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POST ENVIRONMENTAL ASSESSMENT

STB FINANCE DOCKET NO. 34836

Arizona Eastern Railway – Construction and Operation –

In Graham County, Arizona

Victoria Rutson, Chief
Section of Environmental Analysis

Informational Contact:
Diana F. Wood
Section of Environmental Analysis
Surface Transportation Board
395 E Street S.W. 11th Floor
Washington, D.C. 20423

Cooperating Agency

Federal Railroad Administration

Post Environmental Assessment
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TABLE OF CONTENTS

EXECUTIVE SUMMARY

ES.1 INTRODUCTION

On August 4, 2006, the Arizona Eastern Railway (AZER) filed a petition with the Surface Transportation Board (Board) seeking an exemption under 49 United States Code (U.S.C.) 10502 from prior approval requirements of 49 U.S.C. 10901 for authority to construct and operate 12 miles of new rail line in Graham County, Arizona (AZ). The Board, pursuant to 49 U.S.C. 10901, is the agency responsible for granting authority for the construction and operation of new rail line facilities. The Board, through the Section of Environmental Analysis (SEA), is the lead agency responsible for the preparation of this Environmental Assessment (EA). The Federal Railroad Administration (FRA) is a cooperating agency in this EA because AZER has indicated that it may seek Federal funds from FRA's Railroad Rehabilitation and Improvement Financing Program to construct the rail line.

The Proposed Action is the construction and operation of a new rail line to connect the Freeport-McMoRan Dos Pobres Mine (the Mine)[1] with the existing 133.5-mile AZER line that operates between Miami, Arizona and Bowie, Arizona. The proposed rail line would begin near the City of Safford, Arizona, at AZER milepost 1133.5, known as the "Lone Star Junction" and proceed northerly for 12.1 miles, terminating at the Mine. The proposed line would cross agricultural and undeveloped lands and the Gila River, and then would turn in a northeast direction toward the Safford Regional Airport (the Airport). The proposed rail line would cross U.S. Highway 70 west of the San Simon River and east of the City of Safford. The proposed rail line would also cross four unimproved roads: Airport Road, Lone Star Mountain Road, San Juan Road, and Phelps Dodge Road. The crossing at US 70 would consist of a signalized at-grade crossing, including warning lights and automated gates. The other roadway crossings, where traffic volumes are generally low, would consist of signed at-grade crossings with warning lights. Rail traffic on the proposed rail line is anticipated to be one round trip per day, seven days a week, each day of the year. Each train is anticipated to comprise 20 to 25 railcars, powered by two GP-35 locomotives from AZER's existing in-service fleet. Commodities anticipated to be transported include sulfuric acid in tanker cars for use at the Mine, and copper cathodes in boxcars, transported from the Mine to the main AZER rail line.

ES.1.1 BOARD'S OBLIGATIONS UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT

SEA prepared a Draft Environmental Assessment (EA), dated February 25, 2008, to meet the Board's obligations under the National Environmental Policy Act (NEPA). The Draft EA identified and evaluated the potential direct, indirect, and cumulative environmental impacts of the Proposed Action.[2]

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[1] Freeport-McMoRan, Inc., acquired the Phelps Dodge Corporation (PDSI) in late 2006. The Draft EA did not reflect this corporate acquisition.

[2] The Draft EA can be downloaded from the Board's website at www.stb.dot.gov. Go to "E-Library," click on "Decisions & Notices," and then conduct a full text search for the material under "FD 34836."

The Draft EA was made available to the public on February 25, 2008 with a 36 day comment period that ended on March 31, 2008. Although CEQ regulations do not prescribe a specific time limit for the comment period on EAs, it is the Board's practice to typically provide 30 days. However, in response to requests by the public, on April 2, 2008, the Board issued a notice to all interested parties that extended the comment period to May 1, 2008, for a total comment period of 66 days. Accordingly, the opportunity for public comment here has been fully adequate.

ES.1.2 PROJECT SCOPING AND ISSUES

The Board actively consulted with a number of Federal, state, and local agencies to inform them about the proposed construction and operation, to identify issues of concern, and to obtain information about environmental resources within the project area.

On June 13, 2006, SEA sent consultation letters to Federal, state, and local agencies describing the Proposed Action, showing the proposed rail alignment, and requesting that any concerns be identified. Early consultation was conducted to provide input as early as possible in the environmental review process, prior to preparation of the EA. SEA continued following up with a number of these agencies throughout the development of the EA in 2006 and 2007, as well as through finalization of the EA in 2009.

The EA was made available to agencies, the public, and interested parties for a 66-day public comment period. Twenty-five comment letters on the EA were received, and SEA has prepared this Post EA to respond to those comments and make final environmental recommendations.

ES.1.3 BOARD JURISDICTION

The Board has exclusive jurisdiction under Sections 10901 and 10501 of the Interstate Commerce Act over the construction, acquisition, and operation of common carrier rail lines. The Board's authorization may take the form of a "certificate of public convenience and necessity" issued under 49 U.S.C. 10901, or, as in this case, an exemption under 49 U.S.C. 10502 from the formal application procedures of Section 10901. Whether authorization is sought under the procedures of Section 10502, or Section 10901, the Board subjects the proposal to a careful review, including preparation of the environmental documentation required to meet the Board's obligations under NEPA. In this case, SEA prepared a Draft EA, which considered in detail the expected environmental impacts of the Proposed Action.

In 1995, Congress enacted a broad Federal preemption provision, Section 10501(b) that expressly makes the Board's jurisdiction "exclusive" for all transportation by rail carriers, including the facilities and structures that are an integral part of that transportation.[3] Section 10501(b) also expressly states that "the remedies provided under this part are exclusive and preempt the remedies provided under Federal and State law." Thus, Section 10501(b) does not permit dual state and Federal regulation of railroads or activities related to rail transportation at railroad facilities. Accordingly, the case law interpreting this provision consistently has found

[3] 49 U.S.C. 10102(9); 10501(b).

state and local permitting or preclearance requirements (including zoning ordinances and environmental and land use permitting requirements) to be wholly preempted where the railroad facility is an integral part of the railroad's operations.[4] That is because permitting or preclearance requirements could give a local body the ability to deny the carrier the right to construct, develop, and maintain facilities or conduct operations, which would create an irreconcilable conflict with the Board's exclusive jurisdiction over those facilities and operations.[5]

But while exempt from traditional permitting, zoning, and land use processes for their railroad operations, railroads like AZER are not necessarily exempt from other generally applicable laws. The legislative history makes it clear that "the States retain the police powers reserved by the Constitution."[6] Thus, States can take appropriate actions to protect public health and safety so long as their actions do not serve to regulate rail operations or unreasonably interfere with interstate commerce. [7]

For example, a state or local government could issue citations or seek damages if harmful substances are discharged during a railroad construction or upgrading project. Similarly, nondiscriminatory application of state and local requirements such as building and electrical codes generally would not be preempted.[8] And railroads cannot avoid their obligations under consensual measures worked out between the railroad and the community.[9] Section 10501(b) must also be harmonized to the extent possible with other Federal statutes.[10] Thus, Federal environmental statutes such as the Clean Air Act (CAA) and the Clean Water Act (CWA)—statutory schemes that are implemented in part by the states—as well as railway safety regulation under the Federal Railway Safety Act--continue to apply to railroads to the extent that they would not unreasonably interfere with interstate commerce. Finally, state and local entities can raise their environmental concerns before the Board during the environmental review process under NEPA for consideration in cases like this one that require a license from the Board.[11]

In cases that trigger a NEPA review, the Board's mitigation may include conditions that require a railroad to consult with or seek approvals from other government entities, when the Board is reasonably confident that those requirements will not be applied in a discriminatory manner or in a manner that would interfere with the railroad's right to conduct its operations. Where the Board imposes a condition that a railroad applicant meet the reasonable

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[4] City of Auburn v. United States, 154 F.3d 1025 (9th Cir. 1998) (Auburn); Friberg v. Kan. City S. Ry., 267 F.3d 439 (5th Cir. 2001); Norfolk S. Ry. v. City of Austell, 1997 U.S. Dist. LEXIS 17236 (N.D. Ga. Aug. 18, 1997); Flynn v. Burlington N. Santa Fe Corp., 98 F. Supp. 2d 1186 (E.D. Wash. 2000); Joint Pet. for Decl. Order— Boston & Maine Corp. v. Town of Ayer, MA, STB Finance Docket No. 33971 (STB served May 1, 2001), aff'd, Boston & Maine Corp. v. Town of Ayer, 206 F. Supp. 128 (D. Mass. 2002), rev'd solely on attorneys' fee issue, 330 F.3d 12 (1st Cir. 2003) (Ayer); Borough of Riverdale — Pet. for Declar. Order — The New York Susquehanna & W. Ry., STB Finance Docket No. 33466 (STB served Sept. 10, 1999).

[5] Auburn, 154 F.3d at 1029-31.

[6] H.R. Rep. No. 104-311, 104th Cong., 1st Sess. at 95-96 (1995).

[7] See Ayer.

[8] Id.

[9] Township of Woodbridge v. Consol. Rail Corp., No. 42053 (STB served Dec. 1, 2000).

[10] Tyrrell v. Norfolk S. Ry., 248 F.3d 517 (6th Cir. 2001); Friends of the Aquifer et al., STB Finance Docket No. 33966 (STB served Aug. 15, 2001).

[11] See Auburn, 154 F.3d at 1033.

requirements of other government entities as a condition to a license from the Board, the Board controls the process and can take steps later, if necessary, to ensure that the state law is not being applied in such a way as to unduly restrict a railroad's operations or unreasonably burden or interfere with interstate commerce.

ES.1.3 BOARD DECISIONS

By petition filed on August 4, 2006, AZER requested that the Board conditionally grant an exemption under 49 U.S.C. 10502 from the prior approval requirements of 49 U.S.C. 10901 for authority to construct and operate a 12-mile rail line in Graham County, Arizona. In a decision served on November 2, 2006, the Board instituted a proceeding under 49 U.S.C. 10502(b). On June 28, 2007, AZER requested a waiver for 49 CFR 1105.6(a), which generally provides for the preparation of an environmental impact statement for a rail line construction approval. On August 23, 2007, the Board granted the requested waiver, based on information provided to date indicating that the Proposed Action would not result in significant environmental impacts and that any impacts can most likely be addressed through appropriate mitigation measures. The Board's letter regarding the requested waiver is included as Appendix B.

ES.2 PURPOSE AND NEED FOR THE PROPOSED ACTION

According to AZER, the Proposed Action is needed to provide the Mine and Airport with an alternative to truck shipment of materials. Figure ES-1 of the Draft EA illustrates the proposed rail alignment and the project area.

The Mine, which opened for operations in December 2007, receives shipments of sulfuric acid and sends out shipments of copper cathodes via trucks, which travel predominantly on U.S. Highway 70. More specifically, approximately 60 to 80 truckloads of sulfuric acid are transported daily to the Mine from an existing Freeport-McMoRan facility at Miami, approximately 90 miles to the west of the City of Safford. About 15 loads of copper cathodes are in turn transported each day from the Mine back to the Miami facility or to the Union Pacific (UP) rail line at Bowie.

The Airport is considering the development of a business park with light industrial uses on property owned by the Airport. The light industrial uses would most likely require the movement of raw materials and goods in and out of the Airport area. The proximity of the proposed rail line to the Airport would allow for potential future freight rail service. Business park development details are unknown at this time, but as part of the transportation analysis conducted for the Proposed Action, train lengths were assumed to include a range of five to ten cars daily that potentially would be available to serve business park uses near the Airport.

The Proposed Action would reduce or avoid the level of truck traffic on local and regional roadways by providing an efficient and cost-effective alternative for the transport of commodities to and from both the Mine and the potential future development associated with the Airport.

ES.3 ALTERNATIVES

ES.3.1 PROPOSED ACTION

The Proposed Action consists of the construction and operation of a new rail line to connect the Mine with the existing 133.5-mile AZER line that operates between Miami, Arizona, and Bowie, Arizona. AZER connects with the UP railroad near Bowie.

The proposed rail line would begin near Safford, Arizona, at AZER milepost (MP) 1133.5, known as "Lone Star Junction." From this point, the proposed rail line would proceed northerly for 12.1 miles, terminating at the Mine. The proposed rail line would cross U.S. Highway 70 west of the San Simon River as well as four unimproved roads north of the Gila River (Airport Road, Lone Star Mountain Road, San Juan Mine Road, and Phelps Dodge Road). The crossing at U.S. Highway 70 would consist of a signalized at-grade crossing, including warning lights and automated gates. The other roadway crossings, where traffic volumes are generally low, would consist of signed at-grade crossings, with warning lights.[12]

The right-of-way being considered for the proposed rail line would be no greater than 100 feet wide along the entire alignment. Within this right-of-way a single rail track, approximately 8.5 feet in width, would be constructed. This rail line would be located adjacent to a service road that would be approximately 12 feet in width, and bordered by a drainage ditch. Figure 2.2 of the Draft EA contains typical track sections, including sections at proposed road crossings.

South of the Gila River, the proposed rail line would also cross the Montezuma, Union, and Tidwell irrigation canals, as well as a currently unnamed irrigation canal. The proposed rail line would cross the Gila River on a new bridge approximately 1,600 feet in length. The bridge's length would provide 1,500 feet of opening between the north and south banks of the Gila River, to minimize bridge related flooding impacts.

The proposed Gila River bridge superstructure would be composed of precast, pre-stressed concrete I-girders with a composite concrete deck. Preliminary geotechnical recommendations indicate that deep foundations (composed of drilled shafts) are the most appropriate foundation system at both the bridge's piers and abutments. Known seismic and soil conditions in the area indicate that drilled shaft foundations should be socketed into the lower basin fills. The abutments would consist of a concrete beam supported by a single line of two drilled shafts. A 2:1 embankment slope would be constructed in front of each abutment. Preliminary geotechnical investigation indicates that approximately five to six drilled shafts would be required for each abutment, with embedment depths of 60 feet at the north abutment and 115 feet at the south abutment.

North of the Gila River crossing, the proposed rail line would turn in a northeast direction towards the Airport. The proximity of the proposed rail line to the Airport would allow for potential future freight rail service to a planned business park area adjacent to the Airport.

[12] A "signed crossing" is an at-grade rail crossing of a public road accompanied by a posted sign indicating the presence of railroad tracks. A "signalized crossing" includes a flashing light or signal that is activated by an approaching train.

The proposed rail line would handle one round trip per day, consisting of 20 to 25 rail cars powered by two locomotives, seven days a week. Commodities transported would include sulfuric acid in tanker cars for use at the Mine, and copper cathodes in boxcars, transported from the Mine to the main AZER rail line. Early plans for the Proposed Action estimated that three locomotives would be required for each train. Several technical studies developed for this report used this estimate. However, subsequent engineering by AZER determined that only two locomotives would be necessary. Project technical studies were largely not updated to reflect this change, insofar as the reduction in the number of locomotives would not introduce any new adverse environmental effects. In fact, the reduced number of locomotives would incrementally reduce the degree of several environmental effects, including noise, vibration, and air quality. The analyses also included 30 rail cars, five of which could be used to serve potential business park development near the Airport.

The proposed rail line would cross properties owned or controlled by private individuals, Freeport-McMoRan, the City of Safford, and the State of Arizona. Approximately 7.7 miles of the 12.1 miles of the proposed rail line are located north of the Gila River and on land owned by Mine operator Freeport-McMoRan.

ES.3.2 NO-ACTION ALTERNATIVE

Under this alternative, AZER would not construct a proposed rail line from AZER's mainline to the Mine and would therefore provide neither the Mine nor the Airport area with freight rail service. Approximately 60 to 80 truckloads of sulfuric acid would continue to be transported round-trip each day along existing local roads from Freeport-McMoRan's existing facility at Miami, Arizona, to the Mine, a distance of about 95 miles. Approximately 15 truckloads of copper cathodes from the Mine would be returned along existing local roads to the Miami facility or to the UP rail line at Bowie, Arizona. These operations occur at present.

ES.3.3 ALTERNATIVES CONSIDERED BUT REJECTED

A number of alignment alternatives for the Proposed Action were studied by AZER and rejected from further consideration using standardized technical and environmental criteria. SEA reviewed and verified AZER's analyses. The alternatives included several alignment options for the southern portion of the proposed rail line, from AZER's main line to north of the Airport. The northern portion of the proposed rail line, on property owned by Freeport-McMoRan, was identical for all alternatives discussed below. Figure 2.1 in the Draft EA provides a map of the full length of the proposed rail line; Figure 2.3 in the Draft EA provides a map of the alternatives considered but rejected.

Section 2.3 of the Draft EA describes the process used to evaluate alignment alternatives and to make feasibility and practicability determinations. While alignment alternatives were similar in many technical and environmental factors, a number of factors (described below) differ between alternatives. These factors are shown in Table 2.3-1 of the Draft EA.

ES.4 OVERVIEW OF AFFECTED ENVIRONMENT

The project area is located entirely within Graham County, Arizona. A portion of the project area traverses lands that are owned by but located outside the corporate limits of the City of Safford, Arizona.

Land uses in the project area are regulated by Graham County and the City of Safford. Regulations governing land use are set forth in the Graham County Comprehensive Plan and the City of Safford General Plan.

Graham County is in the southeastern portion of Arizona. The County seat is located in Safford, which is also Graham County's largest city, encompassing 7.9 square miles. Graham County is 4,630 square miles in size.

The project area is primarily located on privately owned land. Exceptions include U.S. Highway 70, owned by ADOT, and parcels near the Airport, owned by the City of Safford.

ES.5 SUMMARY OF SEA'S CONCLUSIONS AND RECOMMENDED MITIGATION

Based on its independent analysis of all information available to date, SEA concludes that the Proposed Action would not result in any significant environmental impacts if the mitigation measures recommended in this Post EA are imposed and implemented.

Accordingly, SEA recommends that, in any decision by the Board granting final approval to the proposed construction and operation of the Proposed Action, AZER should be required to implement the mitigation set forth in Chapter 1 of this Post EA. SEA recommends 40 mitigation measures in the Post EA that are either new mitigation measures based on SEA's additional analysis or modifications to mitigation measures previously proposed in the Draft EA.

SEA's final recommended mitigation would reduce or avoid any potential for significant environmental impacts associated with such issues as traffic safety, flooding impacts, and the transportation and handling of hazardous materials. Because the Proposed Action, as mitigated, would not have the potential for significant environmental effects, preparation of an EA for this case is appropriate and the full Environmental Impact Statement (EIS) process is unnecessary.

The Board will now consider the entire environmental record, including SEA's final recommended mitigation measures and all environmental comments received in this proceeding, in making its final decision as to whether to approve the Proposed Action, and if so, what mitigation to impose.

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CHAPTER 1
FINAL RECOMMENDED MITIGATION

Chapter 1 presents SEA's final recommended mitigation. Based on the information available, consultations with appropriate agencies, and SEA's environmental analysis, these mitigation measures address the expected environmental impacts of the construction and operation of the Proposed Action.

SEA recommends to the Board that it impose all of the recommended mitigation measures set forth in Chapter 1 of this Post EA if the Board decides to grant final approval for this project.

1.1 SEA'S RECOMMENDED MITIGATION

SEA reviewed all information available to date and completed its independent analysis of the construction and operation of the proposed rail line, including all the comments and mitigation requested by various Federal, state, and local agencies, as well as other concerned parties. SEA recommends that if the Board approves the Proposed Action, such approval be subject to the 40 mitigation measures presented below.

SEA's analysis identified no adverse impacts for the following environmental topic areas:

- Community and Socio-Economics
- Environmental Justice
- Utilities/Public Services
- Visual/Aesthetics
- Noise/Vibration
- Section 4(f) and Section 6(f) Resources

1.1 SEA'S RECOMMENDED MITIGATION MEASURES

Transportation/Traffic Safety

1. In order to minimize delays of vehicular traffic during construction of the road crossings, AZER shall schedule the work so that construction of the roadway approaches would be completed before construction work within the roadway occurs. AZER shall also ensure that any necessary lane closures correspond with minimum off-peak traffic volumes to reduce any delays due to construction activities.
2. AZER shall consult with appropriate Federal, state, and local transportation agencies to determine the final design and other details of the grade-crossing and associated warning devices on U.S. Highway 70 and Airport Road. Specifically,
    - Construction in the U.S. Highway 70 right-of-way may require an encroachment permit from the Arizona Department of Transportation (ADOT).
    - Construction of at-grade road crossings are subject to the review and approval of the Arizona Corporation Commission.

- At-grade crossing warning devices and queuing distances shall meet the design and operational specifications of ADOT.

3. AZER shall consider school bus schedules in planning and executing the necessary road work.

4. AZER shall make reasonable efforts to identify all utilities that are reasonably expected to be materially affected by the proposed construction within the right-of-way.

5. AZER shall raise the elevation of the proposed at-grade rail crossing over U.S. Highway 70 to be consistent with the elevation of the adjacent bridge over the San Simon River to ensure that visibility will not be a concern for drivers on the roadway.

6. AZER shall install an advanced visual warning (remote flashing signals) on U.S. Highway 70 on the downslope moving away from the bridge east of the San Simon River.

7. AZER shall ensure that all maintenance and inspections are in compliance with Federal Rail Administration standards. AZER shall also ensure that its contractor uses practices recommended by American Railway Engineering and Maintenance of Way Association for project-related construction.

Utilities

8. AZER shall consult with Graham County Electric Cooperative, Inc. (GCEC) prior to construction to determine whether any underground utilities might be crossed by the proposed rail line. If warranted, AZER shall then conduct an underground service alert (USA) for the length of the proposed rail alignment prior to the start of construction. If the USA reveals that undergrounded utilities might be crossed by the proposed rail line, AZER shall coordinate with GCEC to ensure that such conveyances are protected in place.

Land Use/Agricultural Resources

9. AZER shall work with farmers and other property owners to remedy actual damage to property caused by project-related construction.

10. AZER shall negotiate with affected property owners to minimize severance impacts, including severance impacts to drainage ditches.

11. AZER shall ensure all construction debris is removed and disposed of in a proper and legal manner consistent with all Federal, state and local disposal procedures.

12. AZER shall limit construction activities and vegetation clearing to the proposed right-of-way, to the extent possible.

13. Where construction of the rail line would cause unavoidable property severance or damage to structures or infrastructure, AZER shall negotiate with affected landowner(s) within the 500-foot corridor and shall use its best efforts to modify

the alignment, to the extent practicable, to minimize impacts to existing land uses, structures and infrastructure, consistent with the floodplain approval process and the Section 404 U.S. Army Corps of Engineers and Section 7 U.S. Fish and Wildlife Service regulatory permit processes.

Cultural and Paleontological Resources

14. AZER shall comply with the terms of the Memorandum of Agreement, developed pursuant to 36 CFR 800.6(c), which has been executed by all required parties and is included as Appendix G.
15. AZER shall comply with the recommendations of the Historic Properties Treatment Plan prepared for the project pursuant to 36 CFR 800.11.

Hydrology and Water Quality

Applicable Requirements of Other Agencies

16. AZER shall obtain all Federal permits, including the Clean Water Act Section 404 permit required by the U.S. Army Corps of Engineers for project-related encroachment of jurisdictional waters of the United States prior to the initiation of any project-related construction. As part of the 404 permit, AZER shall also obtain an individual, state-issued Clean Water Act Section 401 certification for the part of the project consisting of the crossing of the Gila River.
17. Prior to project construction, AZER shall obtain an Arizona Pollutant Discharge Elimination System permit from the Arizona Department of Environmental Quality. A requirement for this permit is the preparation of a stormwater pollution prevention plan (SWPPP), which includes best management practices to reduce soil erosion and minimize potential release of pollutants into waters of the United States.
18. Prior to project construction, AZER shall obtain a floodplain development permit from Graham County, Arizona.

Construction Practices and Activities

19. AZER shall utilize the following best management practices during construction of the rail line:
    - Implement practices in accordance with the recommendations in the USFWS Biological Opinion (see recommended mitigation #37) and the AZPDES permit (see recommended mitigation #17) to reduce erosion and sedimentation that could occur as a result of construction;
    - Minimize disturbance to the greatest extent possible around water resources;
    - Reseed areas as soon as practicable to prevent erosion;
    - Use native species where practicable for revegetation;
    - Develop a spill prevention plan prior to construction, including measures to be taken should a spill occur;

- Maintain construction and maintenance vehicles to ensure good working order;
- Conduct daily inspections of all equipment for any fuel, lube oil, hydraulic, or Freon/antifreeze leaks;
- Utilize practices to prevent/minimize disturbance to bottom sediments during the proposed Gila River crossing.

20. As part of the construction process, AZER shall repair eroded areas on the downstream side of the track bed in order to minimize the entrance of sedimentation into waterways.
21. AZER shall develop and construct crossings of waterways and drainages as follows:
    - Bridges supported on conventional spread footings shall be used where the rail line alignment crosses the Montezuma Canal, Union Canal south of the Gila River, and an unnamed aqueduct north of the Gila River.
    - The bridge over the Gila River shall be supported on deep foundations due to potential scour erosion from the river. Deep foundations could include piles or cast-in-place drilled shafts. The depths of the foundations would be established based upon bridge loading, scour predictions, and other factors. As it is anticipated that scour erosion could extend to significant depths, AZER shall consult with an expert in scour effects in designing the plans for this crossing.
    - Concrete box culverts shall be used for drainage crossings other than the Gila River and irrigation canals.
22. AZER shall ensure that erosion control measures for culvert crossings shall remain in place until the construction process is completed and the immediate area has been stabilized with a non-erosive cover.
23. For wells located within the proposed right-of-way but outside the grading limits, AZER shall cap or otherwise close the wells in accordance with state regulations.

Maintenance and Operations

24. AZER shall develop a bridge maintenance plan in compliance with Federal Railroad Administrations regulations.
25. AZER shall require that appropriate vegetation control measures are followed and that herbicides applied during right-of-way vegetation control procedures are approved by the U.S. Environmental Protection Agency for such purposes.
26. AZER shall ensure that the company conducting vegetation control is appropriately licensed.
27. AZER shall require that herbicide spraying not be undertaken on days with high winds and that on marginally windy days, an additive may be used to minimize any potential unwanted overspray.

28. AZER's plans for maintaining drainage structures associated with the rail line shall provide for regular maintenance (i.e. removal of debris, rock, sediment) of ditches and at river crossings.

Geology and Soils

29. AZER shall vegetate/reclaim disturbed areas as soon as practicable after project-related construction ends along a particular stretch of rail line. The goal of the reclamation shall be the permanent (re)establishment of native ground cover on disturbed areas.
30. AZER shall conduct a preconstruction survey of the area to identify areas that have a history of landslides. Project plans shall be revised to incorporate features in appropriate locations to reduce the potential for landslides to impede operations at various points of the rail line.
31. AZER shall ensure that for the duration of trenching activities, all excavations are safely sloped and/or include an adequately constructed and braced shoring system, in compliance with Occupational Safety and Health Administration (OSHA) regulations for employees working in an excavation that may expose employees to the danger of moving ground. If material is stored or equipment is operated near an excavation, stronger shoring shall be used to resist the extra pressure due to superimposed loads.
32. Prior to construction, AZER shall consult with utility companies in the project area to determine the location of any surface or subsurface utilities existing in the project area. AZER shall then document (with photographs, video, official documentation, etc.) the pre-construction condition of all such utilities that may be impacted by construction of the proposed rail line.

Hazardous Materials

33. Prior to initiating any project-related construction activities, AZER shall develop a spill prevention plan for hazardous materials for the construction and operation of the rail line. At a minimum, the spill prevention plan shall address the following:
    - Definition of what constitutes a reportable spill;
    - Requirements and procedures for reporting spills to appropriate government agencies;
    - Methods for containing, recovering, and cleaning up spilled material;
    - Equipment available to respond to spills and location of such equipment;
    - Training of personnel and training records;
    - List of government agencies and AZER personnel to be contacted in the event of a spill.

34. AZER shall ensure that operational period safety measures shall include those set forth in current Hazardous Materials Regulations applicable to the safe and secure rail transportation of hazardous materials. AZER shall manage hazardous materials in accordance with handling instructions included in applicable Material Safety Data Sheets.

35. In the event that construction activities encroach upon abandoned fire/trash pits, abandoned septic tanks, abandoned wells, and areas where spent ammunition from the firing range is found at or near the top of the ground surface, AZER shall provide appropriate corrective action. Corrective actions for these matters shall include abandoning wells in accordance with Arizona Department of Water Resources guidance, removal and landfilling of trash from trash pits (and backfilling as appropriate), and abandoning septic systems in accordance with County or other applicable regulations.

Air Quality

36. AZER shall implement standard construction mitigation measures (best management practices) to reduce fugitive dust emissions during construction. These mitigation strategies include watering all active construction areas (including unpaved access roads and parking and storage areas) at least twice daily; covering all trucks hauling soil, sand, and other loose materials; and applying soil binders on unpaved roads and employee/equipment parking areas.

Biological Resources

37. AZER shall comply with all measures required by the U.S. Fish and Wildlife Service during the Section 7 consultation process of the Endangered Species Act, including all measures within the Final FWS Biological Opinion (Appendix C of this Post EA).

38. AZER shall coordinate with the U.S. Army Corps of Engineers regarding possible Section 404 of the Clean Water Act permitting requirements.

39. In order to mitigate impacts to designated critical habitat, AZER shall ensure equipment staging and storage areas are situated outside of the river bed. Additionally, all construction equipment shall be removed from the river channel prior to onset of storm events.

40. AZER shall notify the Arizona Department of Agriculture 20 to 60 days prior to plant destruction to allow for the opportunity to salvage native vegetation. The Arizona Native Plant Law prevents the sale and transport of native vegetation without first obtaining a permit from Arizona Department of Agriculture. Those salvaging the plants shall obtain the necessary salvage permit.

CHAPTER 2
PUBLIC COMMENTS AND RESPONSES

The Board's Section of Environmental Analysis (SEA) received 25 comment letters during the public comment period on the EA.[13] This section summarizes the comments from the public and various local and state agencies and presents SEA's responses. SEA prepared the responses to comments in accordance with CEQ guidance. The guidance provides that "if a number of comments are identical or very similar, agencies may group the comments and prepare a single answer for each group. Comments may be summarized if they are especially voluminous." [14]

Many commenters had similar or identical topics. SEA grouped such comments together by subject and for each subject provides a summary of the comments to illustrate the commenters' concerns. Each summary is followed by SEA's response. SEA's responses clarify or correct information presented in the Draft EA, explain and communicate government policy or regulations, direct commenters to information in the Draft EA, or answer technical questions.

In addition to comment letters from agency officials and land owners in the vicinity of the Proposed Action, SEA received a petition in opposition to the Proposed Action, signed by approximately 100 people residing in Safford, Solomon, Thatcher, or other surrounding communities. Copies of the public comments, including the signed petition, are presented in Appendix A to this Post EA.

The comments and responses are organized into sections that follow the table of contents of the Draft EA. An introductory summary describes in general terms the comments received for each subject.

NEPA Process

Summary
SEA received comment letters on the NEPA process that requested extending the length of the comment period another 60 days. SEA also received comments suggesting that an environmental impact statement (EIS) should have been prepared instead of an EA; that further study was needed to assess potential connected actions, and cumulative, direct and indirect impacts; and a request to include a modified alignment as an alternative in the EA. Specific comments include:

Comment
Commenters called for extending the comment period another 60 days.

[13] AZER's petition, as well as the Draft EA and this Post EA, and all written comments submitted, are available on the Board's website at www.stb.dot.gov. For the Draft EA and Post EA, go to "E-Library," click on "Decisions & Notices," and then conduct a full text search for the material under "FD 34836." The environmental correspondence can be viewed by selecting "Environmental Matters," then clicking on "Environmental Correspondence," and then searching the correspondence under "FD 34836."

[14] See Forty Most Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18026 (1981), Question 29.

Response
The Draft EA was made available to the public on February 25, 2008 with a 36 day comment period that ended on March 31, 2008. Although CEQ regulations do not prescribe a specific time limit for the comment period on EAs, it is the Board's practice to typically provide 30 days. However, in response to requests by the public, on April 2, 2008, the Board issued a notice to all interested parties that extended the comment period to May 1, 2008, for a total comment period of 66 days. Accordingly, the opportunity for public comment here has been fully adequate.

Comment
Commenters called for the preparation of an EIS instead of an EA.

Response
NEPA requires Federal agencies to prepare an EIS for "major Federal actions significantly affecting the quality of the human environment."[15] However, under the CEQ's rules and the Board's own rules, the Board may first prepare an EA to determine if an EIS is necessary. In this case, SEA – through its independent analysis of all the available information, including materials filed by the applicant, SEA's consultation with tribes, and Federal, state and local agencies, and a site visit with CirclePoint, Inc., the third-party consultant assisting SEA – concluded that the Proposed Action would not significantly affect the quality of the human environment if the recommended mitigation measures in Chapter 1 of this Post EA are imposed by the Board and implemented by AZER.[16] Therefore, in making its finding of no significant impact, SEA determined that the EIS process is not warranted, based on the following:

- The proposed right-of-way alignment would cross only two improved public roads (U.S. Highway 70 and Airport Road) with an average daily traffic volume of 5,900 and 425 vehicles, respectively;
- Existing land use is largely agricultural;
- Projected traffic is two daily trains or 730 trains per year, with no diversions of existing traffic to or from other systems or modes;
- There would be no significant impact on local or regional air quality;
- There would be minimal impacts on flora and fauna and AZER would comply with any permit conditions issued by the USACE; that while the preferred alignment would cross 100-year flood zones at five locations, AZER's bridge would be designed and sized to comply with the requirements of the Graham County Engineer to minimize any flood-related impacts; and that the SEA did consult and is continuing to consult with other state and Federal agencies and has not to date identified any significant issues during the agency consultation process.
- Accordingly, there is no need for an EIS.

Comment
The primary purpose of the Proposed Action is to serve the Mine. Therefore, these two projects – the Mine and the proposed rail line – are connected actions that should be discussed together in one EIS pursuant to 40 CFR 1508.25(a)(1), to provide a complete picture of impacts.

[15] 42 U.S.C. 4332(2)(C)

[16] See SEA's letter dated August 23, 2007 in Appendix B of this Post EA. SEA granted the applicant's request for a waiver of 49 CFR 1105.6(a), which generally provides for the preparation of an environmental impact statement for a rail line construction proposal.

Response
AZER has sought only Board authority to construct and operate the proposed rail line. Therefore, including the Mine, which opened in December 2007, as part of the Proposed Action would not inform the Board's decision on AZER's petition to construct and operate a rail line. The purpose of SEA's environmental review process is to ensure the Board's compliance with NEPA, 42 U.S.C. 4321 et seq. and related environmental laws and regulations, as specified in the Board's rules at 49 CFR Part 1105. The purpose of NEPA is to focus the attention of the government and the public on the likely environmental consequences of a proposed agency action before it is implemented in order to minimize or avoid potential negative environmental impacts. See Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 371 (1989). NEPA's requirement has two purposes: First, it "ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts." Second, it "guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decision making process and the implementation of that decision."' Department of Transp. v. Public Citizen, 541 U.S. 752, 768 (2004) (Public Citizen) (quoting Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989)). Thus, information that does not inform the agency's decision need not be included in the environmental document.

The Board has jurisdiction over rail transportation by rail carriers. 49 U.S.C. 10501. In this case, AZER has petitioned the Board, under 49 U.S.C. 10502, for authority to construct and operate a rail line in Graham County, Arizona. After completion of the environmental review process, the Board will decide whether to approve, deny, or approve with conditions AZER's rail construction project. Thus, the EA must include information that the Board needs to issue an informed decision on AZER's proposal to construct and operate the proposed rail line. The Mine, however, is not part of the Proposed Action before the Board and has been subject to the approval process of other laws, not the Interstate Commerce Act.

The Board can only impose conditions that are consistent with its statutory authority over rail transportation by rail carrier under the Interstate Commerce Act. Accordingly, any conditions the Board imposes must relate directly to the transaction before it, must be reasonable, and must be supported by the record before the Board. In this proceeding, the Board's power to impose mitigation extends only to the railroad applicant, AZER, and to potential impacts that could be caused by AZER's proposed rail line construction and operation. The Board does not have authority to regulate Freeport-McMoRan or its mine, and thus could not impose mitigation to reduce potential harms from the Mine. Therefore, an environmental analysis of the potential impacts of the Mine is not properly part of the EA in this rail construction case. See Public Citizen, 541 U.S. at 769.

Comment
The Draft EA should include the cumulative, direct, and indirect impacts from the Mine per 40 CFR 1508.7 and 1508.8.

Response
The CEQ regulations define cumulative impact as "the impact on the environment which results from the incremental consequences of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions." 40 CFR 1508.7. This ensures that the range of actions that is considered in the NEPA document includes not only the proposed project, but also actions that could contribute to cumulative impacts. The CEQ regulations define direct effects as those "which are caused by the action and occur at the same time and place," and indirect effects as those "which are caused by the action

and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 CFR 1508.8.

In preparing the Draft EA, SEA reviewed the EIS for the Mine and determined that it provided a thorough investigation and evaluation of past, present, and reasonably foreseeable future actions over a wide geographic area that included the area of the Proposed Action. In addition, SEA consulted with Federal, state and local officials to determine what projects and activities would occur in the immediate area of the proposed rail line. Based on its review of the EIS for the Mine and its agency consultations, SEA identified two projects – the proposed Airport expansion and the planned light industrial uses – within the vicinity of the proposed rail line that could warrant further analysis of cumulative and indirect impacts. However, SEA consulted with the City of Safford and was informed that there were no immediate or foreseeable plans to develop the two projects. Thus, there is no way, based on current available information, to conduct any analysis of direct or indirect environmental effects of these projects, as information about the location, size and timeframe of these projects is unknown and it would be speculative to make such an assumption. SEA analyzed the direct effects concurrent with its analysis for the Proposed Action. See Chapter 4 of the Draft EA.

Comment
The Mine is now considering a sulfur burning plant that the Board should assess for potential cumulative and indirect effects under 40 CFR 1508.7 and 1508.8. This analysis would provide a more complete picture of impacts to the area.

Response
The newspaper article the commenter is referring to is entitled "Freeport-McMoran Plan for Sulfur Burning Plant" and dated April 18, 2008, two months after the Draft EA was published.

SEA was not aware of any plans for the sulfur burning plant at the time the Draft EA was published and only recently became knowledgeable of this proposal after reading the submitted comment. SEA understands that the plant is intended to produce acids that would be used on site in the copper mining and refining process. The implementation of the plant requires site improvements, including provisions for the handling of molten sulfur and product acid, turbine generators for power production, cooling towers, hydrogen peroxide exhaust scrubbers, and electrical substations.[17]

As mentioned prior, SEA evaluated the information in the Draft EIS for the Mine and conferred with Federal, state, and local officials to determine what projects and activities would occur in the immediate vicinity of the proposed rail line that could warrant further analysis. The Draft EIS for the Mine did not mention the sulfur burning facility. In addition, AZER has not informed SEA of any changes to its operations regarding the type and quantities of commodities to be transported.

In November 2008 and March 2009, SEA reviewed ADEQ's data base to determine the permit status for the sulfur burning plant. However, based on this review, SEA did not observe any information pertaining to the subject Mine or proposed sulfur burning plant in either the "permits issued" or the "permits pending" sections of the data base. Freeport-McMoRan would be required to obtain such a permit in order to operate the plant, pursuant to Title V of the 1990 Federal Clean Air Act Amendments, because sulfur burning plants are regulated as major stationary sources of air pollution. Moreover, the following is a quote from page 2-26 of the Draft EIS for the Mine:

[17] Information from istockanalyst.com; accessed December 2008 at http://www.istockanalyst.com/article/viewiStockNews/articleid/2751093.

"The Project must and will meet all applicable state and Federal air quality standards. These standards prescribe emission limits, operational practices and administrative requirements. The purpose of these standards is to ensure that emissions are sufficiently reduced so as to prevent any exceedances of health-based, maximum allowable ambient concentrations. PDSI (now Freeport-McMoRan) will utilize proven control equipment, innovative process designs, and responsible operating practices as methods to minimize air emissions. These operating practices and compliance with the terms and conditions of the permit will ensure that Project operations are in compliance with applicable air quality standards."[18] As of December 2008, Freeport-McMoRan has deferred construction of the sulfur plant, related to anticipated production cuts at the Mine.[19]

As a result, SEA believes that analysis of potential cumulative effects of the sulfur plant in combination with the Proposed Action would be speculative at this time because it is unclear when and if the sulfur plant project will proceed. If and when the sulfur plant proceeds it will be subject to separate permitting processes which should take into consideration the cumulative effects of the sulfur plant in combination with other reasonably foreseeable projects including the Proposed Action if approved by the Board.

Comment
The Draft EA fails to consider alternatives for a shorter, more direct route between the existing mainline and the Mine, particularly in light of potential airport development. For example, the commenter suggests that SEA could have analyzed a route approximately one mile west of the Proposed Action that would reduce impacts to agricultural lands and allow development of a spur to the airport. Why does the Draft EA not consider other alternatives south of the Gila River besides the Proposed Action alternative, which would bisect the Claridge property.

Response
As stated in Chapter 2 of the Draft EA, SEA analyzed four other routing alternatives that were later rejected from consideration due to a number of factors. Based on its analysis, SEA believes that it considered a reasonable range of alternatives. Figure 2-3 in the Draft EA depicts the routing alternatives examined. One of these, Alternative D, would have largely avoided the Claridge property, but in doing so, would have crossed the Gila River and the San Simon River.

The evaluation of alternatives was based on a number of environmental factors, including the length of the rail line, the number of perennial and ephemeral stream crossings, the ability to directly serve future business/industrial park uses adjacent to the Airport, and several other factors. As discussed at length in this Post EA, the Proposed Action alternative demonstrated the greatest compatibility with the objectives stated in the Purpose and Need chapter and posed the lowest degree of potential environmental impacts.

The commenter submitted a modified alignment for the area south of the Gila River. Specifically, the modified alignment would diverge from the AZER mainline where the mainline crosses the San Simon River. The modified alignment would then follow the course of the San Simon River northerly, turning sharply west just before the Gila River, and then crossing the Gila River approximately one mile to the west of the crossing location proposed in the Draft EA. This alternative would increase the overall length of the rail alignment by at least one mile or more and would limit the ability to provide service to the Airport area.

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[18] Environmental Impact Statement, Dos Pobres/San Juan Project; United States Department of the Interior, Bureau of Land Management, Safford Field Office, June 2004.

[19] Eastern Arizona Courier, December 8, 2008; accessed 12/31/08 at http://www.eacourier.com/articles/2008/12/08/news/breaking_news/doc4936e1316adb2965661450.txt.

The alignments considered for the area south of the Gila River were designed to minimize private property impacts. As shown in Figure 2-3 of the Draft EA, spur tracks from the AZER mainline were located to utilize land already owned by Freeport-McMoRan, while also providing the shortest and straightest alignment path north to the Gila River. In addition, as noted in the FWS's Biological Opinion (see Appendix C of this Post EA), the proposed crossing is located at a narrow point of the Gila River in a portion of the river near, but not immediately within, an area of perennial river flow.

The modified alignment as suggested would also face potentially significant adverse effects to land use on the north side of the Gila River. Unless the modified alignment were to take a sharp turn easterly after crossing the Gila River about one mile west of the Proposed Action's alignment, the modified alignment would likely have to pass through Dry Lake Park, a Section 4(f) resource, or Arizona State Reservation land. This modified alignment would face similar issues to Alternatives A and C contemplated in Section 2.3 of the Draft EA (Alternatives Considered but Rejected).

The commenter observes that future Airport business uses could be served from a more westerly rail alignment if a spur track were to be constructed heading east. As shown in Figure 2-3 of the Draft EA, such spur tracks might need to be constructed through Dry Lake Park and/or Arizona State Reservation Land, while at the same time increasing the overall footprint and acreage of land affected.

Comment
The Corps should be a cooperating agency and be involved in the environmental review process.

Response
SEA invited the Corps to be a cooperating agency for the environmental review, but the Corps declined to participate in such a capacity. SEA did consult with the Corps during preparation of the Draft EA, and continues to do so through the Post EA, and afterwards, for potential impacts to waters of the United States and nontidal wetlands under Corps jurisdiction. The Corps is currently being consulted on permits required for the proposed bridge over the Gila River and is a concurring party to the MOA for cultural resources. Mitigation Measure #16 requires AZER to obtain all Federal permits, including the Section 404 permit required by the Corps for project-related encroachment of jurisdictional waters of the U.S. prior to the initiation of any project-related construction, and Mitigation Measure #38 requires AZER to coordinate with the Corps.

