to 303(d) impaired waters and impacts to protected plants, developing species-specific mitigation measures to minimize potential impacts to birds and animals, conducting plant and animal surveys, determining the ultimate location of noise barriers and the configuration of bridges to span historic features and trails, determining the means to limit damage to visual resources, including the cuts through SMPP, among other things. See, e.g., Table 5-4 (providing a summary of the mitigation measures for this project).

See Neighbors of Cuddy Mountain v. USFS, 137 F.3d 1372, 1381 (9th Cir. 1998) (rejecting as insufficient mitigation measures proposed by the Forest Service when it was not certain that the mitigation measures, would in fact, be adopted).
Appendix A

The Arizona Department of Transportation, the project sponsor, working in close consultation with the Federal Highway Administration, the lead federal agency for the project, and in cooperation with the U.S. Army Corps of Engineers, the U.S. Bureau of Indian Affairs, and the Western Area Power Administration, prepared the Draft and Final Environmental Impact Statements and Section 4(f) Evaluations for the South Mountain Freeway in accordance with: the National Environmental Policy Act of 1969 [42 United States Code Section 4332(2)(c)], Section 4(f) of the Department of Transportation Act of 1966 (49 United States Code Section 303, as amended), and Section 404 of the Clean Water Act of 1977 (33 United States Code Section 1251). The Draft and Final Environmental Impact Statements and Section 4(f) Evaluations: 1) satisfy the Federal Highway Administration’s and Arizona Department of Transportation’s environmental analysis requirements; 2) provide a comparison of the social, economic, and environmental impacts that may result from implementation of the proposed project—construction and operation of a major transportation facility; and 3) identify measures to avoid, reduce, or otherwise mitigate adverse impacts. The Draft and Final Environmental Impact Statements include sufficient preliminary design information to compare alternatives.

Mitigation measures and measures to minimize harm as the result of extensive consultation, avoidance alternatives analyses, and efforts in developing mitigation strategies are presented throughout the Final Environmental Impact Statement to sufficient detail to demonstrate actions leading to impact reduction. Some specifics remained unknown upon publication of the Final Environmental Impact Statement because the design detail was not yet available or because it was procedurally necessary to do so. The final commitments are presented in the Record of Decision. The Arizona Department of Transportation and Federal Highway Administration, by signing the Record of Decision, commit to fulfill all commitments and mitigation measures in the Record of Decision.
Secondary and cumulative impacts of the freeway are reported in the Final Environmental Impact Statement beginning on page 4-179 as defined in 40 Code of Federal Regulations Sections 1508.7 and 1508.8.

The disclosure of secondary and cumulative impacts does not require the Arizona Department of Transportation to propose and implement mitigation measures to address such impacts. Project-specific mitigation measures as proposed to address direct impacts inherently address reduction in such overall impacts as well. The commitments and mitigation measures for the project are described in Table 3, beginning on page 38, of the Record of Decision.
through direct conversion, habitat isolation (addressed below), and native plant loss (addressed below). Also, wildlife typically is displaced, causing either increased competition among species members and/or population reduction.

Furthermore, in discussing habitat isolation, as referenced above, the FEIS merely reiterates its prior conclusions on direct effects, saying only that:

Construction and operation of the proposed action would bisect existing natural habitat for the purposes of a transportation use and, therefore, would contribute to habitat isolation, inhibiting the movement of wildlife for life requirements. This effect would likely be most prevalent in the areas between the South Mountains Sierra Estrella. Id.

In short, the Departments’ purported discussion of cumulative effects on habitat isolation does nothing to further the analysis, since the FEIS merely concludes that, when considering ongoing planned residential, commercial, and transportation developments together, “[t]hese ongoing developments would contribute to continued adverse effects on habitat connectivity. The provision of mitigation for the proposed action in the form of mitigation for [ ] to be situated in cooperation with [ ] and [ ] would minimize impacts attributable to the proposed action.” Id. at 4-184.

The FEIS takes the same approach with regard to analyzing cumulative impacts to plant loss, as noted above, summarily concluding that:

Future residential, industrial, commercial, and transportation projects in conjunction with the proposed action can be reasonably expected to contribute to a loss of native vegetation, as defined and protected under the Arizona Native Plant Act (A.R.S. § 3-301 et seq.). Notably, the proposed action as currently planned would convert natural areas around the South Mountains to a transportation use.

FEIS at 4-184 – 4-185. This form of vague and insufficient cumulative effects analysis continues throughout the cumulative effects section. See, e.g., FEIS at 4-164 (concluding the “over time” development in the southwestern Phoenix will result in a diminishment of vehicle-animal collisions “as habitat decreases and becomes less able to sustain large wildlife populations”); FEIS at 4-185 (observing cumulative impacts on ESA listed species will occur due to proposed SR 30 freeway, but noting only that “NEPA requirements will be addressed in an environmental assessment for that federally funded project”); FEIS at 4-195 (noting that associated development from “other projects” such as “transportation, commercial, and residential developments” would “result in a higher run-off volume and a higher potential for pollutant discharges into receiving waters.”); FEIS at 4-196 (noting that “[o]ngoing planned and permitted residential, commercial, and industrial development in the region would likely continue to place a demand on water availability. The proposed action would have little
Secondary and cumulative impacts of the freeway are reported in the Final Environmental Impact Statement beginning on page 4-179 as defined in 40 Code of Federal Regulations Sections 1508.7 and 1508.8.

Alternatives

In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the systematic alternatives development and screening process presented in Chapter 3 of the Draft and Final Environmental Impact Statements. This process, which occurred early in the environmental impact statement process, was revisited and validated in the Final Environmental Impact Statement (see page 3-2).

The alternatives development and screening process considered the ability of an alternative to minimize impacts on the human and natural environments (see page 3-3 of the Final Environmental Impact Statement). Throughout the process described beginning on page 3-3, environmental impacts are used to eliminate alternatives. In the evaluation of action alternatives (see text beginning on page 3-62 of the Final Environmental Impact Statement) environmental and societal impacts play a substantial role in the identification of the W59 and E1 Alternatives as the Preferred Alternative. In comparison with the other action alternatives studied in detail, the Preferred Alternative is the least harmful alternative.

Land acquisition and relocation assistance services for the project are available to all individuals in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. The implementing regulations for federally funded highway projects are 49 Code of Federal Regulations Part 24. The process for hardship and advanced acquisitions is explained in text on page 4-50 of the Final Environmental Impact Statement. The comment infers that by taking such action, the objective equal consideration of the alternatives studied in detail in the Draft and Final Environmental Impact Statements is tainted. Advanced acquisitions in parallel to a National Environmental Policy Act environmental determination process are not unprecedented and are common practice. In this case, property acquisitions by the Arizona Department of Transportation for purposes of implementing the freeway are done at risk as communicated to the agency by the Federal Highway Administration. If another action alternative had been ultimately selected, the agency would have to place the acquired properties on the market for sale and purchase. The Arizona Department of Transportation attempts to balance the risk against its mission of timely delivery of transportation infrastructure to the traveling public. Further, Federal Highway Administration regulations do not allow the ownership of right-of-way to be a factor in the decision regarding the selection of an alternative.

Unplanned growth is often termed “urban sprawl.” Generally, this term is used in the context of rapid and uncontrolled urban growth onto previously undeveloped land, usually on the outskirts of an existing urban area. Projects like the freeway are often identified as contributors to urban sprawl. Freeway projects are often cited as making land at the urban fringe more accessible and, therefore, more attractive for development. However, examination of data comparing population and land use between 1975 and 2000 suggests major transportation projects like

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Appendix A

A349

Code Comment Document

33 (cont.) the freeway do not induce growth in the region (see Final Environmental Impact Statement pages 4-179 through 4-183). The freeway will be implemented in a historically quickly urbanizing area (most noticeably in the Western Section of the Study Area, although the nationwide recession which began in 2007 slowed growth). In the Eastern Section of the Study Area, the freeway will abut public parkland, Native American land, and a near-fully developed area; therefore, any contribution to accelerated or induced growth will be constrained. The freeway will be built in an area planned for urban growth as established in local jurisdictions’ land use plans for at least the last 25 years.

