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BEFORE THE ARIZONA CORPORATION COMMISSION

Arizona Corporation Commission
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COMMISSIONERS

KRISTIN K. MAYES, Chairman
GARY PIERCE
PAUL NEWMAN
SANDRA D. KENNEDY
BOB STUMP

IN THE MATTER OF THE APPLICATION OF THE TOWN OF SAHUARITA TO UPGRADE AN EXISTING CROSSING OF THE UNION PACIFIC RAILROAD ON RANCHO SAHUARITA BOULEVARD, AT PIMA MINE ROAD, IN THE TOWN OF SAHUARITA, PIMA COUNTY, ARIZONA, DOT CROSSING NO. 742177R.	DOCKET NO. RR-03639A-09-0282 DECISION NO. 71337 **OPINION AND ORDER**

DATE OF HEARING: August 12, 2009

PLACE OF HEARING: Phoenix, Arizona

ADMINISTRATIVE LAW JUDGE: Sarah N. Harpring

APPEARANCES: Mr. Daniel J. Hochuli, Town Attorney for the Town of Sahuarita, on behalf of the Town of Sahuarita;

Mr. Terrance L. Sims, BEAUGUREAU, ZUKOWSKI, HANCOCK, STOLL & SCHWARTZ, P.C., on behalf of the Union Pacific Railroad Company; and

Mr. Charles Hains, Staff Attorney, Legal Division, on behalf of the Safety Division of the Arizona Corporation Commission.

BY THE COMMISSION:

This case involves an application by the Town of Sahuarita ("Town") to upgrade an existing crossing of the Union Pacific Railroad Company ("Railroad") on Rancho Sahuarita Boulevard, at Pima Mine Road, in Pima County.

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Having considered the entire record herein and being fully advised in the premises, the Commission finds, concludes, and orders that:

FINDINGS OF FACT

1. On June 2, 2009, the Town filed with the Arizona Corporation Commission ("Commission") an application to upgrade an existing at-grade railroad crossing of the Union Pacific Railroad Company ("Railroad") on Rancho Sahuarita Boulevard, at Pima Mine Road, by installing flasher signals and gates on the median and edge of the roadway, a cantilever for the northbound direction, railroad pavement markings and crossing signals, and simultaneous preemption with the signal and pre-signal to be installed at Pima Mine Road.

2. On June 17, 2009, a Procedural Order was issued scheduling a hearing in this matter for August 12, 2009, and establishing other procedural requirements and deadlines.

3. On July 17, 2009, the Railroad Safety Section of the Commission's Safety Division ("Staff") filed a Staff Report in this matter, recommending approval of the Town's application.

4. On July 31, 2009, the Town filed a Public Road At-Grade Crossing Agreement between the Town and the Railroad.

5. On August 11, 2009, the Town filed a Certification of Notice and Notice of Appearance; a Notice of Public Hearing as Published in Sahuarita Sun; and an Affidavit of Publication. The documents showed that public notice of the hearing had been published in the *Sahuarita Sun* and in the *Green Valley News and Sun* on July 8, 2009.

6. On August 12, 2009, a full evidentiary hearing was held before a duly authorized Administrative Law Judge of the Commission at the Commission's offices in Phoenix, Arizona. The Town, the Railroad, and Staff appeared through counsel. The Town presented the testimony of Rick Robinson, Construction Manager for the Town's Public Works Department, and Aziz Aman, Manager of Industry and Public Projects for the Railroad. Staff presented the testimony of Chris Watson, Assistant Supervisor and Grade Crossing Inspector for the Railroad Safety Section. No public comment was received. The Railroad did not call any witnesses.

7. No public comments were filed concerning the application.

The Crossing and Its Surroundings

8. The crossing, DOT Crossing No. 742177R, is located within the Town, in Pima County, Arizona, just south of where Rancho Sahuarita Boulevard (running north to south) intersects

(in a "T" formation) with Pima Mine Road (running east to west). Rancho Sahuarita Boulevard is located between I-19 (approximately 1.3 miles to the west) and the Nogales Highway (approximately 1.1 miles to the east). The Railroad's tracks run parallel to, and only approximately 40 feet south of, Pima Mine Road.