Comment
The Arizona Game and Fish Department (AGFD) commented that it would like to be informed of any conservation measures required by the U.S. Fish and Wildlife Service (FWS) as described on pages 6-8 of the Draft EA. AGFD would also like to be informed of future actions in meeting those requirements.

Response
On October 27, 2008, the FWS issued a Biological Opinion for the Proposed Action, pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544). A copy of the Biological Opinion is included in Appendix C and was sent via U.S. mail to the Chief of the Habitat Branch and the Region V supervisor at AGFD. In its opinion, the FWS stated that the construction and operation of the Proposed Action would not result in any direct, indirect, or cumulative adverse impacts to the razorback sucker and southwestern willow flycatcher, or their habitats. The FWS did not require any additional mitigation measures beyond what has already been recommended in the Post EA.

Comment
The Proposed Action would cause an increase in traffic along AZER's mainline that would exceed SEA's threshold for analysis under 49 CFR 1105.7. SEA should therefore consider traffic on AZER's mainline in the EA. SEA should also consider impacts on environmental resources along AZER's mainline, not just air quality per 49 CFR 1105.7 and CEQ regulations.

Response
SEA determined that the regulations at 49 CFR 1105.7 do not require analysis or mitigation of down-line impacts for energy, air, and noise because SEA's regulatory thresholds have not been met.

In the case of energy consumption, the regulations require a detailed analysis of energy if a Proposed Action would divert significant quantities of goods from rail transportation to motor carriage or truck traffic. The reverse would occur in this case because the Proposed Action would divert truck traffic to rail transportation to and from the Mine. Such a diversion would reduce the amount of energy consumed and thus have an overall beneficial effect on energy resources.

For determining air impacts, the regulations require at least a 100 percent increase in rail traffic, as measured in gross ton miles annually, or that an increase of at least eight trains a day would occur on any segment of rail line affected by the proposal. In this case, ADEQ has determined that the Project area is in attainment for all criteria pollutants and that, pursuant to SEA's regulations, the projected rail traffic of two trains per day does not meet the minimum threshold for analysis.

For determining noise impacts, the Proposed Action does not meet the threshold criteria of eight trains per day that would trigger the need for a detailed noise impact analysis. However, SEA considered ambient noise levels in accordance with FRA noise criteria in the Draft EA and determined that the Proposed Action would not have a significant impact on noise-sensitive land uses in and around the project area.

Comment
The Draft EA should quantify the rail traffic anticipated from the light industrial uses and the Airport to determine if the air quality thresholds have been met per CFR 1105.7(e)(5)(i)(A). Otherwise, these land uses should not be included in the Purpose and Need statement.

Response
According to the City of Safford, development of the light industrial uses adjacent to the Airport (an area of approximately 78 acres) has been limited by poor access. As stated in the EA, the provision for rail service to the Airport area would significantly improve access and greatly facilitate any business/industrial park development. Therefore, at the City of Safford's request, SEA included the future development of the Airport area in the purpose and need statement.

However, as no actual development of the light industrial uses has occurred or been proposed to date, the exact type of businesses and/or industrial uses in the area is unknown. Also unknown is the precise amount of rail service that any such uses would utilize. AZER's initial estimates included using three locomotives and 30 rail cars. However, after conducting more detailed engineering, AZER refined its estimated service needs to two locomotives and 20 to 25 rail cars. Notwithstanding, traffic and air quality analyses performed as part of the Draft EA assumed the former train length of 30 cars plus three locomotives. AZER has indicated that if light industrial uses are developed near the Airport, 5 to 10 railcars per day could be added to the train bound to the Mine. These cars can be included on the trains without invalidating SEA's air quality and

traffic analyses, as the 30-car, 3 locomotive length would not be exceeded. Therefore, SEA estimates that 5 to 10 additional carloads could be added to the daily round trip to and from the Mine with no additional environmental effect beyond what was analyzed in Chapter 4 of the Draft the EA. Although the precise extent and nature of any light industrial development is unknown at this time, this level of rail service would provide significant shipping capacity. A single 50 foot rail car has a volume of more than 5,000 cubic feet; each car can carry upwards of 75 tons of material. On a daily basis, 5 to 10 rail cars would provide the opportunity to transport 25,000 to 50,000 cubic yards (up to 375 to 750 tons) of material to or from the potential light industrial area. While no study has been conducted to determine the precise transportation needs of any light industrial development in this area, the indicated available capacity would be able to serve one or more light industrial businesses that may develop near the Airport.

Comment
SEA should have considered the indirect and cumulative impacts associated with the Airport expansion in its environmental review per 40 CFR 1508.7 and 1508.8, if the Airport is to be included in the Purpose and Need statement of the EA. This would include analyzing future rail service to the Airport and determining potential impacts. As an alternative, the commenter suggested that the alignment could be moved further west away from the Airport since this area was not studied in the Draft EA

Response
As stated in chapter 1 of the Draft EA, SEA included the Airport in the Purpose and Need statement because the Airport is proposing to develop light industrial uses on property owned by the Airport. The light industrial uses would require some movement of raw materials and goods in and out of the Airport area. Thus, this project would provide a cost effective and efficient means for the transport of commodities. Moreover, the City of Safford has indicated that the light industrial use areas have limited access and cannot be developed until certain infrastructure improvements are made. Although the City has indicated that there are no current plans to develop this industrial area, the City did request that a connection be provided in the Draft EA with the plan that this area would one day be rail-served. Thus, there is no way, based on current available information, to conduct any analysis of direct or indirect environmental effects of light-industrial uses at the Safford Airport, as information about the location, size and timeframe of such development is unknown and it would be speculative to make such an assumption.

Furthermore, SEA considered a reasonable range of alternatives, and any changes, such as relocating the proposed rail line away from the Airport, would require further analysis and consultation with Federal agencies, and would not be a viable option for supporting any future light industrial uses around the Airport. Chapter 4.0 of the Draft EA provides a discussion of potential impacts on hydrology and viewsheds.

Comment
The Draft EA fails to analyze the environmental impacts associated with train/truck hazardous materials incidents.

Response
Hazardous materials spills from train and trucks would generate similar impacts on air and water resources (See the No Action Alternative) depending on a number of variables such as: the location of the accident relative to the surrounding terrain, meteorological conditions and the type of chemical.

As noted in the Draft EA, the Proposed Action would not result in an increase in the generation or release of hazardous waste. Although the Proposed Action would result in the transport of one train per day of sulfuric acid - a hazardous material - to the Mine from Claypool or Miami, Arizona, the No-Action Alternative would result in the transport of approximately 80 truck loads per day of sulfuric acid along public highways and roadways. As stated in the Draft EA, FRA statistics indicate that hazardous materials transported by railroad are much less likely to be involved in an accidental release than hazardous materials transported by truck.

Chapter 4 of the Draft EA states that in the event of an accident, AZER has contingency plans and crews to handle emergencies such as natural disasters and train derailments. Additionally, Mitigation Measure #33 would require AZER to develop and implement a spill prevention plan.

Comment
The Draft EA did not discuss or analyze ADOT's suggested alternatives for the proposed U.S. Highway 70 crossing.

Response
On April 10, 2008 and subsequent to the above comment, SEA participated in a conference call with representatives from ADOT, the Arizona Corporation Commission (ACC), AZER, and SEA's third party consultants CirclePoint and Wilbur Smith Associates. ADOT requested the meeting to discuss concerns over the need to include a grade-separated crossing at U.S. Highway 70 as an alternative in the Draft EA. During the meeting, AZER agreed to work with ADOT on the grade-separated road crossing issue and has since submitted a letter to SEA indicating its commitment and intent to further work on a plan that is agreeable to all parties in the future. The letter dated November 5, 2008 from John Heffner to Diana Wood in Appendix F (Post EA Correspondence) indicates that AZER is willing to participate in the planning and funding of a fare share of the costs related to a bridge span that would replace an at-grade rail road crossing, in conjunction with the planning and construction of the proposed widening of U.S. Highway 70.

Comment
The Phelps Dodge Mine has since been purchased by the Freeport-McMoRan Gold & Copper Company and should be noted in the EA.

Response
The comment is noted and incorporated herein.

General Matters

Summary
SEA received comments that provided suggestions on how the document could be better organized and comments that provided clarification on specific issues and corrections to errors. The specific comments include:

Comment
The technical appendices should have an index or table of contents.

Response
Comment noted. The Draft EA contains a table of contents and appendices. However, SEA only included a table of contents in appendices with more than 15 pages. Thus, three of the eight technical appendices have table of contents.

Comment
"Tulley Wash" should be spelled "Talley Wash."

Response
Comment noted.

Project Description

Summary
SEA received comments on the project description that expressed concern about potential impacts associated with the 500-foot wide corridor; questioned why other alternative routes and other highway crossings were not considered; and expressed doubt about the Gila River crossing with regard to the actual length of the bridge. Specific comments include:

Comment
The commenter questioned why the right-of-way width increased to 500 feet in the Draft EA when a narrower width was originally discussed. Commenters also questioned the amount of impact the 500-foot width would have on the land, and expressed disappointment that property owners were not informed of such changes.

Response
As indicated in Chapter 2.0 of the Draft EA, the right-of-way would be approximately 100 feet wide and contain the proposed rail line at about 8.5 feet in width, as well as a side running service road approximately 12 feet in width.

The 500-foot corridor was established early in the process as a means to assess impacts on biological and cultural resources. This corridor, or Area of Potential Effects (or APE), was also established to allow AZER some degree of flexibility in locating the final alignment, based on final engineering and environmental approvals. The proposed rail right-of-way remains at a width of no greater than 100 feet within the 500-foot corridor.

Land Use/Farmlands and Agriculture

Summary
SEA received comments on the land use/farmlands and agriculture section of the EA that expressed concerns about agricultural land, irrigation wells, and economic implications for farmers. The City of Safford requested that AZER coordinate final design and planning efforts with the City to avoid conflicts with existing and future development. Specific comments include:

Comment
The proposed rail line would devalue properties and reduce the number of farmable acres of agricultural land. Land owners should be compensated for loss of income and property values, and that damage to land should be mitigated—or that any alignment alternatives traversing farmland should be developed in cooperation with property owners who have the most in-depth knowledge of the lands in question.

Response
As stated in Section 2.3 of the Draft EA, most of the alignment areas in each of the alternatives are on privately held land that is either agricultural use or desert rangeland. In considering the various routing alternatives, SEA sought to both minimize the amount of impact to agricultural and residential properties, as well as reduce the number of river crossings to the greatest extent practicable. As a result, nearly all of the routing alternatives are located away from residential properties and avoid crossing the San Simon River.

In general, agricultural operations are compatible with freight railroads, and often rely on freight to transport agricultural commodities. The alignment alternative under the Proposed Action was developed to closely follow property lines to the extent practicable, so as to avoid private property and agricultural severance impacts.

As noted in the Draft EA, acquisition of the railroad right-of-way would require the permanent use/conversion of (ie, a direct impact to) as much as 24.6 acres of farmland, assuming a 200-foot wide right-of-way (AZER indicates that the actual right-of-way width would be approximately 50 to 100 feet). Appropriate compensation would be provided to affected property owners. It should be noted that Graham County's Comprehensive Plan has not established a "minimum farmable unit" acreage – in other words, the smallest parcel size on which agricultural uses can be feasibly conducted, given local conditions. Two land use designations set forth by the Graham County Comprehensive Plan ("A" and "A-R") allow for unspecified agricultural and grazing uses; minimum lot sizes for these designations are one acre. Where remnant parcels below an acre in size are created, affected property owners could seek compensation from the project applicant.

Notably, the National Resources Conservation Service (NRCS), a bureau of the United States Department of Agriculture, reviewed the potential farmland impacts of the Proposed Action. NRCS has determined that the quantity of farmland that the Proposed Action would impact, when taking into account the nature of surrounding land uses and soil qualities, falls short of NRCS's threshold for mitigation. A copy of a letter from NRCS has been included as Appendix D to this Post EA.

Comment
The proposed rail line would sever existing parcels and adjacent drainage ditches and thus impact farming operations. More land will be needed than just the right-of-way for ancillary rail structures such as turnarounds and spurs, yielding less prime agricultural land to actively farm. It will be difficult to use farm equipment in areas that have been severed by the proposed rail line.

Response
As stated in the Draft EA, the project would have both direct and indirect impacts to farmland pursuant to the Farmland Protection Policy Act. These factors would be taken into consideration with individual property owners during property acquisition negotiations. A new mitigation measure (see Chapter 1, measure #13) was added to better address unavoidable impacts to agricultural lands. The mitigation measure requires AZER to consult with property owners and modify the final alignment within the studied 500 foot corridor so as to minimize or avoid impacts to existing land uses, structures, and infrastructure, consistent with the floodplain approval process and the Section 404 U.S. Army Corps of Engineers and Section 7 U.S. Fish and Wildlife Service regulatory permit processes.

Comment
Commenters expressed concern about wells being capped within the 500-foot corridor resource study area for the proposed rail line. One commenter stated that drilling wells in new locations is not a simple process due to differing parameters such as aquifer depth, location, pressure, and water quality. Studies need to be performed to determine optimum well locations before the old wells are capped.

Response
Although a 500 foot wide corridor was studied in detail for portions of the environmental analysis, the actual railroad right-of-way width would be approximately 50 feet in most locations and at no point wider than 100 feet. All temporary construction effects are to be located within a 200 foot corridor centered on the proposed rail alignment. Temporary construction areas would not necessarily entail the same degree of modifications to land, such as the capping of wells or other significant ground disturbance.

When detailed engineering plans are developed, any wells, utilities, or other structures that are identified as possibly being in the right-of-way will, to the greatest extent practicable, be avoided by the final alignment. Where conflicts with wells, utilities, or other structures cannot be avoided, such features would be capped and/or relocated if necessary.

Comment
SEA should discuss plans for the proposed alignment with the City of Safford so that the proposed rail line does not conflict with existing and future development and land uses, such as the Safford Regional Airport and Dry Lake Park.

Response
SEA met with representatives from the City of Safford early in the project planning process to discuss various routing alternatives for the proposed rail line with respect to adding future rail line service to the Safford Regional Airport and avoiding Dry Lake Park. Both issues were addressed in Chapters 1.0, Purpose and Need, and 2.0, Alternatives, of the Draft EA.

The City of Safford also commented that the Safford Regional Airport Master Plan is in the process of being revised. A key component of the revision is the proposed extension of the Airport's runways. The City indicated that the Master Plan now proposes to extend the runway up to 2,000

feet in a northwesterly direction, within close proximity to the alignment of the proposed rail line. According to a diagram provided to SEA by the City of Safford (and included as Figure 1 in this Post EA), the existing taxiway A/B would be extended from 6,000 to 8,000 feet in length, and a new 8,000 foot runway would be constructed to the immediate north, parallel to the extended taxiway.

As shown in Figure 1 of this Post EA, the right-of-way for the Proposed Action turns sharply to the northwest near the Airport's northern boundary. Therefore, SEA has determined that the proposed rail alignment would not conflict with the proposed taxiway extension and new runway.

Community/Socio-Economic Effects

Summary
SEA received comments on the community/socio-economic effects that questioned the accuracy of the data used in the Draft EA for forecasting economics and demographics. Specific comments include:

Comment
A commenter questioned the accuracy of the Draft EA in stating that the proposed rail line would provide six to 12 jobs.

Response
Based on operational period job estimates provided by AZER, SEA has determined that it is reasonably foreseeable that train operations to the Mine would require additional train operators and/or maintenance of way personnel. Even if the actual number of new employees created by the Proposed Action were reduced from the estimate provided in the Draft EA from a range of 6-12 to a range of 2-4, the impact conclusion in this section would remain largely unchanged, although the degree of beneficial job creation would be slightly reduced.

Comment
Updated demographic and economic data can be found at www.workforce.az.gov.

Response
The State of Arizona Department of Economic Security has developed population estimates at the local, county, and state level as of July 1, 2007. These estimates are reflected in the updated table below.

	1990 population	2000 population	Percent change	July 2007 population estimate	Percent change
Graham County	26,554	33,498	+26.2	37,338	+11.0
City of Safford	7,359	9,232	+25.5	9,460	+2.4
State of Arizona	3,665,228	5,130,632	+40.0	6,500,194	+26.7

Relative to the Draft EA, the July 2007 population estimates show larger increases in the City of Safford, Graham County, and the State than prior estimates from 2003. This additional information does not modify any impact conclusions noted in the Draft EA.

Utilities

Summary
SEA received comments on the utilities/public services that expressed concern about possible rate increases for Graham County Electric Cooperative (GCEC) customers as a result of the proposed rail line. Specific comments include:

Comment
GCEC, a non-profit, member-owned cooperative, commented that the proposed rail line would require the rerouting of major electric and natural gas lines, and crossing of a number of smaller lines. Such measures could disrupt service and result in increased fees. AZER should be required to inform GCEC customers of any and all rate increases.

Response
Chapter 4.0 of the Draft EA stated that the Proposed Action would cross existing telephone and electric power lines at U.S. Highway 70 and that no rerouting was found to be necessary. The Draft EA also stated that there did not appear to be any gas lines in the project area. Although the commenter did not provide specific information as to the location of any gas lines or other underground utilities that might be potentially impacted by the project, SEA has included Mitigation Measure #8 in the EA requires AZER to consult with GCEC, and, if warranted, conduct an underground service alert (USA) for the length of the proposed rail alignment prior to the start of construction. Should the USA reveal the presence of any undergrounded utilities that might be crossed by the proposed rail line, AZER would ensure that such conveyances are protected in place.

Traffic, Transportation and Safety

Summary
SEA received comments on traffic and transportation and safety that expressed concern about traffic congestion, safety, and essential services such as emergency response. Commenters also noted that some of the traffic and transportation information in the Draft EA was either incorrect or not included. Specific comments include:

Comment
The Draft EA did not take into account ADOT's 2003-2007 traffic data, published in April 2008. This is critical because SEA underestimated the level of service (LOS) and traffic delay at the U.S. Highway 70 crossing, and should update the Draft EA accordingly. The Draft EA also did not include truck transportation data, nor did it discuss safety or delay issues.

AZER should build a grade separated crossing at U.S. Highway 70 rather than the proposed at-grade crossing, because the proposed at-grade crossing will: increase traffic, delay emergency vehicle response time, limit access to private driveways, and increase the risk of vandalism and theft to surrounding properties at times when the train is crossing the highway.

R**esponse**
SEA used 2005 traffic data in the Draft EA because this was the latest information available from both ADOT and the Graham County Engineering Department at the time the traffic analysis was being conducted in 2006. SEA used this data to project potential impacts of the Proposed Action up to the year 2030, assuming an annual growth factor of 1.85 percent. SEA's analysis examined U.S. Highway 70 in both 2 lane (existing) and 4 lane (projected) configurations, as presented in Chapter 4.0 of the Draft EA. Based on the 4 travel lane 2030 projections, SEA determined that the

existing LOS A (free-flowing) would decrease to B (reasonably free flowing) for this segment of U.S. Highway 70.

Traffic data for U.S. Highway 70 from 2007 were not available until after the Draft EA was published in 2008. However, SEA has revised the traffic analysis in this Post EA (see Appendix E) to utilize the more recent data. As part of this effort, SEA recalculated the expected annual traffic volume growth rate for U.S. Highway 70, utilizing data between the years 2005 and 2007. During this period, traffic volumes on U.S. Highway 70 increased at an average annual rate of more than 8 percent. To predict year 2030 traffic volumes for U.S. Highway 70, SEA applied this same growth rate of 8 percent. Use of the 8 percent growth rate resulted in a higher level of projected year 2030 traffic than the previous use of the 1.85 percent growth rate.

Assuming 4 travel lanes, the updated analysis shows that in 2030, the LOS at the same location of U.S. Highway 70 would remain at B during the worst-case, peak-hour scenario.[20] For rural areas (defined by ADOT as communities with populations below 50,000) ADOT typically considers LOS C or better (in a range from LOS A (optimal) to LOS F (traffic jam)) to be an acceptable level of delay. Therefore, SEA has concluded that the traffic delay impact at the proposed at-grade crossing would remain unchanged.

The updated analysis also provided information regarding the number of trucks traveling on U.S. Highway 70 in response to comments. The updated analysis indicated that truck traffic constituted approximately 8 percent of all vehicle traffic along this portion of U.S. Highway 70. The updated analysis also noted that some vehicles, especially those carrying hazardous materials, or buses carrying children, are required to stop at all railroad crossings, regardless of the presence of a train. The earlier analysis indicated that such potential impacts could be mitigated through the placement of warning signs and devices on the eastbound and westbound approaches to the proposed at-grade crossing. The updated analysis reaffirmed that warning signs and devices would mitigate potential safe stopping distance concerns with the proposed at-grade crossing and proposed additional signs and signals within a larger potential area relative to anticipated traffic queues.[21]

The updated traffic analysis assumed a maximum traffic queue length of 3,232 feet under a proposed four-lane highway configuration. The analysis also concluded that the total delay anticipated from a single train crossing at U.S. Highway 70 would be 163 seconds (2 minutes and 43 seconds). Given that two daily trains would cross U.S. Highway 70, the maximum total daily train crossing time would be 326 seconds (5 minutes, 26 seconds) each day. Because these queues would be of relatively short duration (under 3 minutes at the longest), it is unlikely that there would be time enough for vandalism to occur.

Comment
The Draft EA failed to analyze the impact of the at-grade railroad crossing on first-responders.

Response
The Draft EA concluded that there would be minimal disruptions along U.S. Highway 70 for all potential users. The updated traffic analysis (Appendix E to this Post EA) examined potential impacts to first responders up to year 2030. The updated analysis assumed that a worst-case delay

[20] The worst-case scenario assumed that the train would cross U.S. Highway 70 during the afternoon peak hour, when traffic levels are at their highest. Crossings at other times of day, when traffic levels are lower, would have proportionately milder effects on traffic.

[21] "Traffic queues" are defined as any group of waiting or slow-moving vehicles. Traffic queues can develop at stop signs, traffic lights, and active rail crossings.

for first responders would be equal to the maximum possible train crossing time, estimated to be 163 seconds per train crossing, or a total of 326 seconds (five minutes) per day. This analysis assumed that first responders would be able to advance to the front of any traffic queues at the crossing.

Given that two trains a day would cross the highway resulting in relatively infrequent, short-duration delays, it was determined that the Proposed Action would have a negligible impact on the mobility of first responders.

In the unlikely event of an unanticipated longer delay due to catastrophic or other unforeseeable factors, area traffic would likely need to be temporarily diverted to East Solomon Road, which runs parallel to U.S. Highway 70 approximately 1 mile to the south. Any such delays would be far outside the course of anticipated daily operations. Catastrophic incidents would be coordinated by both AZER's own operational unit (based in Claypool) and Safford and Graham County emergency responders.

Comment
The Draft EA states that the proposed rail line would reduce or eliminate the trucks hauling hazardous materials; however, many trucks will likely still be needed for transport of other materials to the Mine, as evidenced by operations of the nearby Morenci Mine.

Response
The Draft EA does not state that the proposed rail line would provide all transportation needs to and from the Mine. Rather, the identified purpose and need for the Proposed Action is to provide for the transport of copper cathodes and sulfuric acid to and from the Mine. It is assumed that Mine employees would utilize local roadways to travel to and from the Mine; local roadways would also be utilized to transport other equipment and materials associated with Mine operations. Such operations were analyzed in the separate Mine EIS and are not relevant to the analysis of the Proposed Action in the Draft EA.

Comment
The ACC commented that it has approval authority for at-grade rail/highway crossings in the state of Arizona.

Response
According to its website, one of the main missions of the ACC is to ensure compliance with a number of Federal railroad operating and safety regulations. The ACC carries out these responsibilities in part through its jurisdiction over proposed crossings of public highways and through the activities of its Railroad Safety Section. SEA has recommended Mitigation Measure #2, which states that construction of at-grade road crossings are subject to the ACC's review and approval.

Comment
The Draft EA should discuss the number and types of hazardous materials haulers in the region, as well as the number and types of special vehicles that would be traveling through the at-grade crossing. Related comments argue that information on AZER's own safety record must be taken into consideration when discussing the probability of spills, accidents, and fires.

Response
The Proposed Action would remove some trucks transporting hazardous materials from local roadways and highways; however, such materials would continue to be transported along local

roadways in relation to other uses, users, and needs. SEA does not dispute this assertion. No data are available estimating the number of hazardous materials haulers in the area. Notwithstanding, the Proposed Action would still result in the removal of some hazardous material carrying trucks from local roadways, a small but beneficial impact.

The FRA Office of Safety Analysis tracks railroad accidents and provides a comprehensive, searchable on-line database. In 2007, there were five reported railroad accidents in the state of Arizona involving damages greater than $50,000. Three of these accidents were on the Union Pacific Railroad; the other two were on the Burlington Northern Santa Fe Railroad (BNSF). During the same period, there were five accidents on the Arizona Eastern Railroad, but equipment and track damage was relatively minor (below $50,000 in damage and involving no loss of life).

Between January and September 2008, FRA has tracked a total of thirty one railroad accidents in the state of Arizona. AZER and BNSF each experienced ten railroad accidents during this period. Of these, two were on the AZER; one was a major derailment on January 28 in Gila County, which resulted in more than $1 million in track and equipment damage. This was the second largest rail accident in the state of Arizona between January and September 2008; the largest was on the BNSF on March 16 in Yavapai County.

To reduce and minimize any potential effects related to the unexpected release of hazardous materials, SEA has included several mitigation measures. Mitigation Measure #33 requires AZER to develop a spill prevention plan that would encompass both construction and operational phases of the Proposed Action. Mitigation Measure #34 requires that operational period safety measures encompass all applicable Federal and state regulations related to hazardous materials. In addition, Mitigation Measure #17 requires AZER to develop a stormwater pollution prevention plan (SWPPP) as a condition of an Arizona Pollutant Discharge Elimination System (AZPDES) permit from the Arizona Department of Environmental Quality (ADEQ). The SWPP and the permit would integrate best management practices into rail operation plans that would help to minimize any potential release of pollutants into waters of the United States, including the Gila River and the San Simon River.

Comment
The Draft EA does not address safety issues regarding sight distance for AZER motor vehicles entering U.S. Highway 70 from the access roads, as drivers' view of oncoming traffic may be blocked by crossing arm equipment and bridge barriers.

Response
The updated traffic analysis (Appendix E of this Post EA) indicated that no data were available regarding the number of vehicles turning into or out of properties along U.S. Highway 70 in the vicinity of the proposed at-grade crossing. This stretch of U.S. Highway 70 primarily comprises large parcels of land in agricultural use. Therefore, SEA concludes that traffic volumes turning into U.S. Highway 70 from these roads would be minimal. Crossing arm equipment, when not in a deployed position, would be similar in profile to a telephone pole and would therefore have negligible impacts to views along the roadway.

The Draft EA otherwise extensively covered potential impacts related to safe stopping distance; mitigation measures have been included to reduce the degree of these impacts.

Comment
A commenter questioned why the proposed traffic mitigation measures only covered construction and raising the at-grade crossing to the level of the bridge deck and did not address other mitigation such as the utilization of an extra lane for trucks and buses (because they stop at the tracks). The commenter also questioned why the Draft EA did not incorporate the design of the to-be-constructed five-lane configuration of U.S. Highway 70 so that the safety devices in the project area only have to be constructed once.

Response
Proposed mitigation measures examine operational conditions in the year 2030, not merely construction period impacts, as a comment asserts. Moreover, the analysis for the year 2o30 concluded that delays at the proposed at-grade crossing would be relatively minor, resulting in Level of Service B operations, which are typically considered acceptable by ADOT.

In 2008, ADOT indicated that the agency plans to expand U.S. Highway 70 to include a center turn lane.

As previously mentioned, on April 10, 2008, ADOT coordinated a conference call with SEA, AZER and others. During this call, ADOT and AZER agreed to cooperate on the placement of roadway safety devices at the railroad crossing and coordination of future roadway expansions relative to the railroad crossing.

AZER would construct an at-grade crossing of U.S. Highway 70 to span existing travel lanes. It is assumed that the expansion of U.S. Highway 70 to 3 lanes would occur prior to the construction of AZER's at-grade crossing. In the event that the proposed expansion to 3 lanes does not occur, existing shoulders along both sides of U.S. Highway 70 would afford ample space for trucks, buses, and any other vehicles required to or wishing to stop at the at-grade crossing to do so outside of the main travel lanes and allow any other vehicles to pass.

Comment
The Draft EA should include "information and safety analyses for train-vehicle collisions at five-lane, three-lane, and two-lane highways with at-grade crossings."

Response
The updated traffic analysis (Appendix E of this Post EA) as well as the study prepared for the Draft EA each examined safety considerations for the proposed at-grade crossing.[22] Analyses for safe stopping distance were included for two and four lane configurations of U.S. Highway 70. The analyses concluded that with mitigation, the risk of collisions would be minimized.

Comment
ADOT is proposing a grade separated railroad spur crossing of US 70 west of San Simon River Bridge at milepost 343.4.

Response
The commenter states that design and construction details for this project have not been finalized. However, the comment is acknowledged; this proposed grade separated crossing would not appear to pose any traffic delay or safety issues to the proposed AZER at-grade crossing.

[22] The Draft EA can be downloaded from the Board's website at www.stb.dot.gov. Go to "E-Library," click on "Decisions & Notices," and then conduct a full text search for the material under "FD 34836."

Visual/Aesthetics

Summary
SEA received comments regarding its analysis of visual resources for the Proposed Action. Specific comments include:

Comment
The Draft EA should have utilized a standard visual resource analytical tool such as the Bureau of Land Management's Visual Resources Management System because the proposed Gila River crossing would pose a significant visual impact even if not readily observable to numerous viewers. SEA's analysis was deficient.

Response
The Draft EA acknowledged that neither the Board nor the only cooperating agency, FRA provides detailed guidance for the evaluation of visual impacts. As such, SEA used Federal Highway Administration (FHWA) guidelines for the analysis of visual resources. These guidelines are used across the nation for linear road and highway projects. Therefore, given the linear nature of this project, SEA determined that application of FHWA guidelines was appropriate.

The Draft EA recognized that the proposed Gila River bridge would be a substantial addition to the immediate visual environment of the Gila River crossing, but that the area was largely not visible from any public property, including Dry Lake Park to the north. The potential number of affected viewers would thus be minimal, leading to SEA's conclusion of no significant adverse visual effect.

Cultural and Paleontological Resources

Summary
SEA received comments on the cultural and paleontological resources with regard to potential adverse effects and mitigation to the cultural resources significant to the Hopi Tribe. Specific comments include:

Comment
The Proposed Action may adversely affect cultural resources significant to the Hopi Tribe and that the Hopi Cultural Preservation Office would like to be provided with copies of the draft testing plan and the draft testing report for review and comment if archeological testing is proposed at site AZ CC:2:370 (ASM).

Response
The Draft EA concluded that the Proposed Action may have an adverse effect on six historic resources. The Draft EA concluded that the Proposed Action would not have an adverse effect on site AZ CC:2;370. Notwithstanding, owing to the possibility of buried human remains on this site, Arizona Revised Statutes (ARS) §41-865 requires potential burial sites to be investigated consultation with identified Native American tribes.

Under the Section 106 of the National Historic Preservation Act of 1966 as amended (NHPA) (16 U.S.C. § 470f), SEA has prepared a Memorandum of Agreement (MOA) with the Arizona SHPO to ensure that a number of measures related to the treatment of historic and cultural properties are carried out during the construction of the Proposed Action. Signatory parties to the MOA are STB, FRA, Arizona SHPO and AZER. Concurring parties to the MOA are the Gila River Indian Community, the Hopi Tribe, and the United States Army Corps of Engineers (Corps). A copy of the executed MOA is included as Appendix G. Specifically, the MOA binds the Board, and by

extension, AZER, to comply fully with the terms of the approved Historic Properties Treatment Plan (HPTP) prepared for the Proposed Action. A letter indicating Arizona SHPO's approval of the HPTP is included in Appendix F (Post EA Correspondence).

Therefore, the HPTP includes this site, recommending compliance with ARS §41-865. Moreover, the MOA specifically names the Hopi Tribe as a concurring party to the MOA and invites their ongoing participation. The MOA includes a stipulation that all draft technical reports shall be circulated to all concurring parties.

In accordance with Section 106 regulations, both the MOA and the HPTP were circulated to interested parties, including interested Tribes, for review and comment prior to execution. The executed MOA includes comments generated during this review period.

Comment
The Section 4(f) evaluation discusses only potential effects to recreational facilities. There is no discussion of how potentially affected historic resources may be regulated under Section 4(f).

Response
Section 4(f) of the Department of Transportation Act of 1966, codified in Federal law at 49 USC §303, declares that "[i]t is the policy of the United States Government that 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."

Section 4(f) specifies that "[t]he Secretary [of Transportation] may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park area, refuge, or site) only if:

1. there is no prudent and feasible alternative to using that land; and
2. the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use."

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Departments of Agriculture and Housing and Urban Development in developing transportation projects and programs which use lands protected by Section 4(f).

The U.S. Department of Transportation's regulations regarding the evaluation of archaeological resources under Section 4(f) is further codified at 23 CFR §771.135. Specifically, Section 4(f) does not apply to archaeological sites whose importance as a resource can be documented through a data recovery process and has minimal value for being preserved in place. Moreover, Section 4(f) requirements apply only to sites on or eligible for listing on the National Register of Historic Places (NRHP).

The Draft EA concluded that a recreational facility near the proposed rail alignment (Dry Lake Park) would qualify as a 4(f) resource. The Draft EA concluded that there would be no 4(f) use of this property because the proposed rail alignment would be located at least 1,500 and up to 2,000 feet away from Dry Lake Park.

The cultural resources evaluation within the Draft EA identified 12 potentially affected historic resources in the vicinity of the proposed rail alignment. The Draft EA concluded that the Proposed

Action would potentially result in adverse effects to six of the identified resources. The Draft EA further found that NRHP eligibility had not been determined for three of the six potentially adversely affected resources; the determination of eligibility would establish the extent of the project's adverse effect on each resource.

The Draft EA included mitigation for potential effects to cultural resources in the form of compliance with two guidance documents:

1. A Memorandum of Agreement (MOA), developed pursuant to 36 CFR 800.6(c), to be executed by all required parties.
2. An Historic Properties Treatment Plan (HPTP), to be prepared for the project pursuant to 36 CFR 800.11.

Subsequent to the publication of the Draft EA, the MOA has been developed; the MOA was fully executed by all signatory parties on March 10, 2009. In addition, an HPTP was developed; the HPTP was accepted by the Arizona SHPO on March 12, 2009, as indicated in the letter from Arizona SHPO included within Appendix F (Post EA Correspondence).

Notably, the HPTP identified four additional historic resources that had not been included in the Draft EA. These four sites contain water control checkdams, believed to date from the early 20th century. A supplement to the HPTP concluded that the four checkdams were eligible for listing on the NRHP.

The table below identifies and briefly describes each of the historic resources considered in the HPTP[23], indicates treatment strategies for each resource, and evaluates the applicability of Section 4(f) requirements to each resource. As indicated in the table below, none of the historic resources potentially affected by the Proposed Action are subject to the requirements of Section 4(f).

Summary of Historic Sites Considered in the Historic Properties Treatment Plan, National Register of Historic Places Eligibility, Treatment Strategies, and Section 4(f) Evaluation

ASM Site Number	Name or Type of Site	NRHP Eligibility	Treatment Strategy	Subject to Section 4(f) Requirements?
AZ CC:2:172	Union Canal – irrigation feature	SHPO has determined eligibility under criteria (a) and (c)	Data recovery	No: 4(f) requirements do not apply when importance of resource can be documented through a data recovery process
AZ CC:2:360	San Simon River Diversion	Undetermined; considered potentially eligible under criterion (a)	If eligible, data recovery	No. Even if the resource is ultimately determined to be eligible for the NRHP, a data recovery process would adequately document the value of this resource.
AZ CC:2:361	Hog raising facility ("piggery")	SHPO has determined eligibility under criterion (d)	Data recovery	No: 4(f) requirements do not apply when importance of resource can be documented through a data recovery process
AZ CC:2:362	Montezuma Canal – irrigation	Unevaluated; considered	Eligibility testing; If	No. Even if the resource is ultimately determined to be eligible for the NRHP,

[23] Properties included in the HPTP include the four checkdam sites (AZ CC:2:377, AZ CC:2:378, AZ CC:2:379, AZ CC:2:380) plus two sites that the Draft EA concluded would not be adversely affected by the Proposed Action (AZ CC:2:364 and AZ CC:2:370).

ASM Site Number	Name or Type of Site	NRHP Eligibility	Treatment Strategy	Subject to Section 4(f) Requirements?
	feature	potentially eligible under criterion (a)	eligible, data recovery	a data recovery process would adequately document the value of this resource.
AZ CC:2:363	Farmhouse	Unevaluated; considered potentially eligible under criterion (d)	Eligibility testing; If eligible, data recovery	No. Even if the resource is ultimately determined to be eligible for the NRHP, a data recovery process would adequately document the value of this resource.
AZ CC:2:364	Buried aqueduct	Unevaluated.	Eligibility testing; If eligible, data recovery	No. Proposed Action would not adversely affect this resource. Moreover, even if the resource is ultimately determined to be eligible for the NRHP, a data recovery process would adequately document this resource's value.
AZ CC:2:370	Artifact Scatter	SHPO has determined that the site is not eligible.	Per ARS §41-865, investigation of potential for buried human remains.	No. Proposed Action would not adversely affect this resource. Moreover, the resource is ineligible for NRHP, and is therefore not subject to Section 4(f) requirements.
AZ CC:2:377	Water control checkdams	Eligible under criteria (a), (c), and (d)	Data recovery	No: 4(f) requirements do not apply when importance of resource can be documented through a data recovery process
AZ CC:2:378	Water control checkdams	Eligible under criteria (a), (c), and (d)	Data recovery	No: 4(f) requirements do not apply when importance of resource can be documented through a data recovery process
AZ CC:2:379	Water control checkdams	Eligible under criteria (a), (c), and (d)	Data recovery	No: 4(f) requirements do not apply when importance of resource can be documented through a data recovery process
AZ CC:2:380	Water control checkdams	Eligible under criteria (a), (c), and (d)	Data recovery	No: 4(f) requirements do not apply when importance of resource can be documented through a data recovery process

Hydrology and Water Quality

Summary

SEA received comments that raised concern about the proposed rail line and potential impacts to flooding along the Gila River, stormwater management, and other water resource issues. Specific comments include:

Comment

SEA should provide more information on the Corps Section 404 nationwide permit process with regard to the Proposed Action.

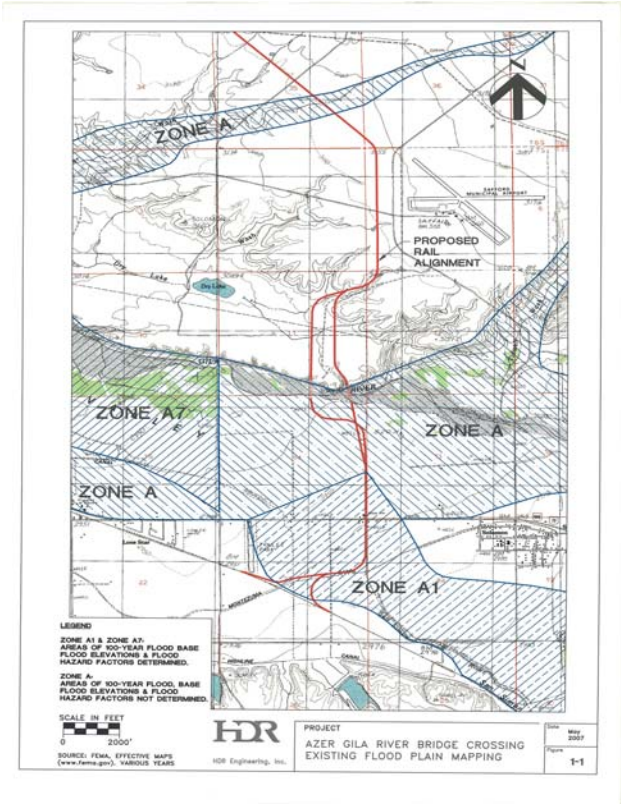
Response
Under 33 U.S.C. 401 et seq., the Corps is authorized to issue "nationwide permits" for activities involving minor modifications to waters of the United States. The Corps has set forth thresholds used in the determination of whether a project can qualify for approval under the nationwide permit, or if an individual permit is required. The Corps's threshold relates to the acreage of wetlands that would be permanently lost in the event a given project is constructed and operated. Based on all information compiled to date and in consultation with the Corps (including an approved Jurisdictional Delineation), the Proposed Action is within the threshold under which a nationwide permit is permissible. As a means of ensuring the Corps's continued oversight and involvement, a condition of the Section 404 permit requires AZER to provide pre-construction notification to the Corps.

Comment
The pre- and post-project floodplain model should be included in the EA to determine the impact of the project on the floodplain.

Response
The Biological Assessment (Appendix D of the Draft EA) included a separate hydrological study of the proposed Gila River crossing (Appendix A within the Biological Assessment[24]). This study examined potential bridge locations and configurations in an effort to avoid and/or minimize any potential flooding impacts. The study concluded that the proposed bridge location, length, and structure would essentially be floodplain neutral, resulting in minimal (less than 1 foot) changes in flooding elevations in the project area. In addition, SEA has included a mitigation measure that requires AZER to obtain a floodplain development permit from Graham County prior to initiating construction of the proposed rail line.

Comment
SEA should have included a map and reference with the write-up pertaining to the Federal Emergency Management Agency (FEMA) -designated floodplain for the San Simon and Gila rivers.

Response
FEMA publishes "Flood Insurance Rate Maps" or FIRMs for the entire United States. These maps show the locations of flood hazard areas, including areas estimated to flood at 100 or 500 year intervals. The hydrological study for the Proposed Action was based upon careful review of the FEMA FIRM map for the area. The Draft EA specifically mentioned that the FIRM for the area indicated that the proposed alignment would traverse areas of floodplains associated with the San Simon and Gila Rivers. For the greater convenience of readers, a map of the floodplain areas is shown in the figure at right.



[24] Available on-line at www.stb.gov; Environmental Correspondence, incoming by Docket Number: Docket FD-34836, ECT# EI-7244.

Comment
The FEMA Floodplain Map in the Draft EA has been updated as of September 28, 2007.

Response
FEMA updated its floodplain maps for Graham County in September 2007, subsequent to the preparation of the hydrological study in March 2007. Revised flood maps will be utilized in the development of detailed bridge design drawings.

Comment
SEA has not adequately addressed flooding associated with the proposed rail line along the Gila River; examined impacts from the railroad bed and bridge; or addressed mitigation. To avoid collecting flood debris and raising the flood elevation of the river, commenters indicated that the bridge should be relocated to a wider area of the river, or that bridge piers be spaced more widely.

Response
The comment suggests that riverine or flood-borne debris would have the potential to become lodged in between bridge piers. A broad accumulation of such debris could have the potential to redirect or impede river flows, potentially worsening flooding conditions. The hydrological study prepared for the Proposed Action determined through flood modeling simulations that a bridge with piers spaced 100 feet apart would allow for adequate clearance for flood debris and thus would not have a significant adverse flooding effect. In addition, SEA has included Mitigation Measure #18 which requires AZER to obtain a floodplain development permit from Graham County prior to construction.

Comment
A comment indicated that siting the Gila River crossing further west, downstream of the confluence of the Gila and San Simon rivers, would reduce flooding risks to upstream landowners, and that railroad infrastructure could serve as a barrier to mitigate flooding on the Claridge property. Related comments noted that a bridge washout occurred near the location of the proposed new crossing.

Response
The hydrological study[25] examined a number of potential locations for the Gila River crossing. The study utilized FEMA regulations (Section 9.4) which establish that a projected rise of 1 foot or less in 100 year water surface elevation is considered a minimally adverse effect. The study modeled several bridge alignments and configurations; the ultimately selected option was that which the study determined to have minimal flooding effects.

As noted in the Biological Opinion (Appendix C to this Post EA), the selected location for the bridge crossing is at the locally narrowest width of the Gila River. Any crossing that would be located as far west as proposed by the commenter would result in an overall alignment that could introduce new environmental impacts (such as crossing of Dry Lake Park, a 4(f) resource, and/or State of Arizona reservation land) while failing to meet objectives set forth in the Purpose and Need statement.