34 Alternatives

The proposed action was not wrongfully segmented. As discussed in text beginning on page 3-11 of the Final Environmental Impact Statement, the South Mountain Freeway has logical termini and independent utility.

35 Section 4(f) and Section 6(f)

Chapter 5 of the Draft and Final Environmental Impact Statements presents the Section 4(f) evaluation for the South Mountains in terms of the resource’s protection as a Section 4(f) resource as a regional park, historic property, and traditional cultural property.

The freeway will pass through the park’s southwestern edge. Section 4(f) of the Department of Transportation Act of 1966 extends protection to significant publicly owned public parks, recreation areas, and wildlife and waterfowl refuges, as well as significant historic sites, whether they are publicly or privately owned. This protection stipulates that those facilities can be used for transportation projects only if there is no prudent and feasible alternative to using the land and the project includes all possible planning to minimize harm to the land [see Final Environmental Impact Statement, Chapter 5, Section 4(f) Evaluation]. Such alternatives to avoid the Phoenix South Mountain Park/Preserve were identified, but were determined to not be feasible and prudent alternatives to avoid the use of the park. Use of a portion of the mountains for the purposes of the freeway represents two-tenths of one percent of the total mountain range (31.3 acres of the park’s approximately 16,600 acres; see Final Environmental Impact Statement pages S-39 and 5-31). Since 1988, and as part of this environmental impact statement process, several measures have been undertaken and will be undertaken to further reduce effects on the mountains. These measures, including narrowing the design footprint, acquiring replacement land immediately adjacent to the mountains, and providing highway crossings, are outlined in text beginning on page 5-23 of the Final Environmental Impact Statement. Phoenix South Mountain Park/Preserve will remain the largest municipally owned park in the United States. The activities that make the park a highly valued resource (recreational activities, interaction with the Sonoran Desert) will remain. Nine-tenths of a mile of the freeway will pass through the park’s southwestern edge (see Final Environmental Impact Statement page 5-13).

When there is a direct use (take) of a Section 4(f) property, such as Phoenix South Mountain Park/Preserve, analysis to determine whether proximity impacts would result in a constructive use is not applicable (23 Code of Federal Regulations § 774.15). As noted in response code 2, the Department of the Interior reviewed the Final Environmental Impact Statement and agreed with the conclusions presented. The complete letter can be found in page A5 of this Appendix A.

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These historic sites include the whole of the SNMP and places and sites recognized as traditional cultural properties (TCPs) under Section 106 of the NHPA, as well as certain sites within the SNAP and elsewhere. The Departments have failed to meaningfully examine the impact of the proposed project on the integrity and purposes of these historic sites or undertake the appropriate planning required by law to minimize for such impacts. This also violates the NHPA and its implementing regulations, as well as NEPA and Section 4(f).
Section 4(f) and Section 6(f)

Chapter 5 of the Draft and Final Environmental Impact Statements presents the Section 4(f) evaluation; discussion of direct and constructive use is fully disclosed throughout the chapter.

As noted in response code 2, the Department of the Interior reviewed the Final Environmental Impact Statement and agreed with the conclusions presented. The complete letter can be found in page A5 of this Appendix A.
direct or constructive use of these resources and therefore, the Departments determined that no measures to minimize harm to these resources is warranted. See id.

Furthermore, in relation to SMPP, the Departments acknowledge that the E1 Alternative would result in the direct use of SMPP, but then unlawfully limit their analysis of the “use” to only those 31.3 acres to be directly (physically) impacted by the project, instead of examining the larger and more substantial impacts to the uses of the Park as a whole (such as recreation, hiking, horseback riding, historical integrity, solitude and quiet enjoyment, wildlife viewing and the preservation of the unique Sonoran Desert ecosystem), concluding under § 774.15, that, “as a rule, applicable in this case, when direct use of a Section 4(f) resource would occur, analyses to determine whether proximity impacts would result in constructive use is no longer applicable.” Sec. 4(f) Analysis at 5:17 (emphasis added). This unduly narrow interpretation of the constructive use test strains the bounds of reason and is inconsistent with the purpose of the Transportation Act itself and applicable rulings from the Ninth Circuit.26

1. Impacts to Resources Other Than SMPP

While the Departments identify a multitude of resources afforded protection under Section 4(f) within the Study Area, they determine, with virtually no substantive analysis, but only conclusory statements, that no constructive uses of these resources would occur. This violates the requirements of Section 4(f).

The standards for determining whether a “constructive use” of resources will occur are outlined in § 774.15. Specifically, a constructive use occurs when:

[The transportation project does not incorporate land from Section 4(f) property, but the project’s proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished.

In this instance, with regard to the multiple public parks, NRHP eligible historic places (including Traditional Cultural Properties), recreational trails, and public school recreational facilities to be impacted by the project, the Departments simply conclude that, irrespective of the construction and presence of a large multiple lane freeway nearby (in many instances less than 1,000 feet from the resources or less), none of the action alternatives would result in the constructive use of these resources. This in turn, conveniently obviates the need for the Departments to determine under Section 4(f) whether measures to minimize the harm are warranted under the law. This fatal flaw permeates the entire Section 4(f) analysis and must be corrected.

26 Even the FHWA’s own policy does not support this constrained review. See Appendix A – Excerpt from FHWA Section 4(f) Policy Paper, FHWA Office of Planning, Environment and Realty: Project Development and Environmental Review (March 1, 2005).
Chapter 5 of the Draft and Final Environmental Impact Statements presents the Section 4(f) evaluation. The freeway will not have a direct impact on these trails because it will span the trails. The trails' importance as Section 4(f) resources is based on their recreational value and is not based on any noise-sensitive activities or viewed characteristics. During construction, trails that will be spanned or will be near potential freeway construction will be closed for limited times for safety reasons. Closures will necessitate that trail users detour around construction sites to rejoin the trails farther along their length. These impacts would be defined as temporary occupancy under the exceptions of Section 4(f) identified in 23 Code of Federal Regulations § 774.13. Subsection (d) details that “temporary occupancies of land that are so minimal as to not constitute a use within the meaning of Section 4(f)” would be an exception if certain conditions are met. The project will meet those conditions (see Appendix 5-2 in Volume II of the Final Environmental Impact Statement).

As noted in response code 2, the Department of the Interior reviewed the Final Environmental Impact Statement and agreed with the conclusions presented. The complete letter can be found in page A5 of this Appendix A.
Chapter 5 of the Draft and Final Environmental Impact Statements presents the Section 4(f) evaluation for the South Mountains in terms of the resource’s protection as a Section 4(f) resource as a regional park, historic property, and traditional cultural property.

The freeway will pass through the park’s southwestern edge. Section 4(f) of the Department of Transportation Act of 1966 extends protection to significant publicly owned public parks, recreation areas, and wildlife and waterfowl refuges, as well as significant historic sites, whether they are publicly or privately owned. This protection stipulates that those facilities can be used for transportation projects only if there is no prudent and feasible alternative to using the land and the project includes all possible planning to minimize harm to the land [see Final Environmental Impact Statement, Chapter 5, Section 4(f) Evaluation]. Such alternatives to avoid the Phoenix South Mountain Park/Preserve were identified, but were determined to not be feasible and prudent alternatives to avoid the use of the park. Use of a portion of the mountains for the purposes of the freeway represents two-tenths of one percent of the total mountain range (31.3 acres of the park’s approximately 16,600 acres; see Final Environmental Impact Statement pages 5-39 and 5-31). Since 1988, and as part of this environmental impact statement process, several measures have been undertaken and will be undertaken to further reduce effects on the mountains. These measures, including narrowing the design footprint, acquiring replacement land immediately adjacent to the mountains, and providing highway crossings, are outlined in text beginning on page 5-23 of the Final Environmental Impact Statement. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. Phoenix South Mountain Park/Preserve will remain the largest municipally owned park in the United States. The activities that make the park a highly valued resource (recreational activities, interaction with the Sonoran Desert) will remain.

