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Transcript Exhibit(s)

Docket #(s): RR-03639A-07-0347

Arizona Corporation Commission

DOCKETED

OCT 11 2007

DOCKETED BY	<i>MR</i>
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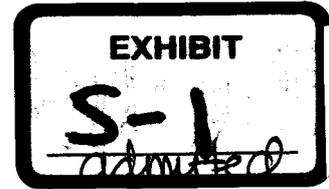
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AZ CORP COMMISSION
DOCKET CONTROL

Exhibit #: 5-1

ORIGINAL



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ARIZONA CORPORATION COMMISSION

Director, Safety Division

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Arizona Corporation Commission
Staff Memorandum
DOCKETED

To: THE COMMISSION SEP - 7 2007 DOCKET NO. RR-03639A-07-0347

From: Safety Division

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Date: September 7, 2007

RE: IN THE MATTER OF THE APPLICATION OF UNION PACIFIC RAILROAD TO ALTER A CROSSING OF THE UNION PACIFIC RAILROAD ON THE SUNSET ROUTE, AT CENTRAL AVENUE IN BOWIE, ARIZONA AAR/DOT NO. 741-403-J, BY ADDING A SECOND MAINLINE TRACK

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On June 4, 2007, the Union Pacific Railroad ("Railroad") filed with the Arizona Corporation Commission ("Commission") an Application for approval for the Union Pacific Railroad to construct a second main track at Central Avenue where it crosses the existing tracks of the Railroad in the Town of Bowie ("Town"), Cochise County, Arizona at AAR/DOT No. 741-403-J.

It should be noted; the Railroad constructed the second main track at Central Avenue in Bowie on May 14, 2007, without Commission approval. An investigation of this incident followed after Staff was made aware of the illegal construction. On June 25, 2007 the Commission issued Decision No. 69653 that imposed a penalty of \$56, 000 against the Railroad for violating Commission regulations. The Railroad was further ordered by Decision 69653, to provide construction updates to Staff throughout the duration of the double track project. To date, the Railroad has complied with the order.

Cochise County ("County") has jurisdiction over Central Avenue where the Railroad tracks and the roadway meet at-grade, at railroad milepost 1098.50 on the Sunset Route. This crossing was first established on May 6th, 1974, and is equipped with flashing lights, automatic gate arms and automatic bells. The only modification came in 1999, when the flashing lights were upgraded from 8 inch to 12 inch. This improvement was part of the 1999 annual Array and paid for by Federal 130 Project money. Commission Rail Safety Section as well as Federal Railroad Administration accident/incident records indicate no accidents or fatalities have occurred at this crossing.

Union Pacific's filing in this application requests approval for the Railroad to add a second main track. The new track is on the south side of the existing two tracks at the crossing, twenty feet from the nearest rail. In conjunction with

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Executive Director

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Director, Safety Division

the second main track a new wayside signal system will be installed for expediting train movement. The signal system is designed to prevent trains from blocking the crossing by installing wayside signals on the east and west sides of Central Ave. The intent of this configuration is to hold trains short of the crossing when stopping a train is necessary. Staff believes, if train crew members comply with railroad operating rules, this type of engineering can help prevent block crossing issues. The track furthest to the north is an interchange siding with the Arizona Eastern Railroad and will remain. As a result of the illegal track construction, the Railroad installed new automatic gates, 12 inch LED flashing lights and bells as well as a new concrete surface at the crossing. These safety devices are consistent with devices employed at similar at-grade crossings in the state.

Bowie Elementary School and Bowie High School are both located three blocks south of the Central Avenue railroad crossing. Data provided to Staff from David Diaz, the Transportation Supervisor for the Bowie Unified School District puts the number of bus trips over the Central Avenue crossing at 12 to 16 trips per day, including a bus run to the San Simon Unified School District.

The closest hospital to the Central Avenue at-grade crossing is the Northern Cochise Community Hospital, located at 901 west Rex Allen Drive, in Wilcox, Arizona, twenty-three miles to the west. If an accident occurs and injuries are severe or in the case of a serious health risk the person or persons are airlifted to a Tucson hospital.

Staff was informed in June of 2007 by the County of a proposed project to construct a new power plant in Bowie, approximately 1.5 miles northwest of the Central Avenue rail crossing. The proposed Bowie Power Station was to be a 600 MW Integrated Gasification Combined Cycle (IGCC coal-fueled electricity generating station). The project was granted a Certificate of Environmental Compatibility by the Arizona Corporation Commission, an air permit by the Arizona Department of Environmental Quality and a conditional use permit by Cochise County.