Comment
A commenter recommended that the grade of the proposed railroad trackbed be assessed to determine if it might cause any flooding to farms and asked what mitigation measures would be adopted to reduce the threat of flooding to surrounding properties.

[25] Available on-line at www.stb.gov; Environmental Correspondence, incoming by Docket Number: Docket FD-34836, ECT# EI-7244.

Response
The commenter is concerned that railroad trackbeds could worsen flooding conditions along adjacent farmland properties. While the hydrological study prepared for the Proposed Action noted that under 100 year flood events railroad tracks are allowed to be overtopped by up to 1 foot of water related to existing flooding conditions in the project area, the trackbeds for the Proposed Action have been designed with culverts running alongside (see Figure 2-2 in the Draft EA), providing positive drainage that would discharge waters from lesser storm events than 100-year floods.

The hydrological study[26] examined potential effects associated with a flood overtopping the railroad tracks. The hydrological study concluded that the proposed bridge crossing would not significantly alter the depth or breadth of floodplains in the project area. To protect the interests of adjacent landowners, Mitigation Measure #13 included in this Post EA requires AZER to work closely with individual property owners in developing the final alignment plan so as to avoid or minimize any negative impacts to property or structures that could be associated with implementation of the Proposed Action. AZER is also required under Mitigation Measure #18 to obtain a permit from the Graham County Engineering Department for all construction work to be conducted in floodplain areas. Graham County is a participant in FEMA's National Flood Insurance Program (NFIP), and therefore has adopted FEMA's regulations at 44 CFR Parts 59-65. As part of its permit review process, Graham County would ensure that the potential for damage from floodwater is reduced, and that river and stream crossings are designed in a manner so as not to exacerbate pre-existing flood risks, both upstream and downstream of the Project area.

Comment
Commenters indicated that hydrological issues, other than flooding, need to be addressed in the Draft EA, including the effect of the bridge on the Gila River's natural streamflow, effect of the Proposed Action on natural drainage patterns, effect of underground bridge supports on subflow in the Gila River, effect of the Proposed Action on groundwater, and the effect of the Proposed Action on the east and west banks of the San Simon River.

Response
In addition to the hydrological study prepared for the Proposed Action[27], Appendix H of the Draft EA provided background information on existing hydrological conditions in the project area, including groundwater conditions.

The hydrological study indicated that effects to Gila River's natural flow during non flood conditions would be minimal. Bridge supports would be spaced 100 feet apart, resulting in minimal disruption natural flow of the river channel following project construction. AZER will be installing stream bank armoring at the crossing area, which will minimize further bank erosion and associated lateral migration of the stream channel.

Regarding groundwater, the hydrological study indicated that in the vicinity of the Gila River, depths to groundwater range from 15 to 50 feet below ground surface (bgs). Along all other portions of the project area, depth to groundwater is approximately 100 feet bgs or greater. The hydrological study indicated that groundwater in the area can be used for irrigation, but contains levels of dissolved solids in excess of typical limits accepted for human consumption without treatment.

[26] Ibid.

[27] Ibid.

Proposed bridge supports are expected to be placed at 90 feet bgs. Construction of the bridge supports would have temporary effects to groundwater in so far as pumping may be required to construct the supports. However, the wide distance between supports (100 feet) would ensure that in the long term, there would be minimal disruption to the flow of groundwater.

In its Biological Opinion (Appendix C of this Post EA), the FWS concluded that neither pier placement nor the San Simon River flow training devices are anticipated to ultimately affect the potential for lateral, within-bank channel movement or recruitment of riparian vegetation at the reach scale.

Comment
The Draft EA referenced prior dumping along the Gila River. The commenter questioned what effect the bridge construction and operations have on these areas and what mitigation measures could be adopted to reduce potential impacts.

Response
Appendix C of the Draft EA contains a preliminary hazards/hazardous materials investigation. As a result of this investigation, which identified some potential dumping areas all along the proposed alignment, not only at the proposed Gila River crossing. Mitigation Measure #35 was included in the Draft EA to address any potential discoveries of dumping and/or hazardous waste sites during construction of the Proposed Action. Implementation of this mitigation measure would avoid or minimize both construction period and operational period impacts.

Comment
ADEQ's Water Quality Division commented that an individual state-issued Clean Water Act Section 401 certification would be necessary for the part of the proposed bridge crossing at the Gila River.

Response
SEA has recommended Mitigation Measure #16, which would require AZER to obtain the Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers (Corps) for project-related encroachment of jurisdictional waters of the U.S. prior to the initiation of any project-related construction, and to obtain an individual, state-issued Clean Water Act Section 401 certification for the part of the project consisting of the crossing of the Gila River.

Comment
AZER may need to explore eligibility requirements for coverage under the Multi-Sector General Permit (MSGP), a separate stormwater permit required for certain specified industrial activities. AZER would be required to develop and implement a SWPPP, which includes best management practices to reduce soil erosion and contain and/or minimize pollutants that might be released to waters of the U.S. AZER may require MSGP coverage as a Sector P industry, which includes railroads.

Response
The 2000 MSGP, expired on October 30, 2005, and has not been replaced as of January 2009. Until ADEQ replaces the MSGP 2000, facilities in Arizona that obtained coverage under this permit prior to its expiration on Oct. 30, 2005 still have permit coverage under an administrative continuance. However, the goals and intent of the MSGP can largely be applied in the SWPPP.[28] Mitigation Measure #17 would require AZER to prepare a SWPPP in accordance with the Arizona Pollutant Discharge Elimination System (AZPDES) Construction Stormwater General Permit.

Comment
What agencies, such as the Corps, would be involved in assessing issues relative to the Gila River bridge crossing?

Response
As recommended in Mitigation Measures #16-#19, the Proposed Action would require a combination of permits and approvals from Federal and local agencies, including the Corps, ADEQ, and Graham County. AZER is required to obtain a nationwide permit from the Corps for the proposed Gila River crossing; the Corps retains jurisdiction over proposed crossings of waters of the United States and associated wetlands. In addition, ADEQ would issue a certification under Section 401 of the Clean Water Act. This certification entails compliance with a number of conditions to ensure that the construction and operation of the Proposed Action avoid or minimize any potential adverse effects to local water quality.

Air Quality

Summary
SEA received comments on the air quality discussion that focused on particulate matter (PM), specifically, regional haze (RH), volatile organic compounds, carbon monoxide, and nitrogen oxides. Specific comments include:

Comment
The air quality analysis was deficient in that it was limited to a comparison of rail and truck transportation. The analysis should include a comparison of the Proposed Action with other rail line paths; a truck alternative; and other alternatives."

Response
The air quality analysis included in the Draft EA compared air quality effects of the Proposed Action and the No Action alternative. "Other rail line paths" were not analyzed but it can be assumed reasonably that any other rail line path with a comparable length as the Proposed Action would generate comparable amounts of emissions. Longer rail line paths would likely generate larger amounts of emissions than the Proposed Action. No other transportation alternatives to and from the Mine were contemplated by SEA in this Draft EA, so no air quality analysis of such alternatives was performed.

[28] Dennis Turner, Water Quality Division of ADEQ. Personal communication, July 25, 2008.

Noise and Vibration

Summary
SEA received comments on the noise and vibration section indicating that the Draft EA did not address all concerns relevant to noise and vibration. Specific comments include:

Comment
The Draft EA did not include analysis of noise or vibration relative to the Gene Robert Larson residence. Related comments expressed concern that the train noise will cause a devaluation of private lands and may affect older buildings.

Response
The Larson residence is located more than 0.25 miles to the west of the proposed U.S. Highway 70 at-grade crossing.

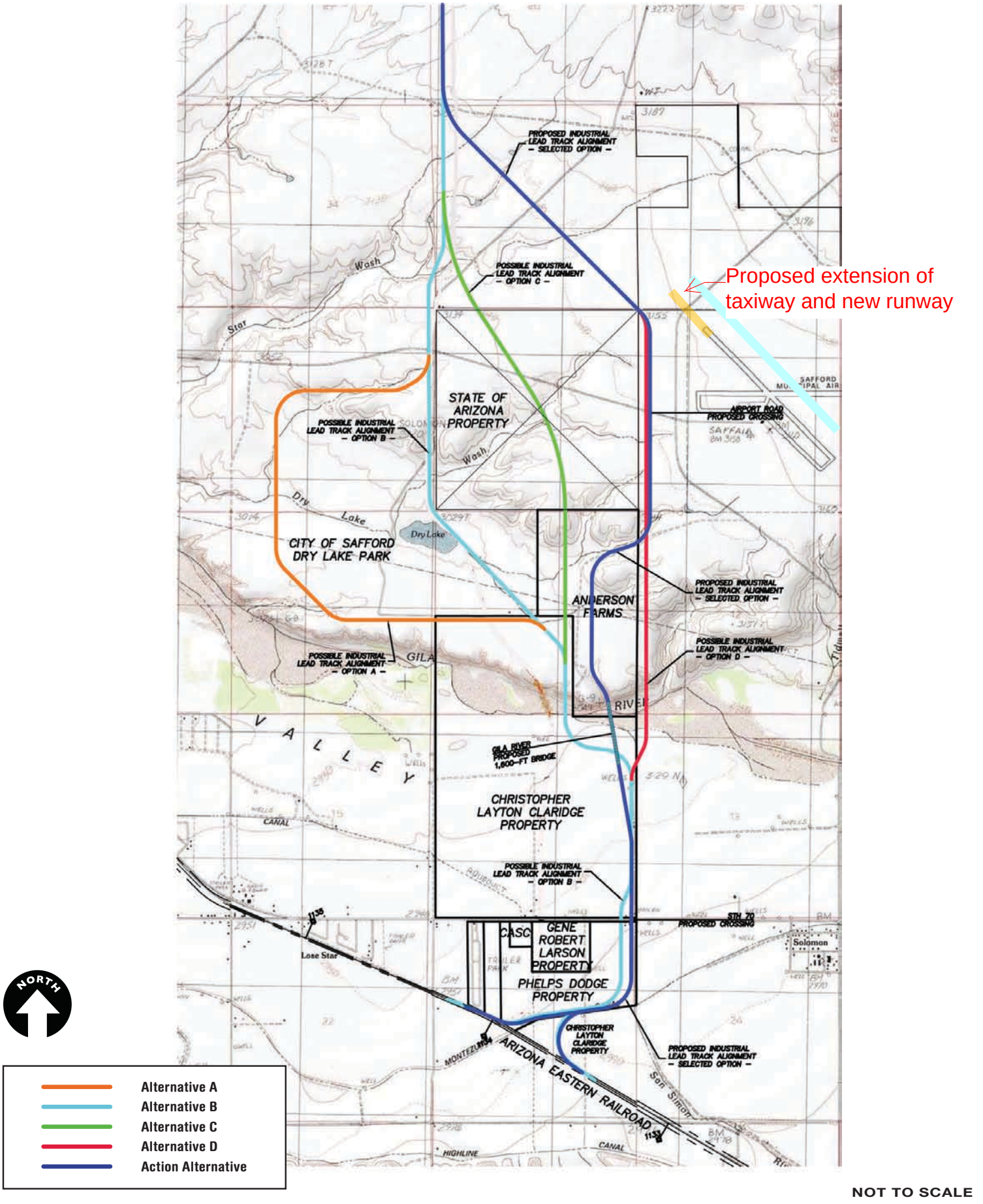
As stated in Chapter 4.0 of the Draft EA, the Proposed Action falls below the thresholds set forth at 49 CFR 1105.7(e)(5)(i)(a) for a detailed noise analysis. Although the Proposed Action did not meet the Board's criteria, SEA utilized FRA noise criteria to examine potential noise impacts of the Proposed Action. The analysis found that an at-grade crossing (at which trains would be required to sound a horn), trains would cause severe noise impacts at a distance of 120 feet; moderate noise impacts at a distance of 260 feet, and vibration impacts at a distance of 200 feet. The Larson residence is located 1,320 feet (0.25 miles) from the at-grade crossing. As such, it would be outside the severe and the moderate noise impact areas and outside the vibration impact area. Further, there are no residential properties or sensitive receptors located within these distances to the proposed rail line. As such, the potential for the Proposed Action to devalue any such properties is low. The Proposed Action would largely traverse lands in agricultural use; such lands are typically considered compatible with railroad uses.

Biological Resources

Summary
SEA received comments on the biological resources section regarding protocols used in the survey for the southwestern willow flycatcher.

Comment
Page 3-37 of the Draft EA did not include information regarding what survey protocols were followed for the southwestern willow flycatcher.

Response
Detailed information about the southwestern willow flycatcher surveys can be found on page 20 of Appendix D of the Draft EA, the Biological Assessment. The surveys were completed under FWS Permit No. TE-834782-0 and AGFD License No. SP722555.



NOT TO SCALE

ARIZONA EASTERN RAILWAY
ENVIRONMENTAL ASSESSMENT

Proposed Airport Expansion Relative to Proposed Action

FIGURE 1

Source: Mountain States Contracting

AZER Post EA
Appendix A
Comment Letters

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007
(602) 771-2300 • www.azdeq.gov

Janet Napolitano
Governor

Stephen A. Owens
Director

#EB-6769
FD 34836

March 3, 2008

Diana Wood, Section of Environmental Analysis
Surface Transportation Board
395 E Street SW
Washington, DC 20423

RE: STB Finance Docket No. 34836
Draft Environmental Assessment for Arizona Eastern Railway
Construction and Operation, Graham County, Arizona

Dear Ms. Wood:

The Air Quality Division appreciates the opportunity to review the "Draft Environmental Assessment, Arizona Eastern Railway (AZER) – Construction and Operation – In Graham County," received February 25, 2008. We understand the proposed railway would provide the Phelps Dodge Mine and Safford Airport with an alternative to truck shipment of materials, which your estimates projected would result in reduced air emissions.

Staff of the Air Quality Division previously has reviewed the proposed project that was submitted for a General Conformity Determination with the Arizona State Implementation Plan in accordance with Clean Air Act Section 176(c)(1); 58 Federal Register 63214-63259; Title 40 Code of Federal Regulations Part 51, Subpart W §§ 51.850-51.860; Title 40 Code of Federal Regulations Part 93, Subpart B §§ 93.150-160; and Arizona Administrative Code R18-2-348 (approved into the Arizona State Implementation Plan April 23, 1999; effective June 22, 1999). The Air Quality Division concluded on July 12, 2006 that a General Conformity Determination was not required because the 12-mile construction site was not in a Nonattainment or Maintenance area.

Although the Safford area is not in a nonattainment area or maintenance area for any National Ambient Air Quality Standard (NAAQS) criteria pollutant, approximately 50 miles to the West in portions of Pinal and Gila Counties, is the Hayden-Miami Nonattainment Area for Particulate Matter (PM). Refer to the enclosed map. To minimize adverse impacts on public health and welfare, information was provided in 2006 that included practices and procedures that would reduce disturbance of PM during the construction of the rail line, which may temporarily increase ambient PM levels (A.A.C. R18-2-604 through -607; R18-2-804).

Particulate matter 10 microns in size and smaller can penetrate the lungs of human beings and animals and is subject to a to protect public health and welfare. Particulate matter 2.5 microns in size and smaller is difficult for lungs to expel and has been linked to increases in death rates; heart attacks by disturbing heart rhythms and increasing plaque and clotting; respiratory infections; asthma attacks and cardiopulmonary obstructive disease (COPD) aggravation. It is also subject to a NAAQS.

Northern Regional Office
1801 W. Route 66 • Suite 117 • Flagstaff, AZ 86001
(928) 779-0313

Southern Regional Office
400 West Congress Street • Suite 433 • Tucson, AZ 85701
(520) 628-6733

Ms. Diana Wood
March 3, 2008
Page 2

Additionally, PM contributes to Regional Haze that impairs visibility at national parks and monuments (Federal Class I areas), including Grand Canyon National Park on the Colorado Plateau. Although no specific Regional Haze reduction measures are in effect in the proposed project area at this time, measures that reduce disturbance of PM also reduce Regional Haze. Refer to the following website: www.azdeq.gov/environ/air/haze/index.html.

Table 3.3-1, "Population Trends," contains population for Graham County, Safford, and Arizona, but the most recent data are for 2003. Population data, as well as economic conditions, could be updated using population projections from the following website: http://www.workforce.az.gov/. Refer to the enclosures.

Staff also noted the preliminary analysis of emissions, prepared by Kleinfelder dated October 30, 2007, that showed projected emissions from the use of diesel trucks (40 tanker and 40 freighter) traveling on the highway compared to locomotives traveling the round-trip per day of 187.5 miles on the railway. PM-10 emissions, for example, are projected at 4.04 tons per year (tpy), compared to 221.22 tpy using the heavy duty diesel trucks, representing more than a 98 percent reduction. However, volatile organic compounds, carbon monoxide, and nitrogen oxides would be expected to increase from the use of locomotives on the railway compared to emissions using a fleet of heavy duty diesel trucks.

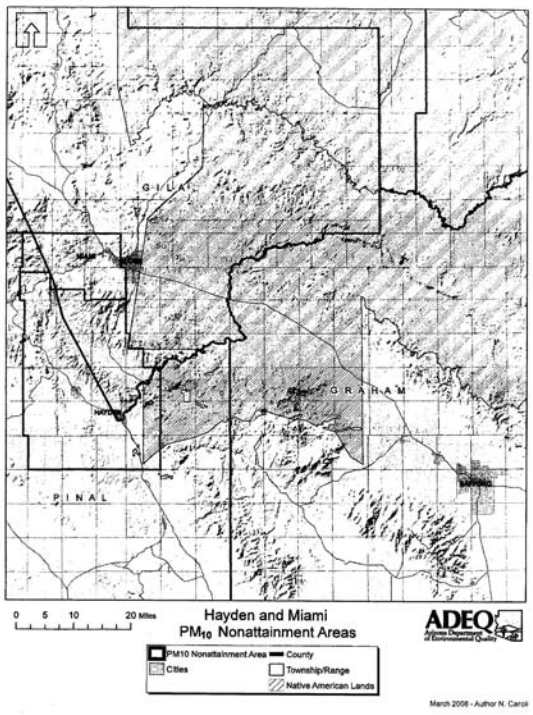
Should you have further questions, please do not hesitate to call David Lillie, of the Planning Section Staff, at (602) 771-4461.

Very truly yours,

Diane L. Arnst, Manager
Air Quality Planning Section

Enclosure (3)

cc: Henry R. Darwin, EV Administrative Counsel
David H. Lillie, Economist
File No. 132184 (7/12/06)



Arizona Subcounty Population Projections
July 1, 2006 to July 1, 2050
by County, Census County Division, Place, and Reservation

	2006	2007	2008	2009	2010	2011	2012
Graham County	**35,477**	**36,277**	**36,966**	**37,594**	**37,441**	**37,310**	**36,196**
Bonita-Klondyke CCD	2,510	2,539	2,560	2,593	2,622	2,646	2,671
Swift Trail Junction CDP (part)	1,062	1,081	1,101	1,120	1,139	1,157	1,175
Remndr of Bonita-Klondyke CCD	1,448	1,457	1,460	1,473	1,481	1,489	1,496
Pima CCD	4,106	4,213	4,270	4,325	4,381	4,434	4,487
Pima town	2,105	2,125	2,144	2,163	2,182	2,200	2,218
Remainder of Pima CCD	2,001	2,088	2,126	2,162	2,199	2,234	2,269
Safford CCD	24,244	24,497	24,746	24,995	25,241	25,476	25,710
Safford city	9,387	9,413	9,439	9,464	9,489	9,514	9,537
Swift Trail Junction CDP (part)	1,496	1,537	1,577	1,617	1,657	1,696	1,735
Thatcher town	4,662	4,780	4,875	4,979	5,063	5,104	5,282
Remainder of Safford CCD	8,699	8,775	8,857	8,934	9,011	9,082	9,157
San Carlos CCD	4,962	5,023	5,082	5,141	5,201	5,259	5,312
Peridot CDP (part)	892	892	892	892	892	892	892
Remainder of San Carlos CCD	4,070	4,131	4,190	4,249	4,308	4,364	4,420
Reservation							
San Carlos (part)	4,918	4,971	5,024	5,076	5,127	5,177	5,226
Total Reservation	4,918	4,971	5,024	5,076	5,127	5,177	5,226
Total Non-Reservation	30,559	31,306	31,942	32,518	32,314	32,133	30,970

Source: Arizona Department of Economic Security, Research Administration, Population Statistics Unit
Based / DES Population Statistics approved June 8, 2007

#

E-Filing Correspondence Information			Status:
	* Required Fields		*Recorded by Diana Wood on 04/01/2008*
*Docket #:			34836
*Name of Sender:	Michael Bryce	Affiliation:	Local Interest
Group:	Graham County	Letter Type:	
Attention Of:	Diana Wood		
*Date Received:		NEPA Type:	
Date of Letter:		In Public Docket?	No
Group's Address:	Graham County 921 Thatcher Blvd.	Phone Number:	928-428-0410
		Email Address:	mbryce@graham.az.gov
Group's City:	Safford	Group's Zip Code:	85546-
Group's State:	AZ		

Submitter's Comments

April 1, 2008

Comments regarding STB Finance Docket No. 34836

Graham County Board of Supervisors comment
1. Why is there no noise or vibration comment relative to Gene Robert Larson's residence adjacent to the route?

Graham County Engineer comments
Volume I
1. Page 4-19 Floodplain Impacts – Proposed Action
The report suggests a review of the construction documents by the County which it is true; however, the review will require a floodplain model for pre- and post- project conditions to verify the impact to the floodplain.

Volume II
1. Technical appendices should have an Index or Table of Contents to help locate information.
2. Appendix B
Page 2 – Site and Project Description
"Tulley" Wash should probably be "Talley" Wash
Page 10 – Railway crossing – same comment as above
3. The Preliminary Jurisdictional Delineation
Page 3 - The description of the southern alignment does not include any reference to the San Simon River floodplain designated by FEMA.
4. Appendix H – Hydrology Study
1. The FEMA Floodplain Map used has been superseded by a map effective September 28, 2007.
2. The Floodplain map showing the floodplain of the San Simon River should also be included because the railroad corridor passes through it.
3. The rail route should be on the floodplain maps superimposed, particularly for the San Simon and Gila Rivers.
4. The impact to the FEMA designated floodplains are minimized, but the true impact will require a hydraulic model of the Gila and San Simon River 100 year flood flows for pre- and post- project conditions.

#EI-7061
DAW
FD 34836

Diana Wood
Section of Environmental Analysis
Surface Transportation Board
395 E. Street SW
Washington, DC 20423

March 31, 2008

Email woodd@stb.dot.gov

Dear Ms Wood,

I have just become aware of a proposal to run a rail service to the new mining operation north of Safford. It is my understanding that the deadline for comments is today and that it may involve some property owned by City of Safford. I am an elected official on the Safford City Council and the council has not been made aware of any details concerning this proposed project.

I would like to request a 60 day extension to the comment period and would also appreciate any information you can provide me regarding it.

Thank you,

Ed Zappia
Safford City Council Member
2020 w. 18th St.
Safford, AZ 85546

928-428-0151 (H)

#EI-7058
DAW
FD 34836

Diana Wood
Section of Environmental Analysis
Surface Transportation Board
Case Control Unit
395 E Street, SW
Washington, DC 20423

Re: STB Finance Docket No. 34836

Dear Ms. Wood,

We are lifelong farmers in the area that would be affected by the Arizona Eastern Railroad's new rail line. Our concerns with the proposed route are many, including flooding by the Gila and San Simon Rivers, crossing the state highway without an overpass bridge, traffic congestion because of the train crossing the highway and added noise in the area because of the train, to mention just a few.

Your document arrived at one of our busiest times of the year, as we are preparing to plant crops. We have not been able to completely read it and may need to seek legal advice to protect our interests in this matter. We are asking that you give an extension of the comment period for at least 60 days so that we may be better prepared to understand the impact the new railroad line may have on us. We are also reserving our rights to make future comments on the issue.

Thank your for your assistance.

Sincerely,

03/31/08
Page 1 of 2

#EI-7057
FD 34836
DAW

ARIZONA DEPARTMENT OF TRANSPORTATION

STB DRAFT ENVIRONMENTAL ANALYSIS REVIEW COMMENTS

Project Name:	US 70 AZER Railroad Spur Crossing	Project No:	STB Finance Docket #34836
Reviewed By:	Paul R. David, Development Engineer	Discipline/Office:	Safford District Development

Item No	Reference	Comment	Disposition Initial	Disposition Final
1	SEA Cover Letter	Paragraph 4 – The SEA lists the relatively low number of existing and projected future vehicle trips and the low frequency and short duration of projected train trips as the criteria for warranting an at grade crossing. As described this sounds very subjective. The warrant analysis criteria are not present in this EA nor have they been provided to the ADOT Safford District for review.		
2	Executive Summary – 1	Paragraph 2 – Phelps Dodge has been purchased by the Freeport McMoRan Gold & Copper Company. This change of ownership should be in this EA.		
3	Executive Summary – 1	Paragraph 3 - There is a desire by the City of Safford to construct an industrial park at the airport but there is no existing current demand or need. A front page news article in yesterday's local paper discussed placing a prison at the airport, not an industrial park.		
4	Executive Summary – 2	Paragraph 3 - The statement that the reduction or elimination of truck traffic to the mine as a result of the railroad spur is a spurious claim. The nearby FMI Morenci Mine has an active rail spur yet still requires over half of their supplies to be delivered by trucks which travel along US 70.		
5	Executive Summary – 2	Paragraph 1 – The transport of copper anodes and sulfuric acid by the AZER is just one small component of the material transport required by the mine. The FMI Morenci Mine has an active rail spur yet they continue to ship anodes and acid by truck on US 70.		
6	Page 3-2	Paragraph 5 – US 70 is correctly listed as a 2 lane highway within the project area. A construction project is scheduled for June of 2008 to increase this segment to 3 lanes as a result of increasing traffic volumes and concerns expressed by residents that a protected center turn lane be added.		
7	Page 3-11	Paragraph 6 – The AADT for 2005 was used by not 2006 data which shows an increase of 18% in traffic volume in one year.		
8	Page 3-13	The historical growth rate derived from linear interpolation is 1.85%. The growth rate falls for both 2006 and 2007. The impact on traffic by a rail crossing will be greater than the model predicts.		
9	Page 3-13	The existing and future traffic volume tables are missing the percentage of trucks, which is critical information. Many trucks and school buses are required by law to stop at railroad tracks. The tracks will create traffic impacts and some minor queuing even when trains are absent.		
10	Page 3-10	The delays of the railroad crossing on first responders and the is not addressed in this draft EA.		
11	Page 4-1	Paragraph 5 – Does the phrase "Below the Gila River" refer to downstream or South of the Gila River?		

03/31/08
Page 2 of 2

			Disposition	
12	Page 4-5	Unless the AZER is currently employing 0.5 – 1.0 person per lane mile of existing track the claim that 12 miles of track will provide 6 – 12 jobs is suspect. There is no footnote citing a source for this claim.		
13	Page 4-8	Paragraph 4 - Rather than include a generalization about fires on trains why not list the safety record for AZER. Within the last month a locomotive was destroyed by fire near Globe. Because of current track conditions and budgetary problems I believe that the AZER has a much higher incident rate than national and regional carriers. This accident rate should be listed and utilized when discussing the probability of spills, accidents and fires.		
14	Page 4-9	Paragraph 1 – The future configuration for US 70 which will begin design in 2010 is for a 5 lane section, not the listed 4 lane. This project is listed in the report as unfunded which is untrue. A costly and comprehensive Design Concept Review has been completed and funds for design have been allocated by the state. This project is not on the District's "wish list" but on our construction list.		
15	Page 4-10	Paragraph 4 - While LOS B & LOS C are acceptable for future (20 year) plans the degradation of LOS from A to B is a serious matter that should be mitigated. Small, medium and large developments are required by ADOT's Safford District to mitigate their capacity degradations with both safety and capacity improvements. Other than some federally mandated safety features at the crossing this Draft EA does not require any capacity improvements to be made by the AZER.		
16	Page 4-11	Paragraph 2 - Sight distance for AZER motor vehicles entering US 70 from the access roads is not addressed. These vehicles will be looking through crossing arm equipment and bridge barriers for crossing traffic. Using current standards these access roads would probably not receive an encroachment permit due to the crest vertical curve which is currently present.		
17	Page 4-19	Paragraph 4 – The SEA conclusion that the Proposed Action will have a minimal impact on natural drainage, sedimentation and erosion patterns does not address the flooding created by the upstream impoundment of water by the railroad bed. Why isn't flooding specifically discussed? There are no studies or sources cited in the very general conclusions of this paragraph.		
18	Page 6-1	The proposed traffic mitigation measures only cover construction and raising the at grade crossing to the level of the bridge deck. How about some meaningful mitigations such as an extra lane for trucks and buses which must stop at the tracks or incorporating the layout of the soon to be constructed five lane configuration so that the crossing arms and other safety devices only have to be constructed once, not now and then later.		

#EI-7059
07W
FD 34836

Diana Wood
Section of Environmental Analysis
Surface Transportation Board
Case Control Unit
395 E Street, SW
Washington, DC 20423

Re: STB Finance Docket No. 34836

Dear Ms. Wood,

I wish to voice my concern about the proposed railroad line to the new Safford mine. I own and lease farmland in the area of Highway 70 which would be most affected by the new line. I have many concerns about Arizona Eastern's proposal, including, but not limited to the following:

1. Flooding of the land that I farm because of the train's river crossing.
2. The number of acres that I farm being cut significantly by the train and its track.
3. The train crossing Highway 70 using an at-grade crossing.
4. My ability to drive my farm equipment down the highway, as I do now between fields, because of traffic congestion with the train stopping traffic to cross.
5. The devalueation of land prices because of a train by my property.
6. Capping of wells in the trains easement area.

I have not had sufficient time to study the documents sent to me or to seek legal counsel, if necessary, so that I can completely understand the Draft EA and its full impact on my farming operation. I am also concerned that the Army Corps of Engineers should be consulted for any crossing in the Gila River. This letter will serve as my official response. I am requesting at least a 60 day extension of the comment period so that I can make a more educated assessment of the proposal.

Sincerely,

Dennis V. Palmer
VIP Farms

GRAHAM COUNTY BOARD OF SUPERVISORS
921 THATCHER BOULEVARD · SAFFORD, ARIZONA 85546
PHONE: (928) 428-3250 · FAX: (928) 428-5951

James A. Palmer, Chairman
Mark C. Herrington, Member
Drew John, Member

TERRY COOPER, COUNTY MANAGER/CLERK

#EI-7063
07W
FD 34836

Diana Wood
Section of Environmental Analysis
Surface Transportation Board
395 E Street SW
Washington, DC 20423

Re: STB Finance Docket No. 34836

March 31, 2008

Dear Ms. Wood:

My name is James Palmer, and I am the chairman of the Graham County Board of Supervisors in Graham County Arizona. I am writing in regards to STB Finance Docket No. 34836, which is the proposed Arizona Eastern Railroad line that would extend from the current line to the new Freeport Copper & Gold Safford Mine site. I have been on record as supporting this railroad spur and I still do support the building of this spur to take a huge amount of truck traffic off of our state and local highways. I do however have several concerns that I would like to comment on concerning this project. From the beginning of this project, the railroad has been in communication with the property owners that the line would cross in order to get to the mine site, however when the plans were actually provided to one of the property owners, Mr. Claridge, they did not even resemble any of the conversations or agreements that had occurred verbally in their previous meetings. The rite-of-way had grown to a width of 500 feet, which is completely unnecessary for building this line. The route has changed from the one agreed on that would have minimally impacted their property to one that in some instances completely rendered some parcels unusable. There are 5 irrigation wells in the proposed area, that it was agreed would still be accessible and usable by the owner and now they are shown to be capped by the railroad. We live in a desert river valley, and water is the life blood of our farms and our communities, and capping wells is not an acceptable solution. As I mentioned, while I do support building this rail line, I want the railroad to get back to the table with the property owner and work out a route and a solution to the concerns of the property owner that will be beneficial to both the railroad and the property owner. This land has been in this family for many generations, and in the more that 100 years that they have worked this land, they have gained an understanding of the two rivers that affect the railroad and how they can best be negotiated in a way that would benefit all parties involved. If this is done the environmental impacts of crossing and running next to these rivers would be minimal and all could benefit. Please consider these comments and send the parties to the negotiating table to work out equitable solutions to these issues. Thank you for your consideration in this matter.

Sincerely,

James A Palmer
Chairman
Graham County Board of Supervisors

#EI-7062
07W
FD 34836

Diana Wood
Section of Environmental Analysis
Surface Transportation Board
Case Control Unit
395 E Street, SW
Washington, DC 20423

RE: STB Finance Docket No. 34836

Dear Ms. Wood,

My name is Gene Robert Larson and I live north and west of the newly proposed railroad line. I have lived in this area all my life and am very unhappy about how I will be affected by the new line.

I am concerned about stopping traffic on the highway for a train to cross at-grade. I can see that this will cause serious traffic issues not only for general traffic, but for school busses, emergency vehicles and trucks hauling hazardous materials. I live close enough to the proposed new line that traffic would be backed up to my driveway, which causes me to be concerned about such things as ingress and egress to my property and possibilities of vandalism and theft because people have time to sit and look things over on my land.

I am also concerned about the noise of the train and what will happen to the value of my land and others around me because of the train going through. My son lives in my father's house, which is over 100 years old. What will the vibration of a train do to this historic structure which has been in my family for so many years?

I worry about flooding caused by the river when a bridge goes across it. Is the railroad concerned with protecting people who live in the area from flooding? I know that things change and progress happens. But I want the railroad to know that I have many reasons not to want the train in that area. I have been told that there is a comment period that ends today, March 31, 2008. I would ask that the comment period be extended by 60 days so that we, as residents, can better respond.

Sincerely,

Gene Robert Larson

RBF CONSULTING

April 28, 2008

Environmental Assessments
Surface Transportation Board
395 East Street SW
Washington DC 20423

Subject: Arizona Eastern Railway Safford Branch Project alignment, which includes a crossing of the Gila River near the San Simon Wash in Graham County, Arizona. Comments on behalf of Chris Claridge.

Attention Diana Wood

Having studied the documents provided and having assisted with design for structures in the Gila River nearby, I have several concerns. From my experience with the 1979 and 1983 floods on the Gila River, large trees and even telephone pones lodged against the bridge piers and caused backwater effect, which in turn caused the river to flow into the fields to the south. The bridge that caused backwater was removed. Now a railroad bridge is being proposed near the same area. With the fifteen proposed bridge piers, trees and other debris could cause a backwater affect that will likely cause flooding of the fields and homes to the south. The cost of the flooding could be considerable. Therefore it is my recommendation that the bridge be put in a wider area of the river, such as one mile to the west where the river is wider and has more capacity (see figure on the following page) or make sure the piers are designed farther apart to avoid collecting debris and raising the flood elevation even in the wider area of the river.

The grade of the railroad trackbed south of the Gila River also gives us concern that should the Gila River come out of its banks and go across the fields, the railroad trackbed might contribute to drainage problems. Therefore, the grade of the trackbed must be reviewed to determine any detrimental floodwater effects to the farms.

The report also mentions that wells that would be in the 500 foot corridor will be capped according to the standards of the Arizona Department of Environmental Quality. Capping the water production wells of the farms would render the farms useless since the irrigation water is provided by the wells. It is not a simple task to drill wells in new locations because the aquifer is not homogeneous. Therefore drilling a well nearby may not yield as much water supply and the water quality could be different. The wells need to be studied to determine if any can be capped. New wells will need to be drilled and in production before the other wells can be capped and abandoned.

The farming operations will be impacted by the alignment of the railroad. Currently the proposed railroad track will divide the farm and cause a portion of the field to be less than 35 acres. This small piece of farm will need to have new concrete delivery ditches installed. It makes it difficult to bring equipment in to work the field and causes more land to be in turnarounds and borders, so net farming area will be lost (see sheet 3). This creates a hardship on the farmer and loss of revenues.

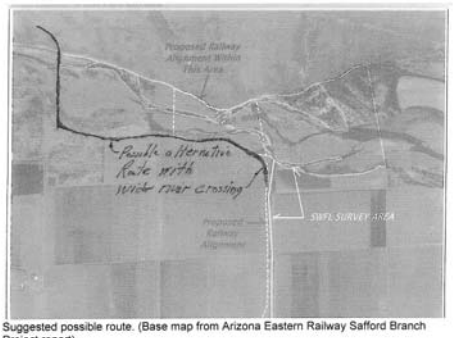
I appreciate this opportunity to comment on Arizona Eastern Railway Safford Branch Project. Should you have any question, please feel free to call me (520-797-3235).

Sincerely,

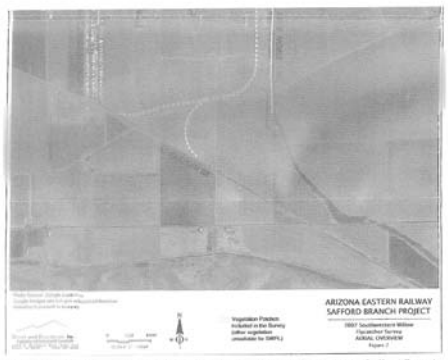
Scott Marvin Larson

11389
SCOTT MARVIN LARSON
Expires: Jun. 30, 2009

PLANNING ★ DESIGN ★ CONSTRUCTION
3011 W. Ina Road, Suite 115, Tucson, AZ 85741-2107 ★ 520.797.3235 ★ Fax 520.797.3236
Offices located throughout California, Arizona & Nevada ★ www.RBF.com



Suggested possible route. (Base map from Arizona Eastern Railway Safford Branch Project report)



Problem of tract splitting field. (Base map from Arizona Eastern Railway Safford Branch Project report)

THE HOPI TRIBE
P.O. Box 123
Kykotsmovi, AZ 86039
(928) 734-3000

Benjamin H. Nuvamsa
CHAIRMAN
Todd Honyaoma, Sr.
VICE-CHAIRMAN

EI-6768
FD 34836

March 6, 2008

Diana Wood, Section of Environmental Analysis
Surface Transportation Board
395 E Street SW
Washington, DC 20423

Re: STB Finance Docket No. 34836

Dear Ms. Wood,

This letter is in response to the correspondence from Victoria Ruston dated February 25, 2008, regarding an enclosed draft Environmental Assessment for a proposed 12.1 mile rail line from Phelps Dodge's proposed San Juan mining operation to an existing Arizona Eastern Railway line. Because the Hopi Tribe claims cultural affiliation to prehistoric cultural groups in Arizona, and the Hopi Cultural Preservation Office supports the identification and avoidance of prehistoric archaeological sites and Traditional Cultural Properties, we appreciate your solicitation of our input and efforts to address our concerns.

The Hopi Cultural Preservation Office understands four prehistoric sites have been identified in the project area, one of which is recommended as National Register eligible. Page 3-20 states that the recommended treatment for ineligible site AZ CC:2:370 (ASM), described as an artifact scatter with rock features, is "archaeological testing of possible grave," while page 4-18 states "The Proposed Action would have no adverse affect on this site."

Therefore, we have determined that this proposal may adversely affect cultural resources significant to the Hopi Tribe. If archaeological testing is proposed at site AZ CC:2:370 (ASM), please provide us with copies of the draft testing plan and the draft testing report for review and comment.

If you have any questions or need additional information, please contact Terry Morgart at the Hopi Cultural Preservation Office at tmorgart@hopi.nsn.us or 928-734-3619. Thank you again for your consideration.

Respectfully,

Marvin Lalo, Acting Director
Hopi Cultural Preservation Office

xc: Arizona State Historic Preservation Office

Graham County Population Projections 2006 - 2055

TABLE 1. Components of Population Change

Year	Population	Change	%Change	Net Migration	Change	%Change	Births	Change	%Change	Deaths	Change	%Change
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Source: Arizona Department of Economic Security, Research Administration, Population Statistics Unit. Population projected by Demographic Cohort-Component Population Model. Approved by Arizona Department of Economic Security Director, March 31, 2006.

EI-7060
DTW
FD 34836

Monday, March 31, 2008

Ms. Diana Wood
Section of Environmental Analysis
Surface Transportation Board
395 E. Street S.W.
Washington, D.C. 20423

Dear Ms. Wood:

I have been aware of many of the issues relating to the rail spur that is proposed, running from the existing east-west railway track, going north to the newly opened Freeport McMoRan copper mine. Recently I have been notified of a possible problem with some of the details of the easements and rights of way, concerning private land along the proposed route.

I would like to formally register a couple of concerns:

1. I understand that the width of the environmental study was 500 feet to follow the center line of the proposed track. I understand that the actual width of land needed is only 40 feet or so. My concern and that there is not a 500 ft. impact on the land, as the route is finalized.

2. I was told of the possibility that the railroad route would involve the capping or closure of wells that were located within the 500 ft. area of study. I would certainly be concerned if any wells were closed, as water in Arizona is an important and scarce commodity.

3. I would like to make sure that any damage done to any land owner or stake holder along the railway would be fully mitigated and compensated as part of the process, including an assessment as to adverse affects, if any, caused by the railway.

I have submitted a letter of support for the railroad spur, and still support the project -- but my support might be in question if any of the above concerns were not fully addressed and met.

I appreciate you and your agency and your attention to our city and the Gila Valley. We look forward to seeing you again here in Safford should you choose to honor us with a visit.

Sincerely,

Ronald M. Green, Mayor
Safford, Arizona

GRAHAM COUNTY ELECTRIC COOPERATIVE, INC.
GRAHAM COUNTY UTILITIES, INC.
P.O. Drawer B
Pima, Arizona 85543

Serving The Beautiful Gila Valley In Southeastern Arizona

Telephone (928) 485-2451
Fax (928) 485-9491

March 28, 2008

#EI-7064
DTW
FD 34836

Diana Wood
Section of Environmental Analysis
Surface Transportation Board
395 E Street SW
Washington, DC 20423

RE: STB Finance Docket No. 34836

Dear Ms. Wood:

On behalf of Graham County Electric Cooperative, Inc. (GCEC) I would like to address a number of concerns our company has regarding Arizona Eastern Railway's (AZER's) proposal for the construction and operation of additional railway in Graham County.

- The comment period should be extended.

  Having natural gas and electricity lines in the area of the proposed railway, GCEC would be impacted greatly. Therefore we feel it is essential for our opinions to be considered in the study process.

- Added cost to GCEC's consumer-owners

  The proposed route the railway would take would necessitate our rerouting major natural gas and power lines and would also require a number of railway crossings for our lines. Our past experience with AZER has taught us that they can arbitrarily and exorbitantly increase fees they charge for our lines to cross the railways. Any and all costs to GCEC associated with this action would impact our consumers in increased rates, as we are a non-profit, member-owned cooperative.

- Impact on land owners

  It appears the proposed route cuts through prime farm land. Will compensation be made with consideration for loss of income from that ground for many years into the future? Our community was established and has thrived for many decades because of the farm industry. How will property values for homeowners in the area be affected? Will compensation be made to them?

- Gila River considerations

  Having constructed and maintained power and natural gas lines across the Gila River for many years, we are familiar with the various issues that must be addressed when considering a crossing. Will the Army Corp of Engineers be involved? How will the natural flow of the river be impacted? Will changes increase flooding in our valley?

- Highway crossing consideration

  In consideration of the heavy traffic on this highway including a large number of employees of the Freeport McMoRan Mine in Morenci traveling this route, serious consideration should be given to a highway overpass or under pass.

These are a few of our concerns. Over time and with more consideration, more issues will come to light. Please give our concerns serious consideration and allow us to have a voice in the planning of this project.

Sincerely,

Steve M. Lines
General Manager
Graham County Electric Cooperative, Inc.
Graham County Utilities, Inc.

LEWIS AND ROCA LLP LAWYERS

Carla Consoli
40 North Central Avenue
Phoenix, Arizona 85004-4429

Direct Dial: (602) 262-5347
Direct Fax: (602) 734-3866
CConsoli@LRLaw.com
Admitted in: Arizona

Our File Number: 80000-80575

March 31, 2008

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED
VIA FACSIMILE

Ms. Diana F. Wood
Surface Transportation Board
Case Control Unit
395 E Street SW
Washington, DC 20423

Re: STB Finance Docket No. 34836

Dear Ms. Wood:

This firm represents Chris and Debbie Claridge, who own approximately 1300 acres in and around the project study area identified in the "Draft Environmental Assessment for the Arizona Eastern Railway ("AZER") - Construction and Operation - in Graham County, Arizona" (the "Draft EA") prepared by the Surface Transportation Board's ("STB") Section of Environmental Analysis ("SEA").