Nine-tenths of a mile of the freeway will pass through the park’s southwestern edge (see Final Environmental Impact Statement page 5-13).

As noted in response code 2, the Department of the Interior reviewed the Final Environmental Impact Statement and agreed with the conclusions presented. The complete letter can be found in page A5 of this Appendix A.
The Departments appear to base their erroneous legal conclusion on an overly narrow interpretation of the definition of "constructive use" found at § 714.15(a), which provides in relevant part:

A constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project’s proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. [Emphasis added].

Thus, it appears that the Departments believe that because (in this instance) the project would incorporate land within the SUPP, they are relieved of any obligation to perform a constructive use analysis under § 714.15 of other areas of uses of the Park. The law does not support this conclusion.

First, what ADOT and the FHWA have essentially concluded strains the bounds of common sense and runs contrary to the purpose of the statute, which is, after all, to ensure that a “special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”  49 U.S.C. § 303(a). Indeed, under the Departments reading of the rule, they would be required to conduct a constructive use analysis where a freeway runs right up to or along the boundary of a Section 4(f) resource like a park, but would have absolutely no obligation to consider the project’s proximity impacts where the freeway actually runs through the park, as is the case here.

The unwarranted nature of this position hardly requires further analysis, and indeed, it has been rejected in the past by the Ninth Circuit in any event. For example, in Adaer, 675 F.2d at 1002, the Ninth Circuit observed Section 4(f) requires "far more than calculating the number of acres to be asphalted", noting that “the location of the affected areas in relation to the remainder of the parkland may be a more important determination than the number of acres affected.” Quoting D.C. Federation of Civic Associations, 459 F.2d at 1239 (internal quotation marks omitted).

Finally, under 714.15(e), it is clear that the potential for constructive use of SUPP and its important resources has already been anticipated by the FHWA, and determined in this case. It matters not that the freeway is actually "incorporating lands" of the Park as opposed to circling or running along side the Park. Specifically, 714.15(e) provides in part:

The Administration has reviewed the following situations and determined that a constructive use occurs when:

(1) The projected noise level increase attributable to the project substantially interferes with the use and enjoyment of a noise sensitive facility of a property protected by Section 4(f), such as:
   (i) Hearing the performances at an outdoor amphitheater.
(ii) Sleeping in the sleeping area of a campground;
(iii) Enjoyment of a historic site where a quiet setting is a generally recognized feature or attribute of the site's significance;
(iv) Enjoyment of an urban park where serenity and quiet are significant attributes; or
(v) Viewing wildlife in an area of a wildlife and waterfowl refuge intended for such viewing.

(2) The proximity of the proposed project substantially impairs esthetic features or attributes of a property protected by Section 4(f), where such features or attributes are considered important contributing elements to the value of the property. Examples of substantial impairment to visual or esthetic qualities would be the location of a proposed transportation facility in such proximity that it obstructs or eliminates the primary views of an architecturally significant historical building, or substantially detracts from the setting of a Section 4(f) property which derives its value in substantial part due to its setting . . . .

(3) The project results in a restriction of access which substantially diminishes the utility of a significant publicly owned park, recreation area, or a historic site.

It is sufficient to say that none of these proximity impacts where evaluated in any meaningful way, since the Departments concluded that applicable law did not require such an evaluation. This is a deep failing in the Section 4(f) analysis that must be corrected.

B. The Departments Have Failed to Ensure that All Possible Planning to Minimize Harm to 4(f) Resources Has Been Undertaken as Required By §774.3(a)(2).

ADOT and the FHWA are required, prior to the issuance of the Record of Decision, to ensure that the action "includes all possible planning, as defined in 774.17, to minimize harm to the property resulting from such use . . . ." §774.3. In this respect, "all possible planning" means that "all reasonable measures identified in the Section 4(f) evaluation to minimize harm or mitigate for adverse impacts and effects must be included in the project." §774.17.

Setting aside all of the failings already described here, which have resulted in the gross failure of the Departments to even consider the need for minimization of harm to most of the 4(f) resources impacted by this project, the Departments also fail far short where they look to the mitigation measures outlined in the FEIS to cure their failure to ensure that "all possible planning" has already been undertaken to minimize harm or mitigate for those few adverse impacts they admit will occur as a direct result of the construction and ultimate physical presence of the proposed freeway, such as landscape alteration, intrusion, access, and habitat connectivity, and historic resources.
For the same reasons outlined by PMPC regarding the Departments’ decision to “pursue” mitigation to future planning opportunities after NEPA, as discussed in Section 6(8) of this letter, this approach similarly fails to meet the obligations of § 774.17, for purposes of Section 4(f).²²

IV. Conclusion

In conclusion, PMPC opposes any alignment of the Loop 202 South Mountain Freeway that would trespass onto the South Mountain Park/Preserve or result in the destruction of ridgelines or lands within Park. SMPP is undoubtedly unique and must remain a place for people and wildlife, not freeways, roads and concrete.

ADOT and the FHWA have failed to fulfill their statutory obligations under NEPA, Sec. 4(f) and other applicable provisions of law. For this reason, PMPC urges the Departments to take a step back and revisit the FEIS and the Section 4(f) process in order to meaningfully address the serious failings in these documents. Nothing less complies with the Department’s obligations under the law. Nothing less will preserve the integrity SMPP and by corollary, our community’s own values that have long recognized and appreciated our natural landscapes, historic sites and traditional cultural properties, parks and recreational facilities.

Yours Truly,

Robin Salishouse
President
Phoenix Mountain Preservation Council, Inc.

CC: Executive Board, Phoenix Mountain Preservation Council, Inc.
    S. Montgomery, Esq.

²²Furthermore, the Departments have failed to meaningfully examine and consider “prudent alternatives” to the use of the 4(f) lands described in this letter, as required by § 774.3(e)(1), just as they have failed to consider reasonable alternatives under NEPA.
ATTACHMENT A

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<thead>
<tr>
<th>Code</th>
<th>Issue</th>
<th>Response</th>
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<td>41</td>
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<td>Attachment.</td>
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The section, General Impacts on Vegetation, Wildlife, and Wildlife Habitat, beginning on page 4-136 of the Final Environmental Impact Statement, discloses by what means the proposed action and its alternatives would affect vegetation, wildlife, and wildlife habitat. The Federal Highway Administration and Arizona Department of Transportation have committed to avoiding and reducing impacts by including multifunctional crossing structures designed for wildlife and for limited human use as well as culverts designed for connectivity for smaller species.

Invasive Species

The Arizona Department of Transportation requires standard mitigation measures to prevent the spread of invasive plants on long-term ground disturbing projects. Invasive species surveys will be conducted during the design phase of the freeway (see page 4-127 of the Final Environmental Impact Statement and Table 3, beginning on page 38, of the Record of Decision). If noxious or invasive species are found to be present in the project footprint during that survey, a measure requiring the contractor to develop and implement an invasive and noxious species control plan would be included in the construction contract. Because the species and locations of invasive plants are likely to change in the period prior to initiation of construction of the freeway, delaying the survey until closer to that time will provide a more effective and efficient use of limited taxpayer funds. Mitigation measures to prevent the introduction of invasive species seeds are presented on page 4-139 of the Final Environmental Impact Statement. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision.