A traffic impact analysis was performed in January, 2007 to determine the effect on roadways in and around Bowie during the construction phases of the power plant. However, Staff has learned through a press release dated August 31, 2007 that the scope of the power plant project has reverted back to its original plan which is to be a natural gas electric power generating facility. The remaining regulatory requirements will be completed in early 2008 and construction is set to begin soon after. The change in the type of operation of the power plant eliminates the need for rail delivery of coal. Therefore, Staff believes the traffic impact analysis is not accurate at this time. Staff realizes that during the

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construction phase of the power plant the average daily traffic (ADT) across Central Ave. will increase. At this time Staff is not sure by how much, but the traffic will decrease again once the plant is fully constructed.

Traffic data provided to Staff by the Railroad, estimates the current Average Daily Traffic ("ADT") for the Central Ave. crossing to be 734. The traffic count was performed in August of 2007 by HDR Engineering. The County is projecting an average increase in traffic of 2.9% per year, which puts the traffic count at 977 in 2016. The current Level of Service ("LOS") for this two lane road is LOS B. The expected level of service in 2016 with the same two lane road will be LOS C. This information was provided to Staff by Dick Schaffer, the Cochise County Transportation Program Manager.

The American Association of State Highway and Transportation Officials (AASHTO) Geometric Design of Highways and Streets, 2004, states that the Level of Service characterizes the operating conditions on a facility in terms of traffic performance measures related to speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. This is a measure of roadway congestion ranging from LOS A--least congested--to LOS F--most congested. LOS is one of the most common terms used to describe how "good" or how "bad" traffic is projected to be.

Data provided by the Railroad states that the number of trains per day through this intersection is 45. There are two passenger trains per day that operate on this line as well. The maximum allowable timetable speed for this location is 70 miles per hour for freight trains and 79 miles per hour for passenger trains.

The nearest alternate public route to cross the railroad from the south side is 15.7 miles to the east at Cochise Avenue in San Simon. Going west from the south side the I-10 Interchange at Highway 191, 9 miles to the west can be utilized and then onto Luzena Road and back east to Bowie via Luzena Road. The north side distance traveling west via Luzena Road is 9 miles to I-10 Interchange & overpass.

The estimated cost of the proposed railroad crossing upgrade is \$278,374.00. The break down of cost is as follows, \$38,600.00 for the crossing surface, and \$239,774.00 for the new signals. Union Pacific Railroad will be paying for the entire project. The Railroad will maintain all railroad equipment after the project is finished, including the flashing lights, automatic gate arms, bells and the newly installed concrete surface.

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Utilizing the Exposure Index (the product of daily road traffic and the daily number of trains as a simplified method or "quick check" to indicate the potential for a grade separation) described in the report Grade Separations – When Do We Separate? By Nicholson and Reed (this report was provided to Commissioner's Offices on June 22, 2007), we have determined the following for this crossing:

Year	Average Daily Traffic	Average Daily Trains	Exposure Index
2007	734	45	33,030
2016	977	60	58,620

The authors of the above-referenced report state that, "when a predetermined value of the index is reached, further investigation is triggered. Examples of predetermined values range in one state from 15,000 for rural conditions to 30,000 for urban conditions, in another from 50,000 for roads on the state highway system to 100,000 for all other roads, and in a third, by speed (15,000 for rural conditions where roadway vehicle speeds are greater than 50 MPH)." The report further indicates that, "investigation described in this section has shown this method is quick, easy, and sufficiently accurate to represent an adequate initial or general screening tool to be used prior to proceeding with more detailed technical analysis."

Having reviewed all applicable data, Staff believes a grade separation at Central Ave. is not warranted for the following reasons:

- Current and projected traffic counts for both highway and rail are not significant enough.
- Cochise County has no plans or funding to grade separate Central Ave.
- Accident history does not support a grade separation.
- The warning device upgrade at Central Ave. proposed by the Railroad in this application will be the latest in industry standards and will provide sufficient protection for the public.

Staff supports the upgrade to the crossing at Central Avenue as presented by Union Pacific's application. Staff believes that the upgrade is in the public interest and is reasonable. Therefore, Staff recommends approval of Union Pacific's application.