The Claridge family has owned, operated and lived on this land for more than a century. The Claridges wish to make clear that they do not stand in opposition to the development of the Safford area nor necessarily to the concept of the rail line. The Claridges do have concerns about the process as it has been conducted to date and the chosen alternative. The Claridges believe that further evaluation of reasonable alternatives and the impacts of these alternatives is necessary to ensure the best future for Arizona, Graham County, Safford and the families who have lived in the area for decades. We reviewed the Draft EA and the attachments thereto with the Claridge family. The following comments to the Draft EA are submitted on behalf of the Claridge family:

1. **The comment period should be extended.**

As stated in our March 24, 2008, correspondence to you, the Claridges requested a 60-day extension to the comment period to allow the Claridges and others more time to review the complex and lengthy (several hundred pages long) Draft EA and to assess the potential impacts to the Claridges, who are significant owners of land in the project study area. We received the Draft EA on March 19, 2008, leaving just eight business days for review and preparation of comments.

Given the size and complexity of the Proposed Action (as defined in Section 1.5 of the Draft EA) and the potentially significant impacts of this Proposed Action on the current and planned uses of the Claridges' property, a 60-day extension is warranted and appropriate in this matter. The Claridges have informed us that numerous other interested parties only recently became aware of the Draft EA and have not had the opportunity to review and comment on it.

In addition, an extension will allow all commenters the opportunity to provide comments that are targeted, specific, and meaningful to assist the SEA and the STB in reviewing the Proposed Action and its evaluation of whether an EIS is in fact required.

2. **Environmental impacts associated with Airport development must be considered so long as the Airport is a critical component of the purpose and need for the Proposed Action.**

According to the Draft EA, this Proposed Action is needed to provide the Dos Pobres Mine and the Safford Regional Airport with an alternative to truck shipment of materials. ES-1; 1-3. The Draft EA eliminated alternatives to the chosen rail line path because those alternatives did "not meet the objective of proximity to Safford Municipal Airport, such that the proposed rail line could someday serve a business park adjacent to the Airport." 2-13. Further, the EA process failed to consider alternatives that would result in a shorter, more direct route between the existing mainline and proposed terminus at the mine. For example, a route interconnecting with the railroad approximately 2 miles west of the route selected in the Proposed Action would result in a much shorter route and reduced impact to existing agricultural lands. In addition, the Draft EA focuses on beneficial impacts associated with the Proposed Action without considering detrimental impacts.

Despite reliance on the Airport connection as a reason for the Proposed Action, the Draft EA does not take into account **any** environmental impacts associated with service to the Airport area "because business park development details are unknown at this time." ES-2; *see also,* 2-4 ("Due to the uncertainty of the development of this business park area, this EA contemplates neither rail spurs nor separate rail trips associated with the potential business park."). The Draft EA must either analyze providing rail service to the Airport area in its entirety, evaluating beneficial **and** detrimental impacts, or the Airport rail service should not be considered at all in citing the line and certainly should not be a determining factor in locating the line.

Under 40 CFR §§ 1508.7 and 1508.8, direct and indirect effects and cumulative impacts, both beneficial and negative, associated with the Airport development must be considered in the EA or the EA must delete the Airport from the purpose and need for the Proposed Action. By only identifying potential beneficial impacts, ignoring potential negative impacts and disregarding reasonable alternatives, the Draft EA is an inaccurate and incomplete picture of the Proposed Action and fails to achieve its statutory and regulatory mandate.

3. **Additional alternatives should be considered.**

As noted in Section 2, the EA process failed to consider any alternatives that would result in a shorter, more direct route between the existing mainline and proposed terminus at the mine. A more direct route should be considered, particularly in light of the uncertainty of future Airport development. This direct alternative could be designed to allow a spur to the Airport if and when that development materializes.

Additionally, other alternatives should be considered south of the Gila River to minimize burdens on private landowners. In the Draft EA, the only alignment considered south of the Gila River (Action Alternative and Alternative B) bisects multiple parcels owned by the Claridges.

4. **49 CFR §1105.6 presumes that an EIS will be prepared for new rail lines.**

Under 49 CFR §1105.6, an environmental impact statement generally is required for rail construction proposals unless they involve: (1) construction of a connecting track on **existing right of way or property owned by the connecting railroads;** (2) abandonment of a rail line; (3) discontinuance of passenger train or freight service: or (4) an acquisition, lease or operation under 49 USC §§ 10901 or 10910. None of these exceptions is present, and no justification exists for not performing an EIS. By not doing so, SEA is recommending that the STB ignore its own regulations.

Other than generalized comments found on Page ES-7, the main text of the Draft EA is silent on the reasons for failing to follow this regulatory mandate and provides no justification or explanation for preparing an EA rather than an EIS. This is particularly inappropriate given that: (1) the Draft EA acknowledges that the Proposed Action will have adverse effects (*See, e.g.,* 4-18), (2) the Draft EA does not consider all the possible impacts of the Proposed Action (*See* Sections 2, 5 and 7 of this letter) and (3) the Draft EA does not include all the necessary cooperating agencies (*See*, Section 6 of this letter).

A. The stated reasons for not preparing an EIS are inadequate.

The claimed justification is found in Appendix I, in a letter from SEA to the Office of Railroad Development. In that letter, SEA asserts:

> The potential environmental effects of the proposed construction and operation are likely to be minimal because the rail line would be located primarily on land owned by Phelps Dodge, only one highway would be crossed only one waterway would be crossed, and any potentially adverse environmental impacts could be mitigated.

This statement is conclusory and lacks technical or legal support. An EIS is required for "major Federal actions significantly affecting the quality of the human environment." 42 USC § 4332(2)(C). Under the Council on Environmental Quality's ("CEQ") National Environmental Policy Act ("NEPA") regulations:

> Significance varies with the setting of the Proposed Action. For instance, in the case of a site-specific action significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant. 40 CFR § 1508.27(a).

With respect to the setting of this Proposed Action, the impacts are significant. First, while the Draft EA fails to identify how much of the Proposed Action is on private land held by third parties, it does note that farmland impacts to third parties such as the Claridges will exceed the impacts to farmland owned by Phelps Dodge. This in itself is significant and warrants more in-depth review. Second, while only one highway will be crossed, it is the **only** major east-west state highway providing access between significant communities in this part of the state. It is a significant transportation artery for both commercial and personal travel in Safford and the traffic is anticipated to increase significantly due to proposed future development. This also warrants more in-depth review and scrutiny. And finally, while only one waterway will be crossed, that waterway is the Gila River. In this area the Gila is a perennial waterway, a rarity in the arid Southwest. The proposed crossing is a significant one, 1600 feet long, requires a cut of 48 feet (the size of a 5 story building) and 44 feet of fill. The construction will require over 15 concrete pillars to a depth up to 115 feet – in the riverbed. This is no small project. Further, there appears to have been no consideration of a previous bridge washout at this location or any analysis of why that bridge was not rebuilt. The potential for flooding was given little consideration, but it is an issue of primary concern to neighboring landowners.

B. An EIS is typically prepared for similar projects.

A brief review of Environmental Matters on the STB website reveals a number of rail construction projects similar in scope to the Proposed Action for which STB required an EIS, including, but not limited to, the following:

- Alaska Railroad - Port MacKenzie Rail Extension: 30 to 45 miles of new rail construction with one round trip per day.
- Southwest Gulf Railroad: Seven miles of new rail construction with two round trips per day.
- Bayport Loop: 12.8 miles of new rail construction with one round trip per day.

The Proposed Action will have a similar length to two of the above-noted projects and will have similar usage to all three. In addition, the Proposed Action will cross the **only** east-west highway in the area, will cross the **one** perennial river in the region, and will carry substances potentially

harmful to the public and the environment if spilled. As a result, the Proposed Action requires the in-depth analysis afforded by the EIS process.

5. Because this Proposed Action is related to the Dos Pobres/San Juan Project, NEPA requires that all impacts be considered.

Because the primary purpose and need for the Proposed Action is to serve the Dos Pobres/San Juan Project, the two projects are connected actions. Accordingly, they should be discussed in the same environmental impact statement under 40 CFR §1508.25(a)(1) to provide a complete and accurate picture of the impacts of this Proposed Action.

The Draft EA considers only incremental impacts to resources such as land use, visual resources, traffic, noise, air, etc., rather than comparing current conditions resulting from truck traffic with other impacts that could occur as a result of these connected actions.

This is an inadequate assessment of the Proposed Action's true impacts. For example, even though the Proposed Action will result in 163 tons per year of NOx, the Draft EA asserts this is not significant when compared to truck traffic and therefore no mitigation is necessary. However, no detailed analysis is provided to support this conclusion. The proper comparison should include the Proposed Action, other rail line paths, a truck alternative, and other alternatives.

Additionally, the indirect effects and cumulative impacts of the Mine should be addressed in this Draft EA under 40 CFR §§ 1508.7 and 1508.8.

6. The U.S. Army Corps of Engineers should be a cooperating agency.

The Draft EA implies that a Nationwide Permit may be available to authorize construction of the 1600 foot bridge crossing the Gila River. That is highly unlikely. Nationwide Permit #14 authorizes linear transportation projects that cause loss of no more than ½ acre of waters of the United States. The Draft EA states that there are approximately 9.7 acres of perennial waters associated with the Gila River crossing. 3-36.

Additionally, the proposed bridge is a massive structure. According to the Bridge Design report found in Appendix D to Appendix D, the bridge will have abutment pillar depths of 60 feet to 115 feet, will use 15 piers that vary in height from 20 feet to 61 feet, and will require a 30 to 40 foot wide access road within the Gila River during construction. According to the Draft EA, "extensive grading is anticipated" at the Gila River crossing. 2-6. This includes cuts up to 48 feet deep and fills up to 44 feet high. 2-7. These distances are the equivalent to the height of a four to five story building.

Accordingly, SEA must identify what circumstances justify a Nationwide Permit or must include the U.S. Army Corps of Engineers in the current environmental review process. Combining the review processes into one process rather than having multiple federal agencies conduct multiple reviews will save both the federal government and affected stakeholders time and resources and will allow for a comprehensive review of the Proposed Action.

7. The analyses of resource impacts are conclusory and inadequate.

The analysis of impacts to land use, biological resources, cultural resources, air quality, water quality, visual resources, and noise do not meet the requirements of STB's own regulations under 49 CFR §§ 1105.1 to 1105.12, the CEQ's regulations under 40 CFR §§ 1500.1 to 1508.28, or the statutory framework under 42 U.S.C §§ 4321 to 4379(f). Time limitations preclude our preparing a comprehensive list of concerns. However, even our abbreviated review supports the conclusion that an EIS is required to provide the necessary hard look at environmental impacts. Examples of the concerns include the following:

A. The Draft EA fails to consider impacts associated with increased rail traffic on the mainline.

According to the Draft EA, the increased traffic on AZER's mainline falls below the threshold for analysis under 49 CFR §1105.7(e)(5)(i)(A). This statement is legally incorrect and lacks factual support.

Section 1105.7(e)(5)(i)(A) applies to air quality analyses only. It does not establish a threshold for analysis for other environmental resources. Accordingly, under 49 CFR § 1105.7 and the CEQ's regulations, SEA should have considered impacts associated with increased traffic on AZER's mainline.

Additionally, as a factual matter, the Draft EA must quantify the rail traffic anticipated with the Airport development or remove it as a purpose and need for the Proposed Action. Without quantification of Airport traffic, SEA cannot determine whether the thresholds for air quality analysis in Section 1105.7(e)(5)(i)(A) have been met.

B. The Draft EA does not sufficiently analyze the Proposed Action's impacts to land use on private lands.

In Graham County, only 7% of land is held in private ownership. The Graham County Comprehensive Plan requires an evaluation of all new projects to determine the impact on private landowners.

However, the Draft EA contains only a cursory analysis of existing private land uses and provides no analysis of future land uses, other than identifying potential beneficial impacts associated with the undefined, unanalyzed Airport development.

The Airport is not the only entity planning for the future. Private landowners are doing the same, and the Draft EA should consider the impact of this Proposed Action on current and future land uses. For example, the Claridges plan to develop their properties that front Highway 70 with commercial and industrial development and accordingly have begun the entitlement process with Graham County to effect these developments. The Proposed Action will place half of the rail construction staging areas on the Claridges' land and will sever some of the Claridges' properties from access to the highway. An analysis of the environmental consequences of the project cannot be complete without consideration or mention of such significant impacts.

C. The discussion of the mitigation measures to address flooding on the Gila River is cursory and wholly inadequate.

The Draft EA notes that the Gila has the potential for large and violent floods. 3-23. It also notes that the Proposed Action will cross a 1.5 mile wide section of designated Zone A floodplain. 4-19. It even admits that the Proposed Action may alter natural drainage patters. *Id.*

Yet, the only mitigation measure proposed in the Draft EA is the Graham County floodplain permitting process. This is not a mitigation measure but an applicable requirement of another jurisdiction. This so-called mitigation will further destroy the ability to use land held in private ownership by making more of it floodplain. As noted in the Draft EA, the purpose of the county permitting process is not to impose environmental mitigation measures, but to make sure that construction activities do not divert or alter flows in a way that would harm public health and safety. 4-19. As a result, the county permitting process cannot be relied on to meet the NEPA obligation to identify impacts to various environmental resources and identify mitigation measures to reduce those impacts. In fact, the proposed "mitigation" does **nothing** to reduce impacts, but merely strives to legalize them.

There are many potential impacts associated with flooding that need to be addressed, including but not limited to, the following:

- Bridges on the Gila in this immediate region have washed out in the past. What mitigation measures can be adopted to ensure that will not occur with this bridge?
- Were adequate hydrological and engineering studies performed in designing and locating the bridge structure?
- Significant construction activities will occur within the Gila River riverbed and floodplain. What mitigation measures can be adopted to reduce the threat to the Proposed Action and surrounding properties as a result of potential flooding during construction and operation of the Proposed Action?

- The Draft EA notes historic dumping along the river (3-32), including possible hazardous waste. What effect will bridge construction and operation have on these areas? What mitigation measures can be adopted to reduce potential impacts?

An EIS is required to provide a complete review and discussion of the potential for flooding and the impact of this flooding on surrounding properties as a result of bridge construction. With only an EA, the environmental consequences of the Proposed Action cannot be fully analyzed.

D. More analysis of hydrologic impacts is necessary.

In addition to the concerns with Gila River flooding, there are other hydrological concerns that should be addressed as part of this process, including, but not limited to, the following:

- How will bridge construction and operation affect streamflow in this perennial stretch of the Gila River?
- The underground supports for the bridge will be substantial. How will bridge foundation construction and operation affect subflow in the Gila River? The issue of subflow has been the subject of over 70 years of litigation in the state of Arizona.
- Many landowners rely on groundwater wells for residential and agricultural needs. What effect will the Proposed Action have on groundwater?
- How will the Proposed Action affect property on the east and west banks of the San Simon River?

E. The discussion of visual resources is conclusory and wholly subjective.

According to the Draft EA, visual impacts would be minimal and no mitigation would be required because impacts "would be borne primarily by the private property owner." 4-15. This is a technically insufficient analysis of visual impacts and an unlawful justification for failing to require mitigation.

A visual resources analysis requires objective consideration of the number and type of observers (including private landowners) and the effects of the Proposed Action. Because the visual resources discussion in the Draft EA lacks any scientific basis, STB should use a standard visual resources analysis tool such as BLM's Visual Resources Management System to objectively assess the impacts of the Proposed Action and all the alternatives.

The railroad bridge provides a good example of why an objective assessment is needed. This massive structure will be 1600 feet in length, with 15 piers varying in height from 20 feet to 61 feet, and will require cuts and fills in excess of 40 feet. Given its great size and location near the highway, it will be readily observable to numerous viewers. However, even if the number of observers were small, the contrast of this large structure with the surrounding natural scenery

will be strong, and the resulting impact on these observers will be significant, particularly in light of the fact that the Draft EA requires no mitigation to this visual impact.

F. The Draft EA provides no analysis of safety impacts and only a cursory analysis of traffic impacts.

Under 49 CFR §1105.7(e)(7), the environmental analysis must consider fully the effects of the proposed action on public health and safety. The Draft EA fails to do so in multiple respects, including the following.

The traffic analysis is incomplete and unclear. For example, it fails to explain why the Safford projected growth rate is 2.5%, but the traffic growth rate is only 1.85%.

The stated impact also is misleading. According to the Draft EA, the average delay per vehicle would only be 18-19 seconds. 4-9. However, Appendix F notes that the train itself will cause a maximum 163 second delay. The Draft EA does not explain this internal inconsistency. More importantly, the Draft EA fails to analyze or address a three-minute delay on first responders. Will they have alternative routes? How long will they be delayed? Is such a delay life threatening in a medical emergency? These are significant health and safety concerns that reinforce the need for a full EIS analysis of the Proposed Action.

Another concern is that the Draft EA does not consider the eventuality that a train will block the crossing for an extended period of time. This is the only major east-west state transportation artery in the region, the only route between many communities in this rural region of Arizona, and the principal route for commercial and personal transportation in the area. What alternative routes are available to detour traffic? What effect will that traffic have on the surrounding areas? A major blockage with associated traffic delays could have significant financial impacts on the region.

The Arizona Department of Transportation recommended a bridge or underpass for the Highway Crossing. The Draft EA overrules the state agency charged with transportation planning and safety, but does not fully document the reasons for doing so. At a minimum, this requires a comparison of the environmental impacts of the various alternatives, which is properly performed through the EIS process.

The Draft EA asserts that the rail line will result in a reduced potential for accidents when compared to truck traffic. (4-24). This is not a valid or accurate comparison, because there is no analysis in the Draft EA of the current truck traffic associated with the Mine. The proper comparison must include a detailed analysis of the current conditions, travel by truck, travel by rail, and other reasonable alternatives.

Even if the potential for accidents would be reduced when compared to truck transport, what are the relative impacts and consequences of a train accident or a truck accident? What are the consequences of one or more rail cars of sulfuric acid or copper concentrate derailing, perhaps into a flowing Gila River? The Draft EA does not fully identify and quantify the impacts to land air quality, water quality, and other resources that would occur in the event of such an accident.

Conclusion

On behalf of our clients, we appreciate the opportunity to comment on the Draft EA. We trust that you will review these comments in light of the short time frame available to prepare this response. The concerns expressed herein are weighty. The Proposed Action is significant. This project and the community it will impact deserve the full review afforded by an EIS.

We look forward to working with you and the other impacted parties to ensure the best possible future for this important region of our State. We request that you notify us when a new environmental review document is available for review.

Very truly yours,

Carla Consoli

CC:rb
cc: Graham County Board of Supervisors

March 31, 2008

Diana Wood
Section of Environmental analysis
Surface Transportation Board
395 E Street SW
Washington, DC 20423

RE: Draft Environmental Assessment; STB Finance Docket No. 34836
Arizona Eastern Railway – Construction and Operation- In Graham County, Arizona

Dear Ms. Wood,

On behalf of the City of Safford, it's my pleasure to offer the following comments to the above referenced environmental assessment.

1. You have referenced the City of Safford's Airport Master Plan in the document. Please be aware that the City of Safford is updating the 2000 Master Plan Document. Based on the update, the City of Safford is planning on extending runway 12/30 from its current length of 6,000 feet to 8,000 feet within the next twenty (20) years. The runway extension will be to the northwest, very close to the proposed alignment of the new railroad spur. We request that you consider planning the future alignment with our staff and airport engineer to ensure that the proposed railroad spur will not conflict with our proposed runway extension.

2. The proposed alignment for the railroad spur appears to cross property owned by the City of Safford just west of the Safford Regional Airport. We propose that you discuss this alignment with our staff in detail during the design process.

3. It appears that the proposed railroad spur is planned for construction just east of the Dry Lake Park. Again, we ask that during planning for the alignment, you work closely with our staff to mitigate any concerns or impacts to the Dry Lake Park.

If you have any questions, please contact me at (928) 432-4171.

Sincerely yours,

Robert L. Porter
Special Projects Manager

Copy to: Huey P. Long, Pete Stasiak, Randy Petty, and Georgia Luster

LAW OFFICE
JOHN D. HEFFNER, PLLC
1750 K STREET, N.W.
SUITE 350
WASHINGTON, D.C. 20006
PH: (202) 296-3333
FAX: (202) 296-3939

March 31, 2008

BY EMAIL
Ms. Victoria J. Rutson
Chief, Section of Environmental Analysis
Surface Transportation Board
395 E Street, SW - Room 1106
Washington, DC 20423-0001
Attn: Ms. Diana Wood

RE: STB Finance Docket No. 34836, Arizona Eastern Railway, Inc., Construction of a Line of Railroad in Graham County, AZ, Petition for Exemption

Environmental comments

Dear Ms. Rutson:

I am writing on behalf of the Arizona Eastern Railway, Inc. ("AZER"), petition in above-captioned railroad construction proceeding.

AZER's review of the Draft Environmental Assessment ("EA") served by the Board on February 25, 2008, disclosed the following language at page 6-2 of the EA:

> "2.2 Construction of at-grade grade crossings are Subject to the review and approval of the Arizona Corporation Commission."

AZER is pleased to work with Arizona agencies including its Corporation Commission in a cooperative manner towards the common good. However, AZER believes that this language could be interpreted as giving the Corporation Commission a veto over the line construction, an interpretation that is both improper and preempted by federal law. We believe that a better statement would be for the SEA to provide that the construction of at-grade road crossings is subject to the *reasonable review* [emphasis supplied] of the Arizona Corporation Commission.

AZER appreciates the opportunity to make its views known.

Sincerely yours,

John D. Heffner

Cc: Ms. Diana Wood
Mr. Jeff Barker
Ed Ellis

COMMISSIONERS
MIKE GLEASON - Chairman
WILLIAM A. MUNDELL
JEFF HATCH-MILLER
KRISTIN K. MAYES
GARY PIERCE

ARIZONA CORPORATION COMMISSION

BRIAN C. McNEIL
Executive Director

April 29, 2008

Diana F. Wood
Section of Environmental Analysis
Surface Transportation Board
395 E Street S.W. 11th Floor
Washington, D.C. 20423

RE: Draft Environmental Assessment, STB Finance Docket No. 34836
Arizona Eastern Railway- Construction and Operation in Graham County, Arizona

Dear Ms. Wood:

The Arizona Corporation Commission (Commission) is the state agency that has jurisdiction over the safety of public crossings by railroads. Arizona Revised Statutes, Section 40-337 gives the Commission authority to approve any modifications to existing crossings or construction of new railroad/highway crossings in Arizona. Further, Commission Safety Division Staff (Staff) is trained and certified by the Federal Railroad Administration (FRA) to inspect all Arizona crossings for compliance with safety requirements. Through an interagency agreement between the Commission and the FRA, Staff inspects track, locomotives/railcars, operating practices, signal/train control devices and the transportation of hazardous material by rail.

Based on our review of the Draft Environmental Assessment referenced above, it is the understanding of Staff that the Arizona Eastern Railway's (AERR) planned construction in Graham County, Arizona includes a new, at-grade crossing over U.S. Highway 70 near Solomon, Arizona. This crossing would be subject to Commission approval.

While the majority of the Draft Environmental Assessment involves environmental factors outside of the Commission's jurisdiction, we do find that a portion of the report relates to traffic and safety. Specifically, we note that the STB Section of Environmental Analysis (SEA) recommends an at-grade crossing where the new spur line will intersect with U.S. Highway 70.

Staff is unable to comment at this early stage as to whether we agree or disagree with the SEA's recommendation. The Commission's application process will include requests for traffic and train data from both the AERR and the road authority (Arizona Department of Transportation). Data will be utilized in analyzing safety measures necessary at this crossing. Any Staff recommendations will be delineated in a staff report and discussed in a hearing before a Commission Administrative Law Judge. Staff recommendations for this crossing, including the need for a grade-separated crossing, will ultimately be determined by a vote of the five elected Commissioners in an Open Meeting of the Commission.

We appreciate the opportunity to provide comment and clarification of the role we will play as this process unfolds.

Sincerely,

Mike Gleason, Chairman

William A. Mundell, Commissioner

Jeff Hatch-Miller, Commissioner

Kristin K. Mayes, Commissioner

Gary Pierce, Commissioner

THE STATE OF ARIZONA
GAME AND FISH DEPARTMENT
5000 W. CAREFREE HIGHWAY
PHOENIX, AZ 85086-5000
(602) 942-3000 • WWW.AZGFD.GOV

GOVERNOR
JANET NAPOLITANO
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DEPUTY DIRECTOR
STEVE K. FERRELL

#E1-7037
DFW
PD-34836

March 25, 2008

Diana Wood
Section of Environmental Analysis
Surface Transportation Board
395 E. Street SW
Washington, DC 20423

Re: Draft Environmental Assessment
Arizona Eastern Railway
Date February 25, 2008

The Arizona Game and Fish Department (Department) has received and reviewed the above referenced Draft EA. The Department has two comments to make in reference to the draft.

1. On page 3-37 you reference surveys conducted within the project area, but you do not reference the protocol used in those surveys. It is important for us to understand which protocols were used before we could concur with you findings.
2. On page 6-8 you refer to "….all measures required by the U.S. Fish and Wildlife Service….". We would like to be informed of those measures, and kept apprized of the progress made in meeting those requirements.

The Department appreciates the opportunity to provide and evaluation of impacts to wildlife or wildlife habitats associated with the project activities. If you have any questions regarding this letter, please contact me at (623) 236-7513.

Sincerely,

Daniel E. Nelson
Project Evaluation Specialist

cc: Joan Scott, Habitat Program Manager, Region V
Laura Canaca, Project Evaluation Program Supervisor

AGFD # M06-0801326

Arizona Department of Transportation
Utility & Railroad Engineering Section
205 S. 17th Ave. Mail Drop 618E Phoenix, Arizona 85007
Phone 602.712.6193 Fax 602.712.3229

Janet Napolitano
Governor

Victor M. Mendez
Director

Richard Travis
Deputy Director

5-1-2008

Victoria Rutson, Chief
Section of Environmental Analysis
Surface Transportation Board
% Diana Wood
Case Control Unit
395 E Street, SW
Washington, DC 20423

Re: STB Docket No. 34836 – Draft Environmental Assessment – Arizona Eastern Railway – Construction and Operation – In Graham County, Arizona

Dear Mrs. Rutson,

On behalf of the ADOT Utility & Railroad Engineering Section and Environmental Planning Sections, I would like to offer the following comments on the Draft Environmental Assessment. ADOT appreciates being able to discuss this application with Mrs. Diana Wood on April 10th, 2008 and for the 30 day extension to the comment period.

The February 25, 2008 draft Environmental Assessment (EA) analyzed an at-grade signalized crossing of a two-lane rural highway for an area of modest population growth. Other foreseeable alternatives suggested by the Arizona Department of Transportation (ADOT) were not discussed or analyzed. This is contrary to the June 13, 2006 Scoping Letter sent by the Surface Transportation Board (STB) to interested parties.

A two-page transmittal letter to the readers of the draft EA speaks to a scoping process and analysis to date by the Surface Transportation Board's Section of Environmental Analysis (SEA). This resulted in a SEA conclusion that "did not appear to warrant grade-separation." We could not find this SEA analysis in the documents provided to ADOT.

The Arizona Department of Transportation (ADOT) has been actively engaged for several years with various alternatives to accommodate the proposed crossing of US Highway 70 near milepost 343, west of the San Simon River by the Arizona Eastern Rail Road (AERR), a privately operated railroad company.

In August of 2006 three basic alternatives discussed with the railroad were:

1) Allow AERR to construct an at-grade crossing on US 70.
2) Have ADOT construct a grade-separated structure over the new spur (and perhaps the San Simon River) as part of our future five-lane widening project. AERR would pay all costs for this overpass.
3) Allow AERR to construct a grade-separated structure over US 70 with sufficient clearance to allow the highway to be widened in the future.

A December 15, 2006 email from Michael Daehler of the ADOT Environmental Planning Group asked John Cook, the preparer of the environmental document for SEA, for Mr. Daehler to be specifically included on the distribution list for the EA for the Arizona Eastern Railroad, and inquired about public meetings held or being planned.

> "Have you have (sic) any public meetings and/or when is the next one planned? ADOT Environmental Planning Group would like to be invited to all meeting and have the opportunity to comment on all documents."

There is currently an active ADOT project for a proposed grade separated railroad spur crossing of the US 70 west of San Simon River Bridge at Milepost 343.4 (ADOT Project Number 70 GH 343 **H7305** S1D, AERR Spur Crossing). An *Initial Feasibility Study Report* for this project was issued in September 2007. The feasibility study addresses design alternatives for a project approximately one mile in length. At this point, a design option has yet to be determined, or a construction footprint finalized.

There is also an active ADOT project for shoulder widening, re-striping for turn lanes and pavement preservation of US Highway 70 from Milepost 341.37 to 343.40 . This project, (ADOT Project Number 70 GH 341.4 **H7094** 01C Lone Star Road to San Simon River Bridge) is going to advertise for bid in June 2008 and will end just before the proposed crossing. The project to widen a portion of US 70 has been actively discussed and planned since June 2006 to help accommodate the growth in traffic and population east of Safford, Arizona. Finally, ADOT is in the process of planning to widen the US 70 to 5 lanes (ADOT Project Number 70 GH 340 **H5109** 01C Safford to Solomon). This project will be directly impacted by the proposed AZER crossing.

The area surrounding the proposed project is experiencing population growth in excess of the data shown in Tables 3.3-1 and 3.3-3. Due to the growth in the Safford area and changes programmed for US 70, ADOT would like to see information and safety analysis included in the EA about train-vehicle collisions at: five-lane, three-lane and two-lane highways with at-grade crossings.

Revised traffic counts were provided to the STB by Mr. Paul David, ADOT Safford District Development Engineer on April 24, 2008. This updated traffic data shows a 245 percent increase in AADT on the US 70 from 2000 AADT in 2003 to 6900 AADT in 2007.

The February 25, 2008 draft Environmental Assessment includes some discussion of the benefits of the proposed railroad hauling hazardous materials to the mine and reducing the total number of trucks hauling hazardous cargos. The draft EA should also discuss the number and types of hazardous materials haulers in the region and the number and types of special vehicles that would still be travelling on US 70 through the proposed at-grade crossing.

The February 25, 2008 draft Environmental Assessment did not discussed the total loss of time and delays caused by vehicles that are required by law, regulation and policy to stop at railroad crossings such as school buses and trucks carrying gasoline, acid and other hazardous materials and the slower speeds for all other vehicles as they travel through an at-grade crossing.

The risks of rear-end (and other) accidents that occur while school buses and other vehicles are stopped at or moving slowly through an empty at-grade crossing was also not included within the impact analysis of the draft EA.

ADOT would like to see information included in the EA about traffic delays to emergency responders, especially since this is the only road between Safford and Solomon, Arizona.

We look forward to commenting on the revised draft Environmental Assessment and working with the STB on proposing the appropriate mitigation measures necessitated by the Arizona Eastern Railway crossing US Highway 70 near the San Simon River.

Sincerely,

Robert H. Travis, P.E.
State Railroad Liaison
Arizona Department of Transportation
rtravis@azdot.gov

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
1110 West Washington Street • Phoenix, Arizona 85007
(602) 771-2300 • www.azdeq.gov

Janet Napolitano
Governor

Stephen A. Owens
Director

March 19, 2008

Diana F. Wood
Section of Environmental Analysis
Surface Transportation Board
395 E. Street SW, 11th Floor
Washington, DC 20423

Re: STB Finance Docket No. 34836

Dear Ms. Wood:

The Arizona Department of Environmental Quality (ADEQ) appreciates the opportunity to comment on the Draft Environmental Assessment (EA) for a proposed 12.1 mile rail line construction from Phelps Dodge's San Juan mining operation (under construction) to an existing Arizona Eastern Railway line operating near Safford.

ADEQ's Water Quality Division (WQD) is responsible for ensuring the delivery of safe drinking water to customers of regulated public water systems under the Safe Drinking Water Act, permits for proposed discharges to surface waters of the United States under the Clean Water Act (CWA), permits for discharges that may impact groundwater under the State aquifer protection program and water quality certifications of certain federal licenses and permits. The WQD's comments related to these programs are presented below

CWA 401 water quality certification: The WQD set out a number of conditions likely to apply in Robert Scalamera's September 27, 2007 letter to WestLand Resources (Appendix E in the draft EA). The WQD would reiterate that an individual state-issued CWA 401 certification will be necessary for the part of the project consisting of the bridge across the Gila River. The U.S. Army Corp of Engineers will determine if a Section 404 nationwide permit is acceptable for other parts of the 12-mile rail line construction (most nationwide permits include specific CWA 401 conditions). The project proponent should contact Robert Scalamera at 602-771-4502 or by e-mail at RS3@azdeq.gov before beginning the CWA 404/401 application process to ensure the most current information and application form. The CWA 401 application form also can be downloaded from the agency website at:
http://www.azdeq.gov/function/forms/appswater.html#dredge

Stormwater: Stormwater discharges associated with construction activities (clearing, grading, or excavating) which disturb one acre or more must obtain coverage under the Arizona Pollutant Discharge Elimination System (AZPDES) Construction Stormwater General Permit (AZG2008-

001). Permittees must develop and implement a Stormwater Pollution Prevention Plan (SWPPP), which includes best management practices that would be implemented to reduce soil erosion and contain and/or minimize the pollutants that might be released to waters of the U.S. Information on the Construction Stormwater General Permit, SWPPP and associated forms, are available on ADEQ's website at: http://www.azdeq.gov/environ/water/permits/stormwater.html#const. For questions on stormwater issues or the Construction General Permit for this project, please contact Shirley Conard at 602-771-4632 or by e-mail at sc4@azdeq.gov

MSGP Coverage: The Arizona Eastern Railway may need to explore eligibility requirements for coverage under the Multi-Sector General Permit (MSGP). The MSGP is a separate stormwater permit that is required from certain specified industrial sites. Operators of these industrial sites must develop and implement a SWPPP, which includes best management practices that would be implemented to reduce soil erosion and contain and/or minimize the pollutants that might be released to waters of the U.S. The Arizona Eastern Railway may require MSGP coverage as a Sector P industry, which includes railroads.

The most recent MSGP is the MSGP 2000, which expired October 30, 2005. A new MSGP has not been issued yet. Facilities with coverage under MSGP 2000 prior to its expiration are granted an administrative continuance. Those facilities already covered under MSGP 2000 must continue to implement their SWPPP and comply with the requirements in the MSGP 2000. The administrative continuance will remain in effect until a new permit is issued. Facilities that did not have coverage under MSGP 2000 prior to its expiration will not have general permit coverage available until the EPA issues a new permit. In the interim, ADEQ requests that any facilities that did not have coverage under MSGP 2000 still use the SWPPP and BMPs recommended for that sector. Information on the MSGP can be found at: http://www.azdeq.gov/environ/water/permits/msgp.html. For questions on MSGP coverage for this project, please contact Dennis Turner at 602-771-4501 or by e-mail at dt1@azdeq.gov.

For further information or for questions, please contact the appropriate program person or contact me directly at (602) 771-4416 or by email at lc1@azdeq.gov.

Sincerely,

Linda Taunt, Deputy Director
Water Quality Division

ER08-0014

March 31, 2008

Victoria Rutson, Chief
Section of Environmental Analysis
Surface Transportation Board
% Diana Wood
Case Control Unit
395 E Street, SW
Washington, DC 20423

Re: STB Docket No. 34836 – Draft Environmental Assessment – Arizona Eastern Railway – Construction and Operation – In Graham County, Arizona

Request for Sixty Day Extension of Comment Period and Invitation to an April 2008 Meeting with ADOT and Arizona Eastern Railway

Dear Ms. Rutson:

The Arizona Department of Transportation (ADOT) has received the above referenced February 25, 2008 draft Environmental Assessment in which there is discussion for a proposed railroad crossing U.S. Highway 70 near milepost 343, west of the San Simon River. Unfortunately, the draft EA contained only discussion and analysis of an at-grade signalized crossing of the highway, and not any other reasonable and feasible alternatives as stated in the June 13, 2006 Scoping Letter sent by the Surface Transportation Board (STB) to interested parties.

Perhaps, there must be some miscommunication because those that I have talked with at ADOT have been operating under the assumption that all future railroad crossing proposed by public and private parties in Arizona would include a detailed analysis of the overpass / underpass alternatives to achieve grade separation rather then just an at-grade crossing.

At this point in the NEPA process both our agencies follow, I would not like to spend inordinate amounts of additional time commenting on a document that does not address the appropriate solutions to obvious safety concerns and risks to the motoring public with a signalized at-grade crossing in the area west of the San Simone River.

I believe what has been provided to date by the consultants to the STB is an incomplete draft Environmental Assessment, and therefore would like to propose a minimum of a sixty-day extension of the comment period, during which time a more complete addendum of corrections to the draft EA could be prepared and distributed.

This extension would also give the Arizona Eastern Railway (AZER), STB and ADOT time to meet and discuss other feasible and reasonable alternatives, such as a railroad overpass or a highway overpass. The STB could then give further direction to their consultant that includes additional appropriate analysis of these options in a subsequent draft EA. Consulting with ADOT and the Arizona Corporation Commission by the AZER on a final design for an at-grade crossing given the current omissions in the draft Environmental Assessment seems problematic at this time.

An April 10, 2008 meeting is in the process of being setup in Phoenix, Arizona so the ADOT Safford District Engineer and the ADOT Railroad Liaison Office can meet with the AZER, and other interested parties such as the Arizona Corporation Commission and the STB.

I and others at ADOT look forward to commenting on a more complete draft Environmental Assessment and working with the STB on proposing the appropriate mitigation measures necessitated by the Arizona Eastern Railway crossing US Highway 70 near the San Simon River.

I have enclosed a short list of Omissions and Defects to the STB Docket No. 34836 – Draft Environmental Assessment – Arizona Eastern Railway – Construction and Operation – In Graham County, Arizona, February 25, 2008

Sincerely,

James J. Lemmon
NEPA Planner
Environmental Planning Group
Arizona Department Of Transportation
1611 West Jackson Street
Mail Drop EM02
Phoenix, Arizona 85007-3217
602-712-6843 voice
602-712-3066 fax

Omissions and Defects: Draft Environmental Assessment – Arizona Eastern Railway – Construction and Operation – In Graham County, Arizona, February 25, 2008

Alternative Table 2.3-1 is an Evaluation of Alignment Alternatives – this table omitted the possible grade-separated railroad crossing options for Airport Road and U.S. 70.

Table 3.2-1 Project Area Parcels and Land Uses – does not include property owned by ADOT for US Highway 70.

Chapter on Affected Environment part 3.15 Section 4(f) - The executive summary speaks to the project having the potential to reduce the integrity of three to four historic resources in the Project Area, however only the public park lands are discussed.

Chapter on Potential Environmental Impacts part 4.6 Traffic and Transportation does not include any analysis on grade-separated crossing of U.S. Highway 70 or Airport Road.

Table 4.6 -1 Results of Afternoon Peak Hour Intersection Operational Analysis is deficient in that the larger measured peak hour flows of Thursday April 4, 2004 were not used. **This is significant** in that all subsequent calculations including the stopping distance queue from the crossing is calculated from this measurement. The distances cars could be stopped and waiting for the crossing to clear would be even closer to the San Simon River Bridge. The line-of-sight to the stopped vehicles to the west of the San Simon Rive Bridge may be further reduced and safety concerns are increased if the appropriate peak hour flows are used.

The analysis on page 4-10 and footnote 8 is incorrect in that there are many vehicles that stop before crossing an at-grade railroad crossing, activated signals or not. School buses and hazardous cargo transportation tanker trucks are the most prevalent, and on a two-lane highway even if the railroad crossing warning lights are not flashing, vehicles may queue up without any warning.

Table 4.6-4 Stopping Site Distances at U.S. Highway 70 At-Grade Crossing is deficient and under stated because the calculations are based on the March 2005 data, not the much larger peak volumes of April 2004.

The mitigation measures of raising the crossing elevation on page 4-12 may be ineffective or defective in that vehicles may queue up for a longer distance from the crossing because of incorrect analysis of peak hour flow data and subsequent stopping distance calculations.

The Mitigation Measure 6.1 SEA Recommended Mitigation Measures by Environmental Topic for Transportation and/Traffic Safety:

- Item number 2 is for AZER to consult state and local transportation agencies parties to determine final design of an at-grade road crossing and associated warning devices on U.S. Highway 70, ***is most likely based on previous miscalculations of safe sight and stopping distance.***

- Item number 5 is for AZER to raise the elevation of the proposed at-grade rail crossing over U.S. Highway 70 to be consistent with t he elevation of the adjacent bridge over the San Simon River to ensure visibility will not be a concern, ***may still not give west bound traffic approaching the crest of the rise on the San Simon River Bridge adequate time and distance to safely slow before entering the queue of stopped or slower moving vehicles approaching the crossing.***

- Item number 6 is AZER shall install an advanced visual warning (remote flashing signals) on US highway 70 on the down slope moving away from the bridge east of the San Simon River. ***Why limit this location only to the east side of the San Simon River Bridge, or should flashing signals be installed on the crest and down slope on both sides of the San Simon River Bridge, if needed. Alternatively, is this mitigation measure for some other bridge location east of the San Simon River Bridge?***

LEWIS AND ROCA LLP LAWYERS

Carla Consoli
40 North Central Avenue
Phoenix, Arizona 85004-4429

Direct Dial: (602) 262-5347
Direct Fax: (602) 734-3868
CConsoli@LRLaw.com
Admitted in Arizona

Our File Number: 488573-00001

May 1, 2008

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED
VIA FACSIMILE

Ms. Diana F. Wood
Surface Transportation Board
Case Control Unit
395 E Street SW
Washington, DC 20423

Re: STB Finance Docket No. 34836

Dear Ms. Wood:

On March 31, 2008, this firm provided comments in the above-referenced docket on behalf of Chris and Debbie Claridge, who own approximately 1300 acres in and around the project study area identified in the "Draft Environmental Assessment for the Arizona Eastern Railway ("AZER") - Construction and Operation - in Graham County, Arizona" (the "Draft EA") prepared by the Surface Transportation Board's ("STB") Section of Environmental Analysis ("SEA").

In those comments and in correspondence submitted March 24, 2008, the Claridges requested an additional 60 days to review the Draft EA, analyze the potential impacts of the Proposed Action, study potential alternatives, and identify additional mitigation measures. On April 1, 2008, the SEA extended the comment period by 30 days. Although a longer comment period extension would have allowed a fuller review and analysis of alternative routes and mitigation measures, the Claridges do appreciate the opportunity to provide these additional comments and trust the SEA will review these supplemental comments in light of the short time frame available to prepare this response.

As noted in their March 31, 2008 comment letter, the Claridges do not oppose the concept of the rail line. Instead, they seek a mutually satisfactory resolution that minimizes impacts to affected landowners and other stakeholders while allowing the project to move forward in a timely and environmentally responsible manner.

To that end, there are better route alternatives through lands owned by the Claridges. The chosen route, as identified in the Draft EA, causes significant impacts to the surrounding community. Additional mitigation measures could reduce the impacts of the project to less than significant levels. The following supplemental comments to the Draft EA, submitted on behalf of the Claridge family, detail these route alternatives and other mitigation measures.

1. The SEA Should Evaluate Alternative Routes on Lands Owned by the Claridges.

The best way to ensure that a project minimizes impacts to affected landowners is to choose the route through those lands that is preferred by the owners. Landowners are in the best position to know how their land is used, the future plans for the land, and the impact the Proposed Action will have on their land. Yet the Draft EA failed to consider the route proposed by the Claridges in a meeting with AZER representatives and other stakeholders held almost two years ago, June 29, 2006 ("Claridge Alternative," shown in Exhibit A).

This alternative is viable and does not shift impacts from the Claridges to other landowners. Instead, it is a route through the Claridges' properties that the Claridges have determined will minimize impacts to their land within the project study area.

A. The Claridge Alternative Would Mitigate Land Use Impacts.

A fundamental siting principle is to follow existing linear features to reduce environmental impacts on surrounding lands. The Proposed Action does not comport with this principle, and will result in significant impacts to current and future land uses on private lands.