1. Fragmentation of Habitat

Roads often decrease the genetic diversity of affected populations due to reduced population size and genetic drift. 1 Like animals, plant communities exist, providing genetic conduits between individuals and populations for many plant species. Although there are limited studies done in our region, the presence of a genetic corridor for individual species is an important population dynamic. With loss of habitat and corresponding fragmentation, genetic bottlenecking can be expected, reducing the population vigor and possibly increasing the risk of local extinction. How it affects certain species, such as those whose pollen and seed dispersal are more limited, is not known. For example, recent studies have suggested that the elephant tree (Bursaria spinifolia) populations are represented by plants that are mainly female (that only produce fruit) or male flowers, but sometimes hermaphroditic (flower has both male and female functional parts); plants may also have flowers that change sexes with external factors such as severe frost. This plant is known to occur in the impact zone of the Loop 202 within South Mountain Park. How further fragmentation within the Park and from surrounding mountain ranges such as the Sierra Estrella and White Tank Mountains affects this special plant of South Mountain and its insect pollinators is unknown. Such fragmentation of habitat and its impact on connectivity of plant populations are not addressed in the FEIS.

II. Invasive Species

Roads and road verges serve as dispersal corridors in plants, including exotic species (Holderegger & DiGullo, 2010). The potential conduit function of roads depends on the habitat specificity of the spreading species, its dispersal range relative to the spacing of roads in the landscape, and the relative importance of long- and short-range dispersal. Effective management of an invasion requires distinguishing between the habitat and conduit functions, a distinction difficult to make with only snapshot data. 2 None of this was addressed in the FEIS.

The proposed highway loop 202 will act as a major corridor for invasive species dispersal and establishment via the tremendous habitat disturbance, vehicular traffic, and the increased access to this southwest side (which has previously experienced


relatively minimal influence from development. Disturbance-tolerant species predominate, especially with intensive management adjacent to highways, and exotic species typically are common. 3 Hansen and Clevenger (2005) showed how compared to forests, highway corridor edges in arid or semi-arid habitats act as microhabitats for non-native species and are more prone to invasion, especially if disturbed. The study’s results emphasize the importance of minimizing the disturbance of adjacent plant communities along highways and railways during construction and maintenance, particularly in arid or semi-arid habitats and in areas sensitive to additional fragmentation and habitat loss, such as that found in South Mountain. 4 The only mitigation addressing invasive species in the FEIS was to have the construction equipment cleaned. This is unacceptable; further discussion and proposed actions to minimize disturbance of plant communities adjacent to corridor should have been addressed in the FEIS.

In addition, the following statements can be applied to Loop 202 with respect to invasive species:

- Numerous seeds are carried and deposited along roads by vehicles. 5
- Plants may also spread along roads due to vehicle-caused air turbulence or favorable roadside conditions. 6 For example, the short-distance spread of an exotic wetland species, purple loosestrife (Lythrum salicaria), along a New York highway was facilitated by roadside ditches, as well as culverts connecting opposite sides of the highway and the median strip of vegetation.
- Non-authorized hiker/biker access encourages disturbance and increase in accidental seed dispersal for invasive species establishment and proliferation.
- Nutrient enrichment from nearby agriculture enhances the growth of aggressive weeds and can be a major stress on a roadside native-plant community (Panetta FD, Hopkins AJM. 1991, pp. 341–351).

None of the above has been addressed in the FEIS.

Finally, I found that there are relatively few invasive species in this area, an observance of significance especially following an epic summer precipitation pattern that would have encouraged establishment and spread of invasive species.

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Appendix A

Code Comment Document

III. Fire

Human access and disturbance effects on remote areas tend to increase with higher road density. Similarly, human-caused fire ignitions may increase. Fires, which are fueled by invasive species and often ignited by humans along such corridors, have devastating impacts on the local Sonoran Desert flora, including the iconic saguaros. Once established, alien grasses such as buffelgrass (Pennisetum ciliare) and Saharan mustard (Brassica tournefortii) may contribute to a grass/fire cycle; a short fire return interval can cause local extinctions of saguaros (Carnegia gigantea) and foothills paloverde (Cercidium microphyllum), the latter, along with several other small shrubs such as bunchgraze (Ambrosia deltoidea, A. dumosa), are important nurse plants for saguaro seedlings and young plants.

IV. Floristic Analysis

A bare-bones, poor floristic analysis was provided in the FEIS, which included only an assessment of some of the major species in the various habitats provided by a "biologist." I conducted a two-hour reconnaissance of the area and following a quick referral to SEINet herbarium database, I listed at least 75 species as occurring in the impacted area. In addition, I located several areas supporting biological soil and desert pavement in the impacted area, which was not addressed in the FEIS.

Regarding whether or not a Park visitor’s experience will be negatively affected by the Loop 202, the response was that there would be “no impact for the visitor to have a Sonoran Desert experience.” What is a Sonoran Desert experience? The experience involves not only seeing, touching and/or smelling, but also listening to Sonoran Desert sounds and lack of sounds, save for birds, insects and other inhabitants. It also involves being present in an area whose indications of impacts, such as roads, car noise and pollution are minimal at best. Five major trails are within 1/4 of a mile of this multi-lane roadway. Increased traffic leads to an increased establishment and pervasiveness of invasive species that leads to increased fire risk and frequency. All of this lead towards changing the Sonoran Desert ecosystem from a diverse assemblage of cacti, shrubs, trees and annuals, to a less diverse scrub-alien grassland plant community. This also changes the visitors’ opportunity to experience the Sonoran Desert as we knew it. To say that Park visitors will not have their experience in the desert impacted is ludicrous.

V. Disposition of Plants Affected And Follow-Up Maintenance

Although the FEIS states that ADOT will contact the Arizona Department of Agriculture regarding what plants will be affected, there is no statement as to what options they will have (i.e., transplanting or allowing salvage), and depending on the

44 Biology, Plants, and Wildlife
Comment noted. See response code 40 related to invasive species.

45 Section 4(f) and Section 6(f)
As stated in the Council on Environmental Quality’s Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, environmental impact statements should be analytic rather than encyclopedic [40 Code of Federal Regulations Part 1502.2(a)]. The discussion included in the Final Environmental Impact Statement appropriately illustrates the plant communities present in the Study Area.

The context and attributes of the South Mountains are described in the Final Environmental Impact Statement. The acreage of parkland to be converted to a transportation use is reported on page 5-14 in the section, Direct Use. It is reported that 31.3 acres, or just less than 0.2 percent of the parkland, will be converted to a transportation use (this is a reduction in the amount of use planned for in 1988).

The text goes on to point out other concerns associated with the direct use reported, and text on page 5-14, in the sidebar, "The South Mountains in Phoenix’s Sonoran Preserve System," describes the importance of Phoenix South Mountain Park/Preserve in the region. Beginning on page 5-23 in the section, Measures to Minimize Harm, measures are presented to be undertaken to address the use impacts, including land replacement, on properties adjacent to the park.

City of Phoenix planning efforts since the mid-1980s illustrate an awareness of the potential for the proposed freeway to affect Phoenix South Mountain Park/Preserve. In 1989, the South Mountain Park Master Plan was adopted by the Phoenix City Council. The master plan shows the freeway alignment as adopted by the State Transportation Board in 1988. In 1990, the Phoenix Mountain Preserve Act was ratified by the Arizona Legislature. The Act did not apply to roadways through a designated mountain preserve if the roadway was in the State Highway System prior to August 15, 1990. The proposed freeway was in the State Highway System prior to 1990. Records prior to the Act suggest a primary reason for the exception was to allow the proposed freeway to go through Phoenix South Mountain Park/Preserve (see page 5-14 of the Final Environmental Impact Statement). The project team examined alternatives to avoid the park, but did not identify any feasible and prudent alternatives to avoid impacts. The Arizona Department of Transportation continues to work with park stakeholders to minimize impacts and address concerns. Measures to minimize harm to the park were developed (see Final Environmental Impact Statement, starting on page 5-23).

The U.S. Department of the Interior reviewed the Final Environmental Impact Statement and commented, “The Department agrees that the South Mountain Park and Preserve (SNPP) is a Land and Water Conservation Fund (LWCF) assisted site that will be directly impacted by the subject project. These documents assess the direct use of park land for freeway purposes to be 31.3 acres. We agree with the conclusions stated. We note that the “Measures to Minimize Harm” on the Section 4(f) Statement pages 5-23, 5-24, and 5-25 have annotated a commitment to provide replacement land for the converted park land. The Department concurs with the assessment of the impacts to the LWCF-assisted resource and acknowledges the mitigation commitment.”