9. At the crossing, Rancho Sahuarita Boulevard has two northbound lanes, and two southbound lanes. (Tr. at 36.) The crossing currently has railroad pavement markings and crossing signs, but no flasher signals, gates, or cantilevers. (Ex. A-3.) For northbound traffic, there is currently a stop sign before the railroad tracks and then another stop sign after the railroad tracks at the intersection of Rancho Sahuarita Boulevard and Pima Mine Road. (*Id.*) For southbound traffic, there is a yield sign at the intersection along with standard railroad pavement markings and cross-buck signage to alert drivers to the upcoming crossing. (*Id.*) There is currently no traffic control device in place to prevent a motorist from stopping on the railroad tracks. (Tr. at 14.) The posted speed limit on Rancho Sahuarita Boulevard is 30 miles per hour ("MPH"). (Tr. at 17.)

10. Pima Mine Road has one eastbound lane, one westbound lane, and a right turn bay to enter onto Rancho Sahuarita Boulevard. (Tr. at 36.) The Town stated that Pima Mine Road is used as a means of accessing I-19, which otherwise must be accessed using Sahuarita Road, approximately 3 miles to the south. (Tr. at 24-25.) The posted speed limit on Pima Mine Road is 50 MPH. (Tr. at 17.)

11. The Town is the roadway authority for both Rancho Sahuarita Boulevard and Pima Mine Road. (Tr. at 16.) Pima Mine Road marks the northern border of the Town. (*Id.*)

12. The area to the north of the crossing and Pima Mine Road is part of the San Xavier District of the Tohono O'Odham Nation. The Tohono O'Odham Nation operates a casino in the area, just next to I-19. To the southwest of the crossing, there is a built-out residential area known as Rancho Sahuarita, which contains approximately 5,000 residential units with 12,000 residents. (Tr. at 43, 42.) Farther to the west, beyond I-19, is the active Asarco Mining Company ("Asarco") operation that is served by the rail line. (Tr. at 41.) The area to the southeast of the crossing contains a Unisource Energy Corporation substation and is otherwise rather sparsely developed. (*See* Ex. A-1; Tr. at 45.)

13. The Town testified that the Tohono O'Odham Nation was notified of the Town's application and did not provide any response to the Town. (Tr. at 21-22.) In addition, the Town testified that Asarco was notified and did not provide any response. (Tr. at 22.)

The Crossing Upgrades

14. The Town requests approval to install flasher signals and gates on the median and edge of the roadway, a cantilever for northbound traffic, railroad pavement markings and crossing signs, and simultaneous preemption with the signal and pre-signal to be installed at Pima Mine Road. (Ex. A-3.) Staff stated that the crossing upgrades will include installation of the latest in industry standards, to include 12-inch LED flashing lights with sidelights, cantilevers with 12-inch LED flashing lights, automatic gates, bells, and constant warning time circuitry. (Ex. S-1.) The crossing upgrades will also include a new concrete crossing surface and the replacement of any impacted pavement markings. (*Id.*) Staff stated that the proposed measures are consistent with safety measures used at similar at-grade crossings in the State. (*Id.*)

15. Staff stated that, in addition to the crossing upgrades, new traffic signals will be installed at the intersection of Rancho Sahuarita Boulevard and Pima Mine Road, with simultaneous preemption interconnected between the traffic signal controller and train detection circuitry, as required by the Federal Highway Administration ("FHWA") *Manual on Uniform Traffic Control Devices* because of the proximity of the roadway intersection to the railroad tracks. (*Id.*) The Town testified that the addition of the simultaneous preemption means that the activation of the flashing warning assembly and the gates will be coordinated with the traffic signal equipment. (Tr. at 32.) A pre-signal will warn northbound vehicles when a train is approaching and will activate a red light causing the northbound vehicles to stop before reaching the railroad tracks. (Tr. at 32-34.) Any northbound vehicles that have already passed the railroad tracks and are in the area between the tracks and Pima Mine Road will be given a green light allowing them to proceed onto Pima Mine Road, to clear the area for safety. (Tr. at 32-34.) A driver on Pima Mine Road desiring to turn southward onto Rancho Sahuarita Boulevard will encounter red lights preventing the turn, a sign prohibiting right turns on red, and gates blocking access to the railroad tracks. (Tr. at 34-35, 47.)