In the southernmost area of the project study area, the Proposed Action will sever the Claridges' land located adjacent to the existing AZER railroad. As a result, farmland will be lost and new concrete irrigation ditches will be required. Further north, the Proposed Action will render unusable approximately ten acres of the Claridges' land located west of the San Simon River, south of the Gila River, and east of the Proposed Action. Additionally, if the Proposed Action incorporates a 500-foot-wide corridor as noted in the biological and cultural assessments for the project, it will require the replacement of approximately 6250 feet of existing irrigation ditch.

In contrast, the Claridge Alternative would follow the San Simon River from the AZER Railroad to the Gila River. By siting the project along this natural linear feature, the project would not sever and unnecessarily encumber private lands. In addition, this alternative would reduce impacts to existing irrigation works by approximately 30%. We urge consideration of this or other similar alternatives along existing linear features between the existing railroad and the Gila River.

B. Siting the Gila River Crossing Further West Would Mitigate Flooding Risks.

The Proposed Action will require a large bridge at the confluence of the Gila and San Simon rivers. While noting that flooding can occur, the Draft EA implied that floods are infrequent and proposed no mitigation measures to address the flood risk.

Periodic flooding is a certainty. According to streamflow data obtained from the USGS, annual peak streamflows for the Gila River at the head of the Safford Valley exceed flood stage (approximately 18,000 cfs) once every five years on average ("Exhibit B"). These floods occur suddenly. On January 27, 2008, the maximum stream flow was 390 cfs. The next day, it was 16,600 cfs ("Exhibit C"). If the Proposed Action is constructed as currently planned, flooding impacts will be exacerbated on upstream lands because debris will collect at the bridge's abutments and piers during periodic floods. (*see also*, comments of Scott Marvin Larson, incorporated as "Exhibit D").

Siting the crossing downstream of the rivers' confluence would eliminate the flooding risks to the Claridges' upstream neighbors. The railroad infrastructure along the southern bank of the Gila River could serve as a barrier to mitigate flooding on the Claridges' property.

C. Siting the Gila River Crossing Further West Would Mitigate Visual Impacts.

As discussed in Section 7.E of the March 31, 2008, comment letter, visual impacts of the Proposed Action will be significant, and the Draft EA's conclusion that no mitigation is required rests on a faulty legal premise.

The Claridge Alternative, or a similarly located substitute, would mitigate greatly visual impacts. Because the southern and northern abutments would be closer to natural grade, the scale of the fills and cuts otherwise required to construct the bridge approaches and abutments would be reduced.

2. Additional Mitigation Measures Should Be Developed Through a Collaborative Stakeholder Process.

Many of the significant impacts associated with the Proposed Action could be reduced to less than significant levels through the adoption of mitigation measures developed cooperatively among AZER and affected landowners, jurisdictions, and agencies.

For example, as discussed in Section 1, a slight alignment change would reduce land use impacts, flooding impacts, and visual impacts. Specific material and design considerations, such as constructing the bridge with fewer piers, would mitigate further the flooding potential and visual impacts associated with the bridge. Land use and visual impacts would be further mitigated by landscaping the bridge approaches. Overall impacts would be reduced by making the right-of-way as narrow as practicable.

These are just a few examples. A working group could identify many more practical and cost-effective measures. Accordingly, the Claridges propose that the SEA adopt the specific mitigation requirements listed herein and also require AZER to establish a working committee to further identify and implement reasonable mitigation measures.

3. The SEA should consider the environmental impacts and effects associated with the proposed Sulfur Burning Plant.

Freeport-McMoran recently announced plans to construct and operate a sulfur burning plant at the new Safford Mine. According to local press reports, Freeport-McMoran has decided not to use rail transportation to support the mine "at this time." ("Exhibit E"). The reasons for using truck traffic in lieu of rail were not identified.

Freeport-McMoran's recently announced plans appear inconsistent with the Proposed Action and undercut one of the touted benefits of the Proposed Action, which was the reduction in truck traffic. We therefore request an explanation why, on one hand, Freeport-McMoran wants to use a rail line to reduce truck traffic associated with ore processing, yet on the other, it wants to use trucks instead of rail for the sulfur burning plant.

Additionally, unless Freeport-McMoran commits to never using the rail to support the sulfur burning plant, the potential additional rail traffic should be analyzed in this environmental review.

Finally, regardless of whether the environmental effects associated with construction and operation of the sulfur burning plant are direct or indirect, the impacts will be cumulative, and therefore the sulfur burning plant's environmental impacts, including air emissions associated with plant operation and truck traffic, must be analyzed as part of this environmental review under 40 CFR §§1508.7 and 1508.8.

Conclusion

In its decision to grant a 30-day extension, the SEA cited its desire to balance the needs of the extension requests with the need to move the environmental review process forward without undue delay. The Claridges do not seek delay. Consideration at this time of these alternative routes and additional mitigation measures would result in a project with reduced impacts, perhaps rendering an environmental impact statement unnecessary. In contrast, the Proposed Action will result in further delays. As currently envisioned, the Proposed Action has significant impacts that require additional analysis through an EIS.

We look forward to working with you and the other impacted parties to ensure the best possible future for this important region of our State. In the event that despite the concerns enumerated in the comments submitted you determine that no further analysis is required, we request that you notify us when the Post EA is available for review.

Very truly yours,

Carla Consoli

CC/rb
cc: Graham County Board of Supervisors

EXHIBIT A

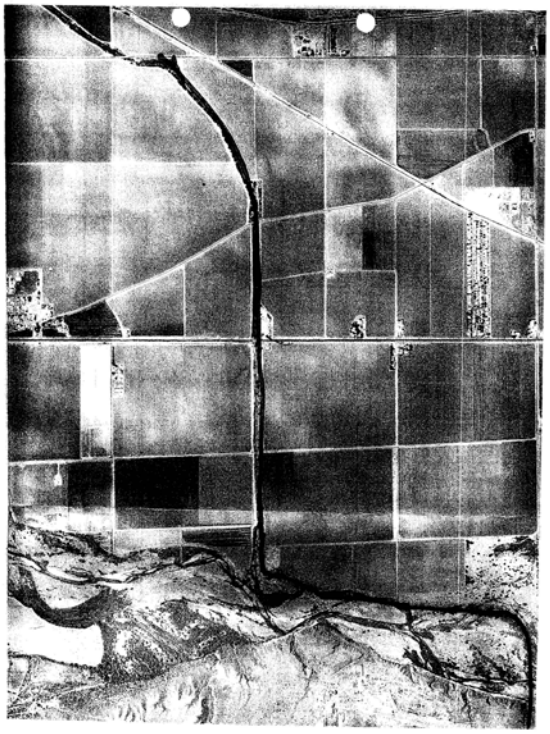
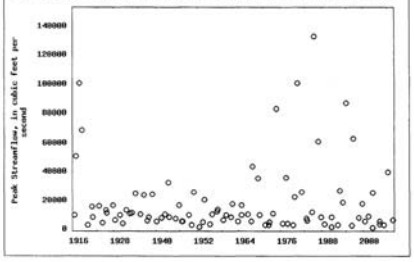


EXHIBIT B

USGS

USGS 09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NR SOLOMON,



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Peak Streamflow for the Nation

USGS 09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NR SOLOMON,

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Graham County, Arizona
Hydrologic Unit Code 15040005
Latitude 32°52'06", Longitude 109° 30'38" NAD27
Drainage area 7,896 square miles
Gage datum 3,059.92 feet above sea level NGVD29

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Water Year	Date	Gage Height (feet)	Stream-flow (cfs)
1914	Aug. 21, 1914	4.50	9,000
1915	Dec. 20, 1914	8.75	50,000
1916	Jan. 19, 1916	14.00	100,000
1917	Oct. 14, 1916	10.70	67,900
1918	Jul. 01, 1918	3.10	2,700
1919	Aug. 03, 1919	6.60	15,000
1920	Dec. 05, 1919	5.20	7,620
1921	Aug. 21, 1921	7.55	15,700
1922	Aug. 15, 1922	3.60	3,780
1923	Aug. 12, 1923	6.80	12,600
1924	Dec. 28, 1923	6.50	10,600
1925	Sep. 03, 1925	8.10	15,900
1926	Apr. 07, 1926	4.58	5,660
1927	Sep. 13, 1927	6.08	9,320
1928	Aug. 01, 1928	3.64	3,230
1929	Jul. 30, 1929	7.15	12,700
1930	Aug. 11, 1930	6.32	10,100
1931	Feb. 15, 1931	6.45	10,500
1932	Feb. 10, 1932	11.05	24,000
1933	Sep. 09, 1933	15.40	9,600
1934	Aug. 27, 1934	19.40	23,000
1935	Sep. 01, 1935	13.50	5,550
1936	Feb. 17, 1936	13.94	8,000
1937	Feb. 08, 1937	19.10	23,700
1938	Mar. 04, 1938	12.85	4,690
1939	Aug. 06, 1939	14.20	7,370
1940	Sep. 06, 1940	15.24	9,840
1941	Sep. 30, 1941	13.43	31,900
1942	Dec. 12, 1941	6.33	7,730
1943	Sep. 27, 1943	5.87	6,680
1944	Sep. 25, 1944	9.00	15,800
1945	Aug. 11, 1945	5.70	4,820
1946	Oct. 09, 1945	5.83	5,100
1947	Aug. 30, 1947	7.30	9,250
1948	Jun. 01, 1948	5.56	2,540
1949	Jan. 14, 1949	11.50	25,200
1950	Jul. 30, 1950	5.30	1,240
1951	Aug. 03, 1951	6.98	4,240
1952	Jan. 19, 1952	10.50	19,700
1953	Jul. 30, 1953	6.42	3,040
1954	Mar. 24, 1954	8.24	9,850
1955	Jul. 24, 1955	8.95	11,700
1956	Oct. 04, 1955	9.20	13,300
1957	Jul. 26, 1957	8.06	5,980
1958	Mar. 23, 1958	9.18	9,060
1959	Aug. 28, 1959	8.50	7,860
1960	Jan. 12, 1960	10.80	16,700
1961	Sep. 10, 1961	7.28	4,800
1962	Sep. 26, 1962	10.68	16,100
1963	Oct. 19, 1962	9.00	9,350
1964	Jul. 15, 1964	9.15	9,880
1965	Aug. 02, 1965	7.33	4,800
1966	Dec. 22, 1965	13.70	43,000
1967	Aug. 12, 1967	13.30	34,800
1968	Dec. 20, 1967	8.37	9,280
1969	Sep. 11, 1969	5.68	2,460
1970	Aug. 06, 1970	5.90	2,250
1971	Oct. 03, 1970	7.20	4,510
1972	Oct. 25, 1971	9.10	10,200
1973	Oct. 20, 1972	15.60	82,400
1974	Aug. 16, 1974	6.69	3,280
1975	Sep. 09, 1975	12.70	35,000
1976	Feb. 11, 1976	6.65	3,400
1977	Aug. 13, 1977	6.95	2,540
1978	Mar. 02, 1978	10.20	21,600
1979	Dec. 19, 1978	14.40	100,000
1980	Feb. 16, 1980	8.95	25,300
1981	Jul. 12, 1981	10.55	7,000
1982	Oct. 03, 1981	10.15	5,240
1983	Mar. 25, 1983	12.10	11,300
1984	Oct. 02, 1983	20.80	132,000
1985	Dec. 29, 1984	16.95	60,200
1986	Oct. 17, 1985	10.98	7,690
1987	Nov. 03, 1986	9.10	3,020
1988	Sep. 23, 1988	11.02	7,820
1989	Oct. 15, 1988	7.18	891
1990	Aug. 16, 1990	8.52	2,240
1991	Mar. 02, 1991	14.38	26,200
1992	Feb. 14, 1992	13.42	17,900
1993	Jan. 19, 1993	18.56	86,200
1994	Sep. 04, 1994	7.01	1,760
1995	Jan. 05, 1995	17.50	62,400
1996	Aug. 10, 1996	13.29	7,470
1997	Sep. 22, 1997	14.23	16,900
1998	Jul. 23, 1998	10.11	4,950
1999	Aug. 05, 1999	11.46	8,240
2000	Aug. 29, 2000	6.36	506
2001	Oct. 23, 2000	15.16	24,600
2002	Sep. 12, 2002	10.76	4,740
2003	Oct. 08, 2002	9.77	2,780
2004	Nov. 13, 2003	9.17	2,520
2005	Feb. 13, 2005	18.44	39,000
2006	Aug. 23, 2006	11.38	5,870

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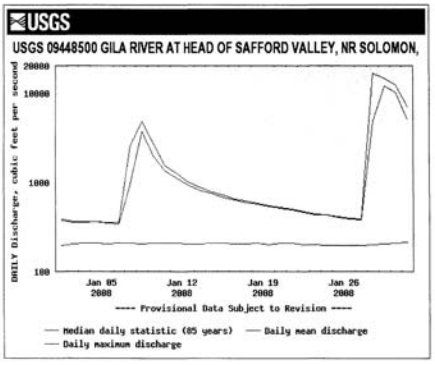
EXHIBIT C



May 1, 2008

Ms. Diana Wood
Section of Environmental Analysis
Surface Transportation Board
Case Control Unit
395 E Street, S.W.
Washington, D.C. 20423

RE: STB Finance Docket No. 34836, Arizona Eastern Railway, Inc. – Construction of a Line of Railroad – In Graham County, AZ

Dear Ms. Wood:

On April 2, 2008, the Board's Section of Environmental Analysis (SEA) served a notice extending the public comment period in the above-captioned railroad construction proceeding until May 1, 2008. Petitioner Arizona Eastern Railway, Inc. ("AZER") submits these comments in response to that notice addressing issues raised by certain parties.

Overall Alignment Approach and Alternative Analysis

From the very beginning of the project, it has always been AZER's goal to work with all of the landowners and be sensitive to their needs and desires and to compensate for any land that would be required for railroad right-of-way.

Selection of the railroad right-of-way alignment required consideration of many factors including not only the assembly of land parcels and land ownership, but the length of the railroad to be built, customer needs and the potential for future service development, and the physical attributes of grades, curves, site preparation, etc. AZER has designed this project not only to limit its effect on historical, cultural and biological resources, but also to minimize the impact the railroad would have on the flood plain and other watersheds. And then are the needs and responsibilities of the stakeholders to include and consider as the alignment selection analysis went forward: Arizona DOT ("ADOT"), the City of

Safford, Graham County, the State of Arizona's multiple agencies and authorities, and several federal agencies. The railroad is a stakeholder too.

After analyzing several different alternatives, only the recommended alternative seemed to best achieve these goals.

US70 Crossing Discussions and Long Term Planning

AZER met with ADOT, the Arizona Corporation Commission, the City of Safford and Graham County about the proposed railroad crossings planned for U.S. 70 and Airport Road. AZER is proposing that both roadway crossings be constructed to the level of protection selected and required by the Environmental Assessment ("EA") being prepared for permitting this project by the Surface Transportation Board ("STB"). For both crossings, the Draft report required at-grade crossings with the appropriate signaling devices and signage. As part of the planning process for the U.S. 70 at-grade crossing, ADOT shared its long-term plans for U.S. 70. They include widening the road from the existing 2 lanes to a 4-lane road which would require a new bridge to be built across the San Simon River, just east of where the railroad would cross the existing highway. AZER was asked by ADOT if it would consider contributing for a portion of the costs associated with making the new structure a grade separated bridge at that time ADOT rebuilds it. This would require building the new bridge at a higher elevation with a span long enough to pass over the railroad. AZER has committed to work with ADOT to achieve this goal. ADOT has told AZER that it plans to start designing the new grade separated bridge in 2011 and could commence construction in 2014.

Private Parties: Mr. and Mrs. Christopher Claridge. Mr. and Mrs. Christopher Claridge ("the Claridges"), abutting landowners, submitted the lengthiest and most detailed comments of any of the commenting parties. Pared down to their most basic points, the Claridges requested a 60-day comment period and asserted that 1) the SEA's draft EIS failed to address routing alternatives (i.e. routes that avoided the Claridge's property) and failed to identify the detrimental impacts that the rail line would have on the airport (while identifying the benefit impacts), 2) the SEA's decision to prepare an EA instead of an EIS lacked technical or legal support; 4) the SEA failed to find the Dos Pobres/San Juan Project a "connected action" to be addressed in the SEA's EIS; 5) the SEA failed to identify the circumstances justifying the issuance of a nationwide permit or include the US Army Corps of Engineers ("USACE") in the process; and 6) the SEA

failed to find that this rail line construction project presents significant impacts on biological and cultural resources, air and water quality, adjoining landowners and land uses, area hydrology (flooding), safety, and quality of life issues all of which mandate the preparation of an EIS.

The 60 day comment period

In response, AZER notes that the SEA has effectively granted the Claridges' first request by extending the initial 35-day comment period from March 31 until May 1, thus giving the public a total of 66 days in which to submit comments. This 66 day period is longer than most comment periods granted by the SEA.

Routing Alternatives

Regarding routing alternatives, the SEA considered 5 potential options. Each of the options including the chosen route offered advantages and disadvantages. In conducting its analysis the SEA chose the alternative that presented the fewest adverse impacts as well as the opportunity to serve the airport location should industry locate there at some future date. As the SEA noted in Section 2.0 of its report, it rejected Alternative A because it presented the largest study area and therefore the greatest number of impacts. The SEA rejected Alternatives B and C because those routings would have required crossing public lands that were unavailable or committed to incompatible land uses. The SEA rejected Alternative D because that option entailed the construction of bridges over two bodies of water instead of one. Accordingly, the SEA concluded that the last construction alternative, the chosen one, presented the fewest overall impact issues other than the fact that it crosses the Claridges' property.

The Claridges assert that the SEA's analysis was in some way deficient because it ignored the potential negative impacts associated with the chosen Alternative. The Claridges could have identified any such negative impacts in their comments; however, they did not identify any negative comments. By implication, the only negative impact is the fact that a rail line crossing their property might in some unspecified way adversely affect their ability to sell or develop their land. However, the SEA must discount this assertion in view of the many years the Claridges have owned their property and the lack of sale activity or development to date.

Environmental Impact Statement (EIS) versus Environmental Assessment (EA)

The Claridges' third argument – that the SEA is required to prepare an EIS for this project – misreads the applicable law and should be rejected out of hand. The Claridges argue that the SEA is *normally* [emphasis supplied] required to prepare an EIS because this project does not entail the construction of a connecting track on an existing railroad right-of-way or property owned by connecting railroads. However, this argument ignores both past Board precedent and the Board's regulation at 49 CFR 1105.7 *et al.*

The term "significant" for the purposes of the National Environmental Policy Act ("NEPA") requires considerations of both the context and the intensity of a project's impacts. 40 CFR 1508.27. While the project must be analyzed in terms of direct, indirect, and cumulative impacts and actions, the SEA is also required to consider the severity of the project's impacts on a variety of matters involving the environment, historic and cultural resources, and safety and the "quality of life" in a community. The fact is that every project, however major or minor, has some impacts. But the simple fact is that this project has very limited impacts as railroad construction projects go.

In that regard, the Board's environmental regulations identify a series of criteria for determining the intensity of the community impact of a railroad construction project. 49 CFR 1105.7(e). Among other matters, the regulations identify the number of train frequencies, the amount of truck traffic generated by a rail facility, whether the project will divert traffic from motor carrier to rail transportation, and whether the affected area is in an attainment or a nonattainment area. In this case the projected traffic level, one round trip per day in an attainment area is well under the Board's jurisdictional threshold. Moreover, this construction project will divert to rail about 15,000-20,000 truckloads (5,000 rail car loads) of traffic that would otherwise move by highway over U.S. Highway 70, the *only* east-west highway in the area.

The Claridges cite several other railroad construction projects entailing the preparation of an Environmental Impact Statement for the proposition that an EIS is required here. Those "precedents" are inapplicable here. The Alaska Railroad-Port MacKenzie Rail Extension case involves the construction of 30-45 miles of railroad into an area with significant ecological impacts unlike the modest impacts here. While the Southwest Gulf Railroad and Bayport Loop cases superficially appear to be more comparable to the AZER case, they involve the construction of rail

lines in populated areas that present significant environmental impacts. The Bayport Loop case involved the construction of a new rail line that crossed numerous other lines and roads, handled hazardous commodities, and significant community participation and opposition in the environmental scoping proceeding. As a general matter, it is SEA and Board policy to require a full Environmental Impact Statement only for those actions that may significantly affect the environment. 40 CFR 1105.4(f), 1105.6(a). For those actions that would not have a significant environmental impact with appropriate mitigation, the SEA and the Board will find that an Environmental Assessment is sufficient. 49 CFR 1105.4(d), 1105.6(b). Morristown & Erie Railway, Inc. Modified Rail Certificate, STB FD. No. 34054, served June 22, 2004, *aff'd sub. nom.* Town of Springfield v. the Surface Transportation Board, __ F.3d __ (D.C. Cir. 2005).

The simple fact is that the Board has frequently found that an EA is adequate to meet the requirements of NEPA. See, e.g., Itasca County Regional Rail Authority-Petition for Exemption, et al, FD No. 34992, served March 28, 2008; Pemiscot County Port Authority - Construction Exemption - Pemiscot County, MO, FD No. 34117, served May 7, 2003; Ellis County Rural Rail Transportation District-Construction and Operation Exemption-Ellis County, TX, FD No. 33731, served April 24, 2000.

In granting AZER's EIS waiver request, the SEA found, among other things, that the proposed right-of-way alignment would cross only two public roads (U.S. Highway 70 and Airport Road) with an average daily traffic volume of 5,900 and 425 vehicles, respectively; that the existing land use is largely agricultural; that the projected traffic is two daily trains or 730 trains per year with no diversions of existing traffic to or from other systems or modes; that there would be no significant impact on local or regional air quality; that there would be minimal impacts on flora and fauna and AZER would comply with any permit conditions issued by the USACE; that while the preferred alignment would cross 100-year flood zones at five locations, AZER's bridge would be designed and sized to comply with the requirements of the Graham County Engineer to minimize any flood-related impacts; and that the SEA did consult and is continuing to consult with other state and federal agencies and has not to date identified any significant issues during the agency consultation process. Accordingly, there is no need for an EIS.

The rail construction project and the Dos Pobres/San Juan Mine Project as connected actions

There is no basis for finding that the construction of the subject rail line is a connected action with the construction of the mine. Although the new mine being constructed by FCX Freeport McMoran Copper and Gold, Inc.[1] will utilize Petitioner's rail service, they are not connected actions because each can exist independent of the other. The Dos Pobres/San Juan mine facility is substantially complete and in operation well before the commencement of rail service. Accordingly, that facility will initially rely on motor carrier service for its transportation needs until the railroad is ready for service. While truck is inferior to rail transportation from the perspectives of cost, energy consummation, and emissions, it is an adequate and feasible way to handle Freeport's transportation needs until rail service becomes available. The STB does not analyze the direct impacts of a customer facility proposed to be served by a new rail line where the line and the facility are otherwise independent of each other. Vaughn RR Co.- Construction Exemption-Nicholas and Fayette Counties, WV, ICC FD No. 32322 (served Nov. 4, 1993).

There is no need for the issuance of a nationwide permit or the Army Corps of Engineers should be a cooperating agency

Whether or not there is a need for issuance of a nationwide permit is an issue that will be examined in discussions between AZER's own environmental consultant (WestLand Resources, Inc.), the US Fish & Wildlife Service, and the USACE. As to whether the USACE should be a cooperating agency, the USACE was invited to participate in this project as a cooperating agency and declined to do so.

The SEA's analyses of resource impacts are conclusory and inadequate

Finally, the Claridges devote the remainder of their presentation to a discussion of how the SEA's analysis of this project is deficient in numerous respects including, among others, biological and cultural resources, air and water quality, visual resources, noise, potential for flooding, safety and traffic impacts.

As a preliminary matter, the Claridges erroneously maintain that the SEA should have considered impacts associated with increased traffic on

[1] Formerly Phelps-Dodge

AZER's mainline. Although the Board has licensing authority over the construction of new rail lines, that approval power does not extend to proposals to rebuild or increase traffic on existing rail lines. Dakota, Minnesota & Eastern Railroad Corporation Construction into the Powder River Basin, FD No. 33407, January 30, 2002. However, the Board in that case did perform an environmental analysis of the increased amount of traffic that would move over the existing DM&E railroad system should the construction approved there be completed. But there is a significant difference between the DM&E case and this proceeding insofar as that applicant proposed to move *thirty-seven daily coal trains* [emphasis supplied] versus Petitioner's plan to handle one daily round trip of about 30 rail cars.

In other respects, the amount of rail traffic to be generated by this line is not sufficient to trigger the SEA's jurisdictional thresholds for certain environmental impacts. For example, under the Board's environmental regulations at 49 CFR 1105.7, the applicant is required to provide information on and the SEA is required to review impacts on transportation systems, land use, energy consumption, air and noise impacts, safety, biological resources, and water quality. Insofar as air and noise impacts are concerned, the construction and operation of this rail does not even meet the SEA's minimum thresholds for the agency to grant relief. Because this part of Arizona is in an attainment area, the applicable air quality standard is an increase of rail traffic of at least 100% or an increase of at least eight trains per day on any segment of rail line affected by the construction proposal, an increase in rail yard activity of at least 100%, or an average increase in truck traffic of more than 10% or 50 trucks per day. AZER anticipates operating but one round trip per day seven days per week over the subject line to be constructed. Once the train reached AZER's mainline, this traffic will be incorporated into AZER's existing rail line. The increase in train traffic will be less than 100%. Moreover, handling the mine's traffic by train instead of truck will have the result of decreasing, not increasing the amount of truck traffic over area roads.

Regarding noise impacts, the regulation requires analysis *if* [emphasis supplied] any of the impacts in 49 CFR 1105.7(e) (5) (i) is surpassed. But as noted above, those thresholds have not been met.

Other Private Property Considerations

Regarding locating the railroad on privately held lands, specifically the Claridge properties and the Anderson properties, the alignment was developed to minimize the total number of acres affecting their lands, oriented to run parallel to property lines to minimize the severance of any parcels, preserve for the landowners acreage that has the greatest future potential for development, and to engineer the design of the railroad to be as floodplain neutral as possible, i.e., that it neither improves nor worsens flooding conditions on any adjacent properties the railroad would use. Additionally, AZER has mentioned to both property owners, that if they so desire, AZER could help find rail-served developments for their properties and AZER remains committed to working with them to explore this concept further if they would like to do so.

Addressing specific comments regarding the design of the railroad alignment, some explanation is appropriate. The five hundred foot wide corridor was studied in detail only for the purpose of performing the environmental analysis. The railroad right-of-way will be much narrower, with some exceptions, requiring a strip of land no more than about 50' wide for its operating and maintenance needs and in many locations, narrower than that. When during the detailed engineering design state of the project any wells, utilities, or other key structures are identified that are likely to be in the railroad right-of-way, they will be, to the greatest extent practicable, avoided by the final alignment or be relocated.

Based on hydrology studies, it was determined that the Gila River bridge should span about 1,500 linear feet. This length provides for spanning the 800 foot (plus or minus) wide river bank-to-bank distance, but also for about 700 feet across the flood plain to the south to allow for the free flow of the Gila River should there be a flood event. Pier distances for the bridge are calculated to be about 100 feet pier-to-pier to create the smallest possible footprint for the bridge and therefore to minimize flow interference.

Building a railroad embankment on the south bank of the Gila River to have the railroad cross the river one mile to the West is not practicable because it would inhibit the natural flow of a Gila River flood event. Additionally, a bridge at that location would be about the same length as the proposed bridge to minimize flow interference on the flood plain, would require significantly more land to be acquired, require more earth work (i.e.,

cuts and fills), sever additional parcels of land on the north and south sides of the river, and increase the overall length of the railroad alignment.

AZER's comments regarding the SEA mitigation measures

AZER has reviewed the SEA's proposed mitigation measures in Sec. 6.0 of the EA and has the following responses:

Transportation/traffic safety item 1. The third line of the SEA's comment refers to completion before construction work within the roadway occurs. AZER believes this is a typo with the correction work being railway or railroad instead of roadway.

Transportation/traffic safety item 2.2

AZER has already responded to the requirement that the construction of at-grade road crossings shall be subject to the review and approval of the Arizona Corporation Commission.

Land Use Agricultural Resources items 8 and 9

AZER has already committed to working with farmers and other property owners to remedy actual damage to property caused by the railroad construction and to negotiating with affected property owners to minimize severance impacts.

Historic properties item 12.2

This provision is open-ended. AZER is agreeable to any reasonable conditions sought by the SHPO in the section 106 consultation process.

Applicable requirements of other agencies item 17

AZER believes this requirement pertaining to a floodplain development permit is unclear.

Applicable requirements of other agencies items 20, 20.1 through 20.3

The reference in item 20.1 to an unnamed viaduct is vague. AZER's construction shall adhere to railroad industry (AREMA) construction standards and well as best engineering practices and shall comply with applicable FRA safety requirements.

Biological resources item 35

AZER shall comply with all reasonable measures required by the U.S. Fish and Wildlife Service.

In conclusion, the SEA properly found that this project presents no adverse impacts for the following environmental topic areas: community and socio-economics, environmental justice, utilities and public services, visual and aesthetic impacts, noise and vibration, and biological resource impacts.

AZER believes that the SEA has properly reviewed and analyzed this rail construction project under the National Environmental Policy Act and related regulations. It urges the SEA to publish a Final Environmental Assessment finding that the project does not present any significant environmental impacts once appropriate mitigation measures are imposed.

Sincerely yours,

John D. Heffner
Counsel for Petitioner

Cc: Ms. Victoria Rutson
Environmental service list
Mr. Scott Steinwert
Mr. Jeffrey Barker
Mr. Ed Ellis

STB Finance Docket No. 34836
#EI-7046
DTW

PETITION

We, the undersigned citizens of Graham County, Arizona, do hereby state that we oppose Arizona Eastern Railroad's proposed rail line from the Safford Mine, running south along the San Simon River to the existing tracks near Old Solomonville Road for the following reasons:

1. Hazardous conditions created by an at grade crossing over US Highway 70. School busses and some trucks are required to stop at railroad crossings.
2. Hazardous conditions created by stopping traffic in both directions for the train to cross US Highway 70. Highway 70 is the main highway to the Safford area from Solomon and southeastern Arizona and southwestern New Mexico.
3. Noise created by the train.
4. Property devaluations because of the negative impact that a train will bring to our properties.
5. Flood Hazards to our property and surrounding area from construction of railroad Improvements.

	Signature	Print	Adders	Date
1	[illegible]	Collin Claridge	16953 N Blackrock	3-24-08
2	[illegible]	Jason Black	1900 [illegible]	3-24-08
3	[illegible]	[illegible]	13963 N Black Rock Rd	3-24-08
4	Rochelle Claridge	Rochelle Claridge	13863 N. Black Rock Rd	3/24/08
5	T Wade Norton	T. Wade Norton	P.O. Box 172 Ft. Thomas Az.	3/24/08
6	Cathie Hawkins	Cathie Hawkins	PO Box 271 Ft Thomas Az	3-24-08
7	Gayle Orth	Gayle Orth	PO Box 93 Ft. Thomas AZ	3/24/08
8	[illegible]	Keith Richards	Box 127 Ft Thomas Az	3-24-08
9	[illegible]	Tommy Serna	Po Box 334 Ft Thomas Az	3-25-08
10	Deborah L Black	Deborah L. Black	PoBox 370 Ft Thomas Az	3-25-08
11	Debbie Claridge	Debbie Claridge	16222 W. Sundown Ft. Thomas, AZ	3-25-08
12	[illegible]	Jed Claridge	P.O. Box 64 Ft Thomas AZ 85536	3-26
13	Courtney Sumner	Courtney Sumner	16222 W Sundown Dr 85536	3/27/08
14	[illegible]	Gabriel Moss	P.O. Box 37 Bylas, Az 85530	
15	Sherrill Moss	Sherrill Moss	P.O. Box 37 Bylas AZ 85530	
16	Hannah Claridge	Hannah Claridge	P.O. Box 332 Fort Thomas Az 85536	
17	[illegible]	Virginia Norton	PO Box 175 Central Az 85531	
18	Jani Norton	Jani Norton	PO Box 70 Ft Thomas 85536	
19	[illegible]	Charles Rhodes	Box 241 Ft. Thomas 85536	
20	Wanita Rhodes	Donita Rhodes	Box 241 Ft Thomas 85536	
21	Benedict	BENEDICT	BYLAS AZ	3/28/08
22	[illegible]	Frederick Yazz	PO Box 118 85530	3/28/08
23	[illegible]	Kelby Hawkins	PO Box 271 Ft Thomas AZ 85536	3/28/08
24	[illegible]	Central virginia	Box 175 Central arizona 85531	
25	[illegible]	Fort Thomas Az	Box 69 Ft Thomas	85536

PETITION

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5. Flood Hazards to our property and surrounding area from construction of railroad Improvements.

	Signature	Print	ADDRESS Adders	Date
1	Joyce Larson	Joyce Larson	3640 E Hwy 70- Saf. Az	3-25-08
2	[illegible]	Vac R. Gibbs	3201 E Hwy 70 #158 Safford Az	3/25/08
3	Elva Loi Gibbs	Elva Loi Gibbs	3201 E Hwy 70 #158 "	" 3-25-08
4	Milton M. Gibbs Sr.	Milton M. Gibbs, Sr.	3201 E Hwy 70 #104	3-26-08
5	[illegible]	Barbara S. English	3201 E US Hwy 70 #14 Safford	3/26/08
6	[illegible]	Richard D English	3201 E US Hwy 70 #14 Safford	3-26-08
7	[illegible]	Wm C. Gibbs	1101 S 5th Av Safford AZ	3/26/08
8	[illegible]	Patrick A. Anderson	1223 S. 5th Ave Safford Az	3-26
9	[illegible]	Sheila Boto	3201 East Hwy 70	3/26/08
10	[illegible]	George [illegible]	3201 East Highway 70	[illegible]
11	Lorraine Arthur	Lorraine Arthur	3201 E Hwy 70	3/26
12	[illegible]	Bob Dickey	3201 Hwy 70E Lot 67	3/26/08
13	Mary C. Kinkead	Mary C. Kinkead	3201 Hwy 70E #20 Safford, AZ	3-28-08
14	Sharon Dearborn	Sharon Dearborn	3201 E. US Hwy 70 #45, Safford, Az 85546	3-28-08
15	Dorothy Daugherty	Dorothy Daugherty	3201 E Hy 70 Safford Az 85546	3-28-08
16	Muriel Ray	Muriel Ray	3201 E Hwy 70 #24 Safford AZ 85546	3-28-08
17	[illegible]			
18	[illegible]	[illegible]	3201 E Hwy 70 " Safford AZ 85546	[illegible]
19	[illegible]	[illegible]	3201 E US Hwy 70 #174 Safford AZ 85546	3/28
20	Betty J. Bait	Betty J. Bait	3201 E US Hwy 70 #151, Safford AZ	
21	Vincent R. Bait	Vincent R. Bait	" " " " " " Safford Az	3-28
22	Rene Parks	Rene Parks	3201 E Hwy 70 #73 Safford Az 85546	
23	Pat Schuman	Pat Schuman	3201 E Hwy 70 #87 Safford Az 85546	
24	Joan Herreid	Joan Herreid	3201 E. Hwy 70 #93 Safford Az 85546	
25	Gail Beithacker	Gail Beithacker	3201 E Hwy 70 #49 Safford, Az. 85546	

PETITION

We, the undersigned citizens of Graham County, Arizona, do hereby state that we oppose Arizona Eastern Railroad's proposed rail line from the Safford Mine, running south along the San Simon River to the existing tracks near Old Solomonville Road for the following reasons:

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3. Noise created by the train.
4. Property devaluations because of the negative impact that a train will bring to our properties.
5. Flood Hazards to our property and surrounding area from construction of railroad Improvements.

	Signature	Print	Adders	Date
1	Patricia L. Gellrach	Patricia L. Gellrach	3201 E Hwy 70 lot #52	3/28/08
2	Ester Barsham	Ester Barsham	3201 E. US 70 #45	3/28/08
3	Mary Pierce	Mary Pierce	3201 E Hwy 70 #27	3/28/08
4	Helen Beckley	Helen Beckley	3201 E US. Hwy 70 #61	3/28
5	Dave Beckley	Dave Beckley	3201 E US Hwy 70 #61	3/28/08
6	Marie Rhodes	Marie Rhodes	3508 E US Hwy 70	3-28-08
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	Signature	Print	Adders	Date
1		MARY ESQUIRO	18337 W Geronimo	3/27/08
2		Jon Squire	" " "	
3		Jennifer Cichron	3306 E. Solomon Rd	3/28/08
4		DeDra Hankins	[illegible]	
5		Vicki Clonts	Box 162 Pt. Thomas, Az	3/27/08
6		McKay Ferrin	PO. Box 352 Central Az	3/27/08
7		[illegible] Ferrin	P.O. Box 352 Central, Az	3/27/08
8		Ross Ferrin	P.O Box 352 Central Az	3/27/08
9		Alisha Ferrin	PO Box 352 Central AZ	3/27/08
10		Jacy Crockett	PO. Box 1002, Thatcher, AZ	3/27/08
11		Jeana Jeffrey	PO Box 352 Central AZ	3/27/08
12		[illegible]	PO Box 352 Central, AZ	3/27/08
13		Russ Norden	PO Box 70 Pt Thomas AZ	3/27/08
14		Steve Clonts	PO Box 162 Pt Thomas AZ	3/27/08
15		Fern Cluff	3935 W Paco St	3/27/08
16		Lloyd Mathews	3935 W Paco St	3/27/08
17		Nadia Mathews	3935 W Paco St	3/27/08
18		Tricia Naviaux	1730 N Diamond Bar Rd Pima	3/30/08
19		CHAS Cluff	18222 W. Section 16 Pt Thomas AZ 85552	
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	Signature	Print	Adders	Date
1		Irene Robert Jaros	ESTATE ROBERT LARSEN 3249 E H4970	3-27-08
2		Brianna Bojorquez	2336 S. 2nd Ave Solomon AZ 85551	3-27-08
3		Julian Sanchez	475-0175	
4		Maria Gonzales	1851 W 19th Pl	3-25-08
5		[illegible]	[illegible]	
6		[illegible]	1851 W 19th Pl	3-25-08
7		Granados	804 11th Place Safford, Az 85546	3-27-08
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	Signature	Print	Adders	Date
1		DENNIS PALMER	4107 W. 1st St Thatcher	3/27/08
2		Robert Lunt	1155 N Reay Ln Thatcher	3/27/08
3		Felipe Palacio	4725 W. Palmer Ln Thatcher	3/27/08
4		Ron SPARKS	4101 W. 2nd ST. Thatcher	3/27/08
5		Kim Palmer	1175 N. Reay Ln Thatcher	3/27/08
6		Matt Palmer	1175 N. Reay Ln Thatcher	3/27/08
7		Verla Palmer	4175 W 1st Thatcher Az	3/27/08
8		TRELVA PALMER	4175 W 1st Thatcher Az	3/27/08
9		MARGARET PALMER	4103 W 1st St Thatcher Az 85552	
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	Signature	Print	Address	Date
1		Ted Jacobson	3591 E Solomon Rd	3-28-08
2		Linnette Jacobson	3591 E Solomon RD	3-28-08
3		John Jarvis	3591 E Solomon Rd	3-30-08
4		Jan Jarvis	3511 E Solomon Rd	3-30-08
5		Joni Jarvis	3511 E Solomon Rd	3-30-08
6		George E. Jarvis	P.O. Box 807 Safford	3-30-08
7		Joyce Jacobson	PO Box 807 Safford	3-30-08
8		Stacey Jarvis	3581 E Solomon	3-30-08
9		Mace Cothran	6576 S Hwy 191 Safford	
10		Mary Jean Weed	585 S 400 West Thatcher AZ 85552	
11		GEORGE D. FRANCO	2274 S. Bonita Ave, Solomon	
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#EI-7226
DAW
FD 34836

Regarding STB Finance Docket No. 34836

March 31, 2008

Diana Wood
Section of Environmental Analysis
Surface Transportation Board
395 East Street SW
Washington, DC 20423

Dear Ms. Wood:

There are some concerning aspects of the proposal to run a rail line to the copper mining operations north of Safford. The rail link is obviously needed, and would have many benefits in getting truck traffic off the area highways; but the present proposals on the bridge construction and the U. S. Highway 70 crossing are the two points which need additional scrutiny and revision.

In the area where the rail would cross US 70, there is a significant amount of traffic, and this volume is increasing to the point where ADOT is planning a five lane segment through that area. A grade crossing on a highway with this traffic load would create a considerable bottleneck and possible hazard due to restrictions on HAZMAT trucks and buses. From many years experience as a trucker, I am very aware of all the consequences of a string of traffic flowing at around 65 miles per hour, then a heavy truck or bus having to come to a complete stop at the crossing, and then gear back up to regain traffic speed. The resulting backups are inconvenient and irritating to drivers, and there is always the risk of an inattentive driver rear-ending in the slowdown, or some impatient driver performing an unsafe pass. These crossings congest traffic all day, every day, not just the few minutes a train is in the crossing. In this location of high current use and certain additional traffic load in the future, I think the rail should definitely be required to overpass the highway.

The design of the river crossing has some elements which it seems have not been adequately addressed; these being that no bridges in the area have been able to contain the large flood flows, and that this river carries tremendous amounts of debris at flood stage. These details require that an adequate design have a maximum allowance for the passage of debris as well as ample spill areas around the approaches so as not to create a dam and back up floodwater over large amounts of surrounding land.

Thank You;

Robert Rogers

Robert Rogers
P.O. Box 69
Fort Thomas
Arizona 85536

AZER Post EA
Appendix B
Correspondence from SEA

SURFACE TRANSPORTATION BOARD
Washington, DC 20423

Office of Economics, Environmental Analysis and Administration

August 23, 2007

John D. Heffner, PLLC
1920 N Street N.W.
Suite 800
Washington, DC 20036

Re: STB Finance Docket No. 34836, Arizona Eastern Railway – Construction and Operation – In Graham County, Arizona: Response to EIS Waiver Request

Dear Mr. Heffner:

Pursuant to 49 CFR 1105.6(d), the Surface Transportation Board's (Board) Section of Environmental Analysis (SEA) is granting your request of June 28, 2007 for a waiver of 49 CFR 1105.6(a), which generally provides for the preparation of an environmental impact statement for a rail line construction proposal. We are granting the requested waiver based on available information gathered to date, including materials filed by the applicant, SEA's consultation with tribes, and Federal, state and local agencies, and a site visit with CirclePoint, Inc., the approved third-party consultant that has the responsibility of assisting SEA in preparing the environmental analysis and appropriate environmental documents our environmental consultant for this proceeding.

By petition filed on August 4, 2006, Arizona Eastern Railway's (AZER) seeks an exemption from the Board under 49 U.S.C. 10502 from the prior approval requirements of 49 U.S.C. 10901 for authority to construct and operate a 12-mile rail line in Graham County, Arizona. The proposed line would start at the connection with AZER's existing rail line at Safford, AZ, pass the Safford Municipal Airport, and terminate at Phelps Dodge Mining Company's (Phelps Dodge) Dos Pobres/San Juan Mine currently under construction. Principal commodities to be handled include sulfuric acid, copper and copper-related products.

AZER examined other alternatives but concluded that all but the proposed alignment are infeasible due to environmental, land use, and engineering constraints. Initially, the proposed rail line would serve only the mine. However, the City of Safford commented that a planned industrial park adjacent to the airport could generate a need for rail service. In addition, AZER believes that rail service could be expanded further to support the planned increase in airport operations, as envisioned in the Safford Regional Airport Master Plan Update (City of Safford 1989).

Based on the information available to date, we believe that the proposed action would not result in significant environmental impacts and that any impacts can most likely be addressed through appropriate mitigation measures. Therefore, for the reasons listed below, we believe the preparation of an environmental assessment (EA) is the appropriate level of environmental documentation:

1. The proposed alignment would cross only two public roads, U.S. Highway 70, which experiences an average daily traffic flow of approximately 5,900 vehicles, and Airport Road, which has an average daily traffic volume of 425 vehicles.[1] AZER indicates that it would install automatic traffic signals and gates at the U.S. Highway 70 crossing and further evaluate whether the same would be needed for the Airport Road crossing.

2. The existing land use in the immediate vicinity of the project is largely agricultural.

3. Projected traffic on the proposed line would be two trains per day or 730 trains per year, all of which would otherwise be moved by highway. There would be no diversions of existing freight or passenger traffic to or from other systems or modes.

4. There would be no significant impact to local or regional air quality. The Arizona Department of Environmental Quality has determined that Graham County is in attainment for national ambient air quality standards and therefore, in conformance with the Arizona State Implementation Plan.