III. Fire  

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IV. Floristic Analysis  

A bare-bones, poor floristic analysis was provided in the FEIS, which included only an assessment of some of the major species in the various habitats provided by a "biologist." I conducted a two-hour reconnaissance of the area and following a relatively quick reexamination of SERNET herbarium database, I listed at least 75 species as occurring in the impacted area. In addition, I located several areas supporting biological soil and desert pavement in the impacted area, which was not addressed in the FEIS.

Regarding whether or not a Park visitor’s experience will be negatively affected by the Loop 202, the response was that there would be "no impact for the visitor to have a Sonoran Desert experience." What is a Sonoran Desert experience? The experience involves not only seeing, touching and/or smelling, but also listening to Sonoran Desert sounds and lack of sounds, save for birds, insects and other inhabitants. It also involves being present in an area whose indications of impacts, such as roads, car noise and pollution are minimal at best. Five major trails are within 2% of a mile of this multi-lane roadway. Increased traffic leads to an increased establishment and pervasiveness of invasive species that leads to increased fire risk and frequency. All of this leads towards changing the Sonoran Desert ecosystem from a diverse assemblage of cacti, shrubs, trees and annuals, to a less diverse scrub-alien grassland plant community. This also changes the visitor’s opportunity to experience the Sonoran Desert as we knew it. To say that Park visitors will not have their experience in the desert impacted is ludicrous.

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46 Biology, Plants, and Wildlife

Improved techniques and knowledge regarding the transplanting of salvaged native plants in Arizona have increased survival rates. The Arizona Department of Transportation has considerable experience transplanting native plants protected by the Arizona Native Plant Law and has experienced a high survival rate. The Arizona Department of Transportation has conducted studies on the best methods to use for transplanting desert species, particularly ironwood trees and saguaros, and was honored by the American Society of Landscape Architects in 2012 for this work. The research results have been incorporated in the procedures for plant salvage for Arizona Department of Transportation projects and throughout the industry. Reports on the research findings are available from the Arizona Department of Transportation Research Center at <azdot.gov/planning/researchcenter/research/research-reports>.

There is a plan and budget for landscaping and maintenance along the project. The specific questions are noted. These details will be determined during the final design, construction, and maintenance periods of the project.

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Controlling and treating runoff is a normal function of Arizona Department of Transportation projects. The U.S. Army Corps of Engineers, as a cooperating agency, has participated and contributed in each step of the environmental process. The agency has found the logical sequence of decision making to be sound and in line with National Environmental Policy Act requirements. The Arizona Department of Environmental Quality has also contributed to the process. Both agencies have oversight roles in project permitting as established in the Clean Water Act (Sections 401, 402, and 404). Extensive mitigation in accordance with the permitting requirements can be found in the Water Resources and Waters of the United States sections of Chapter 4 of the Final Environmental Impact Statement. These commitments are confirmed in Table 3, beginning on page 38, of the Record of Decision. The Arizona Department of Transportation is fully obligated and committed to implementation and adherence to those mitigation strategies.

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### Area Pollutants

Runoff pollutants alter soil chemistry and may be absorbed by plants, the effects of which are poorly known amongst desert plants but varying amongst species. Sticks adjacent to the road surface typically contain the greatest mass of heavy metals. In one study, elevated concentrations in grass tissue may occur within 5–8 m of a road, although high lead levels were found in soil out to 25 m. As far as I can tell, this was not addressed in the FEIS. Road dust (which is little-studied) sediment transfer may directly damage vegetation, provide nutrients for plant growth, or change the pH and vegetation. Effect-distances are usually <10–20 m but may extend to 200 m downwind. In arid lands such as the South Mountain area, soil erosion and drainage are common road problems.

6 How pollutants and dust can affect the native plants along Loop 202 was not addressed in the FEIS.

Finally, this development of another major freeway mirrors that of a larger policy of most, if not all highway developments in the U.S., where environmental transportation policy largely ignores a range of ecological issues including biodiversity loss, habitat...
fragmentation and disruption of horizontal natural processes (which contrasts sharply with a policy that focuses on recreating “nature, including natural processes and biodiversity, and enhancing the national ecological network” as is found in the Netherlands). It was very clear that the FEIS paid little attention to plants and plant communities and how they would be affected by the construction of Loop 202, short-term, let alone, long-term consequences were not addressed and any mitigation offered was of little import.
December 29, 2014

South Mountain Freeway Project Team
Arizona Department of Transportation
1655 West Jackson Street, MD 126F
Phoenix, AZ 85007
Submitted via electronic mail to projects@azdot.gov

Re: Comments on the South Mountain Freeway Final Environmental Impact Statement and Errata

Dear South Mountain Freeway Project Team:

Thank you for the opportunity to review and comment on the Final Environmental Impact Statement (FEIS) for the South Mountain Freeway (Loop 202). Please accept these comments on behalf of Sierra Club’s Grand Canyon Chapter and our more than 35,000 members and supporters.

The Sierra Club’s mission is “to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth’s ecosystems and resources; and to educate and enlist humanity to protect and restore the quality of the natural and human environments.” Our members have a significant interest in and are directly affected by the proposed South Mountain Freeway and its impacts on air quality, public health, native plants and animals, South Mountain Park, and other natural resources. Many of our members enjoy watching wildlife, hiking, and other outdoor and educational activities on the lands affected by this proposed project.

The information presented in the FEIS and associated Errata is disappointing, inadequate, and non-responsive. Relatively few changes or clarifications were made from the Draft Environmental Impact Statement (DEIS) to the FEIS. The fact that the Arizona Department of Transportation (ADOT) failed to consider Sierra Club’s comments when preparing the FEIS and that an Errata had to be issued indicates quite clearly that our comments were not adequately considered or incorporated into the FEIS. In the Errata, responses to our comments focused primarily on justifying the project, rather than on responding to the issues that we raised. Additionally, the only changes that were made in the FEIS relative to our comments were due to the same points being raised in other people/organization’s comments. In some cases, clarification or a response to a specific point we made were included in the Errata, but these changes were not made in the FEIS. Further, a number of our questions and comments were not addressed in the responses in the Errata.

Sierra Club’s comments here will primarily address some of the information presented in the FEIS and Errata, but will also reiterate previous comments that were not adequately addressed in the FEIS and where ADOT was nonresponsive. Please refer to our comments on the DEIS for a complete list of our concerns. We incorporate by reference the Sierra Club comments on the DEIS dated July 24, 2013.

Comments noted. Responses to specific comments are provided in the following pages.
Appendix A • Code Comment Document

2 As Sierra Club stated in its comments on the he National Environmental Policy Act (NEPA) requires the lead agency, ADOT, to “[d]iligently explore and objectively evaluate all reasonable alternatives,” including those that are “not within the jurisdiction of the lead agency” (40 C.F.R. §1502.14(a) and (c)). The Study Area for the proposed South Mountain Freeway was arbitrarily limited with no real justification for doing so as ADOT did not seriously consider addressing transportation issues via improving infrastructure outside the Study Area, how Highway 85 could address transportation needs, not how improved mass transit both in and outside the Study Area could improve transportation. On the east end of the project, the Study Area was narrowed inappropriately to basically limit the freeway to the Preferred Alternative and No Action Alternative. ADOT failed to meet this basic NEPA requirement as it did not rigorously explore and evaluate all reasonable alternatives.

ADOT inappropriately excluded other alternatives from further and more detailed consideration in violation of 40 C.F.R §1502.14. These alternatives should have included other locations and alignments. However, we agree that alignment on the Gila River Indian Community lands is inappropriate and would likely have many of the same negative impacts as the Preferred Alternative, so that alternative was appropriately excluded from further consideration. ADOT basically limited the analysis to the one type of development and the one area it wants to build the freeway,1 which was clearly predecisional. The agency evaded a response to this comment in the FEIS.