16. The project has an estimated cost of approximately $500,000 for the crossing

improvements and approximately $350,000 for the traffic signals. (Tr. at 16.) The entire project will be funded by the Town, which will maintain the approaching surface, the signing and pavement markings on the road approaches, and the traffic signals at the intersection. (Ex. A-3.) The Railroad will own and maintain the crossing surface, gates, and flashers. (Ex. A-3.)

17. The Town has entered into a public at-grade crossing agreement with the Railroad for construction of the crossing improvements. (*Id.*) The Railroad will be completing the surface work and the signal work (including cantilevers, gates, and lights), but will not be responsible for the traffic lights. (Tr. at 51.)

18. The Town has not yet entered into a contract for the traffic control improvements because of this pending matter and the Town's desire not to enter into an agreement that it cannot perform. (Tr. at 29.) The Town estimates that the crossing improvements can be completed within and will only necessitate closure of the crossing for two days. (Tr. at 42-43.) The Town intends to coordinate the completion of this project with another Town project that will also affect access to the Rancho Sahuarita subdivision to ensure that access to the Rancho Sahuarita subdivision will not be cut off at any time. (Tr. at 42-43.) The Town hopes to have the project completed by July 2010 and indicated that a 15-month deadline to complete the project after Commission approval would be helpful as it would allow a little slack. (*See* Tr. at 29-30.)

19. Mr. Aman testified that the Railroad fully supports the Town's application and the improvements to be made at the crossing, as the installation of constant warning time circuitry will enhance safety and will improve the flow of traffic through the crossing. (Tr. at 48-49.) Mr. Aman testified that the improvements are also designed to prevent motor vehicles from stopping on the railroad tracks, which is possible now. (Tr. at 53.) Mr. Aman testified that the safety of the crossing will be greatly improved by the upgrades. (Tr. at 51.) Mr. Aman also testified that a 15-month timeline for completion of the upgrades would be "perfectly fine" for the Railroad, (Tr. at 50), and that completion of the crossing improvements will only require the crossing to be closed for 48 hours, (Tr. at 52).

Train Volume and Crossing Usage

20. The rail line that runs through the crossing is known as the Pima Mine Spur, (Ex. S-1),

and is used solely to serve the Asarco mining operation, (Tr. at 41).

21. Only two freight trains per day travel through the crossing, at a speed of approximately 10 MPH. (Tr. at 17.) The rail line is not used by passenger trains. (Tr. at 18.)

22. According to the Town, the average daily traffic ("ADT") for Rancho Sahuarita Boulevard just south of Pima Mine Road is 8,500 vehicles per day ("VPD"). (Tr. at 17.) The Level of Service ("LOS")[1] for northbound traffic at the intersection of Rancho Sahuarita Boulevard and Pima Mine Road is LOS D during the morning peak hours and LOS C during the afternoon peak hours, (Tr. at 17, 26), which indicates a significant backup in the area every morning and every evening, (Tr. at 39). The Town attributes the backups to the current use of stop signs, rather than automated signals, for traffic control and expects that the traffic signal improvements will improve the situation. (Tr. at 26-27, 39.) Staff agrees that the LOS for the crossing area will improve with the signalization upgrades. (Tr. at 57.)

23. The Town reported an ADT of 5,800 VPD for Pima Mine Road, from a Pima Association of Governments count reported in 2007, but expressed some doubt concerning whether that figure is accurate, in light of the significantly higher figure for Rancho Sahuarita Boulevard.[2] (Tr. at 37-38.) The Town believes that the 8,500 VPD ADT for Rancho Sahuarita Boulevard is more indicative of the current level of traffic in the crossing area. (Tr. at 38.)

24. No rail-traffic accidents have occurred at the crossing. (Tr. at 17, 57.) There is, however, a history of traffic accidents in the vicinity of the crossing, generally caused by motor vehicles being rear-ended when they come to a stop to make the left-hand turn from westbound Pima Mine Road to Rancho Sahuarita Boulevard. (Tr. at 57-58.) Staff believes that the upgrades to be made in the area of the crossing will alleviate the traffic safety issues on Pima Mine Road as well as any traffic collision issues on Rancho Sahuarita Boulevard in the crossing area. (Tr. at 58.)

25. The closest school to the crossing is located approximately 3 miles south on Rancho

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[1] According to Staff, the American Association of State Highway and Transportation Officials' *Geometric Design of Highways and Streets* (2004) states that LOS characterizes the operating conditions of a roadway in terms of traffic performance measures related to speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience, with LOS A signifying the least congestion and LOS F signifying the most congestion. (Ex. S-1.)