5. The Arizona Game and Fish Department (AGFD) has determined that the proposed alignment is located within Designated Critical Habitat for the Southwestern Willow Flycatcher (*Empidonax traillii extimus*) and the Razorback Sucker (*Xyrauchen texanus*) within a three mile radius of the Gila River. AZER retained WestLand Resources, Inc. (WestLand) as its contractor to complete surveys of the endangered species (peer reviewed by CirclePoint), which to date, reveal that the Willow Flycatcher has no permanent nesting sites. There are no records of Razorback Sucker within this reach of the Gila River. However, if construction of the proposed alignment were to proceed, AZER indicates that it would implement mitigation measures for the Willow Flycatcher and the Razorback Sucker as specified by AGFD and the U.S. Fish and Wildlife Service.

6. AZER retained WestLand to file and obtain a permit from the U.S. Army Corps

[1] Based on 2005 Arizona Department of Transportation (ADOT) data for Milepost 341.85 to Milepost 344.37, the only segment on US Highway 70 that includes the proposed rail crossing.

of Engineers (USACE) pursuant to Section 404 of the Clean Water Act. AZER has stated that it will comply with any permit conditions imposed by USACE. In September 2006, WestLand completed a preliminary Jurisdictional Delineation (JD) of waters of the U.S. (peer reviewed by CirclePoint) along the alignment and submitted it to the USACE. The proposed JD is under review. Potential jurisdictional waters crossed by the alignment include the Gila River and numerous ephemeral washes. WestLand indicates that no jurisdictional wetlands have been identified along the Gila River. The total area of delineated jurisdictional waters associated with the Gila River crossing is approximately 10.2 acres for ephemeral drainages and 9.7 acres for perennial waters.

7. The Preferred Alignment would cross 100-year flood zones at five locations, as identified on Flood Insurance Rate Maps published by the Federal Emergency Management Agency (FEMA). Specifically, the Project area traverses an approximately 1.5 mile section of designated floodplain associated with the confluence of the San Simon and Gila Rivers and would also cross several washes; all of which are designated by FEMA as a Zone A 100-year flood zone.[2] The approximate width of Zone A varies from 180 feet to approximately 440 feet. AZER indicates that the bridge at the Gila River would be designed and sized to comply with the Graham County Engineer requirements including those developed to minimize impacts to the 100-year floodwater elevations.

8. The Arizona State Historic Preservation Office (SHPO) stated that portions of the project area have not been surveyed and may contain prehistoric/historic archaeological resources. At the request of the SHPO, a class III cultural resources inventory was completed in February 2007. The survey resulted in the identification of 18 isolated occurrences of artifacts or cultural features and seven new archaeological sites. The Area of Potential Effect (APE) crosses three previously recorded linear sites including the Arizona Eastern Railroad, US 666/191 and Union Canal. The National Register of Historic Places eligibility of four sites could not be determined from surface evaluations alone, therefore SEA will be conducting eligibility testing once final engineering has been completed and a Treatment Plan has been prepared. Although SEA is still in the process of making final National Register determinations for the historic properties, the proposed action would likely result in adverse effects, including direct impacts, to some National Register eligible sites. In April 2007, SEA sent a copy of the document to eleven agencies and ten Indian Tribes for comment. Formal comments were received from the Arizona Department of Transportation, Arizona

[2] Zone A is the flood insurance rate zone that corresponds to the 100-year floodplain that is determined by approximate methods. Because detailed hydraulic analyses have not been evaluated for such areas, the zone does not include base flood elevations or depth. This zone requires flood insurance.

State Museum, Fort Sill Apache Tribe, Gila River Indian Community (GRIC), and Salt River Pima-Maricopa Indian Community. GRIC commented that it has interest in three sacred traditional cultural places that are currently subject to a conservation easement from the Phelps Dodge Corporation. Although the sites are not within the APE, GRIC has requested Section 106 consulting party status. SEA concurs with GRIC's request, given that any changes to the proposed alignment could impact the cultural resources, and has therefore granted the organization consulting party status. To date, no other Section 106 issues have been identified.

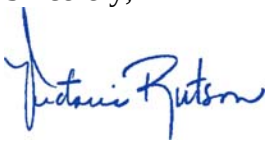
9. Other Federal and state agencies did not identify any significant issues during the agency consultation process.

10. SEA and CirclePoint staff did not identify any significant issues during the site visit in July 2006.

After the EA is prepared, SEA will make the document available for public review and comment. Once the comment period is concluded, SEA will prepare a Post EA discussing the comments received and including any appropriate modifications to its existing analysis or additional analysis. The Post EA will also set forth for the Board SEA's final recommended mitigation measures. The Board will then consider the EA, the public comments, and SEA's Post EA recommendations before making its final decision in this proceeding. Should the process disclose unanticipated impacts that are significant, we will require the preparation of an EIS at that time.

If you have any questions, please do not hesitate to contact me or Diana Wood, SEA Project Manager at 202-245-0302.

Sincerely,



Victoria Rutson
Chief
Section of Environmental Analysis

cc: Scott Steinwert, CirclePoint
John Cook, CirclePoint

AZER Post EA
Appendix C
Biological Opinion

United States Department of the Interior

Fish and Wildlife Service
Arizona Ecological Services Field Office
2321 West Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951
Telephone: (602) 242-0210 Fax: (602) 242-2513

In Reply Refer to:
AESO/SE
22410-2008-F-0474

October 27, 2008

Ms. Victoria Rutson, Chief
Section of Environmental Analysis
Office of Economics, Environmental Analysis and Administration
Surface Transportation Board
Washington, D.C. 20423

RE: Arizona Eastern Railway Safford Branch and Gila River Bridge Project

Dear Ms. Rutson:

Thank you for your request for formal consultation with the U.S. Fish and Wildlife Service (FWS) pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act). Your request was dated May 12, 2008. At issue are impacts that may result from the proposed construction and operation of an Arizona Eastern Railway (AZER) spur across the Gila River in Graham County, Arizona. The proposed action will adversely affect the endangered southwestern willow flycatcher (*Empidonax trailii extimus*; flycatcher) and its critical habitat and the endangered razorback sucker (*Xyrauchen texanus*) and its critical habitat.

This biological opinion is based on information provided in the: (1) October 10, 2008, supplemental information submittal to the Biological Assessment (BA Amendment); (2) May 17, 2007, AZER Safford Proposed Rail Alignment – Hydrology and Hydraulics Design Memorandum; (3) the undated Permian Basin Railways AZER Hazmat Security Plan; (4) the August 1, 2007, Geotechnical Design Memorandum, Preliminary Geotechnical Assessment, Gila River Bridge and Approaches; (5) December 19, 2007, Biological Assessment (BA) for the proposed action; (6) your February 25, 2008, two-volume Draft Environmental Assessment (EA) for the proposed action; (7) proceedings of various meetings, conference telephone calls, and electronic mail exchanges between May and October 2008; (8) various published and unpublished sources of information. Literature cited in this biological opinion is not a complete bibliography of all literature available on the species of concern, and its effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at this office.

Consultation History

February 19, 2008: We received your February 14, 2008, letter requesting our concurrence that the proposed action was not likely to adversely affect the southwestern willow flycatcher and the razorback sucker.

February 29, 2008: We transmitted a letter (File number 22410-2008-F-0190) to you: (1) indicating that we did not concur with the effects determinations contained in your February 14, 2008, letter; and (2) requesting additional information in order to initiate formal consultation.

March 4, 2008: Your February 25, 2008, letter transmitting the draft Environmental Assessment for the subject action was received at our office.

May 7, 2008: FWS staff met with your project consultants to discuss the proposed action. Later on the same date, documents requested by FWS were delivered by courier.

May 12, 2008: You transmitted a request for formal consultation on the proposed action's effects to the southwestern willow flycatcher and the razorback sucker to us.

August 28, 2008: FWS staff participated in a conference call with your staff and the project consultants to discuss the delivery schedule for a final biological opinion. Your staff indicated that a draft biological opinion could be foregone in order to expedite the process.

October 10, 2008: We received, via electronic mail, an amendment to the BA describing the scope and effects of pre-construction geotechnical exploration and testing activities. We also transmitted a request for a 60-day extension to complete the biological opinion.

BIOLOGICAL OPINION

Description of the Proposed Action

The proposed action is the construction of a 12.4-mile railroad spur that will connect the Dos Pobres/San Juan mine and other industrial properties north of Safford and the Gila River with an existing 133.5-mile AZER rail line that operates between the towns of Miami and Bowie, Arizona. The action area, within which effects to threatened and endangered species and their critical habitats are reasonably certain to occur, is limited to the Gila River and adjacent areas, specifically, a 500-foot wide area associated with a 1,600-foot railway bridge, a supporting embankment, river training devices, and the temporary access road for installation of the bridge support structures. The bridge alignment will be contained within a 100-foot-wide right of way (ROW) within the 500-foot-wide corridor defining the action area.

Pre-Construction

Construction of the Gila River Bridge as part of the 12.4-mile AZER Project requires placement of 11 support piers in the Gila River channel; four will be located within upland areas. Pier placement requires that geotechnical investigations be conducted in advance. Geotechnical exploration activities will consist of test borings and temporary access routes to four bore hole locations that will be located south of the existing low flow channel near the Gila River's right bank (Figure 1 in the BA Amendment) and the two bore hole locations north of that low flow

channel (Figure 2 in the BA Amendment). Additional geotechnical investigations will be conducted away from the river, along the proposed railway alignment.

These six bore holes will be constructed in or proximate to the Gila River floodway. Each of the test borings will be a six-inch diameter hole drilled to a depth of 130 feet. The southern four holes will be drilled with conventional tracked drilling equipment. The two northern holes, where access is more difficult and limited, will be drilled using a portable drilling rig. Access to the south test boring locations will be via the existing all-weather farm road/flood control berm located west of the confluence of the Gila River and the San Simon River. The route to be traveled by the drilling equipment and support vehicles is generally depicted on Figure 1 in the BA Amendment. While accessing the site and setting up the drill rigs, the drilling company will avoid trees or shrubs within the floodplain to the maximum extent practicable. Access to the northern two test boring locations (BA Amendment Figure 2) will be via an existing side drainage that originates on the top of an adjoining bluff. As with the south access alignment, the minimum work necessary to provide temporary access to the drilling sites will be completed. Along the north access location, access route improvements will include moving some larger boulders and rocks to provide suitable access for rubber-tired service equipment using tracked or rubber-tired construction equipment. The north staging area (BA Amendment Figure 2) is situated at the terminus of the temporary access route. It will consist of an area large enough to park the transport vehicle – no additional grading for the staging area is planned.

These techniques will be used on the two northern drill sites to minimize the impacts of geotechnical exploration activities. During drilling operation, drill cuttings will be kept in close proximity to each boring. When drilling is complete, the cuttings will be used to backfill each boring, except for the upper 20 feet of the borings, which will be backfilled with grout in accordance with Arizona Department of Water Resources well-drilling regulations.

Construction

All construction activities, including staging areas, will be located within the 500-foot-wide corridor. The Surface Transportation Board anticipates two equipment staging areas will be required, one at the north and one at the south end of the Bridge. The bridge will be constructed concurrent with grading and railbed construction. Bridge construction will occur in three phases, as described below.

Bridge construction and installation of 15 support piers

The plan and profile for the bridge are shown in Appendix D of the BA. There are 15 pier structures, 11 of which will be located within the Gila River channel. A typical cross section for the pier supports is also provided in Appendix D. The temporary road, described in greater detail in the following section, is required for construction access. The road will be designed to allow placement of the pier drilling rig at the pier locations with room for other construction vehicles to pass. Construction of the piers will require excavation for placement of concrete forms, rebar, and the pier shafts. Excavation of the shafts will generate material (drill spoils) from alluvium underlying the river channel. These materials will not be stockpiled in the river bottom. All drill spoils will be put into dump trucks and transported offsite for use in construction of the railroad embankment approaches for the bridge structure. The estimated volume of drill spoils for each pier structure is about 170 cubic yards.

There are several options for installing the piers and the exact construction methods will be determined during the later stages of engineering design. Alternative methods of construction include temporary casing with a vibratory hammer, uncased/partially cased construction without slurry, or uncased/partially cased with slurry. Preliminary studies indicate that this project could be constructed using partially cased construction without slurry or uncased slurry construction. These construction methods are accomplished using a crane-mounted drill rig on a relatively flat pad adjacent to the access road, as previously described. If slurry construction is used, a closed slurry tank system will be used to ensure the slurry is not introduced into the river or surroundings. Similarly, temporary casings are usually smooth steel plate cans that are positioned with the vibratory hammer and then removed as the shaft is constructed. Partially cased construction typically consists of stay-in-place corrugated metal-pipe forms at the top of the excavation to prevent sloughing in the upper reaches. The metal-pipe forms are used when the lower reaches of the pier are demonstrated to be structurally sound.

Temporary access road within the Gila River

A temporary construction access road will be built adjacent to the bridge crossing within the 100-foot-wide right-of-way (ROW) along the entire length of the bridge. Construction vehicles, including vehicles carrying materials from off-site sources, will travel to the project area on interstate highways, state highways, county, and local roads, pursuant to the posted weight limitations.

The temporary access road will be constructed for use during the estimated 11-month construction period. The modeled two-year return interval storm event at the Gila River crossing is 9,400 cubic feet per second. Designing the temporary access road to allow flows of this volume to pass underneath is not practicable, therefore the road will most likely be washed out at some point during construction. On-site native materials from within the Gila River channel will be sufficient for construction of the temporary access road, resulting in no change in the character of the sediment within the river. No material will be imported for road construction. The road will be designed to pass low flow volume; the height and number of culverts will guide design of the access road. The top of the road will be approximately 20 feet wide with a 60 foot-wide graded work zone at each of the pier structures. A typical cross section is provided, although the exact dimensions of the road cannot be determined until additional field surveys are conducted (Figure 7 in the BA).

Railroad construction would follow generally accepted practices, including conformance to American Railway Engineering and Maintenance-of-Way Association standards. Extensive grading is anticipated in the Gila River crossing area. Unneeded excavated materials will be disposed at approved off-site locations. The selected contractor would obtain all necessary permits for disposal of waste including vegetation and other debris removed during clearing, grading and construction of the ROW.

Bridge embankment and river training devices

River training devices will protect the structure and the embankment during flood events and will be constructed along the west bank of the San Simon River where it runs parallel to the east side of the Bridge. In the event of a flood, these devices will divert the overflow north toward the Gila River. The actual method of bank protection will be determined during design and therefore is subject to change. There are numerous methods available for protection, though the selected

option will be designed to avoid encroachment on the San Simon River low flow channel and to avoid the need for the purchase of additional right of way. Fill slope protection may include riprap, rail bank protection, or sheet pile (Figure 7 and Appendix D in the BA).

Operations and Maintenance

The bridge will handle one train's round trip per day at 20 to 25 carloads per train trip, seven days a week. On an annual basis, this would total between 7,300 to 10,950 railcars traveling the bridge. Six to 12 permanent employees are anticipated to be hired to perform operations and maintenance tasks.

AZER would perform all maintenance and inspections in compliance with Federal Railroad Administration Standards. Crews using "high-rail" vehicles traveling on the rail line would perform daily inspection and maintenance activities. AZER would take necessary measures to ensure that appropriate vegetation control is followed and that any herbicides applied are approved by the United States Environmental Protection Agency. In areas where the Alignment crosses public highways, the maintenance requirements of Arizona Department of Transportation and/or Graham County will be employed. AZER has contingency plans for emergencies such as derailments and natural disasters. AZER emergency crews are headquartered at Claypool, Arizona.

Conservation Measures

Construction of the bridge and associated features, including pre-construction geotechnical investigations, will be completed using methods designed to minimize environmental impacts to the extent practicable. The temporary access road within the channel of the Gila River will consist of on-site native materials with no armoring. In the likely occurrence of a flood event, the road will wash out but will not result in the addition of pollutants or non-native materials into the Gila River. The river training devices will be constructed to maintain the San Simon River channel so that current conditions at the confluence with the Gila River will remain unchanged during normal flow conditions.

The Arizona Department of Environmental Quality (ADEQ) provided a list of conditions likely to be required under the Section 401 Water Quality Certification. This list was based on preliminary design information provided by the engineers. The individual Section 401 Certification is a requirement of the 404 permit and will be obtained concurrent with the CWA Section 404 permit. The conditions provided by ADEQ are intended to minimize the potential for water quality degradation and will be incorporated in the Project's design and construction. There are 3 general conditions regarding completion of the Stormwater Pollution Prevention Plan (SWPPP) and Arizona Pollution Discharge Elimination Permit (APDES) that are designed to minimize potential negative effects to surface water quality. Nineteen specific conditions provide more detailed direction (Attachment E to the BA). In accordance with these conditions,

AZER will not import materials for the purpose of building temporary structures in the streambed during construction of the bridge. Project activities would cease during high flow events (estimated to be the two-year return interval event) and require removal of mobile equipment from the streambed during the flow event. Upon completion of construction activities, AZER will restore the streambed as close to its original contours as possible given the new permanent bridge support structures. General Best Management Practices (BMP) and the

conditions outlined in the 401 Water Quality Certification will be incorporated into the Project design and construction.

Status of the Species - Southwestern Willow Flycatcher

The rangewide status of the southwestern willow flycatcher was described in detail in our July 17, 2008, biological opinion on right-of-way maintenance within utility corridors on National Forests in Arizona (File number 22410-2007-F-0365), and is incorporated herein via reference. Additional information can be found in the species' Recovery Plan (FWS 2002b).

Southwestern willow flycatcher critical habitat is described in the Final Rule (70 FR 60886: FWS 2005). The primary constituent elements (PCE) of critical habitat include the presence of riparian plant species in a dynamic (successional) riverine environment (for nesting, foraging, migration, dispersal, and shelter), a specific, suitable structure of this vegetation, and the presence of insect populations for food.

Environmental Baseline – Southwestern Willow Flycatcher

The Environmental Baseline describes the status of the southwestern willow flycatcher within the 500-foot by 1,600-foot action area over and adjacent to the Gila River. Southwestern willow flycatchers have not been detected recently within the alignment, though surveys were foregone in 2008. Ellis *et al*. (2008) and Durst *et al*. (2008) include data indicating widespread occupancy of the Gila River in the vicinity of the project area between 1993 and 2007.

The Gila River within the action is critical habitat for the southwestern willow flycatcher, and this aspect of the Environmental Baseline was described in our December 12, 2006, reinitiated biological and conference opinion on the effects of the Safford Resource Management Plan (File numbers 02-21-05-F-0086 and 02-21-88-F-0114). The Environmental Baseline section from this prior consultation is incorporated herein via reference. In brief, the Gila River within the action area is geomorphically active, with near-perennial flow existing in a limited low-flow channel flanked by both vegetated and open cobble bars subject to scour during overbank flows. The depth to the alluvial water table varies spatially and temporally but is sufficient to support xero- and mesoriparian plants such as desert broom (*Baccharis sarothroides*), velvet mesquite (*Prosopis velutina*), tamarisk (*Tamarix* spp.), and Goodding willow (*Salix gooddingii*). This riparian vegetation has the potential to grow to sufficient size and state of structural diversity sufficient to support flycatcher breeding, but it does not do so at this time. High flow events through the somewhat constrained reach have limited growth.

Effects of the Proposed Action - Southwestern Willow Flycatcher

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and interdependent with that action, that will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

The action area is presently unlikely to support nesting southwestern willow flycatcher, and thus, direct effects to the species' breeding activities are not anticipated. Both Ellis *et al*. (2008) and Durst *et al*. (2008) note that southwestern willow flycatchers do nest both up- and downstream from the bridge alignment, indicating that the action area supports the species' immigration, dispersal, and emigration activities. We do not anticipate that construction or operation of the bridge will appreciably affect use of the project site as a migration corridor.

The proposed action will, however, adversely affect southwestern willow flycatcher critical habitat in the project area. This biological opinion does not rely on the regulatory definition of "destruction or adverse modification" of critical habitat at 50 CFR 402.02. Instead, we have relied upon the statutory provisions of the Act to complete the following analysis with respect to this critical habitat. The effects to southwestern willow flycatcher critical habitat are described below.

Construction Impacts

Construction activities will require up to 11 months of disturbance within the Gila and San Simon river's channels. The temporary in-channel channel effects to southwestern willow flycatcher critical habitat include minor vegetation and sediment disturbances associated with geotechnical investigations, dewatering of limited areas, construction of a temporary road (with culverts to pass stream flows), the clearing of 0.4-acre of riparian vegetation, which includes 0.32 acre of temporary loss and 0.08-acre of permanent loss.

Installation of piers for the Bridge will affect a small area of critical habitat for the flycatcher. The area of critical habitat to be permanently disturbed by construction of the Bridge associated with the Permitted Activities is 1.8 acres (the area of the 100-foot-wide corridor).

Dewatering will not be permanent and is not expected to appreciably diminish the aquatic macroinvertebrate community – a PCE - such that flycatcher foraging is affected. All construction activities capable of introducing contaminants (i.e. sediment and fluids and fuels from construction vehicles) will be minimized by the implementation of Best Management Practices (BMP) guided by a Stormwater Pollution Prevention Plan (SWPPP).

The temporary effects to 0.32 acre of riparian vegetation, also a PCE, are offset by the strong likelihood that successional processes will quickly return the site to its pre-project state. This is particularly true for the early successional riparian vegetation located within the active channel. The permanent loss of 0.08 acre of riparian vegetation is minor compared to the ongoing presence of this PCE in adjacent areas.

Geomorphic Impacts

The bridge has been sited in a Gila River reach that is narrower than the reaches up- and downstream from it, yet exhibits a history of lateral channel movements (Wittler *et al*. 2002). The piers will occupy 1.8 acres of critical habitat within the bed of the Gila River, though an indeterminate fraction of this land is within the unvegetated active channel. Further, given the great magnitude of 100-year return interval peak flows in the area (over 140,000 cubic feet per second on the Gila River), neither pier placement nor the San Simon River flow training devices are anticipated to ultimately affect the potential for lateral, within-bank channel movement or recruitment of riparian vegetation at the reach scale. The retention of the aforementioned fluvial

processes also preserved the dynamism of the riparian ecosystem, thus ensuring that the PCEs of critical habitat are not appreciably diminished.

Risk of Environmental Contamination

The BA states that the bridge will handle one round trip by train per day at 20 to 25 carloads per trip, seven days a week. On an annual basis, this would total between 7,300 to 10,950 railcars traveling the bridge. We anticipate that the majority of the cargo will be materials related to mining, potentially including sulphur and/or sulphuric acid. Unintended spills of these cargoes, as well as fuels and fluids associated with the locomotives and cars, pose a risk of environmental contamination. The AZER Hazmat Security Plan (AZER 2008) contains procedures regarding notification and response processes. A spill of sufficient toxicity and magnitude and/or a response to any spill could affect PCEs related to the retention of vegetation and the presence of insects upon which flycatchers forage. While the plan does indicate the intention to minimize the risk to the environment, including critical habitat for the southwestern willow flycatcher, it cannot anticipate all incidents nor minimize their effects *a priori*.

Cumulative Effects

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Further economic development of private lands near the Gila and San Simon rivers will, in some cases, occur in the absence of Federal permitting. This increased development would lead to more public use of the rivers and shoreline areas. Increases or changes in cowbird foraging areas (corrals, domestic stock, and bird feeders) and habitat fragmentation may increase the parasitism rate and decrease flycatcher productivity. Continued and future conversion of floodplains and near-shore lands would eliminate opportunities to restore floodplains for southwestern willow flycatcher habitats. Increased recreation, camping, off-road vehicle use, or river trips, may harass and disturb breeding birds or impact nesting habitats. This increased recreation also increases wildfire potential in these areas. As these areas develop, demands will increase for groundwater pumping. The water budget of the Gila Valley is already in deficit; increased pumping would accelerate loss of river flow and increase associated loss of riparian vegetation along those rivers. Fire, often associated with agricultural operations in the middle Gila Valley, continues to degrade southwestern willow flycatcher habitat there. Yearlong livestock grazing on private and State lands in these areas may be negatively affecting regeneration of native species used for nesting.

Proposals are being considered for phreatophyte control in the Safford area of the Gila River, and projects authorized in the 2004 Arizona Water Settlement will likely affect flows in the Gila River through the action area. Although the specifics are not yet known, these projects may affect southwestern willow flycatchers and their habitats, including critical habitat. Proponents of these projects are also unknown, but we believe most will be Federal agencies or will have a Federal nexus, resulting in section 7 consultations. Some projects may not have a Federal nexus; the effects of those projects would be cumulative effects.

Conclusion

After reviewing the current status of the southwestern willow flycatcher, the environmental baseline for the action area, the effects of the proposed AZER bridge construction, and the cumulative effects, it is the FWS's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the southwestern willow flycatcher, and is not likely to destroy or adversely modify designated critical habitat for the species. We present this conclusion for the following reasons:

- Southwestern willow flycatchers are not currently known to nest within the action area, rendering effects to individuals of the species unlikely.

- Pre-project geotechnical investigations and subsequent construction at the site is unlikely to deter southwestern willow flycatchers from migrating through the project area during or following construction.

- The temporary loss of 0.32 acre of riparian vegetation within the critical habitat is likely to be short lived. The permanent loss of 0.08 acre of riparian vegetation –a Primary Constituent Element - within the critical habitat is inconsequential in scale relative to the acreage of critical habitat in the vicinity, the Upper Gila Recovery Unit, and rangewide.

- The fundamental geomorphology of the Gila and San Simon rivers will not be altered to the extent that the function of the critical habitat and its role in the recovery of the species will be appreciably diminished.

- The PCEs of critical habitat will not be diminished to the extent that recovery of the flycatcher is reduced.

These conclusions are based on full implementation of the project as described in the Description of the Proposed Action section of this document, including any Conservation Measures that were incorporated into the project design. Additional information can be found in the revisions to the species' Recovery Plan (FWS 2002a).

Status of the Species – Razorback Sucker

The rangewide status of the razorback sucker, including a description of the species' critical habitat, was described in detail in our June 26, 2008, biological opinion on the renovation of the Cibola High School levee pond (File number 22410-F-2008-0348), and is incorporated herein via reference.

The Gila River in the reach containing the action area is critical habitat for the species. This critical habitat contains three categories of PCEs: water, physical habitat, and the biological environment (FWS 1994). The water element refers to water quality and quantity. Water quality is defined by parameters such as temperature, dissolved oxygen, environmental contaminants, nutrients, turbidity, and others. Water quantity refers to the amount of water that must reach specific locations at a given time of year to maintain biological processes and to support the

various life stages of the species. The physical habitat element includes areas of the Colorado River system that are or could be suitable habitat for spawning, nursery, rearing, and feeding, as well as corridors between such areas. Habitat types include bottomland, main and side channels, secondary channels, oxbows, backwaters, and other areas in the 100-year floodplain, which when inundated may provide habitat or corridors to habitat necessary for the feeding and nursery needs of the razorback sucker. The biological environment element includes living components of the food supply and interspecific interactions. Food supply is a function of nutrient supply, productivity, and availability to each life stage. Negative interactions include predation and competition with introduced nonnative fishes.

Environmental Baseline – Razorback Sucker

The Environmental Baseline describes the status of the razorback sucker within the 500-foot by 1,600-foot action area over and adjacent to the Gila River. Historically, the razorback sucker was found in the Gila River upstream to the New Mexico border (Bestgen 1990), but was likely extirpated by the late 1970s. Razorback suckers were transplanted into the Gila River and its tributaries between 1981 and 1989; however, there is no evidence that the transplanted fish have established self-sustaining populations. These transplants were not formally monitored until 2001, when a baseline fisheries inventory was conducted in the Gila Box portion of the Gila River. The inventory found no razorback suckers. No razorback suckers were found during depletion surveys of a plunge pool below the Eagle Creek diversion dam in 1996 (SWCA 1997). The Bureau of Land Management (BLM) reported a large razorback sucker found in Bonita Creek in 1991, though they were not detected during a fish renovation project in October 2008. Small numbers of released razorback suckers may survive in the Gila River and Bonita and Eagle creeks. Fish may have also moved upstream into the San Francisco River. Razorback suckers are, however, immeasurably unlikely to be present within the action area.

The Gila River within the action area is critical habitat for the species, and this aspect of the Environmental Baseline was further described in our December 12, 2006, reinitiated biological and conference opinion on the effects of the Safford Resource Management Plan (File numbers 02-21-05-F-0086 and 02-21-88-F-0114). In brief, the Gila River within the action area is geomorphically active, with near-perennial flow existing in a limited low-flow channel flanked by both vegetated and open cobble bars subject to scour during overbank flows. The depth to the alluvial water table varies spatially and temporally but is sufficient to support xero- and mesoriparian plants such as desert broom, velvet mesquite, tamarisk, and Goodding willow. The reach within which the bridge is proposed to be constructed is somewhat constrained. This characteristic, along with the limited size and state of structural diversity of riparian vegetation, limits the formation of complex aquatic habitats (pools, backwaters, oxbows, fluvial marshes, floodplain rearing areas, etc.). The action area thus primarily exhibits PCEs related to the presence of water.

Effects of the Proposed Action - Razorback Sucker

Effects of the action area refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and interdependent with that action, that will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and

are later in time, but are still reasonably certain to occur.

Razorback suckers are likely immeasurably rare in the Gila River and lower reaches of the San Simon River. Individuals of the species are unlikely to be affected by the proposed action. The proposed action will, however, adversely affect razorback sucker critical habitat in the action area. This biological opinion does not rely on the regulatory definition of "destruction or adverse modification" of critical habitat at 50 CFR 402.02. Instead, we have relied upon the statutory provisions of the Act to complete the following analysis with respect to this critical habitat. The effects to razorback sucker critical habitat are described below.

Construction Impacts

Construction activities will require up to 11 months of disturbance within the Gila and San Simon river's channels. The temporary in-channel channel effects to razorback sucker critical habitat include minor vegetation and sediment disturbances associated with geotechnical exploration, dewatering of limited areas, construction of a temporary road (with culverts to pass stream flows), and the clearing of 0.4-acre of riparian vegetation, which includes 0.32 acre of temporary loss and 0.08-acre of permanent loss.

Dewatering activities will change the spatial extent of water, not the volume, and will be temporary in nature. PCEs related to the presence of water will thus be minimally affected. Riparian vegetation, and the interactions between it and the hydrologic system, supports several PCEs, including those associated with rearing and feeding, fluvial function, and water quality. We anticipate that successional projects will return the 0.32-acre of cleared riparian vegetation to it's pre-project seral state relatively rapidly. The permanent loss of 0.08 acre of riparian vegetation is minimal in comparison to the extent of vegetation-based PCEs in the vicinity of the action area and in the middle reaches of the Gila River.

Installation of piers for the Bridge will affect up to 1.8 acres of critical habitat for the razorback sucker. An additional 7.3 acres of critical habitat within the action area may be temporarily disturbed during construction. There are 517 river miles of critical habitat designated for the razorback sucker in Arizona. The maximum stream length of impact to razorback sucker critical habitat is 500 linear feet or 0.095-mile. The entire 1.8 acres to be lost to bridge pier placement are unlikely to contain the full suite of PCEs; the loss is likely to be inconsequential at the site and reach scales.

All activities capable of introducing contaminants (i.e. sediment and fluids and fuels from construction vehicles) will be minimized by the implementation of Best Management Practices (BMP) guided by a Stormwater Pollution Prevention Plan (SWPPP). Implementation of the SWPPP will help ensure that the water quality aspects of the razorback sucker's PCEs are not appreciably affected.

Geomorphic Impacts

The bridge has been sited in a Gila River reach that is narrower than the reaches up- and downstream from it, yet still exhibits a history of lateral channel movements. The piers will occupy up to 1.8 acre of razorback sucker critical habitat but, given the great magnitude of 100-year return interval peak flows in the area (over 140,000 cubic feet per second on the Gila River), neither they nor the San Simon River flow training devices are anticipated to ultimately

affect the potential for lateral, within-bank channel movement or recruitment of riparian vegetation at the reach scale. The retention of the aforementioned fluvial processes also preserved the dynamism of the riparian ecosystem, thus ensuring that the PCEs of critical habitat are not appreciably diminished.

Risk of Environmental Contamination

The BA states that the bridge will handle one round trip by train per day at 20 to 25 carloads per trip, seven days a week. On an annual basis, this would total between 7,300 to 10,950 railcars traveling the bridge. We anticipate that the majority of the cargo will be materials related to mining, potentially including sulphur and/or sulphuric acid. Unintended spills of these cargoes, as well as fuels and fluids associated with the locomotives and cars, pose a risk of environmental contamination. The AZER Hazmat Security Plan contains procedures regarding notification and response processes. A spill of sufficient toxicity and magnitude and/or a response to any spill could affect PCEs related to the retention of vegetation and the aquatic ecosystems that are habitat for insects upon which flycatchers forage. While the plan does indicate the intention to minimize the risk to the environment, including critical habitat for the razorback sucker, it cannot anticipate all incidents nor minimize their effects *a priori*.

Cumulative Effects

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Many activities outside of the Federal nexus occur and are expected to continue in razorback sucker habitat, including critical habitat. Critical habitat through the middle Gila Valley downstream of the Gila Box Riparian National Conservation Area is mostly non-Federal land. Cumulative effects in this area are described for the southwestern willow flycatcher above. Human development or recreational site encroachment and changes in land-use pattern around occupied reaches and designated critical habitat that further fragment, modify, or destroy upland or riparian vegetation negatively affect water quality and quantity and the primary constituent elements of critical habitat. Increased development, agriculture, and livestock grazing practices may result in the drainage, development, or diversions of wetland and aquatic habitats that reduce water quantity and quality, and destroy spawning and critical habitats. Non-native fish introduction resulting from fishing and recreation in occupied reaches and critical habitat would increase resource competition and direct mortality from predation.

Conclusion

After reviewing the current status of the razorback sucker, the environmental baseline for the action area, the effects of the proposed AZER bridge construction, and the cumulative effects, it is the FWS's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the razorback sucker, and is not likely to destroy or adversely modify designated critical habitat for the species. We present this conclusion for the following reasons:

- Razorback sucker are immeasurably unlikely to occur within the action area, rendering effects to individuals of the species unlikely.

- Pre-project geotechnical investigations and subsequent construction at the site is unlikely to deter razorback suckers from utilizing the aquatic ecosystems within the project area during or following construction.

- The temporary disturbance of up to 7.3 acres of critical habitat is likely to be short lived, and not all areas contain Primary Constituent Elements. The permanent loss of 1.8 acres (0.095 river miles) of critical habitat displaced by the bridge piers is inconsequential in scale relative to the acreage of critical habitat in the vicinity and rangewide.

- The fundamental geomorphology of the Gila and San Simon rivers will not be altered to the extent that the function of the critical habitat and its role in the recovery of the species will be appreciably diminished.

- The PCEs of critical habitat will not be diminished to the extent that recovery of the razorback sucker is reduced.

These conclusions are based on full implementation of the project as described in the Description of the Proposed Action section of this document, including any Conservation Measures that were incorporated into the project design.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is further defined (50 CFR 17.3) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. "Harass" is defined (50 CFR 17.3) as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. AIncidental take@ is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The FWS does not anticipate the proposed action will incidentally take any southwestern willow flycatchers for the following reasons:

- Habitat capable of supporting the nesting and breeding of southwestern willow flycatchers does not exist in the action area. Construction activities are not likely to

significantly affect the use of the project area for migration and dispersal, and permanent effects to habitat, including critical habitat, are inconsequentially minor relative to the amount available in the vicinity, Recovery Unit, and range of the species.

The FWS does not anticipate the proposed action will incidentally take any razorback suckers for the following reasons:

- Razorback suckers are not likely to measurably occur in the action area. Construction activities are not likely to significantly affect the use of the project area for migration and dispersal, and permanent effects to habitat, including critical habitat, and inconsequentially minor relative to the amount available in the vicinity, Recovery Unit, and range of the species.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

We recommend that your agency participate in the implementation of recovery projects for the southwestern willow flycatcher and razorback sucker.

In order for the FWS to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the FWS requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the action outlined in the request. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Please also note that the release of toxic substances to the Gila River may require reinitiation of consultation under item 2, above, as the nature, magnitude, and impact of spills cannot be accurately evaluated at this time.

The FWS appreciates the Surface Transportation Board's efforts to identify and minimize effects to listed species from this project. For further information please contact Jason Douglas at (520) 670-6150, (x226), or Sherry Barrett at extension (x223). Please refer to the consultation number, 22410-F-2008-0474 in future correspondence concerning this project.

Sincerely,

/ s / Sherry Barrett for
Steven L. Spangle
Field Supervisor

cc (hard copy):
Assistant Field Supervisor, U.S. Fish and Wildlife Service, Tucson, Arizona
U.S. Army Corps of Engineers (Attn: Robert Dummer), Phoenix, Arizona

Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, Arizona
Regional Supervisor, Region V, Arizona Game and Fish Department Tucson, Arizona

cc (electronic copy):
Kimberly Otero, WestLand Resources, Inc., Tucson, Arizona
Mark Cochran, CH2M Hill, Tucson, Arizona

filename: Eastern Arizona Railway\FINAL Eastern Arizona RR BiOp.docx

LITERATURE CITED

Bestgen, K.R. 1990. Status review of the razorback sucker, *Xyrauchen texanus*. Report to U.S. Fish and Wildlife Service, Salt Lake City, Utah. Contribution 44, Larval Fish Laboratory, Colorado State University, Fort Collins, Colorado.

Durst, S.L., Sogge, M.K., Stump, S.D., Walker, H.A., Kus, B.E., and Sferra, S.J. 2008. Southwestern willow flycatcher breeding sites and territory summary - 2007. U.S. Geological Survey Open File Report 2008–1303. 31 pp.

Ellis, L. A., D. M. Weddle, S. D. Stump, H. C. English, and A. E. Graber. 2008. Southwestern willow flycatcher final survey and monitoring report. Arizona Game and Fish Department, Research Technical Guidance Bulletin #10, Phoenix, Arizona, USA.

SWCA, Inc. 1997. Eagle Creek fish salvage field work report. Technical memorandum from Jim Tess, SWCA, Inc to Rick Mohr, Phelps Dodge Corporation, Morenci, Arizona.

U.S. Fish and Wildlife Service (FWS). 2005. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Southwestern Willow Flycatcher (*Empidonax traillii extimus*); Final Rule. Federal Register 70(201): 60886-61009.

U.S. Fish and Wildlife Service (FWS). 2002a. Razorback Sucker (*Xyrauchen texanus*) Recovery Goals – Amendment and Supplement to the Razorback Sucker Recovery Plan. Mountain-Prairie Region (6), Denver, CO.

U.S. Fish and Wildlife Service (FWS). 2002b. Southwestern Willow Flycatcher Recovery Plan, Region 2, Albuquerque, NM.

U.S. Fish and Wildlife Service (FWS). 1994. Determination of Critical Habitat for the Colorado River Endangered Fishes: Razorback Sucker, Colorado Pikeminnow, Humpback Chub, and Bonytail Chub. Federal Register 59(54): 13374-13400

Wittler, R.J., M.R. Delcau, and J.E. Clawson. 2002. Revisions to 2001 Upper Gila River Fluvial Study – Stable Channel Analysis. Technical Service Center. U.S. Department of the Interior, Bureau of Reclamation. Denver, CO.

AZER Post EA
Appendix D
Correspondence from NRCS

Natural Resources Conservation Service
230 N. 1st Avenue, #509
Phoenix, Arizona 85003-2946
(602) 280-8801
FAX (602) 280-8809

JAN 10 2008

John Cook AICP, Senior Associate
135 Main Street, Suite 1600
San Francisco, California 94105

Dear Mr. Cook:

This response is in regard to your email dated December 11, 2007, requesting information regarding the presence of prime and unique land status for the proposed freight railroad to spur from an existing Arizona Eastern Railroad near Safford and Solomon in Graham County, Arizona.

We reviewed the information provided, including the NRCS-CPA-106, and completed our portion of the form. It is enclosed with this response. The following is noted:

1- The project proposal contains 24.63 acres of land that meets the definition of prime farmland. However, the sum of the assessment criteria in Part VI and the Land Evaluation relative value in Part V is 138. Sum values less than 160 are considered as land already committed to urban uses. Therefore, the proposed new project, if implemented as planned, is exempt from the requirements of the FPPA and no further mitigation activities are required. A summary report of the soils for your defined corridor has been provided for your analysis and later use, if need be. The report includes a discussion of the soil types and their relative agricultural productivity.

2- We do not see any immediate concerns or impacts that would directly affect wetland areas associated with agriculture.

We recommend that any future development projects receive a prime farmland determination prior to any construction activities. Should you have questions, please feel free contact Steve Smarik, Environmental Coordinator, at 602.280.8785 or at the address shown above.

Thank you again for the chance to review the proposed project.

Sincerely,

ERIC BANKS
Assistant State Conservationist (P-FA)

Enclosure

cc:
Jennifer Varin, DC, Safford, Arizona
Steve Smarik, Environmental Coordinator, NRCS, Phoenix, AZ

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request: DECEMBER 11, 2007	4. Sheet 1 of 1
1. Name of Project: ARIZONA EASTERN RAILROAD	5. Federal Agency Involved: SURFACE TRANSPORTATION BOARD	
2. Type of Project: FREIGHT RAILROAD CONSTRUCTION/UPGRADE	6. County and State: GRAHAM COUNTY ARIZONA	

PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS: 12/6/07	2. Person Completing Form: S. Smarik
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form) YES ☑ NO ☐	4. Acres Irrigated: 24.63	Average Farm Size: 475 acres
5. Major Crop(s): Cotton alfalfa Wheat	6. Farmable Land in Government Jurisdiction: Acres: 96,982 % 3.3	7. Amount of Farmland As Defined in FPPA: Acres: not known %
8. Name Of Land Evaluation System Used: —	9. Name of Local Site Assessment System: —	10. Date Land Evaluation Returned by NRCS

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment PROPOSED ACTION			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	24.63	0		
B. Total Acres To Be Converted Indirectly, Or To Receive Services	246.3	0		
C. Total Acres In Corridor	1,210	0	0	0
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	2463			
B. Total Acres Statewide And Local Important Farmland	—			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	.03%			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	25%			
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*	83			
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*	Maximum Points			
1. Area in Nonurban Use	15	15		
2. Perimeter in Nonurban Use	10	10		
3. Percent Of Corridor Being Farmed	20	5		
4. Protection Provided By State And Local Government	20	0		
5. Size of Present Farm Unit Compared To Average	10	10		
6. Creation Of Nonfarmable Farmland	25	0		
7. Availability Of Farm Support Services	5	5		
8. On-Farm Investments	20	10		
9. Effects Of Conversion On Farm Support Services	25	0		
10. Compatibility With Existing Agricultural Use	10	0		
TOTAL CORRIDOR ASSESSMENT POINTS	160	055	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100	83			
Total Corridor Assessment (From Part VI above or a local site assessment)	160	55	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	138	0	0	0

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
A	24.63	February 2007	YES ☐ NO ☒

5. Reason For Selection:

Signature of Person Completing this Part: [signature] DATE: 12/11/2007

NOTE: Complete a form for each segment with more than one Alternate Corridor

AZER Post EA
Appendix E
Updated Traffic Analysis

ENGINEERS
PLANNERS
ECONOMISTS
Wilbur Smith Associates

LOS ANGELES OFFICE

MEMO

Date: July 8, 2008

Project Number: 100756

To: John Cook, AICP**,** CirclePoint

From: Sam Morrissey, P.E.

Subject: Arizona Eastern Rail – Updated Traffic Analysis

Wilbur Smith Associates is pleased to present this memorandum; an updated traffic and transportation analysis of a proposed Arizona Eastern Rail (AZE) line in Safford, Arizona. The update reflects comments and additional data received from the Arizona Department of Transportation (ADOT) in April 2008. In a prior report, WSA analyzed projected traffic using 2005 traffic data for the U.S. 70 corridor. This revised report utilized new data provided by ADOT in April 2008, reflecting traffic data spanning from 2003 to 2007.

The analysis documents the existing and future conditions along two study roadway segments where the proposed rail line will cross; Highway U.S. 70 and Airport Road. The primary focus of this analysis was the transportation related effects of the proposed project at these two crossing locations.

1.0 EXISTING CONDITIONS

As a basis for comparison with proposed future conditions, existing conditions were analyzed for both study roadway segments along U.S. 70 and Airport Road. Available 2005 traffic volume data was collected for Airport Road. Year 2007 traffic data for U.S. 70 was provided by ADOT.