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Director, Safety Division

A handwritten signature in black ink, appearing to read "DR".

Dave Raber
Director
Safety Division

DR: BHL: cbw

Originator: Chris B. Watson

A handwritten signature in black ink, appearing to read "Brian H. Lehman".

Brian H. Lehman
Railroad Supervisor
Safety Division

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August 22, 2007

Anthony J. Hancock
Terrance L. Sims, Esq
Beaugureau, Zukowski, Hancock,
Stoll & Schwartz, P.C.
302 East Coronado Road
Phoenix, Arizona 85004

Sent via U.S. Mail & Email to:
ahancock@bzhsslaw.com
tsims@bzhlaw.com

Re: Staff's **First Set of Data Requests to Union Pacific Railroad Company**
Docket No. RR-03639A-07-0347

Dear Mr. Hancock and Sims:

Please treat this as Staff's **First Set of Data Requests to Union Pacific Railroad Company** in the above-reference matter.

For purposes of this data request set, the words "Union Pacific Railroad," "Company," "you," and "your" refer to Union Pacific Railroad Company and any representative, including every person and/or entity acting with, under the control of, or on behalf of the Union Pacific Railroad Company. For each answer, please identify by name, title, and address each person providing information that forms the basis for the response provided.

These data requests are continuing, and your answers or any documents supplied in response to these data requests should be supplemented with any additional information or documents that come to your attention after you have provided your initial responses.

Please respond within **ten** calendar days of your receipt of the copy of this letter. However, if you require additional time, please let us know.

Please provide one hard copy as well as searchable PDF, DOC or EXCEL files (via email or electronic media) of the requested data directly to each of the following addressees via overnight delivery services to:

- (1) **Chris Watson, Railroad Safety Inspector, Arizona Corporation Commission, 2200 North Central Avenue, Suite 300, Phoenix, Arizona 85004.**
- (2) **Charles H. Hains, Attorney, Arizona Corporation Commission, 1200 West Washington Street, Phoenix, Arizona 85007.**

Sincerely,

A handwritten signature in black ink, appearing to read "Charles H. Hains", with a long horizontal flourish extending to the right.

Charles H. Hains
Attorney, Legal Division
(602) 542-3402

CHH:sab
Enclosure(s)
cc: Chris Watson

**ARIZONA CORPORATION COMMISSION
STAFF'S FIRST SET OF DATA REQUESTS TO
UNION PACIFIC RAILROAD COMPANY
DOCKET NO. RR-03639A-07-0347
AUGUST 22, 2007**

Subject: All information responses should ONLY be provided in searchable PDF, DOC or EXCEL files via email or electronic media.

- CW 1.1 Please provide the names and locations of all schools (elementary, junior high and high school) within the area of the crossing.
- CW 1.2 Please provide school bus route information concerning the crossing, including the number of times a day a school bus crosses this crossing.
- CW 1.3 Please provide information about any hospitals in the area and whether the crossing is used extensively by emergency service vehicles.
- CW 1.4 Please provide any long term traffic studies that have been done for the area.
- CW 1.5 Provide average daily traffic counts ("ADT") for crossing.
- CW 1.6 Please provide the total cost to upgrade this crossing.
- CW 1.7 Provide distances in miles to the nearest alternative routes on either side of this crossing.
- CW 1.8 Please provide the Level of Service ("LOS") for this crossing.

**ARIZONA CORPORATION COMMISSION
UNION PACIFIC'S FIRST SET OF DATA REQUEST RESPONSES
DOCKET NO. RR-03639A-07-0347
CENTRAL AVE in BOWIE, AZ
AUGUST 30, 2007**

CW 1.1 Please provide the names and locations of all schools (elementary, junior high and high school) within the area of the crossing.

Response: *Bowie Elementary School @ 309 S. Central Ave and Bowie High School @ 315 W. 5th Street, both are 3 blocks south of crossing in Bowie, AZ 85605*

Source: *David M. Diaz, Transportation Supervisor for Bowie Unified School District #14 at 315 W. 5th Street, Bowie, Arizona 85605*

CW 1.2 Please provide school bus route information concerning the crossing, including the number of times a day a school bus crosses this crossing.