[2] The Town's witness also stated that the discrepancy could be caused by where the measurement was taken on Pima Mine Road, as measuring traffic on either side of the intersection with Rancho Sahuarita Boulevard would not capture all of the traffic turning the other way onto Pima Mine Road. (Tr. at 45-46.)

Sahuarita Boulevard at Calle Las Tonas. (Tr. at 18.) School buses traverse the crossing a total of 8 times per day. (*Id.*)

26. No Town bus service or other public transit system currently uses the crossing. (Tr. at 18.)

27. No hospitals are located in the vicinity of the crossing, and the use of the crossing by emergency vehicles is typical of that in other areas around Town. (Tr. at 18; Ex. S-1.) There is no evidence indicating that the crossing is used extensively by emergency vehicles.

Grade Separation/Crossing Elimination

28. Staff analyzed whether grade separation is currently warranted at the crossing using the FHWA's *Railroad-Highway Grade Crossing Handbook* ("FHWA Handbook")[3] and determined that the crossing meets none of the criteria for grade separation. (Ex. S-1.) The FHWA Handbook indicates that grade separation or crossing elimination should be considered when one or more of nine criteria are met. (*Id.*) Staff created a chart, attached hereto and incorporated herein as Exhibit A, showing the results of Staff's analysis of the criteria for the crossing. Staff does not recommend grade separation at the crossing. (*See id.*)

29. The Town testified that grade separation at the crossing is not possible because the proximity of the crossing to Pima Mine Road would necessitate the raising of both Pima Mine Road and Rancho Sahuarita Boulevard and *encroachment* onto the land of the Tohono O'Odham Nation, which will not grant the Town permission to encroach. (Tr. at 18-19.) The Town testified that it would be impossible to raise Rancho Sahuarita Boulevard so that it could pass over the railroad tracks and Pima Mine Road and then bring it back down again in the space available to the Town. (Tr. at 27-28.) Staff agreed that grade separation is not really feasible at the crossing because of the proximity of the crossing to Pima Mine Road and the Tohono O'Odham Nation. (*See* Tr. at 59.)

30. The Town stated that the crossing is needed to provide access to Pima Mine Road and I-19 and that its elimination would require motorists to take a detour of more than 5 miles to access I-19. (Ex. A-3.)

[3] Staff used the revised 2nd edition from August 2007.

31. Staff determined that closing the crossing could have a negative effect on local businesses because the area surrounding the crossing is highly developed with residential units and commercial businesses. (Ex. S-1.) Staff does not recommend closing the crossing. (*Id.*)

Staff's Recommendations

32. Staff recommends approval of the application. Staff believes that the upgrades are reasonable and in the public interest, are consistent with safety measures taken at crossings of a similar nature throughout the State of Arizona, and will provide for the public's safety. (Tr. at 59; Ex. S-1.) Staff also believes that the Railroad should be allowed 15 months to complete the upgrades at the crossing. (Tr. at 59.)

Conclusion

33. The evidence indicates that the upgrades to be made at the crossing will greatly enhance the safety of the crossing for the public.

34. Staff's recommendations are reasonable and appropriate and should be followed.

CONCLUSIONS OF LAW

1. The Commission has jurisdiction over the parties and over the subject matter of the application pursuant to Article XV of the Arizona Constitution and A.R.S. §§ 40-336, 40-337, and 40-337.01.

2. Notice of the application was provided in accordance with the law.

3. Upgrading of the crossing as proposed in the application is necessary and appropriate for the public's convenience and safety.

4. Pursuant to A.R.S. §§ 40-336 and 40-337, the application should be approved as recommended by Staff.

5. After the crossing is upgraded, the Railroad should maintain the crossing in accordance with A.A.C. R14-5-104.

ORDER

IT IS THEREFORE ORDERED that the application of the Town of Sahuarita is hereby approved.

IT IS FURTHER ORDERED that the Union Pacific Railroad Company shall complete the

upgrades to the crossing at Rancho Sahuarita Boulevard and Pima Mine Road within 15 months after the effective date of this Decision.

IT IS FURTHER ORDERED that the Union Pacific Railroad Company shall notify the Commission, in writing, within 10 days of both the commencement and the completion of the crossing upgrades, pursuant to A.A.C. R14-5-104.