U.S. 70

The study area along U.S. 70 spanned from milepost 343 to milepost 344. A conceptual rail alignment plan including crossing locations was completed in June 2007. The selected study area includes the conceptual crossing locations. Within the bounds of the study area, U.S. 70 is a two-lane highway with a posted speed limit of 55 mph. No signalized intersections exist within the study area. Both residential and commercial driveways directly access the highway. U.S. 70 crosses the San Simon River within the study area. An upgrade in roadway elevation leading to the crossing was observed for a length of approximately 650 feet on either side of the bridge.

In April 2008, ADOT provided the following update on planned improvements to U.S. 70 in the study area:

> There is also an active ADOT project for shoulder widening, re-striping for turn lanes and pavement preservation of US Highway 70 from Milepost 341.37 to 343.40 . This project, (ADOT Project Number 70 GH 341.4 **H7094** 01C Lone Star Road to San Simon River Bridge) is going to advertise for bid in June 2008 and will end just before the proposed crossing. The project to widen a portion of US 70 has been actively discussed and planned since June 2006 to help accommodate the growth in traffic and population east of Safford, Arizona. Finally, ADOT is in the process of planning to widen the US 70 to 5 lanes (ADOT Project Number 70 GH 340 **H5109** 01C Safford to Solomon). This project will be directly impacted by the proposed AZER crossing.

The center turn lane to be added will provide improved access for driveways and sites adjacent to U.S. 70. No data on the number of vehicles turning into or out of adjacent sites within the project area is available; it is assumed that the volume of vehicles turning into or out of adjacent sites will be minimal and will not impact through capacity.

Airport Road

The study area along Airport Road extended westward approximately one half mile from the intersection with Solomon Pass Road. Within the study segment, Airport Road consists of two lanes with no intersections. Airport Road is predominantly surrounded by vacant land, with the exception of Safford Regional Airport to the east of the study area. No speed limit was posted within this roadway segment, however based on the closest available posting the speed limit was assumed to be 55 mph.

1.1 EXISTING TRAFFIC VOLUMES

Year 2003 to 2007 average annual daily traffic (AADT) volumes for U.S. 70 from milepost 341.85 to milepost 344.37 were supplied by the Arizona Department of Transportation (ADOT)[1], while Year 2005 AADT volumes for Airport Road were calculated based on raw traffic count data provided by the Graham County Office of Engineering. Seasonal and daily adjustment factors, as well as peak hour (K) and peak directional (D) factors were provided by ADOT to arrive at a one-way PM peak hour volume used in analysis. Table 1.1 summarizes the AADT calculations for each study segment. Figures 1.1 and 1.2 graphically summarize the existing available traffic volumes along each of the study roadway segments. The tabulated data from which the information in Table 1.1, Figures 1.1, and Figure 1.2 was derived can be found in Appendix A. Note that the data presented in Figures 1.1 and 1.2 does not include updated Year 2007 traffic volume data on U.S. 70. At the time of report preparation, no updated hourly traffic volume data for U.S. 70 was available. As Figures 1.1 and 1.2 show, historical traffic patterns remain consistent throughout a typical weekday; we therefore assume that Year 2007 hourly traffic volumes on U.S. 70 exhibit a similar pattern.

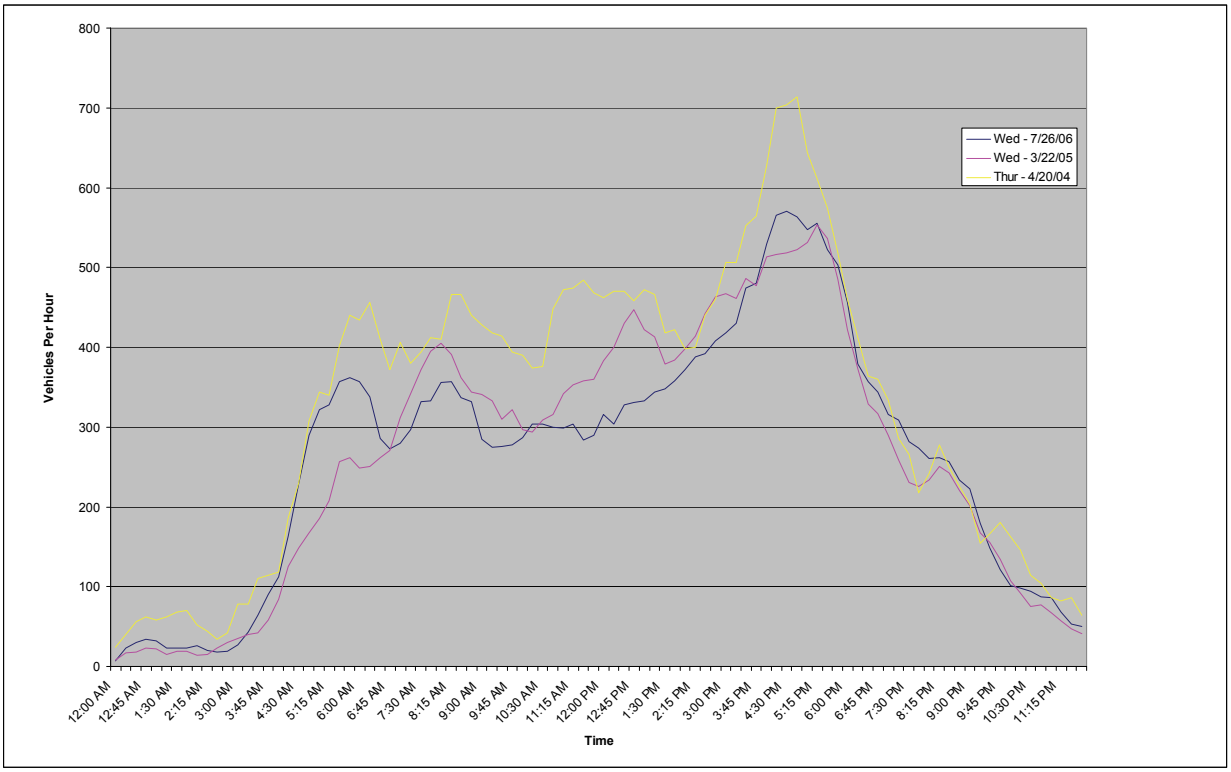
Table 1.1 – Existing AADT and Calculations

	2007 US 70	2005 Airport Rd
Raw Count Data[1]	N/A	464
Annual Growth Factor[2]	0	0
Seasonal Adjustment[2]	N/A	0.917
AADT[2]	6,900	425
% Trucks[3]	8.0%	N/A
K Factor[2]	10.10%	10.10%
PM Peak hour	697	43
D Factor[1]	51.50%	51.50%
One Way PM Peak	**359**	**22**

Source: *1) Graham County Engineering Department*
2) Arizona Department of Transportation (ADOT)
3) Arizona Department of Transportation (ADOT)

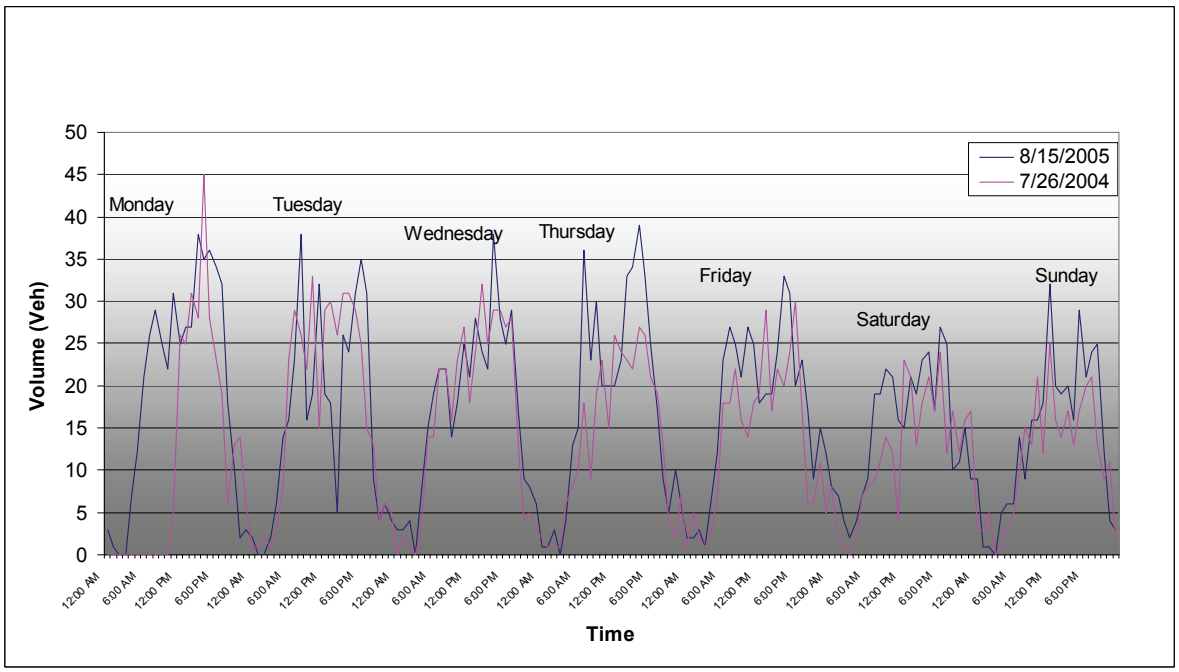
[1] Data provided by ADOT staff via email dated Thursday, April 24, 2008 11:05 AM.

Figure 1.1 – Existing Hourly Traffic Volumes – U.S. 70 MP 341.85 to MP 344.37



Data Source: Arizona Department of Transportation, September 2006.

Figure 1.2 – Existing Weekly Traffic Volumes – Airport Road 500' E/O Mesa De La Paz



Data Source: Graham County Engineering Department, September 2006.

1.2 EXISTING LEVEL OF SERVICE (LOS)

Currently, along both study roadway segments there are no at-grade rail crossings to restrict traffic flow. From the standpoint of delay based LOS analysis, both study roadway segments along Airport Road and U.S. 70 are operating at free-flow and vehicles traveling on these roadway segments do not experience any delay (with the exception of minor intermittent delays to turning vehicles into and out of adjacent sites). An analysis of operating conditions on U.S. 70 (consistent with HCM 2000 methodologies for a two-lane class II rural highway) identifies current PM Peak Hour operating conditions at LOS B. The summary analysis worksheets for this analysis are included in Appendix A.

2.0 FUTURE CONDITIONS

Future conditions were projected into Year 2030, including both two-lane and four-lane configurations possible along the study segment of U.S. 70, as well as an unchanged two-lane scenario for Airport Road.

As noted in section 1.0, a center turn lane is planned for U.S. 70 within the study area, bringing the cross-section to three lanes. By the Year 2030, ADOT states that U.S. 70 will have a five-lane cross section with two-lanes in each direction and a center turn lane. Each of the future conditions described in this section will include an assumed center turn lane. As this lane serves as access for vehicles turning into or out of adjacent sites along U.S. 70, this center turn lane is not assumed to add through capacity to U.S. 70 in excess of the two- or four-lane cross sections. Therefore, the future conditions will refer to two- and four-lane cross sections.

2.1 FUTURE PLANNED DEVELOPMENT AND 2030 AADT

In order to predict 2030 volumes, an annual growth rate of 1.85% was applied to Year 2005 AADT traffic volumes on Airport Road. This rate was provided by ADOT for traffic volumes along the study roadway segment and was derived from the linear interpolation of previous growth in traffic volumes along U.S. 70. Therefore, any previous development trends along U.S. 70 are expected to be captured by this growth rate. By using this growth rate to project volumes, a similar pattern of development previously to the west of the study area is assumed to continue east along U.S. 70 through the Year 2030.

As a part of this update, the growth rate between Year 2005 and Year 2007 AADT volumes was examined. Between 2005 and 2007, AADT volumes along U.S. 70 grew at an average annual rate of 8.36% per year. This growth rate is substantially higher than previous documented growth rates, and was therefore used to develop Year 2030 AADT estimates on U.S. 70 in the study area

Table 2.1 summarizes how the AADT data for each location was incorporated into each analyzed scenario. Note that Table 2.1 also includes an estimate of the number of trucks during the PM Peak Hour. This was determined based on existing data provided by ADOT showing the percentage of trucks on U.S. 70 in the study area to be 8.0% in 2007. The resulting one-way PM peak hour volume was then incorporated into the subsequent intersection operational analyses to be outlined in Section 3.2.

Table 2.1 – 2030 AADT Calculations

	2007	2005	2030	
	U.S. 70	Airport Rd	U.S. 70	Airport Rd
Raw Count Data[1]	N/A	464	N/A	N/A
Annual Growth Factor[2]	0	0	8.36%	1.85%
Seasonal Adjustment[2]	N/A	0.917	N/A	N/A
AADT[2]	6,900	425	43,758	673
% Trucks[3]	8.0%	N/A	8.0%	N/A
K Factor[2]	10.10%	10.10%	10.10%	10.10%
PM Peak hour	697	43	4,420	68
D Factor[1]	51.50%	52.00%	51.50%	52.00%
One Way PM Peak	**359**	**22**	**2,276**	**35**
Trucks	*29*	*N/A*	*182*	*N/A*

Source: 1) Graham County Engineering Department
2) Arizona Department of Transportation (ADOT)
3) Arizona Department of Transportation (ADOT)

3.0 TRAFFIC IMPACT ASSESSMENT

As a direct result of the construction of an at-grade crossing, vehicles along each study segment which were previously freely flowing will be subject to delay based on the proposed at-grade rail crossings. In order to calculate the average vehicle delay at each segment it was necessary to predict the potential maximum direct delay imposed by each train crossing. In addition to average vehicle delay, it was also of interest to compute maximum vehicle queues possible, for safety and sight distance considerations.

For the purposes of this analysis, it is assumed that a maximum of one train crossing would occur during the PM Peak Hour. AZE has noted that train operations would primarily occur during off-peak periods, and that a train crossing during the PM Peak Hour would be an extremely rare occurrence.

3.1 CROSSING DELAY CALCULATION

In order to estimate the crossing time of the train, assumptions were made regarding train length and speed. The maximum train length as well as the minimum speed provided by Arizona Eastern Rail was incorporated in the calculations, in order to be conservative.

Assumptions:

- Train speed: 10 MPH minimum
- Train Length: 30 cars + 3 locomotives = 1,920 ft maximum
- One crossing per PM peak hour

In addition to the train crossing, it was necessary to incorporate any standards in preemptive signal timing to accurately reflect the total delay imposed by the train as it crosses the roadway.

The guidelines used in these calculations are in accordance with the Arizona Corporation Commission (ACC) Rail Road Safety department's guidelines.

Railroad Crossing Phases:

- 20 seconds signal preemption (as per Federal Rail Administration requirements)
- 131 seconds for train to cross the roadway (as calculated, based on above assumptions)
- 12 seconds maximum before gates are fully raised (guideline provided by the Manual for Uniform Traffic Control Devices)
- The train will impose a maximum of 163 seconds delay per crossing.

3.2 QUEUE LENGTH AND VEHICLE DELAY ANALYSIS

The data calculated above was combined with the available Average AADT volumes for the two following roadway segments:

- U.S. 70 MP 341.85 to MP 344.37
- Airport Road east of Mesa De La Paz

Synchro 6 and 7 software (consistent with Highway Capacity Manual methodologies) was utilized for PM peak hour operational analysis of an at-grade crossing at each study roadway segment. In compliance with ADOT traffic engineering policies, the analysis conformed to the following guidelines:

Peak Hour Factor (PHF):

- PHF = 0.8 for < 75 vph per lane
- PHF = 0.85 for 75 – 300 vph per lane
- PHF = 0.9 for >300 vph per lane

Source: ADOT Traffic Engineering Policies, Guidelines, and Procedures; Section 200 – Traffic Studies

The results of the PM peak hour intersection operational analysis for potential at-grade crossings at U.S. 70 and Airport Road is summarized on Table 3.1. Note that Table 3.1 shows two possible configurations for U.S. 70; the existing two-lane configuration as well as the proposed four-lane configuration. All conditions include a center turn lane on U.S. 70.

Table 3.1 – Results of PM Peak Hour Intersection Operational Analysis (One Crossing Per PM Peak Hour)

	2007		2005	2030		
	U.S. 70 2 Lanes[a]	U.S. 70 4 Lanes[a]	Airport Rd	U.S. 70 2 Lanes[a]	U.S. 70 4 Lanes[a]	Airport Rd
Volume (vph)	697	697	43	4,420	4,420	68
PHF	0.9	0.85	0.8	0.9	0.9	0.8
Adj. Flow (vph)	774	820	54	4,911	4,911	85
Average Delay Per Vehicle (sec)	**19.2**	**20.5**	**32.1**	**334.8**	**19.8**	**30.5**
Intersection LOS	**B**	**C**	**C**	**F**	**B**	**C**
Max Queue (ft)	**1,017**	**426**	**61**	**6,335**	**3,232**	**87**
Max Queue (Veh)[a]	**58**	**24**	**3**	**359**	**183**	**5**

Source: Wilbur Smith Associates, 2006 and 2008.
Notes: a) Includes center turn lane.
b) Based on AASHTO standard length of 17 feet 8 inches for cars and light trucks

Based on the analysis, an at-grade crossing of a four-lane U.S. 70 (with center turn lane) in 2030 would yield the following:

- Maximum Queue Length: *3,232 ft (for each direction*)
- Maximum Queue: *183 vehicles (for each direction)*
- Average Delay per Vehicle: *19.8 seconds (Intersection LOS B)*
- Vehicles Affected per PM Peak Hour Crossing: *366 vehicles*

Additionally, an at-grade crossing at Airport Road in 2030 would yield the following:

- Maximum Queue Length: *87 ft (for each direction*)
- Maximum Queue: *5 (for each direction)*
- Average Delay per Vehicle: *30.5 seconds (Intersection LOS C)*
- Vehicles Affected per PM Peak Hour Crossing: *10 vehicles*

The analysis shows that even with the substantial increase in traffic along U.S. 70 under Year 2030 conditions, the expansion of U.S. 70 to four-lanes (with a center turn lane) combined with the relatively minor delays associated with one train crossing, result in a minor change to PM Peak Hour operating conditions. Therefore, the proposed at-grade crossing would not significantly impact PM Peak Hour operations on U.S. 70.

3.3 POTENTIAL CONSTRUCTION TRAFFIC IMPACTS

Construction activities were assumed to consist of clearing and grubbing, laying down the roadbed, laying track, and constructing a bridge over the Gila River. The assumption for construction time is eight hours a day, five days a week, for approximately 9 to 12 months.

A typical track construction vehicle list was assumed to be the following:

- Trucks (5 pickups and 1 flat bed truck)
- Skid Steer Loaders (4)
- Front-end Loaders (4)
- Air Compressors (2)
- Spiker (1)
- Ballast Regulator (1)
- Tamper (2)

Based on the number of vehicles required for this construction operation a negligible amount of construction related traffic would be imposed on local roadways. Additionally any possible delays due to the specific at-grade crossing construction can be minimized by ensuring that any lane closures correspond with the minimum off-peak traffic volumes previously shown in Figures 1.1 and 1.2.

4.0 SAFETY CONSIDERATIONS

As a direct result of the proposed at-grade crossing vehicles traveling along each of the study roadway segments will be required to come to a complete stop during each train crossing. As a result, it was necessary to evaluate where any stopping sight distance (SSD) limitations exist along the study roadway segments.

Other safety considerations include vehicles that are required to stop at all at-grade railroad crossings. Certain vehicles, such as school busses and trucks carrying hazardous materials are required by law, policy, or regulation to stop at railroad crossings. As shown in section 2.1, this means that a percentage of the approximately 29 trucks per day in 2007 and 183 trucks per day in 2030 may stop at the proposed railroad crossing.

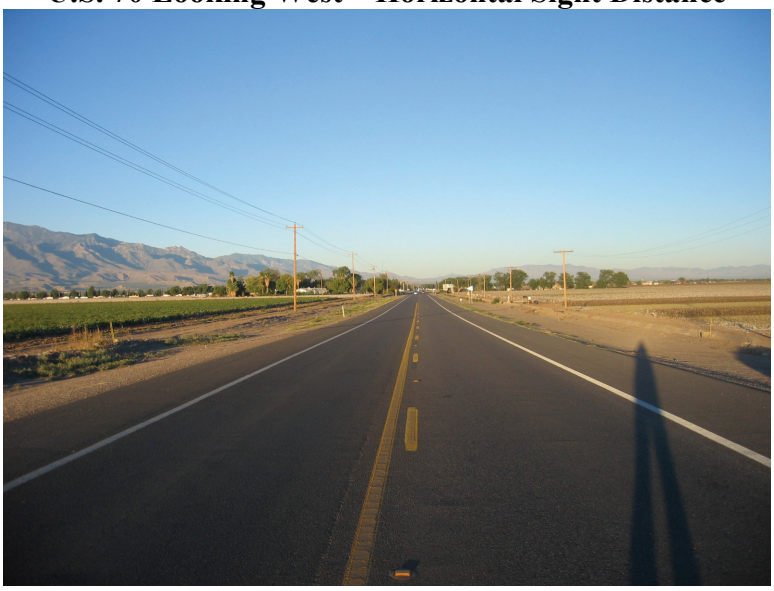
Last, the proposed at-grade crossing could also potentially impact first responders, such as ambulance, fire, and law enforcement vehicles. It is assumed that these first responders would be able to reach the front of any vehicle queues that develop due to railroad crossing delays. Therefore, the maximum delay to a first responder vehicle would be 163 seconds, or the total estimated duration for grade crossing delay as noted in section 3.1.

4.1 SSD EVALUATION

Horizontal Sight Distance:

Field observations along U.S. 70 and Airport Road revealed no horizontal sight distance concerns. Both roads are essentially straight between intersections, as shown in the images below.

U.S. 70 Looking West – Horizontal Sight Distance



Airport Road Looking East – Horizontal Sight Distance

Vertical Sight Distance:

Field observations along U.S. 70 within the vicinity of the San Simon River crossing showed up-grades in roadway slope leading to the bridge at a length of approximately 650 feet on either side. An at-grade rail crossing west of the San Simon River would thus be at a lower elevation than the bridge itself, creating a potential obstruction to the visibility of the crossing as well as the cars queued at the crossing. Conversely, if the rail crossing were placed within 650 feet of the San Simon River and raised to an equal elevation, it would be at a relative high-point in elevation, and visibility would not be a concern. A view from the San Simon River bridge looking west along Highway 70 is shown below.

U.S. 70 Looking West – Vertical Sight Distance

Along Airport road, there are no substantial vertical sight distance issues. The photo below shows airport road looking east. As shown in the photo, Airport Road does go through an elevation change; however, this elevation change would not impact vertical sight distance due to the installation of an at-grade crossing.

Airport Road Looking East – Vertical Sight Distance

SSD Calculation:

Given that the railroad is proposed to cross U.S. 70 to the west of the San Simon River, only vehicles traveling westbound over the river crossing could possibly be affected by limited sight distance of an at-grade crossing. Under this scenario, the most current AASHTO highway design

standards were utilized in order to determine SSD. The assumptions leading to the calculated SSD are highlighted in Table 4.1.

Table 4.1 – SSD Variables

Symbol	Description	Value
V	Design Speed (mph)[a]	60
b	Brake Reaction Distance (ft)[b]	220.5
a	Deceleration Rate (ft/sec²)	11.2
G	Grade	-2%

Source: 1) Wilbur Smith Associates, 2006
2) A Policy on Geometric Design of Highways and Streets 2001, American Association of State Highway and Transportation Officials (AASHTO)
Notes: a) Speed based on 85th percentile speed, approximated to be 5 mph over 55 mph speed limit, according to ADOT Traffic Engineering Policies, Guidelines, and Procedures; Section 200 – Traffic Studies.
b) Brake-reaction distance predicated on a reaction time of 2.5 sec.

Stopping Distance Equation:

$$d = \frac{V^2}{30\left(\left(\frac{a}{32.2}\right) \pm \frac{G}{100}\right)} = 365 \text{ feet}$$

SSD = d+b = 365+220.5 =585.5 ≈ **590 feet**

Source: A Policy on Geometric Design of Highways and Streets 2001, American Association of State Highway and Transportation Officials (AASHTO)

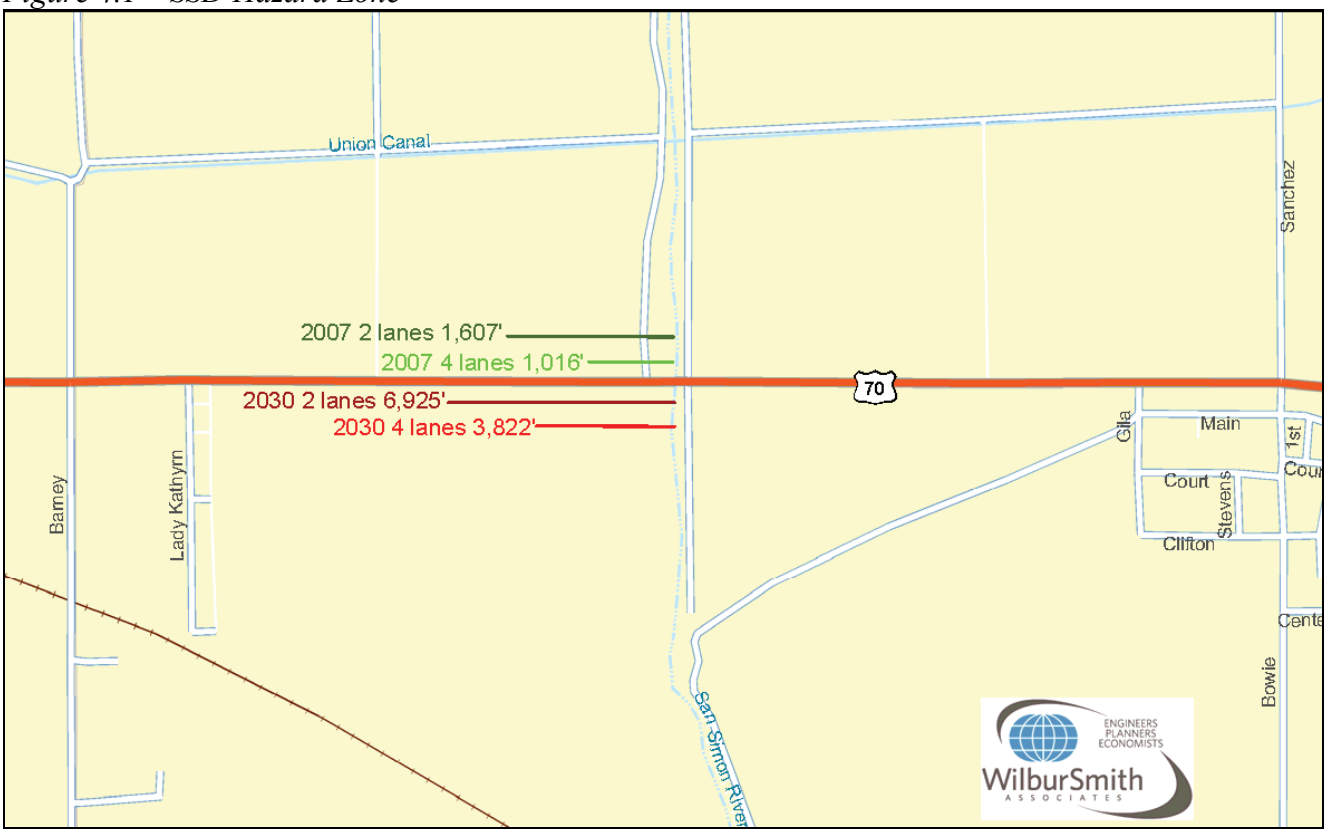
***SSD Calculation Results**:*
Table 4.2 shows the zone to the west of the San Simon River in which the placement of an at-grade crossing would necessitate either additional warning signals, or the elevation of the crossing to be level with the San Simon River Bridge. At the distances shown in Table 4.2, vehicle queues related to a train crossing during the PM peak hour in 2030 would remain outside the allotted SSD, thus allowing an approaching vehicle the necessary distance to stop before reaching the queue. Figure 4.1 depicts these zones for each of the scenarios.

Table 4.2 – SSD Hazard Zone

	2007		2030	
	U.S. 70 - 2 Lanes	U.S. 70 - 4 Lanes	U.S. 70 - 2 Lanes	U.S. 70 - 4 Lanes
Max Queue (ft)	1,017	426	1,371	608
SSD (ft)	590	590	590	590
Hazard Zone (feet West of San Simon River Bridge)	1,607	1,016	6,925	3,822

Source: Wilbur Smith Associates, 2008.

Figure 4.1 – SSD Hazard Zone



Source: Wilbur Smith Associates, 2008.

5.0 Possible Mitigation Measures

5.1 VEHICLE DELAY

Although an at-grade crossing will inevitably impose a previously non-existent vehicular delay, when averaged over the existing PM peak hour the resulting delay ranges from LOS B to LOS C. In the Year 2030, a two-lane cross section of U.S. 70, with the center turn lane, would result in LOS F operations during a railroad crossing; however, it is assumed that the project to widen U.S. 70 will be completed prior to the Year 2030. With a four-lane cross section (with a center turn lane), the railroad crossing would operate at LOS B during worst-case PM peak hour conditions. As stated in Section 3.0, this analysis assumes a maximum of one train crossing occurring during the PM Peak Hour. AZE has noted that train operations would primarily occur during off-peak periods, and that a train crossing during the PM Peak Hour would be an extremely rare occurrence

In addition the analyzed PM peak hour represents the worst-case scenario when the train crossing coincides with the PM peak hour, which is also the absolute daily peak hour. Under these considerations, and given the acceptable LOS B during even a worst-case scenario, no mitigation measures are required for vehicle delay.

When no train crossings occur, U.S. 70 would operate as a highway facility. An analysis of operating conditions on U.S. 70 (consistent with HCM 2000 methodologies) under Year 2030

conditions is summarized below. The summary analysis worksheets for this analysis are included in Appendix A.

- U.S. 70, Year 2030, 2-Lanes (with center turn lane), PM Peak Hour - LOS F
- U.S. 70, Year 2030, 4-Lanes (with center turn lane), PM Peak Hour - LOS C

5.2 STOPPING SIGHT DISTANCE

The proposed at-grade crossing shall include active warning devices and gate systems to prohibit entry during a train approach and crossing. Because the sight distance concerns surrounding the San Simon River Bridge are due to the difference in elevation between the bridge and the proposed at-grade crossing, one possibility would be to elevate the track to the same level as the bridge. This mitigation measure is particularly applicable to an at-grade crossing less than 650 feet west of the river; on the down-slope moving away from the bridge. If the track is not to be elevated, an advanced visual warning would be necessary on both sides of the proposed crossing. Remote flashing signals to the east of the river would effectively mitigate inadequate SSD, while advanced warning to the west of the crossing would notify oncoming vehicles of potential stopped traffic and vehicle queues. Alternatively, by simply ensuring that warning signals located at the crossing are visible to westbound vehicles east of the river, the same mitigation purpose would be fulfilled.

Due to concerns regarding heavy vehicles stopping at the at-grade crossing, additional warning signs and devices should be placed on the eastbound and westbound approaches along U.S. 70. All warning signs and devices shall conform to applicable ACC Rail Road Safety department guidelines, as well as other appropriate regulations.

An alternative solution to the concerns regarding heavy vehicles stopping at the at-grade crossing would be the construction of separate truck and heavy vehicle lanes in both the eastbound and westbound directions. These lanes would serve as deceleration/acceleration lanes for trucks and other heavy vehicles that are required to stop at the at-grade crossing. This solution would result in a seven-lane cross section at the railroad crossing; therefore, railroad crossing gate systems would be substantial, and gate arms could be in excess of 50 feet in length. Given the cross-section of U.S. 70, it may be appropriate to construct raised medians in the center turn lane (conforming to all applicable roadway design and safety standards) and installing a four-quadrant gate system at the proposed railroad crossing (if this alternative solution was to be carried forward).

APPENDIX A:
TRAFFIC COUNT DATA
&
ANALYSIS WORKSHEETS

Station Name:US-70 MP 343
Description:20th St to Bowie Ave/Sanchez Rd
City: Safford, AZ
County:Graham

Interval	Wed - 7/26/06				Wed - 3/23/05				Thursday - 4/20/04			
Begin	W	E	Hourly Total	AADT Adj	W	E	Hourly Total	AADT Adj	W	E	Hourly Total	AADT Adj
12:00 AM	2	5	***7***	***7***	4	4	***8***	***8***	12	12	***24***	***21***
12:15 AM	15	1	***23***	***21***	4	5	***17***	***15***	8	8	***40***	***35***
12:30 AM	3	4	***30***	***28***	1	0	***18***	***16***	8	8	***56***	***49***
12:45 AM	4	0	***34***	***31***	1	4	***23***	***21***	3	3	***62***	***54***
1:00 AM	2	3	***32***	***30***	5	2	***22***	***20***	10	10	***58***	***51***
1:15 AM	3	4	***23***	***21***	0	2	***15***	***14***	10	10	***62***	***54***
1:30 AM	3	4	***23***	***21***	5	0	***19***	***17***	11	11	***68***	***59***
1:45 AM	1	3	***23***	***21***	1	4	***19***	***17***	4	4	***70***	***61***
2:00 AM	4	4	***26***	***24***	1	1	***14***	***13***	1	1	***52***	***46***
2:15 AM	1	0	***20***	***19***	3	0	***15***	***14***	6	6	***44***	***39***
2:30 AM	2	3	***18***	***17***	6	7	***23***	***21***	6	6	***34***	***30***
2:45 AM	5	0	***19***	***18***	3	9	***30***	***27***	8	8	***42***	***37***
3:00 AM	9	7	***27***	***25***	5	2	***35***	***31***	19	19	***78***	***68***
3:15 AM	12	5	***43***	***40***	4	4	***40***	***36***	6	6	***78***	***68***
3:30 AM	24	2	***64***	***59***	14	1	***42***	***37***	22	22	***110***	***96***
3:45 AM	29	2	***90***	***82***	22	6	***58***	***52***	10	10	***114***	***99***
4:00 AM	35	3	***112***	***102***	29	4	***84***	***74***	21	21	***118***	***103***
4:15 AM	58	10	***163***	***149***	42	7	***125***	***111***	40	40	***186***	***162***
4:30 AM	79	13	***229***	***208***	36	2	***148***	***131***	44	44	***230***	***200***
4:45 AM	81	11	***290***	***264***	41	6	***167***	***148***	49	49	***308***	***267***
5:00 AM	58	12	***322***	***293***	39	12	***185***	***163***	39	39	***344***	***299***
5:15 AM	54	20	***328***	***298***	64	8	***208***	***184***	38	38	***340***	***295***
5:30 AM	95	26	***357***	***325***	67	20	***257***	***227***	75	75	***402***	***349***
5:45 AM	72	25	***362***	***329***	34	18	***262***	***231***	68	68	***440***	***382***
6:00 AM	36	29	***357***	***325***	29	9	***249***	***220***	36	36	***434***	***377***
6:15 AM	37	18	***338***	***307***	36	38	***251***	***222***	49	49	***456***	***396***
6:30 AM	41	28	***286***	***260***	50	48	***262***	***231***	52	52	***410***	***356***
6:45 AM	52	32	***273***	***248***	38	23	***271***	***239***	49	49	***372***	***323***
7:00 AM	41	31	***280***	***255***	41	38	***312***	***275***	53	53	***406***	***352***
7:15 AM	34	38	***297***	***270***	44	60	***342***	***302***	36	36	***380***	***330***
7:30 AM	44	60	***332***	***302***	46	82	***372***	***328***	59	59	***394***	***342***
7:45 AM	39	46	***333***	***303***	33	51	***395***	***348***	58	58	***412***	***358***
8:00 AM	40	55	***356***	***324***	31	58	***405***	***357***	52	52	***410***	***356***
8:15 AM	26	47	***357***	***325***	38	52	***391***	***345***	64	64	***466***	***404***
8:30 AM	30	54	***337***	***307***	33	66	***362***	***319***	59	59	***466***	***404***
8:45 AM	38	42	***332***	***302***	26	40	***344***	***303***	45	45	***440***	***382***
9:00 AM	22	26	***285***	***259***	47	39	***341***	***301***	46	46	***428***	***371***
9:15 AM	30	33	***275***	***250***	36	46	***333***	***294***	59	59	***418***	***363***
9:30 AM	40	45	***276***	***251***	31	45	***310***	***274***	57	57	***414***	***359***
9:45 AM	37	45	***278***	***253***	40	38	***322***	***284***	35	35	***394***	***342***
10:00 AM	28	29	***287***	***261***	33	28	***297***	***262***	44	44	***390***	***338***
10:15 AM	34	46	***304***	***277***	37	42	***294***	***259***	51	51	***374***	***325***
10:30 AM	33	52	***304***	***277***	40	51	***309***	***273***	58	58	***376***	***326***
10:45 AM	32	46	***300***	***273***	40	45	***316***	***279***	71	71	***448***	***389***
11:00 AM	23	33	***299***	***272***	33	54	***342***	***302***	56	56	***472***	***410***
11:15 AM	44	41	***304***	***277***	41	49	***353***	***311***	52	52	***474***	***411***
11:30 AM	33	32	***284***	***258***	54	42	***358***	***316***	63	63	***484***	***420***
11:45 AM	40	44	***290***	***264***	41	46	***360***	***318***	63	63	***468***	***406***
12:00 PM	45	37	***316***	***287***	59	51	***383***	***338***	53	53	***462***	***401***
12:15 PM	40	33	***304***	***277***	51	56	***400***	***353***	56	56	***470***	***408***
12:30 PM	45	44	***328***	***298***	63	63	***430***	***379***	63	63	***470***	***408***
12:45 PM	44	43	***331***	***301***	62	42	***447***	***394***	57	57	***458***	***397***
1:00 PM	44	40	***333***	***303***	43	42	***422***	***372***	60	60	***472***	***410***
1:15 PM	51	33	***344***	***313***	45	53	***413***	***364***	53	53	***466***	***404***
1:30 PM	43	50	***348***	***317***	52	40	***379***	***334***	39	39	***418***	***363***
1:45 PM	61	36	***358***	***326***	46	63	***384***	***339***	59	59	***422***	***366***
2:00 PM	52	46	***372***	***338***	45	54	***398***	***351***	48	48	***398***	***345***
2:15 PM	55	45	***388***	***353***	65	49	***414***	***365***	54	54	***400***	***347***
2:30 PM	38	59	***392***	***357***	61	59	***442***	***390***	59	59	***440***	***382***
2:45 PM	46	67	***408***	***371***	57	73	***463***	***408***	69	69	***460***	***399***
3:00 PM	46	62	***418***	***380***	50	53	***467***	***412***	71	71	***506***	***439***
3:15 PM	49	63	***430***	***391***	49	59	***461***	***407***	54	54	***506***	***439***
3:30 PM	47	94	***474***	***431***	67	78	***486***	***429***	82	82	***552***	***479***
3:45 PM	44	75	***480***	***436***	59	62	***477***	***421***	75	75	***564***	***489***
4:00 PM	51	106	***529***	***481***	59	80	***513***	***452***	103	103	***628***	***545***
4:15 PM	51	97	***565***	***514***	56	55	***516***	***455***	90	90	***700***	***607***

4:30 PM	53	93	***570***	***518***	59	88	***518***	***457***	84	84	***704***	***611***
4:45 PM	45	67	***563***	***512***	56	69	***522***	***460***	80	80	***714***	***619***
5:00 PM	58	83	***547***	***497***	81	67	***531***	***468***	68	68	***644***	***559***
5:15 PM	61	95	***555***	***505***	65	68	***553***	***488***	74	74	***612***	***531***
5:30 PM	64	49	***522***	***475***	61	69	***536***	***473***	65	65	***574***	***498***
5:45 PM	35	58	***503***	***457***	34	40	***485***	***428***	52	52	***518***	***449***
6:00 PM	39	55	***456***	***415***	44	41	***422***	***372***	39	39	***460***	***399***
6:15 PM	35	44	***379***	***345***	50	34	***373***	***329***	50	50	***412***	***358***
6:30 PM	42	49	***357***	***325***	47	39	***329***	***290***	41	41	***364***	***316***
6:45 PM	35	45	***344***	***313***	33	29	***317***	***280***	50	50	***360***	***312***
7:00 PM	39	27	***316***	***287***	31	27	***290***	***256***	26	26	***334***	***290***
7:15 PM	28	44	***309***	***281***	31	22	***259***	***229***	26	26	***286***	***248***
7:30 PM	34	30	***282***	***257***	29	29	***231***	***204***	31	31	***266***	***231***
7:45 PM	36	36	***274***	***249***	34	23	***226***	***200***	26	26	***218***	***189***
8:00 PM	23	30	***261***	***238***	33	33	***234***	***207***	38	38	***242***	***210***
8:15 PM	32	41	***262***	***238***	33	37	***251***	***222***	44	44	***278***	***241***
8:30 PM	24	35	***257***	***234***	24	26	***243***	***215***	17	17	***250***	***217***
8:45 PM	24	25	***234***	***213***	17	18	***221***	***195***	14	14	***226***	***196***
9:00 PM	24	18	***223***	***203***	23	24	***202***	***178***	27	27	***204***	***177***
9:15 PM	15	14	***179***	***163***	14	21	***167***	***148***	19	19	***154***	***134***
9:30 PM	12	16	***148***	***135***	22	16	***155***	***137***	23	23	***166***	***144***
9:45 PM	14	8	***121***	***110***	10	4	***134***	***119***	21	21	***180***	***156***
10:00 PM	10	12	***101***	***92***	13	7	***107***	***95***	18	18	***162***	***141***
10:15 PM	14	12	***98***	***90***	12	8	***92***	***82***	11	11	***146***	***127***
10:30 PM	9	15	***94***	***86***	15	6	***75***	***67***	7	7	***114***	***99***
10:45 PM	8	7	***87***	***80***	7	9	***77***	***68***	16	16	***104***	***91***
11:00 PM	11	10	***86***	***79***	6	4	***67***	***60***	9	9	***86***	***75***
11:15 PM	6	2	***68***	***62***	6	4	***57***	***51***	9	9	***82***	***72***
11:30 PM	6	3	***53***	***49***	6	5	***47***	***42***	9	9	***86***	***75***
11:45 PM	6	6	***50***	***46***	5	5	***41***	***37***	5	5	***64***	***56***
Totals	3199	3178			3239	3122			3929	3929		
Combined	6377				6361				7858			
Split %	50.2%	49.8%			50.9%	49.1%			50.0%	50.0%		
	W	E			W	E			W	E		
AM Peak H	5:15 AM - 6:15 AM				7:15 AM - 8:15 AM				7:45 AM - 8:45 AM			
Volume	257	100			154	251			233	233		
Combined	**357**				**405**				**466**			
PM Peak H	3:45 PM - 4:45 PM				4:30 PM - 5:30 PM				4:00 PM - 5:00 PM			
Volume	199	371			261	292			357	357		
Combined	**570**				**553**				**714**			