Response: *The buses for both the Bowie Elementary and High Schools cross the Central Ave tracks from 12 to 16 times per day including a bus run to San Simon Unified School District.*

Source: *David M. Diaz, Transportation Supervisor for Bowie Unified School District #14 at 315 W. 5th Street, Bowie, Arizona 85605*

CW 1.3 Please provide information about any hospitals in the area and whether the crossing is used extensively by emergency service vehicles.

Response: *The nearest hospital is Northern Cochise Community Hospital at 901 W Rex Allen Drive in Wilcox, Arizona 85643 (520)384-3541 located twenty-three miles to the west. If injuries are severe, folks are airlifted out to a Tucson hospital.*

Source: *Jennifer Crumbliss, Senior Transportation Engineer with HDR, Engineering, Inc. at 8404 Indian Hills Drive, Omaha, NE 68114, (402) 926-7049 used the internet site www.GoggleEarth.com along with discussions with David Diaz of Bowie Unified School District #14. Juan Cruz, Roadway Designer with HDR in Tucson physically verified hospital and school locations on June 14, 2007.*

CW 1.4 Please provide any long term traffic studies that have been done for the area.

Response: *The only long term traffic study for this area is the Arizona Department of Transportation's Southeast Regional Transportation Study and can be found at the following internet site:
http://tpd.azdot.gov/planning/rtp_southeastaz.php*

This study is underway and only includes the State Route system without any local Cochise County roads. There are no Cochise County traffic studies within the area of Bowie, AZ.

Source: *Dick Schaffer, Transportation Program Manager Cochise County Planning and Zoning, 1415 Melody Lane, Building E, Bisbee, AZ, (520)432-9332.*

CW 1.5 Provide average daily traffic counts ("ADT") for crossing.

Response: *The August 2007 average daily traffic at Central Ave is 734 vehicles per day. The projected 2016 average daily traffic at Central Ave is 977 vehicles per day.*

Source: *Traffic counts performed by Bill Pearson with ACCEPT Consulting at 28151 S. Foxwood Way, Amado, Arizona 85645, (520)398-2149. Traffic projection calculations were performed by Heidi Schneider, Transportation Engineer with HDR Engineering, Inc at 33 W Congress Street, Suite 205, Tucson, AZ 85701, (520)206-0351.*

CW 1.6 Please provide the total cost to upgrade this crossing.

Response: *The total cost to upgrade this crossing is \$278,374.00, consisting of \$38,600.00 for the crossing surface and \$239,774.00 for the signals.*

Source: *Union Pacific.*

CW 1.7 Provide distances in miles to the nearest alternative routes on either side of this crossing.