In the FEIS, ADOT also failed to adequately analyze an alternative or alternatives that would include increased funding for public transportation options such as fuel-efficient buses and light rail or commuter rail projects to address transportation needs. ADOT failed to consider transit-oriented development to integrate public transit, land use (residential, commercial, industrial, open-space), and the environment or to encourage innovative incentive-based programs that encourage walking, biking, carpooling, or the use of public transportation.

Based on the information provided in the FEIS and the Errata, and as noted in our previous comments, the proposed freeway is inappropriate for this area. The proposed freeway will not meet the Purpose and Need of this project, will further exacerbate air quality and public health concerns, will further fragment the landscape, will negatively impact natural resources, will negatively affect cultural resources and practices, and more. These impacts were not adequately addressed the FEIS as required by NEPA. The information presented indicates that the No Action Alternative is the only reasonable alternative at this time.

Proposed Action and Alternatives

ADOT continually points to the “benefits” of the Preferred Alternative, yet many of these presumed benefits are not justified by the information provided in the FEIS. This was one of our primary comments on the DEIS. For example, the notes in the Errata refer to Table 3-9 (FEIS, p. 3-38) for benefits of the proposed action compared to the No Action Alternative. However, many of the statements in this table are clearly slanted toward selection of an action alternative without adequate justification, use of the best available science, or current research provided in the text. Only a few of these “benefits” are backed up by numbers or by current research.

1 See question/answer 2a of “Forty Most Asked Questions Concerning CEQ’s NEPA Regulations”: “In determining the scope of alternatives to be considered, the emphasis is on what is ‘reasonable’ rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the viewpoint of the applicant.)

3 The parameters for delineation of the Study Area are described in Chapter 1, Purpose and Need, of the Draft and Final Environmental Impact Statements as the area defining the transportation problem. As presented in the chapter, transportation models were used to determine where the characteristics of the transportation problem would diminish, and, generally, it is at these locations where the definition of the Study Area took shape. This effort was coordinated with stakeholder agencies, including the U.S. Environmental Protection Agency. The statement that the project team excluded alternatives outside of the Study Area is not supported by the facts presented in the Draft Environmental Impact Statement. Alternatives considered in the Draft Environmental Impact Statement included many that were located outside of the Study Area. Examples include the Riggs Road Alternative (see page 3-9), the State Route 85/Interstate 8 Alternative (see page 3-9), the U.S. Route 60 Extension (see page 3-12), the Interstate 10 Spur (see page 3-12), and the Central Avenue Tunnel (see page 3-12). In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process presented in Chapter 3 of the Draft Environmental Impact Statement. This process, which occurred early in the environmental impact statement process, was revisited and validated in the Final Environmental Impact Statement (see page 3-2).

4 Alternatives, Purpose and Need

The study has considered a variety of transportation modes: transportation system management/transportation demand management, mass transit (commuter rail, light rail, expanded bus service), arterial street improvements, land use controls, and a No-Action Alternative. These alternatives alone or in combination would have limited effectiveness in reducing overall traffic congestion in the Study Area and, therefore, would not meet the purpose and need criteria; specifically, they would not adequately address projected capacity and mobility needs of the region. Mass transit modes such as light rail and an expanded bus system were reexamined in the Final Environmental Impact Statement and were eliminated from further study because even better-than-planned performance of transit would not adequately address the projected 2035 travel demand (see Final Environmental Impact Statement page 3-4). For example, the average daily ridership for the light rail system connecting downtown Phoenix and the Arizona State University campus was approximately 44,000 in 2014. This is only approximately 25 percent of the total daily vehicles projected to use the freeway in 2035.

5 National Environmental Policy Act Process

The environmental impact statement process followed the National Environmental Policy Act and Federal Highway Administration’s implementing regulations for conducting social and economic evaluations. The impacts associated with the proposed action are appropriately disclosed in the Final Environmental Impact Statement.

Alternatives, Purpose and Need

The basis for the identification of the Preferred Alternative is presented beginning on page 3-62 of the Final Environmental Impact Statement. The identification was based on sound analytical methods such as the Maricopa Association of Governments regional travel demand model. In reaching its determination, the

(Response 5 continues on next page)
previous studies. Similarly, ADOT repeatedly states that the proposed freeway would decrease energy consumption and improve air quality in the region, but these statements are based on general information or assumptions, not on relevant research or by past experience with freeway construction in the Phoenix-metropolitan area. ADOT cannot justify a project based on inadequately grounded assumptions and without using the best available science.

As noted in our previous comments, an alternative that focuses on increased transit was not adequately considered. Although ADOT appears to have considered increased transit as part of its alternatives analysis in the FEIS, such an alternative was eliminated from further study because it “would not adequately address the projected 2035 travel demand” (Errata, p. C5). Related to this, ADOT notes that two high-capacity transit corridors are currently being considered but will not meet the 2035 travel demand. Certainly, these two corridors on their own could not meet the travel demand. However, if implemented appropriately, increased transit could provide significant congestion relief and meet other requirements described in the Purpose and Need, especially over the long term. However, because ADOT continually focuses on freeway development and has not begun to adequately implement transit within our region, transit-oriented alternatives are pushed to the back burner. If ADOT were to begin focusing more on transit and other alternative modes of transportation, transit could become a viable option. As noted in our previous comments, transit would also provide a long-term solution, far beyond the 2035 timeframe discussed in this proposal. ADOT must begin to focus more on alternative modes of transportation. This project provides an ideal opportunity to do so and ADOT should have considered such an alternative.

In many of its responses to Sierra Club comments, ADOT states that impacts do not need to be analyzed because the magnitude of these impacts would be similar across all action alternatives (e.g., Errata, p. C47). However, this is not the point of an EIS. The point of an EIS is to provide full disclosure of the potential impacts of a proposed project when compared to the baseline (No Action Alternative). ADOT failed to provide adequate information about potential impacts of selecting an action alternative.

Air Quality

The FEIS and Errata are nonresponsive to air quality concerns raised by Sierra Club in our comments on the DEIS.

In the Errata, ADOT merely restated the same language that appeared in the DEIS in several of its responses to Sierra Club comments regarding air quality. These comments were nonresponsive and make it clear that ADOT did not take our comments into consideration in developing the FEIS and that it is not able to provide further information relative to the questions we asked and concerns we raised and therefore has not done its due diligence relative to NEPA.

ADOT continually states that energy consumption and related air pollution would decrease if an action alternative were selected as congestion would be decreased in the region. However, as discussed in our previous comments, these statements neglect other projects currently occurring across the region, including transit projects, as well as planned or potential efforts to reduce congestion and to meet travel demands, and therefore do not address the indirect or cumulative impacts of the proposed action. Additionally, anticipated “benefits” from this project, such as congestion relief, would be short-lived, at best. This is not recognized in the FEIS. Over the long-term, this freeway would increase energy consumption and associated air pollution.

The Arizona Department of Transportation sought to balance its responsibilities to address regional mobility needs while being fiscally responsible and sensitive to local communities.

As noted in the Final Environmental Impact Statement, when compared with the No-Action Alternative, the Preferred Alternative would result in less energy consumption (page 4-172). Increased levels of congestion (greater inefficiency) under the No-Action Alternative would result in higher energy consumption than with any of the action alternatives.

The Arizona Department of Transportation does not claim that the project will improve air quality in the region. The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM_{2.5}) and followed U.S. Environmental Protection Agency guidelines. The carbon monoxide and particulate matter (PM_{2.5}) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the updated analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-78 of the Final Environmental Impact Statement).

Mass transit modes such as light rail and an expanded bus system were reexamined in the Final Environmental Impact Statement and were eliminated from further study because even better-than-planned performance of transit would not adequately address the projected 2035 travel demand (see Final Environmental Impact Statement page 3-4). For example, the average daily ridership for the light rail system connecting downtown Phoenix and the Arizona State University campus was approximately 44,000 in 2014. This is only approximately 25 percent of the total daily vehicles projected to use the freeway in 2035.