Airport Rd
500 Ft E/O Mesa De La Paz
7/26/2004

Interval	Mon - 7/26			Tues 7-27			Wed - 7/28			Thur - 7/29			Fri - 7/30			Sat - 7/31			Sun - 8/1			Weekday Avg	
Begin	W	E	Total	W	E	Total	W	E	Total	W	E	Total	W	E	Total	W	E	Total	W	E	Total	W	E
12:00 AM	-	-	**0**	0	1	**1**	0	0	**0**	1	1	**2**	1	0	**1**	4	4	**8**	0	3	**3**	0	0
1:00 AM	-	-	**0**	1	0	**1**	2	0	**2**	0	1	**1**	3	2	**5**	0	2	**2**	3	0	**3**	1	0
2:00 AM	-	-	**0**	2	0	**2**	0	1	**1**	0	1	**1**	1	1	**2**	1	0	**1**	4	1	**5**	0	0
3:00 AM	-	-	**0**	0	1	**1**	0	0	**0**	0	1	**1**	1	0	**1**	0	0	**0**	0	0	**0**	0	0
4:00 AM	-	-	**0**	0	3	**3**	0	3	**3**	2	4	**6**	0	3	**3**	0	2	**2**	0	1	**1**	0	3
5:00 AM	-	-	**0**	3	5	**8**	5	9	**14**	3	5	**8**	3	4	**7**	3	4	**7**	0	3	**3**	3	5
6:00 AM	-	-	**0**	6	17	**23**	3	11	**14**	2	8	**10**	4	14	**18**	5	3	**8**	2	3	**5**	3	12
7:00 AM	-	-	**0**	6	23	**29**	6	16	**22**	4	14	**18**	5	13	**18**	3	6	**9**	6	4	**10**	5	16
8:00 AM	-	-	**0**	16	10	**26**	8	14	**22**	5	4	**9**	6	16	**22**	7	4	**11**	4	11	**15**	8	11
9:00 AM	-	-	**0**	12	10	**22**	8	8	**16**	8	11	**19**	8	8	**16**	7	7	**14**	4	9	**13**	9	9
10:00 AM	-	-	**0**	17	16	**33**	10	13	**23**	11	12	**23**	7	7	**14**	4	8	**12**	12	9	**21**	11	12
11:00 AM	4	1	**5**	6	9	**15**	14	13	**27**	7	8	**15**	8	10	**18**	2	2	**4**	9	3	**12**	7	8
12:00 PM	16	10	**26**	13	16	**29**	10	8	**18**	18	8	**26**	13	6	**19**	14	9	**23**	10	15	**25**	14	9
1:00 PM	14	11	**25**	18	12	**30**	10	14	**24**	10	14	**24**	15	14	**29**	10	11	**21**	14	2	**16**	13	13
2:00 PM	17	14	**31**	15	11	**26**	17	15	**32**	13	10	**23**	11	6	**17**	4	9	**13**	10	4	**14**	14	11
3:00 PM	17	11	**28**	18	13	**31**	15	10	**25**	12	10	**22**	12	10	**22**	9	9	**18**	12	5	**17**	14	10
4:00 PM	30	15	**45**	21	10	**31**	14	15	**29**	17	10	**27**	10	10	**20**	14	7	**21**	6	7	**13**	18	12
5:00 PM	18	10	**28**	15	14	**29**	20	9	**29**	16	10	**26**	15	9	**24**	9	8	**17**	7	10	**17**	16	10
6:00 PM	15	8	**23**	17	8	**25**	19	8	**27**	13	8	**21**	15	15	**30**	14	10	**24**	9	11	**20**	15	9
7:00 PM	7	12	**19**	8	7	**15**	13	15	**28**	9	10	**19**	11	6	**17**	5	7	**12**	10	11	**21**	9	10
8:00 PM	2	4	**6**	8	5	**13**	7	6	**13**	9	4	**13**	5	1	**6**	12	5	**17**	6	7	**13**	6	4
9:00 PM	6	7	**13**	3	1	**4**	0	4	**4**	2	2	**4**	2	4	**6**	8	4	**12**	5	4	**9**	2	3
10:00 PM	6	8	**14**	3	3	**6**	1	4	**5**	1	1	**2**	5	6	**11**	9	7	**16**	7	4	**11**	3	4
11:00 PM	2	4	**6**	1	4	**5**	1	2	**3**	6	1	**7**	2	3	**5**	9	8	**17**	1	1	**2**	2	2
Totals	154	115		209	199		183	198		169	158		163	168		153	136		141	128		173	173
Combined	269			408			381			327			331			289			269			346	
Split %	57.2%	42.8%		51.2%	48.8%		48.0%	52.0%		51.7%	48.3%		49.2%	50.8%		52.9%	47.1%		52.4%	47.6%		50.0%	50.0%
AM Peak Hr	-	-		10:00 AM	7:00 AM		11:00 AM	7:00 AM		10:00 AM	7:00 AM		9:00 AM	8:00 AM		8:00 AM	10:00 AM		10:00 AM	8:00 AM		10:00 AM	7:00 AM
Volume	-	-		17	23		14	16		11	14		8	16		7	8		12	11		11	16
Combined	N/A			40			30			25			24			15			23			27	
PM Peak Hr	4:00 PM	4:00 PM		4:00 PM	12:00 PM		5:00 PM	2:00 PM		12:00 PM	1:00 PM		1:00 PM	6:00 PM		12:00 PM	1:00 PM		1:00 PM	12:00 PM		4:00 PM	1:00 PM
Volume	30	15		21	16		20	15		18	14		15	15		14	11		14	15		18	13
Combined	45			37			35			32			30			25			29			31	

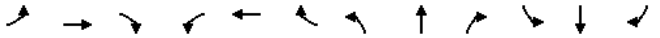
Airport Rd
500 Ft E/O Mesa De La Paz
8/15/2005

Interval Begin	Tues 7-27 E+W	Wed - 7/28 E+W	Thur - 7/29 E+W	Fri - 7/30 E+W	Sat - 7/31 E+W	Sun - 8/1 E+W	Mon - 8/2 E+W	Tues - 8/3 E+W	Tues - Total E+W	Weekday Avg E+W
12:00 AM	-	3	1	2	8	9	3	2	*2*	2
1:00 AM	-	3	1	2	7	1	1	0	*0*	1
2:00 AM	-	4	3	3	4	1	0	0	*0*	2
3:00 AM	-	0	0	1	2	0	0	2	*2*	0
4:00 AM	-	7	4	7	4	5	7	6	*6*	6
5:00 AM	-	15	13	12	7	6	12	14	*14*	13
6:00 AM	-	19	15	23	9	6	21	16	*16*	18
7:00 AM	-	22	36	27	19	14	26	23	*23*	26
8:00 AM	-	22	23	25	19	9	29	38	*38*	27
9:00 AM	-	14	30	21	22	16	25	16	*16*	21
10:00 AM	-	18	20	27	21	16	22	19	*19*	21
11:00 AM	-	25	20	25	16	18	31	32	*32*	26
12:00 PM	-	21	20	18	15	32	25	19	*19*	20
1:00 PM	-	28	23	19	21	20	27	18	*18*	23
2:00 PM	5	24	33	19	19	19	27	-	*5*	21
3:00 PM	26	22	34	24	23	20	38	-	*26*	28
4:00 PM	24	38	39	33	24	16	35	-	*24*	33
5:00 PM	31	28	33	31	17	29	36	-	*31*	31
6:00 PM	35	25	25	20	27	21	34	-	*35*	27
7:00 PM	31	29	17	23	25	24	32	-	*31*	26
8:00 PM	9	17	9	17	10	25	18	-	*9*	14
9:00 PM	4	9	5	9	11	12	10	-	*4*	7
10:00 PM	6	8	10	15	15	4	2	-	*6*	8
11:00 PM	4	6	6	12	9	3	3	-	*4*	6
Totals	incomplete	407	420	415	354	326	464	incomplete	*380*	417
Split W/E ('04 Data)	-	48/52	52/48	49/51	53/47	52/48	57/43	-	*51/49*	-
Estimated Split - W	-	0	0	0	0	0	0	-	*0*	0
Estimated Split - E	-	0	0	0	0	0	0	-	*0*	0
AM Peak Hr	-	11:00 AM	7:00 AM	7:00 AM	9:00 AM	11:00 AM	11:00 AM	-	*8:00 AM*	9:20 AM
Volume	-	25	36	27	22	18	31	-	*38*	31
Estimated Split - W	-	0	0	0	0	0	0	-	*0*	0
Estimated Split - E	-	0	0	0	0	0	0	-	*0*	0
PM Peak Hr	-	4:00 PM	4:00 PM	4:00 PM	6:00 PM	12:00 PM	3:00 AM	-	*12:00 PM*	1:30 PM
Volume	-	38	39	33	27	32	38	-	*19*	33
Estimated Split - W	-	0	0	0	0	0	0	-	*0*	0
Estimated Split - E	-	0	0	0	0	0	0	-	*0*	0

AADT's

						2003	2004	2005	2006	
1489	US 70	331.8	Alder St	335.5	Main St - Thatcher	9400	8600	8700	7600	AADT07
443	US 70	335.5	Main St - Thatcher	336.63	1st Ave	10600	14200	14500	12600	
1490	US 70	336.63	1st Ave	337.96	20th Ave	17000	17500	15100	15900	
1491	US 70	337.96	20th Ave	338.96	8th Ave - Safford	21000	19700	20100	18700	
446	US 70	338.96	8th Ave - Safford	339.46	US 191 South	9000	9500	9700	15600	
447	US 70	339.46	US 191 South	340.05	Hollywood Dr	7000	8000	9700	10900	
1492	US 70	340.05	Hollywood Dr	341.71	20th St	4700	3900	9600	10000	6900
1493	US 70	341.85	20th St	344.37	Bowie Ave / Sanchez Rd	2000	3900	5900	6800	
449	US 70	344.37	Bowie Ave / Sanchez Rd	349.48	US 191 North	1200	1200	4000	5000	
450	US 70	349.48	US 191 North	378.48	Wilson St	1100	1100	1000	960	
451	US 70	378.48	Wilson St	378.91	SR 75 - Duncan	1200	1300	1100	1400	
452	US 70	378.91	SR 75 - Duncan	379.79	7th St	1500	1600	1200	2300	
453	US 70	379.79	7th St	385.25	New Mexico State Line	1400	1400	1700	1200	
454	SR 71	85.81	US 60 - East of Auguila	102.91	US 93	840	650	740	700	
455	SR 71	102.91	US 93	109.68	SR 89 - Congress	740	670	660	750	
855	SR 72	13.11	SR 95	27.04	Main St - Bouse	2700	2900	2500	2800	
456	SR 72	27.04	Main St (Palamosa Rd) - Bouse	49.91	US 60	2400	2200	2300	2300	
457	SR 73	310.38	US 60 - North of Carrizo	319.77	Cedar Creek	1000	730	540	820	
458	SR 73	319.77	Cedar Creek	335.04	BIA Rte 46 (Road to Fort Apache Casino)	1500	1000	800	1300	
459	SR 73	335.04	BIA Rte 46 (Road to Fort Apache Casino)	338.25	White River High School entrance	6700	5400	3100	4400	
1206	SR 73	338.25	White River High School entrance	338.86	BIA Rte 55	9000	11200	9100	11300	
1207	SR 73	338.86	BIA Rte 55	341.95	White River Hospital entrance	7600	7500	6700	8600	
775	SR 73	341.95	White River Hospital entrance	357.72	SR 260 - Hondah	4900	3600	3200	4000	
996	SR 74	0.02	US 60 - Morristown	20.88	Wadell Dam Lookout Rd	4100	4500	4100	5500	
1208	SR 74	20.89	Waddell Dam Lookout Rd	22.29	New River Rd / Lake Pleasant Rd	6700	4900	4300	5800	
1209	SR 74	22.29	New River Rd / Lake Pleasant Rd	30.84	I-17 (Exit 225) / Carefree Hwy	7600	9800	7400	11200	
462	SR 75	378.91	US 70 - Duncan	379.46	Virden Rd	3000	2000	2700	2700	
463	SR 75	379.46	Virden Rd	391.85	Apache Grove Rd	1200	1300	1200	1300	
856	SR 75	391.85	Apache Grove Rd	398.43	US 191 / SR 78	2200	2500	1900	2000	
610	SR 77	68.1	I-10 (Exit 255)	69.54	Oracle Rd / Miracle Mile	38600	33900	25300	30900	
1210	SR 77	69.54	Oracle Rd / Miracle Mile	70.3	Prince Rd	49000	52200	53300	48600	
1211	SR 77	70.3	Prince Rd	70.8	Roger Rd	47600	57300	51400	54800	
1212	SR 77	70.8	Roger Rd	71.3	Wetmore Rd	46000	52600	53600	55200	
1213	SR 77	71.3	Wetmore Rd	72.06	River Rd	45400	47700	49900	52100	
1214	SR 77	72.09	River Rd	73.85	Orange Grove Rd	49100	54700	41100	50200	
1215	SR 77	73.85	Orange Grove Rd	74.84	Ina Rd	51500	53100	55300	51400	
1216	SR 77	74.85	Ina Rd	75.87	Magee Rd	70000	61300	57100	58900	
1217	SR 77	75.87	Magee Rd	76.93	Hardy Rd	49800	51400	44300	55100	
1218	SR 77	76.93	Hardy Rd	78.97	1st Ave	43700	57600	39700	50100	
1219	SR 77	78.97	1st Ave	81.88	Tangerine Rd	49800	31900	28700	30100	
1220	SR 77	81.88	Tangerine Rd	82.75	Rancho Vistoso Rd	29100	36800	30200	38100	
1221	SR 77	82.75	Rancho Vistoso Blvd	85.73	Golder Ranch Rd	27400	32300	30300	34300	
1222	SR 77	85.73	Golder Ranch Rd	91.14	SR 79 - Oracle Jct	12900	26200	25300	30000	
857	SR 77	91.14	SR 79 - Oracle Junction	100.26	S Oracle Rd / Old Hwy 77 - Oracle	8800	9900	8200	8300	

Roadway	Begin Mile Post	Start	End Mile Post	End	AADT 2006	Truck ADT	Percentage of Trucks
US 70	344.37	Bowie Ave / Sanchez Rd	349.48	US 191 North	4994	97	8.00%



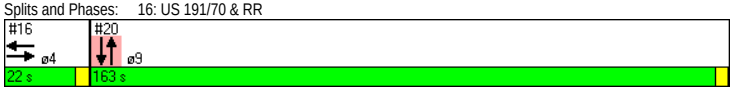
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	359	0	0	338	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	1759	0	0	1759	0	0	0	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1759	0	0	1759	0	0	0	0	0	0	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		65			65			30			30	
Link Distance (ft)		4525			3881			3088			542	
Travel Time (s)		47.5			40.7			70.2			12.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	0	399	0	0	376	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	399	0	0	376	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1			1							
Detector Template												
Leading Detector (ft)		50			50							
Trailing Detector (ft)		0			0							
Detector 1 Position(ft)		0			0							
Detector 1 Size(ft)		50			50							
Detector 1 Type		Cl+Ex			Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0							
Detector 1 Queue (s)		0.0			0.0							
Detector 1 Delay (s)		0.0			0.0							
Turn Type												
Protected Phases		4			4							
Permitted Phases												
Detector Phase		4			4							
Switch Phase												
Minimum Initial (s)		4.0			4.0							
Minimum Split (s)		20.0			20.0							
Total Split (s)	0.0	22.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	11.9%	0.0%	0.0%	11.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)		18.0			18.0							
Yellow Time (s)		3.5			3.5							

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	159.0
Minimum Split (s)	163.0
Total Split (s)	163.0
Total Split (%)	88%
Maximum Green (s)	159.0
Yellow Time (s)	3.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)		0.5			0.5							
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0			3.0							
Recall Mode		Max			Max							
Act Effct Green (s)		54.6			54.6							
Actuated g/C Ratio		0.82			0.82							
v/c Ratio		0.28			0.26							
Control Delay		19.1			19.4							
Queue Delay		0.0			0.0							
Total Delay		19.1			19.4							
LOS		B			B							
Approach Delay		19.1			19.4							
Approach LOS		B			B							
Queue Length 50th (ft)		0			0							
Queue Length 95th (ft)		#1017			#954							
Internal Link Dist (ft)		4445			3801			3008			462	
Turn Bay Length (ft)												
Base Capacity (vph)		1441			1441							
Starvation Cap Reductn		0			0							
Spillback Cap Reductn		0			0							
Storage Cap Reductn		0			0							
Reduced v/c Ratio		0.28			0.26							

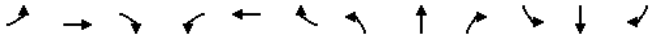
Intersection Summary			
Area Type:	Other		
Cycle Length: 185			
Actuated Cycle Length: 66.6			
Natural Cycle: 185			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.28			
Intersection Signal Delay: 19.2		Intersection LOS: B	
Intersection Capacity Utilization 22.2%		ICU Level of Service A	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 16: US 191/70 & RR



Lane Group	ø9
All-Red Time (s)	0.5
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



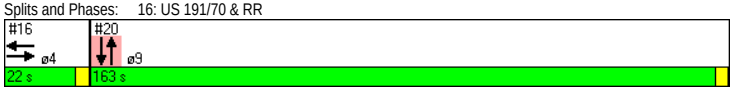
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	359	0	0	338	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	3343	0	0	3343	0	0	0	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3343	0	0	3343	0	0	0	0	0	0	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		65			65			30			30	
Link Distance (ft)		4525			3881			3088			542	
Travel Time (s)		47.5			40.7			70.2			12.3	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	0	422	0	0	398	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	422	0	0	398	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1			1							
Detector Template												
Leading Detector (ft)		50			50							
Trailing Detector (ft)		0			0							
Detector 1 Position(ft)		0			0							
Detector 1 Size(ft)		50			50							
Detector 1 Type		Cl+Ex			Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0							
Detector 1 Queue (s)		0.0			0.0							
Detector 1 Delay (s)		0.0			0.0							
Turn Type												
Protected Phases		4			4							
Permitted Phases												
Detector Phase		4			4							
Switch Phase												
Minimum Initial (s)		4.0			4.0							
Minimum Split (s)		20.0			20.0							
Total Split (s)	0.0	22.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	11.9%	0.0%	0.0%	11.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)		18.0			18.0							
Yellow Time (s)		3.5			3.5							

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	159.0
Minimum Split (s)	163.0
Total Split (s)	163.0
Total Split (%)	88%
Maximum Green (s)	159.0
Yellow Time (s)	3.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)		0.5			0.5							
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0			3.0							
Recall Mode		Max			Max							
Act Effct Green (s)		54.6			54.6							
Actuated g/C Ratio		0.82			0.82							
v/c Ratio		0.15			0.15							
Control Delay		20.3			20.7							
Queue Delay		0.0			0.0							
Total Delay		20.3			20.7							
LOS		C			C							
Approach Delay		20.3			20.7							
Approach LOS		C			C							
Queue Length 50th (ft)		0			0							
Queue Length 95th (ft)		#426			#396							
Internal Link Dist (ft)		4445			3801			3008			462	
Turn Bay Length (ft)												
Base Capacity (vph)		2739			2739							
Starvation Cap Reductn		0			0							
Spillback Cap Reductn		0			0							
Storage Cap Reductn		0			0							
Reduced v/c Ratio		0.15			0.15							

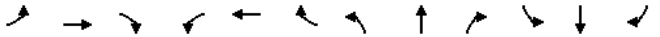
Intersection Summary			
Area Type:	Other		
Cycle Length: 185			
Actuated Cycle Length: 66.6			
Natural Cycle: 185			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.15			
Intersection Signal Delay: 20.5		Intersection LOS: C	
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 16: US 191/70 & RR



Lane Group	ø9
All-Red Time (s)	0.5
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



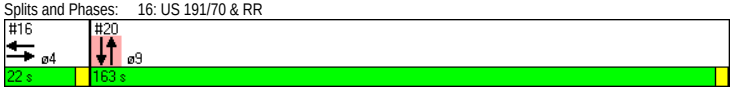
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	2276	0	0	2143	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	1759	0	0	1759	0	0	0	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1759	0	0	1759	0	0	0	0	0	0	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		65			65			30			30	
Link Distance (ft)		4525			3881			3088			542	
Travel Time (s)		47.5			40.7			70.2			12.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	0	2529	0	0	2381	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2529	0	0	2381	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1			1							
Detector Template												
Leading Detector (ft)		50			50							
Trailing Detector (ft)		0			0							
Detector 1 Position(ft)		0			0							
Detector 1 Size(ft)		50			50							
Detector 1 Type		Cl+Ex			Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0							
Detector 1 Queue (s)		0.0			0.0							
Detector 1 Delay (s)		0.0			0.0							
Turn Type												
Protected Phases		4			4							
Permitted Phases												
Detector Phase		4			4							
Switch Phase												
Minimum Initial (s)		4.0			4.0							
Minimum Split (s)		20.0			20.0							
Total Split (s)	0.0	22.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	11.9%	0.0%	0.0%	11.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)		18.0			18.0							
Yellow Time (s)		3.5			3.5							

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	159.0
Minimum Split (s)	163.0
Total Split (s)	163.0
Total Split (%)	88%
Maximum Green (s)	159.0
Yellow Time (s)	3.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)		0.5			0.5							
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0			3.0							
Recall Mode		Max			Max							
Act Effct Green (s)		54.6			54.6							
Actuated g/C Ratio		0.82			0.82							
v/c Ratio		1.76			1.65							
Control Delay		357.3			310.9							
Queue Delay		0.0			0.0							
Total Delay		357.3			310.9							
LOS		F			F							
Approach Delay		357.3			310.9							
Approach LOS		F			F							
Queue Length 50th (ft)		~353			~286							
Queue Length 95th (ft)		#6335			#5976							
Internal Link Dist (ft)		4445			3801			3008			462	
Turn Bay Length (ft)												
Base Capacity (vph)		1441			1441							
Starvation Cap Reductn		0			0							
Spillback Cap Reductn		0			0							
Storage Cap Reductn		0			0							
Reduced v/c Ratio		1.76			1.65							

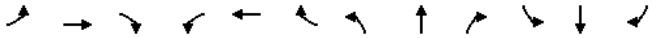
Intersection Summary			
Area Type:	Other		
Cycle Length: 185			
Actuated Cycle Length: 66.6			
Natural Cycle: 185			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.76			
Intersection Signal Delay: 334.8		Intersection LOS: F	
Intersection Capacity Utilization 123.1%		ICU Level of Service H	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 16: US 191/70 & RR



Lane Group	ø9
All-Red Time (s)	0.5
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



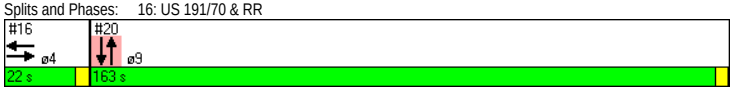
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	2276	0	0	2143	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	3343	0	0	3343	0	0	0	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3343	0	0	3343	0	0	0	0	0	0	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		65			65			30			30	
Link Distance (ft)		4525			3881			3088			542	
Travel Time (s)		47.5			40.7			70.2			12.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	0	2529	0	0	2381	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2529	0	0	2381	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1			1							
Detector Template												
Leading Detector (ft)		50			50							
Trailing Detector (ft)		0			0							
Detector 1 Position(ft)		0			0							
Detector 1 Size(ft)		50			50							
Detector 1 Type		Cl+Ex			Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0							
Detector 1 Queue (s)		0.0			0.0							
Detector 1 Delay (s)		0.0			0.0							
Turn Type												
Protected Phases		4			4							
Permitted Phases												
Detector Phase		4			4							
Switch Phase												
Minimum Initial (s)		4.0			4.0							
Minimum Split (s)		20.0			20.0							
Total Split (s)	0.0	22.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	11.9%	0.0%	0.0%	11.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)		18.0			18.0							
Yellow Time (s)		3.5			3.5							

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	159.0
Minimum Split (s)	163.0
Total Split (s)	163.0
Total Split (%)	88%
Maximum Green (s)	159.0
Yellow Time (s)	3.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)		0.5			0.5							
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0			3.0							
Recall Mode		Max			Max							
Act Effct Green (s)		54.6			54.6							
Actuated g/C Ratio		0.82			0.82							
v/c Ratio		0.92			0.87							
Control Delay		20.9			18.5							
Queue Delay		0.0			0.0							
Total Delay		20.9			18.5							
LOS		C			B							
Approach Delay		20.9			18.5							
Approach LOS		C			B							
Queue Length 50th (ft)		0			0							
Queue Length 95th (ft)		#3232			#3043							
Internal Link Dist (ft)		4445			3801			3008			462	
Turn Bay Length (ft)												
Base Capacity (vph)		2739			2739							
Starvation Cap Reductn		0			0							
Spillback Cap Reductn		0			0							
Storage Cap Reductn		0			0							
Reduced v/c Ratio		0.92			0.87							

Intersection Summary			
Area Type:	Other		
Cycle Length: 185			
Actuated Cycle Length: 66.6			
Natural Cycle: 185			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 19.8		Intersection LOS: B	
Intersection Capacity Utilization 66.2%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 16: US 191/70 & RR



Lane Group	ø9
All-Red Time (s)	0.5
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

HCS+: Two-Lane Highways Release 5.2

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	SGM
Agency/Co.	Wilbur Smith Associates
Date Performed	7/7/08
Analysis Time Period	PM Peak Hour
Highway	U.S. 70
From/To	MP 341.85 to MP 344.37
Jurisdiction	Graham County, ADOT
Analysis Year	2007
Description	Year 2007

Input Data

Highway class	Class 2				
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	8	%
Segment length	2.5	mi	% Recreational vehicles	0	%
Terrain type	Level		% No-passing zones	5	%
Grade: Length		mi	Access points/mi	3	/mi
Up/down		%			
Two-way hourly volume, V	697	veh/h			
Directional split	52 / 48	%			

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.2	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.984	
Two-way flow rate,(note-1) vp	787	pc/h
Highest directional split proportion (note-2)	409	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	55.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	0.8	mi/h
Free-flow speed, FFS	53.0	mi/h
Adjustment for no-passing zones, fnp	3.4*	mi/h
Average travel speed, ATS	43.4	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1*	
Heavy-vehicle adjustment factor, fHV	0.962	
Two-way flow rate,(note-1) vp	805	pc/h
Highest directional split proportion (note-2)	419	
Base percent time-spent-following, BPTSF	50.7	%
Adj.for directional distribution and no-passing zones, fd/np	2.2	
Percent time-spent-following, PTSF	52.9	%

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.25	
Peak 15-min vehicle-miles of travel, VMT15	484	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1743	veh-mi
Peak 15-min total travel time, TT15	11.1	veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.2

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	SGM
Agency/Co.	Wilbur Smith Associates
Date Performed	7/7/08
Analysis Time Period	PM Peak Hour
Highway	U.S. 70
From/To	MP 341.85 to MP 344.37
Jurisdiction	Graham County, ADOT
Analysis Year	2007
Description	Year 2030

Input Data

Highway class	Class 2				
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	8	%
Segment length	2.5	mi	% Recreational vehicles	0	%
Terrain type	Level		% No-passing zones	5	%
Grade: Length		mi	Access points/mi	3	/mi
Up/down		%			

Two-way hourly volume, V 4420 veh/h
Directional split 52 / 48 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.992	
Two-way flow rate,(note-1) vp	4950	pc/h
Highest directional split proportion (note-2)	2574	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	55.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	0.8	mi/h
Free-flow speed, FFS	53.0	mi/h
Adjustment for no-passing zones, fnp	3.4*	mi/h
Average travel speed, ATS	11.1	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1*	
Heavy-vehicle adjustment factor, fHV	0.962	
Two-way flow rate,(note-1) vp	5108	pc/h
Highest directional split proportion (note-2)	2656	
Base percent time-spent-following, BPTSF	98.9	%
Adj.for directional distribution and no-passing zones, fd/np	0.2	
Percent time-spent-following, PTSF	99.1	%

Level of Service and Other Performance Measures

Level of service, LOS	F	
Volume to capacity ratio, v/c	1.55	
Peak 15-min vehicle-miles of travel, VMT15	3069	veh-mi
Peak-hour vehicle-miles of travel, VMT60	11050	veh-mi
Peak 15-min total travel time, TT15	275.5	veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.2

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst: SGM
Agency/Co: Wilbur Smith Associates
Date: 7/4/2008
Analysis Period: PM Peak
Highway: U.S. 70
From/To: MP 341.85 to MP 344.37
Jurisdiction: ADOT
Analysis Year: 2030
Project ID: 2030 4-Lane U.S. 70

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	4		4	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	1.0	mph	1.0	mph
Free-flow speed	57.4	mph	57.4	mph

VOLUME

Direction	1		2	
Volume, V	2276	vph	2143	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	632		595	
Trucks and buses	8	%	8	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.962		0.962	
Flow rate, vp	1315	pcphpl	1238	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1315	pcphpl	1238	pcphpl
Free-flow speed, FFS	57.4	mph	57.4	mph
Avg. passenger-car travel speed, S	57.4	mph	57.4	mph
Level of service, LOS	C		C	
Density, D	22.9	pc/mi/ln	21.6	pc/mi/ln

Overall results are not computed when free-flow speed is less than 45 mph.

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AZER Post EA
Appendix F
Post EA Correspondence

LAW OFFICES
JOHN D. HEFFNER, PLLC
1750 K STREET, N.W.
SUITE 200
WASHINGTON, D.C. 20006
PH: (202) 296-3333
FAX: (202) 296-3939

#EI-16030
FD-34836
DMW

November 5, 2008

Ms. Diana Wood
Section of Environmental Assessment
Surface Transportation Board
395 E Street, N.W.
Washington, D.C. 20423-0001

RE: STB Finance Docket No. 34836, Arizona Eastern Railway-Construction and Operation-Graham County, AZ

Subject: ADOT Proposed US70 San Simon River Bridge Reconstruction Project - Arizona Eastern Railway Project Participation

Dear Ms. Wood:

I am writing on the behalf of the Arizona Eastern Railway (AZER) to affirm its commitment to work with the Arizona Department of Transportation (ADOT) when it rebuilds the US 70 highway bridge over the San Simon River into a five-lane elevated structure. More specifically, AZER will agree to participate in the planning and funding of a fair share of the costs related to a bridge span that will replace the proposed AZER Safford Branch US70 railroad at-grade crossing that is currently in the alignment plans submitted to the Surface Transportation Board's environmental assessment section for permitting.

We anticipate that the STB will likely grant AZER's petition to build the subject rail line in early 2009. Following that, and working with ADOT and the Arizona Corporation Commission, AZER is proposing to design and construct a two-lane at-grade crossing traversing US 70, perhaps as soon as in early 2010. We realize that construction of the new ADOT US70 highway bridge could start within two years or so after that date, and that as a

consequence, the new AZER US70 at-grade highway crossing may need to be removed as soon as the new ADOT bridge is built. Even so, having the ADOT bridge built over the rail line would, in the long view, make for good engineering practice for both the highway and railroad rights-of-way and AZER would like to participate in this plan.

In the meantime, AZER is putting together work plans to perform survey and engineering work for the proposed two-lane US70 at-grade highway crossing, and will be starting to work with ADOT on the specific requirements for accessing the US70 right-of-way and designing a crossing that meets ADOT engineering design criteria.

Please contact me if you have any questions or require additional information.

Respectfully submitted,

John D. Heffner

cc: Mr. Jeff Barker
environmental contact list

Arizona State Parks

MOA signed

March 12, 2009

Diana Wood
Section of Environmental Analysis
Surface Transportation Board
395 E Street SW, 11th Floor
Washington, DC 20243

Arizona State Parks
1300 W. Washington
Phoenix, AZ 85007

Tel & TTY: 602.542.4174
AZStateParks.com

800.285.3703 from
(520 & 928) area codes

General Fax:
602.542.4180

Director's Office Fax:
602.542.4188

RE: Memorandum of Agreement (MOA) and Historic Properties Treatment Plan (HPTP) for Arizona Eastern Railway Project
STB Finance Docket No. 34836
SHPO-2006-1264 (39245 and 39177)

Dear Ms. Wood:

Thank you for continuing to consult with our office pursuant to 36 CFR 800 regarding the above referenced federal undertaking.

Enclosed are five copies of the Memorandum of Agreement that were each signed by James W. Garrison, Arizona State Historic Preservation Officer, on May 10, 2009.

The revised Historic Properties Treatment Plan dated February 20, 2009 is acceptable.

We look forward to continuing to consult pursuant to the MOA.

Sincerely,

Jo Anne Medley
Compliance Specialist/Archaeologist
State Historic Preservation Office

Enclosures(5)

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Appendix G
Section 106 Memorandum of Agreement (MOA)

MEMORANDUM OF AGREEMENT
AMONG
THE SURFACE TRANSPORTATION BOARD,
THE FEDERAL RAILROAD ADMINISTRATION,
THE ARIZONA STATE HISTORIC PRESERVATION OFFICE,
AND
ARIZONA EASTERN RAILWAY

Regarding

ARIZONA EASTERN RAILWAY CONSTRUCTION AND OPERATION OF THE PROPOSED RAILROAD IN GRAHAM COUNTY, ARIZONA

February 2, 2009

WHEREAS, the Surface Transportation Board (STB) administers the Interstate Commerce Act, as amended, and in connection with rail construction projects, is responsible for complying with the National Environmental Policy Act (NEPA), and the National Historic Preservation Act (NHPA), 16 United States Code (U.S.C.) § 470f; and

WHEREAS, Arizona Eastern Railway (AZER) filed a petition with the Board on August 4, 2006, in Finance Docket No. 34836 (the Undertaking) requesting an exemption from 49 U.S.C. § 10901 seeking authority to construct and operate approximately 12 miles of a new rail line, beginning at Milepost 1133.5 near Safford, Arizona, and terminating at the Phelps Dodge FreeportMcMoRan Mine (the Mine) in Graham County, Arizona. The proposed rail line would connect the Mine with an existing 113.5-mile AZER line that operates between Miami, Arizona, and Bowie, Arizona; and

WHEREAS, STB has defined the Undertaking's area of potential effects (APE) as a 500-foot-wide, approximately 12-mile corridor encompassing approximately 750 acres in Sections 5, 8, 9, 10, 14, 15, 23, 26, 35, and 36 of Township 6 South, Range 26 East, and Sections 1, 2, 11, 12, 13, 14, 23, and 24, Township 7 South, Range 26 East (Gila and Salt River Baseline and Meridian), in Graham County, Arizona, as depicted in Attachment A; and

WHEREAS, STB has determined that the Undertaking may have an adverse effect on six (6) historic properties, designated with Arizona State Museum (ASM) archaeological site numbers AZ CC:2:172(ASM), AZ CC:2:361(ASM), AZ CC:2:377(ASM), AZ CC:2:378(ASM), AZ CC:2:379(ASM), and AZ CC:2:380(ASM), which are eligible for listing in the National Register of Historic Places (NRHP), and has the potential to adversely affect four (4) sites, designated with ASM archaeological site numbers AZ CC:2:360(ASM), AZ CC:2:362(ASM), AZ CC:2:363(ASM), and AZ CC:2:364(ASM), and has consulted with the Arizona State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation (Council) pursuant to 36 C.F.R. part 800, of the regulations implementing Section 106 of the NHPA;

WHEREAS, AZER is considering filing an application with the Federal Railroad Administration (FRA) under the Railroad Rehabilitation and Improvement Financing Program (45 U.S.C. § 821 et seq) seeking a loan to fund construction of the proposed rail line.

WHEREAS, the SHPO is authorized to enter into this Memorandum of Agreement (MOA) in order to fulfill its role of advising and assisting Federal agencies in carrying out their Section 106 responsibilities pursuant to Sections 101 and 106 of the NHPA and 36 CFR § 800.2(c)(1)(i) and 800.6(b); and

WHEREAS, the SHPO is authorized to advise and assist Federal and state agencies in carrying out their historic preservation responsibilities and cooperate with these agencies under A.R.S. § 41-511.04(D)(4); and

WHEREAS, the Council has elected not to participate in this MOA; and

WHEREAS, STB has invited AZER to participate in the MOA as an invited Signatory; and

WHEREAS, STB has consulted with and invited 10 Federally recognized Tribes[1] to participate as Concurring Parties[2] in accordance with 36 CFR § 800.2 (c)(2)(B)(ii), and where to date, the Hopi Tribe and the Gila River Indian Community have asked to participate in this process; and

WHEREAS, STB has invited the U.S. Army Corps of Engineers to participate in this process as a Concurring Party; and

WHEREAS, STB, as lead agency, and FRA, as cooperating agency, have prepared a Draft Environmental Assessment (EA), *Finance Docket No. 34836 Arizona Eastern Railway – Construction and Operation Exemption – In Graham County, AZ*, in which two alternatives known as the Proposed Action Alternative and the No-Action Alternative were assessed; and

WHEREAS, the EA identified the execution of the MOA and the recommendations of the Historic Properties Treatment Plan as the appropriate mitigation measure to address the impacts of the Proposed Action on historic properties and other cultural resources; and

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[1] The Tribes that were consulted and asked to participate in this project include: the Ak-Chin Indian Community Council; the Salt River Pima-Maricopa Indian Community; the San Carlos Apache Tribal Council; the Hopi Tribe; the Pueblo of Zuni; the Fort Sill Apache Tribe; the Gila River Indian Community; the Tohono O'odham Nation; the Mescalero Apache Tribe; and the White Mountain Apache Tribe. Of these Tribes, the Hopi Tribe and the Gila River Indian Community have asked to participate in this process.

[2] Parties who have participated in the consultations but do not have responsibilities under the MOA may be invited to sign as concurring parties. If a party who was invited to sign or concur in the agreement declines to sign, the agreement will still go into effect once the signatories have executed the document (see 36 CFR 800.6).

NOW, THEREFORE, STB, FRA, the SHPO, and AZER (hereafter collectively, the Signatories) agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the Undertaking on historic properties.

STIPULATIONS

The STB shall ensure that the following stipulations are carried out, and that no excavation or disturbance of a historic property occurs within the approved five hundred feet APE boundaries prior to the following stipulations being implemented.

I. IMPLEMENTATION OF THE HISTORIC PROPERTIES TREATMENT PLAN

Prior to construction, AZER will retain qualified personnel as defined in Stipulation VIII of this Agreement. The STB will ensure that the work implemented by the qualified personnel will be conducted in compliance with the approved Historic Properties Treatment Plan (HPTP), entitled *Historic Properties Treatment Plan for Historic Properties Affected by the Proposed Arizona Eastern Railroad Extension*, dated September 26, 2008, and amended on January 6, 2009. The HPTP, which is appended to this document, specifies and directs implementation of agreed-upon mitigation measures sufficient to resolve adverse effects to the six (6) historic properties and the (4) potentially historic properties affected by the Undertaking.

II. DRAFT REPORT REVIEW

AZER will develop draft technical reports resulting from Stipulation I and distribute the reports to STB. STB will distribute the reports for review and comment to FRA, the SHPO and Concurring Parties. The reviewers shall have 20 days from receipt of the draft Preliminary Report to respond to STB with comments. The reviewers shall have 30 days from receipt of the draft Data Recovery Report to respond to STB with comments. STB shall ensure that the reports are finalized to address the comments of the reviewers. Failure to respond by any party within the comment period shall not prohibit the STB from finalizing said documents.

III. TREATMENT OF HUMAN REMAINS

Should any human remains and associated funerary objects be discovered during the implementation of cultural resources studies or during construction of the Undertaking, they will be treated pursuant to the requirements of A.R.S. § 41-865 and consistent with the Council's "Policy Statement Regarding the Treatment of Burial Sites, Human Remains and Funerary Objects."

IV. UNANTICIPATED DISCOVERY OF HISTORIC PROPERTIES

AZER shall immediately notify STB if previously unrecorded archaeological features or materials including, but not limited to human remains and associated funerary and ceremonial objects are discovered during ground-disturbing activities. In the event of a discovery, AZER shall immediately

halt those activities and take steps to ensure that the area of the discovery is protected and secured as specified in the HPTP. STB will notify all Signatories and Concurring Parties within forty-eight (48) hours of the discovery. The notification shall describe the actions proposed by the STB to resolve the adverse effects. All Signatories and Concurring Parties will respond to STB within forty-eight (48) hours of the notification. STB shall take all recommendations provided by Signatories and Concurring Parties into account. STB shall ensure the approved treatment plan is implemented by a qualified consultant, in accordance with Stipulation VIII, before AZER resumes ground-disturbing activities.

V. CURATION

AZER shall be responsible for the curation of all recovered materials and associated documentation (e.g., field notes, maps, drawings, photographs) resulting from the implementation of this MOA in accordance with 36 C.F.R. part 79 and ASM's practices and policies except where an alternative plan for disposition of human remains is provided in the HPTP or Stipulation IV.

VI. CONFIDENTIALITY

The nature and location of archaeological sites discussed in the HPTP shall be maintained as confidential, with access limited to the STB, FRA, the SHPO, and AZER involved in the planning and reviewing of the Undertaking, and qualified researchers consistent with § 304 of the NHPA.

VII. REPORT DISTRIBUTION

Except as limited by Stipulation VI, STB shall ensure that all final reports resulting from actions pursuant to this MOA are provided to the Signatories and Concurring Parties.

VIII. PROFESSIONAL QUALIFICATIONS

STB shall ensure that all historic preservation work carried out pursuant to this MOA is carried out by, or under the supervision of, a person or persons meeting the Secretary of the Interior's Professional Qualification Standards (48 F.R. 44738-44739).

IX. CONFLICT OF INTEREST

The SHPO may terminate this MOA upon finding that an Arizona State Parks employee who was significantly involved in the creation of this MOA is, within three (3) years after its execution, an employee or consultant of any other party to the MOA.

X. EQUAL OPPORTUNITY AND NONDISCRIMINATION

The Signatories agree to comply with all applicable federal and state laws relating to equal opportunity and nondiscrimination.

XI. NONAVAILABILITY OF FUNDS

This MOA shall be subject to available funding, and nothing in this MOA shall bind the State of Arizona to expenditures in excess of funds authorized and appropriated for the purposes outlined in this MOA.

XII. DISPUTE RESOLUTION

Should any Signatory or Concurring Party to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, STB shall consult with such party to resolve the objection. If STB determines that such objection cannot be resolved, STB will:

A. Forward all documentation relevant to the dispute, including the STB's proposed resolution, to the Council. The Council shall provide STB with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, STB shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the Council, Signatories, and Concurring Parties, and provide them with a copy of this written response. STB will then proceed according to its final decision.

B. If the Council does not provide its advice regarding the dispute within the thirty (30) day time period, STB may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, STB shall prepare a written response that takes into account any timely comments regarding the dispute from the Signatories and Concurring Parties to the MOA, and provide them and the Council with a copy of such written response.

C. STB's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.

XIII. ALTERNATIVE DISPUTE RESOLUTION

The Signatories agree to consider use of alternative dispute-resolution procedures authorized by statutes, regulations, and court rules, including, but not limited to, 5 U.S.C. 575 and A.R.S. § 12-1518, where appropriate.

XIV. RECORD RETENTION

All books, accounts, reports, files, and other records of the SHPO and the regulatory project files and technical reports of the STB relating to this MOA which are, and determined releasable under the

Freedom of Information Act shall be subject, at all reasonable times, to inspection and audit by the State of Arizona for five (5) years after completion of the project.

XV. AMENDMENT OF THIS AGREEMENT

STB, FRA, the SHPO, or AZER may request that this MOA be amended according to 36 C.F.R. § 800.6(c)(7). Any amendment will be effective on the date an amended agreement is signed by the Signatories. The STB will ensure that a copy of any executed agreement is filed with the Council.

XVI. TERMINATION

In the event the Signatories determine the terms of the MOA cannot be or are not being carried out, the Signatories shall consult to seek amendment of the MOA. If the MOA is not amended, the STB or the SHPO may terminate it pursuant to 36 CFR 800.6(c)(8). The STB will either execute an MOA under 36 CFR 800.6(c)(1) or request the comments of the Council pursuant to 36 CFR 800.7(a).

XVII. DURATION

This MOA shall remain in effect for ten (10) years from the date of its execution by the Signatories, at which time the Board will notify the parties within three months of its impending expiration and request to extend it for a specific time period. All signatories must respond affirmatively prior to the expiration for the MOA to remain in effect.

XVIII. EFFECTIVE DATE

This MOA shall become effective after the date of the last Signatory signature and subsequent filing of the MOA with the Council.

IN WITNESS WHEREOF, execution of this MOA by the SHPO, STB, FRA, and AZER and subsequent implementation of its terms, evidence that the STB has taken into account the effects of the Undertaking on historic properties and that the STB has satisfied its responsibilities under Section 106 of the NHPA and applicable implementing regulations.

SIGNATORY PARTIES:

SURFACE TRANSPORTATION BOARD

By: Victoria Rutson Date: Feb. 2, 2009

Name: Victoria Rutson

Title: Chief, Section of Environmental Analysis

FEDERAL RAILROAD ADMINISTRATION

By: _____ Date: 2/9/09
Name: Mark E Yachmetz
Title: Associate Administrator Railroad Dev

ARIZONA STATE HISTORIC PRESERVATION OFFICE

By: _____ Date: 3/10/09
Name: James Garrison
Title: Arizona State Historic Preservation Officer

ARIZONA EASTERN RAILWAY

By: _____ Date: 2/24/09
Name: Jeffrey J. Barker
Title: Vice President - Special Projects

CONCURRING PARTIES:

GILA RIVER INDIAN COMMUNITY

By: _____ Date: _____
Name: _____
Title: _____

HOPI TRIBE

By: _____ Date: _____
Name: _____
Title: _____

U.S. ARMY CORPS OF ENGINEERS

By: _____ Date: _____

Name: David J. Castanon

Title: Chief, Regulatory Division