IT IS FURTHER ORDERED that the Union Pacific Railroad Company shall maintain the crossing at Rancho Sahuarita Boulevard and Pima Mine Road in compliance with A.A.C. R14-5-104.

IT IS FURTHER ORDERED that this Decision shall become effective immediately.

BY ORDER OF THE ARIZONA CORPORATION COMMISSION.

CHAIRMAN

COMMISSIONER

COMMISSIONER

COMMISSIONER

COMMISSIONER

IN WITNESS WHEREOF, I, ERNEST G. JOHNSON, Executive Director of the Arizona Corporation Commission, have hereunto set my hand and caused the official seal of the Commission to be affixed at the Capitol, in the City of Phoenix, this 13th day of November, 2009.

ERNEST G. JOHNSON
EXECUTIVE DIRECTOR

DISSENT _____

DISSENT _____

SERVICE LIST FOR: UNION PACIFIC RAILROAD COMPANY

DOCKET NO.: RR-03639A-09-0282

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EXHIBIT A

FHWA Guidelines Regarding Grade Separation

The FHWA Railroad-Highway Grade Crossing Handbook (Revised Second Edition August 2007) provides nine criteria for determining whether highway-rail crossings should be considered for grade separation or otherwise eliminated across the railroad right of way. The Crossing Handbook indicates that grade separation or crossing elimination should be considered whenever one or more of the nine conditions are met. The nine criteria are applied to this crossing application as follows:

FHWA - GRADE SEPARATION GUIDELINES			
Highway-rail grade crossings should be **considered** for grade separation or otherwise eliminated across the railroad right of way whenever one or more of the following conditions exist:			
Condition/Criteria		Response	Remarks
The highway is a part of the designated Interstate Highway System	Crossing Currently meets the criteria	No	Rancho Sahuarita Boulevard is an arterial for the Town of Sahuarita, but does not provide regional connectivity, and is not part of the interstate system.
	Crossing meets the criteria by 2030	No	
The highway is otherwise designed to have full controlled access	Crossing Currently meets the criteria	No	Rancho Sahuarita Boulevard provides access to/from several subdivisions, and is not designated to have access control.
	Crossing meets the criteria by 2030	No	
The posted highway speed equals or exceeds 70 mph	Crossing Currently meets the criteria	No	The speed limit is 30 mph, and the design speed is 35 mph.
	Crossing meets the criteria by 2030	No	
AADT exceeds 100,000 in urban areas or 50,000 in rural areas	Crossing Currently meets the criteria	No	ADT is approximately 8,500 vehicles per day. The capacity of the road is approximately 15,000 vehicles per day. (2006 Counts by PAG)
	Crossing meets the criteria by 2030	N/A	
Maximum authorized train speed exceeds 110 mph	Crossing Currently meets the criteria	No	From DOT inventory reports, the maximum timetable speed is 10 mph The curves along the spur track (approaching Nogales Highway) prevent high speeds.
	Crossing meets the criteria by 2030	No	
An average of 150 or more trains per day or 300 million gross tons/year	Crossing Currently meets the criteria	No	Average of 2 trains per day according to DOT inventory.
	Crossing meets the criteria by 2030	No	
Crossing exposure (trains/day x AADT) exceeds 1M in urban or 250k in rural; or passenger train crossing exposure exceeds 800k in urban or 200k in rural	Crossing Currently meets the criteria	No	Exposure value is approximately 17,000 (8,500 vpd x 2 tpd)
	Crossing meets the criteria by 2030	No	
Expected accident frequency for active devices with gates, as calculated by the US DOT Accident Prediction Formula including five-year accident history, exceeds 0.5	Crossing Currently meets the criteria	No	There have been no accidents related to the crossing in the most recent three years of available data (2005-2007). The predicted accidents per year is 0.045.
	Crossing meets the criteria by 2030	N/A	
Vehicle delay exceeds 40 vehicle hours per day	Crossing Currently meets the criteria	No	With one vehicle arriving every 10 seconds, and assuming three minutes of crossing time each per day, the estimated vehicle delay is (180s/10s/vehx180s/2 x 2 trains/day) = 0.9 hrs/day.
	Crossing meets the criteria by 2030	N/A	

N/A = Information was not available to perform these calculations. However, based on information currently available, Staff does not anticipate that these criteria will be met by 2030.