The impacts of all alternatives, including the No-Action Alternative, are disclosed in Chapter 4 of the Final Environmental Impact Statement.

The Maricopa Association of Governments regional travel demand model includes the planned multimodal projects as identified in the latest Regional Transportation Plan. Therefore, the benefits of these other projects are accounted for in the analysis of the No-Action Alternative and action alternatives. Within the 2035 planning horizon for the project, the energy use will be less with the freeway in place when compared with the No-Action Alternative. The carbon monoxide and particulate matter (PM_{2.5}) analyses demonstrated that the freeway will not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the updated analysis showed that for the Study Area, constructing the freeway will have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the (Response 8 continues on next page)
Land Use

ADOT did not adequately address our comments related to induced traffic as a result of the proposed freeway. ADOT used aggressive growth projections and the assumption that these areas will be developed regardless of the freeway. Although it is true that development is likely to occur in some of these areas and that they are zoned for such development, development of the full area is not a certainty. As noted in our previous comments, the real estate market in Phoenix is highly speculative, and zoning changes are frequently made or development slated for an area is delayed or does not occur. Many of the growth projections are overly aggressive in the Study Area, and are based on the assumption that a freeway will be built. If the freeway is not constructed, it is quite possible that these areas will not be developed.

ADOT claims that freeway projects such as this do not accelerate or induce growth (e.g., Errata, p. C8). However, the discussion related to this in the FEIS provides a direct contradiction to this statement (FEIS, p. 4-182). ADOT is correct that the relationship between transportation and land use is “complex.” However, it then brushes this complexity aside by using aggressive growth models and assumptions of development. ADOT further contradicts itself by saying that accelerated or induced growth as a result of this freeway would be “constrained” (e.g., Errata, p. C8), which indicates that some induced growth is expected. Similarly, ADOT notes that not constructing the freeway would make it difficult to gain access to adjacent land uses (Errata, p. C14), which indicates that this freeway would make it easier to access and develop surrounding areas. ADOT also notes that a reasonably foreseeable impact from this project is “increased rate of land conversion” (FEIS, Table 4-55, p. 4-181).

ADOT also did not address our comment regarding its statements regarding compatibility of a transportation corridor with multifamily residential uses. Our comments noted that these statements were unfounded. In its response, ADOT merely restated the language yet did not provide any justification (Errata, p. C19) and therefore was nonresponsive to this concern.

Biological Resources

Habitat loss and degradation

The FEIS continues to underestimate potential habitat loss and degradation and also does not respond to our request for further discussion of potential impacts and associated analyses. For example, ADOT repeatedly asserts that impacts to wildlife habitat and to South Mountain Park will be minimal as the proposed freeway would only use 31.3 acres of the park or two-tenths of one percent (e.g., Errata, p. C9). Unfortunately, this statement is erroneous. By cutting through the park, the small fragment of habitat on that remains on the other side of the freeway would effectively be lost for most species as many cannot subsist in such a small area. The proposed crossing structures provide only limited mitigation for this problem (see further discussion below). By only focusing on the actual footprint of the freeway, ADOT vastly underestimates potential impacts of this project on wildlife, South Mountain Park, and other natural resources. Although several groups made this comment on the DEIS, ADOT failed to address it in the FEIS and therefore was nonresponsive.

ADOT also did not address our comment related to the accelerated rate of habitat loss. Its only response is that freeway projects do not induce growth (see discussion above) and that the freeway is planned for an area that is to be developed regardless (Errata, p. C42). However, our comment referred to specific language in the DEIS, which is also in the FEIS: a reasonably foreseeable impact of this project is “increased rate of land conversion” (FEIS, Table 4-55, p. 4-181). By not acknowledging the impacts of
accelerated habitat loss, ADOT greatly underestimates the impacts of this project and was again nonresponsive in the FEIS.

The Errata states that the project would not provide new public access points to South Mountain Park (p. C40). However, no justification for this statement is provided. Will the sides of the freeway be fenced to prohibit the public from leaving the roadway? As is evident on many of the freeways and other roads that cut through natural areas in Arizona, vehicle and on-foot travel frequently occurs off of these roadways. Similarly, the multiuse crossing structures may provide additional access to previously undisturbed areas (see further discussion below).

Limited knowledge of species in Study Area

ADOT did not adequately address Sierra Club concerns regarding its limited understanding of what species occur in the area. As we noted in our previous comments, information provided on potential impacts to species is misleading and inaccurate. We appreciate that additional surveys will be coordinated if design commences on this project, but further information should have been acquired prior to compilation of the EIS. Without this knowledge, much of the information provided in the FEIS regarding impacts to species is based on weak assumptions.

ADOT also inappropriately used HabiMap to determine species presence and potential impacts. In several of its responses to our comments regarding sensitive species, ADOT states that HabiMap indicates that the majority of the project area “has a moderate-to-low value for most” of these species (e.g., Errata, p. C42). However, this is an inaccurate statement and is also not the intent of HabiMap. These values are based on the number of Species of Greatest Conservation Need that may occur in an area. HabiMap does not rate the quality of habitat for those species, so the statement that the area has a certain value for “most” of the species is wholly erroneous. Related to this, HabiMap is not intended to justify or condemn a proposed project based on species richness in that area. By doing so, ADOT invalidates the purpose of and potential analyses related to HabiMap.

Related to the above, we also need to reiterate that the Heritage Data Management System (HDMS) is not an appropriate tool to determine absence of species from an area. The HDMS is based on incidental observations or surveys results that have been reported to HDMS managers; it is in no way a complete list of species presence and cannot be used to ascertain species absence. In its responses to our comments, ADOT completely ignored these facts. We do appreciate that ADOT noted that incidental observations it recorded do not equate to absence of those species from the Study Area (Errata, p. C47), but it needs to recognize that about the HDMS as well.

In our comments, we requested that site-specific surveys be completed to more adequately determine what species may be present. In response, ADOT said that “delaying the survey until closer to [initiation of construction] will provide a more effective and efficient use of limited taxpayer funds” (Errata, p. C47). This does not address our comments related to this. The point of initial surveys is not to identify specific locations of individual animals but to, instead, understand species presence and the full implications of the project. Without this knowledge, only impacts to individual animals that are encountered could be mitigated, not population-wide impacts.

ADOT also did not respond to our question about whether or not any surveys have been conducted and, if so, what methods were used (Errata, p. C47). Related to this, however, we question the efficacy of planned surveys for some species. For example, ADOT says that if indications of bat roosting sites are found during surveys for Sonoran desert tortoises, additional surveys and mitigation measures may be implemented (Errata, p. C54). We question how surveys for tortoises can be used to determine presence

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<tr>
<td>12</td>
<td>Biology, Plants, and Wildlife</td>
<td>The freeway will be a completely access-controlled facility. Right-of-way fencing will prohibit motorists from leaving the freeway right-of-way to access adjacent land. One multifunctional crossing will be located coincident with an existing Maricopa County trail. The other multifunctional crossings along the freeway will facilitate limited pedestrian access from the Gila River Indian Community to culturally important places and will also serve wildlife. These crossing structures and associated fences will be designed to reduce the incidence of vehicle-wildlife collisions and to reduce the impact of the freeway on wildlife connectivity between the South Mountains, the Gila River, and the Sierra Estrella. The Arizona Department of Transportation will coordinate with the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Gila River Indian Community’s Department of Environmental Quality during the design phase regarding the potential for locating and designing wildlife-sensitive roadway structures.</td>
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<td>14</td>
<td>Biology, Plants, and Wildlife</td>
<td>While the HabiMap data were used to make a general observation of the quality of habitat in the Study Area, the determination of occurrence (known, likely, and unknown) was made based on field surveys of habitat and the review of available data by a qualified wildlife biologist. The determination was not made based on the HabiMap layers or scores as perceived by the commenter.</td>
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<td>15</td>
<td>Biology, Plants, and Wildlife</td>
<td>Comment related to the Heritage Data Management System is noted. The system is only one source, of many, used to determine the occurrence of species.</td>
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<td>16</td>
<td>Biology, Plants, and Wildlife</td>
<td>Field surveys were conducted by a qualified biologist to characterize habitat and the potential presence of species. The statement referenced on page C54 states that the surveys for bat roosting sites would occur during surveys for the tortoise “and other sensitive species.”</td>
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of bats as these species occupy very different niches and microhabitats. Again, we urge ADOT to conduct surveys specific to the species that may occur in the area.