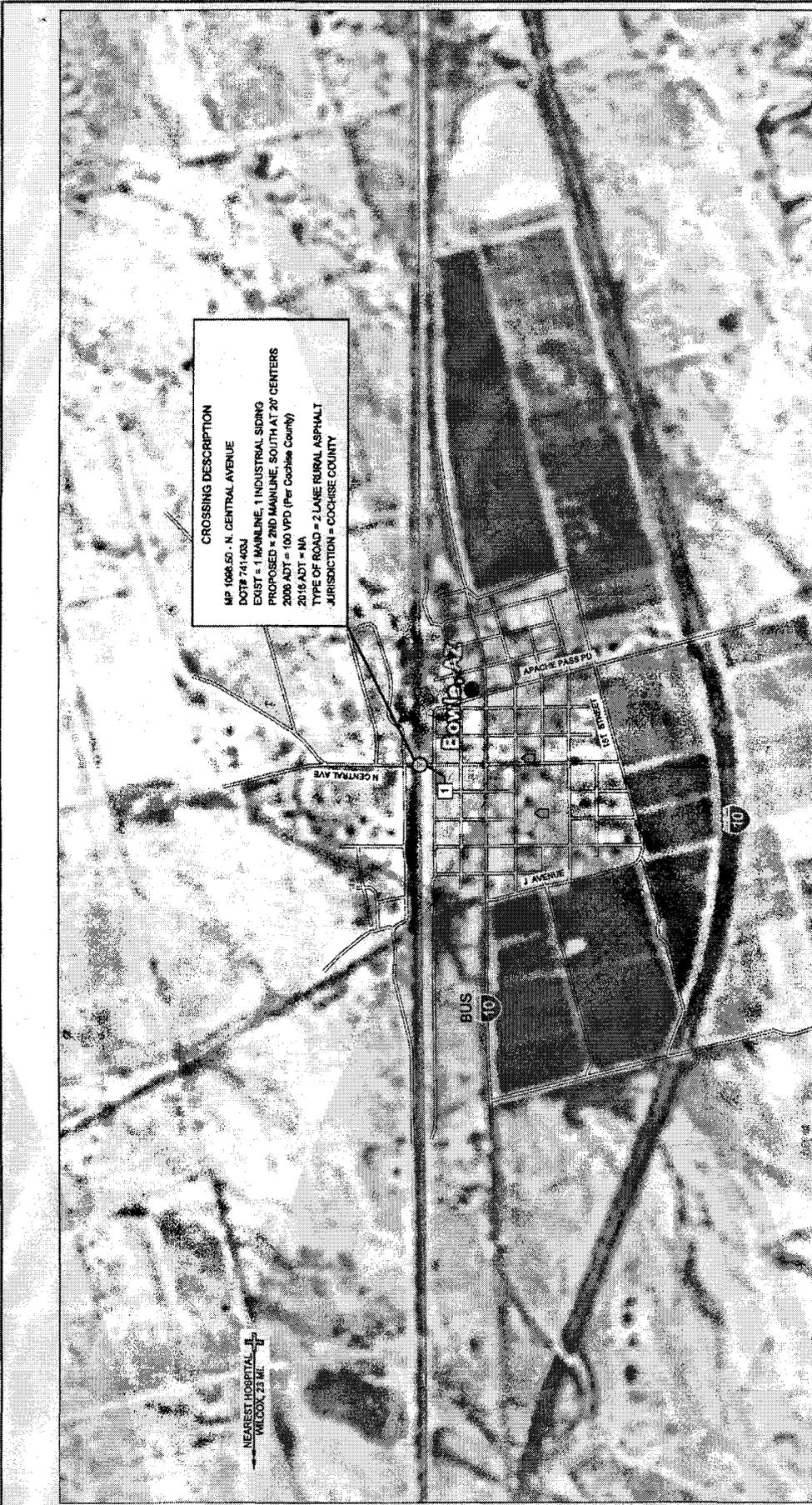
Response: *The nearest alternate public routes to cross the railroad on the South side via I-10 Bus and Frontage roads are 15.7 miles east to Cochise Avenue in San Simon and 19.61 miles west to Country Club Drive. The north side distance via Luzena Road west is 9 miles to I-10 Interchange & overpass.*

Source: *HDR's use of the Union Pacific Straight-line Diagrams and www.MapQuest.com along with discussions with David Diaz of Bowie Unified School District #14.*

CW 1.8 Please provide the Level of Service ("LOS") for this crossing.

Response: *The 2007 LOS for Central Avenue at the crossing is LOS "B" with a future 2016 LOS "C" utilizing a 2.9% annual growth rate provided by Dick Schaffer, Transportation Program Manager Cochise County Planning and Zoning, 1415 Melody Lane, Building E, Bisbee, AZ, (520)432-9332.*

Source: *Traffic level of service calculations were performed by Heidi Schneider with HDR Engineering, Inc at 33 W Congress Street, Suite 205, Tucson, AZ 85701, (520)206-0351.*



CROSSING DESCRIPTION
 MP 1006.50 - N. CENTRAL AVENUE
 DOT# 741403J
 EXIST = 1 MAINLINE, 1 INDUSTRIAL SIDING
 PROPOSED = 2ND MAINLINE, SOUTH AT 20' CENTERS
 2006 ADT = 100 VPD (Per Cochise County)
 2016 ADT = NA
 TYPE OF ROAD = 2 LANE RURAL ASPHALT
 JURISDICTION = COCHISE COUNTY

NEAREST HOSPITAL
 WILCOX, 23 MI.

SOURCE: AERIAL PHOTOGRAPHY PROVIDED BY GOOGLE EARTH, 2007

DATE: 31 MAY 2007

SUNSET ROUTE - Cochise to San Simon
 TOWN OF BOWIE
 COCHISE COUNTY, AZ
 CROSSING LOCATION

LEGEND

- EXISTING TRACK
- PROPOSED TRACK
- EXISTING AT-GRADE CROSSING
- SCHOOL
- HOSPITAL
- FIRE STATION
- CORPORATE CITY LIMITS

CROSSING LOCATIONS

1 MP 1006.50 - N. CENTRAL AVENUE