As noted in our previous comments, ADOT needs to identify impacts to individual species, including the Species of Greatest Conservation Need that are identified through HabiMap and HDMS examination. These tools are starting points to indicate potential species that may occur in an area. Site-specific surveys and analyses are then needed to assess presence, distribution, potential impacts, and suitable mitigation measures. ADOT failed to do so and failed to address our comments related to this and therefore was nonresponsive.

**Habitat connectivity/wildlife crossing structures**

Sierra Club continues to have significant concerns that the proposed multifunctional crossings will not facilitate or maintain connectivity and wildlife movement across the roadway. Language in the Errata indicates that use of these structures is intended to be limited to wildlife and tribal members (e.g., Errata, p. C43); however, such restrictions are not adequately noted in the FEIS. If such restrictions are intended, how does ADOT plan to ensure that other people, including the public, do not use these areas? Will they be gated and locked? If so, how would that permit wildlife movement? As is evidenced in other structures in the Phoenix area (e.g., Dreamy Draw), the public frequently uses such crossing structures. In fact, some of these areas have become popular with homeless persons and teenagers. Such activities would dissuade and may, in fact, prevent wildlife movement.

In order to maintain habitat connectivity, we strongly urge ADOT to separate crossing structures intended for human use from those intended for wildlife use. Although ADOT points to some situations in which multifunction crossings may be effective, numerous other studies indicate that such structures may not be effective (see our previous comments as well as those submitted by the Arizona Game and Fish Department [AGFD]).

ADOT also did not adequately address our comment related to the need for funnel fencing in conjunction with wildlife crossings. Instead, it states that "potential fencing" may be used to funnel wildlife to the crossing structures (e.g., Errata, p. C44). Why is such fencing only "potential"? As noted in our previous comments and by AGFD, such fencing is essential in order to minimize road mortality and maintain habitat connectivity.

Finally, ADOT did not address our comment that construction of these crossing structures may not maintain connectivity if the surrounding landscape is developed, as is assumed in the FEIS. Our comment related to this is that, although it is not within ADOT’s purview to maintain connectivity in areas outside of its jurisdiction, it must be realistic in its discussion of impacts from the proposed action versus the No Action Alternative. By stating that this project will maintain connectivity (even though it assumes that the surrounding area will be developed), it artificially bolsters the proposed action and negates the No Action Alternative.

**Coordination/Outdated information**

ADOT did not address our concerns regarding the lack of coordination with AGFD and other agencies when preparing the DEIS. In addition, much of the information it provides in its responses to our comments is from outdated information. For example, it uses communications from AGFD from 2006 in order to justify the lack of wildlife surveys that have been completed in the area (e.g., Errata, p. C45). As AGFD noted in its comments, additional data and information have become available since this time.

The analysis presented in the Biological Resources section of Chapter 4 of the Final Environmental Impact Statement and the Biological Evaluation completed in 2014 represent an appropriate analysis of existing conditions and potential impacts based on field surveys and available literature.

One multifunctional crossing will be located coincident with a Maricopa County trail. The other multifunctional crossings along the freeway will facilitate limited pedestrian access from the Gila River Indian Community to culturally important places and will also serve wildlife. The crossings will not be gated or locked to restrict human use; however, there are no specific trails or paths associated with the crossings. Even if the crossings for wildlife were separated and designed specifically for wildlife, there is no guarantee that humans would not use the crossings, similar to the Dreamy Draw example included in the comment. These crossing structures and associated fences, such as funnel fencing, will be designed to reduce the incidence of vehicle-wildlife collisions and to reduce the impact of the freeway on wildlife connectivity between the South Mountains, the Gila River, and the Sierra Estrella. The Arizona Department of Transportation will coordinate with the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Gila River Indian Community’s Department of Environmental Quality during the design phase regarding the potential for location and design of wildlife-sensitive roadway structures.

The comment assumes that development patterns would be different if the freeway were not in place. The freeway will be implemented in a historically quickly urbanizing area (most noticeably in the Western Section of the Study Area). Historical and projected growth and the factors contributing to such growth are well-documented in the Final Environmental Impact Statement in Chapter 1, Purpose and Need, and in the Chapter 4 sections, Land Use and Economic Impacts, beginning on pages 4-3 and 4-56, respectively. The freeway will be built in an area planned for urban growth as established in local jurisdictions’ land use planning activities for at least the last 25 years (see the section, Induced Growth, beginning on page 4-182 of the Final Environmental Impact Statement). Additionally, the area in question has become much more fragmented during the environmental impact statement process and continues to experience fragmentation, independent of the project. It is not reasonable to assume this will not continue or that concerned entities will prevent further fragmentation because that has not occurred to date.

The information provided by the Arizona Game and Fish Department was reviewed and considered in the analysis presented in the section, Biological Resources, in the Final Environmental Impact Statement. An example includes the addition of movement areas to Figure 4-38 on page 4-126 of the Final Environmental Impact Statement. The updated information provided by the Arizona Game and Fish Department did not change the conclusions for biological resources. Based on the Arizona Game and Fish Department comments, changes were included in the Final Environmental Impact Statement to provide clarification.
and it is important to use the most recent and best available data to make decisions. ADOT has failed to do so.

Noise
ADOT did not adequately address our comments regarding the impacts of noise. Specifically, it did not address potential impacts to recreationists and to wildlife in South Mountain Park. We again note that the mitigation measures proposed—namely, the noise walls—may have little impact in reducing the amount of noise experienced by recreationists and wildlife in the park. The noise walls will help reduce noise heard on the other side of the wall but may disperse that noise to higher levels, such as the hillsides where recreationists and wildlife will be. This is an important omission from the FEIS.

Summary
ADOT has not justified the need for this proposed freeway and has inaccurately and inadequately assessed and analyzed the potential impacts (direct, indirect, and cumulative) from selecting its action alternative. This project would have irreversible and irretrievable impacts on air quality, public health, wild lands, wildlife, and more. Further, ADOT has not analyzed the full range of reasonable alternatives for this project, as the law dictates. We strongly encourage ADOT to withdraw the proposed action, to select the No Action Alternative, and to, instead, invest in solutions that make sense for our region and our state.

Thank you for considering our comments.

Sincerely,

Sandy Bahr
Chapter Director
Sierra Club – Grand Canyon Chapter

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<tr>
<td>20</td>
<td>Noise</td>
<td>With regard to wildlife, noise impacts are disclosed on page 4-136 of the Final Environmental Impact Statement. As stated on page 5-3 of the Final Environmental Impact Statement, ¼ mile is the approximate maximum distance from which traffic noise would be disruptive to human or wildlife uses. In terms of noise analyses, several reasons support why the analysis did not extend beyond ¼ mile: noise impacts at 2,000 feet or greater from the freeway would be minimal (decibels would not be above minimum thresholds); the Federal Highway Administration Traffic Noise Model has limitations for predicting noise levels beyond approximately 500 feet; mitigation, such as noise walls, would not be effective for receptors at 2,000 feet or greater (and at elevated positions) away from the freeway; and, even if it were shown that noise levels are higher on the trail, the impacts would be temporary in nature because trail users would be moving along the trail and because only a short portion of the trail is in a direct line to the freeway (no picnic areas appear to be located along this trail). The existing trails within the park nearest the freeway are 2,000 feet or more away (for example, the National Trail is 2,000 feet away and the Bursera Trail is 4,000 feet away).</td>
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<td>21</td>
<td></td>
<td>Comments noted. Responses to specific comments are provided in the following pages.</td>
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