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BEFORE THE ARIZONA CORPORATION C

COMMISSIONERS

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

Arizona Corporation Commission
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IN THE MATTER OF THE APPLICATION OF THE UNION PACIFIC RAILROAD COMPANY TO ALTER THREE CROSSINGS OF THE UNION PACIFIC RAILROAD AT CAMINO DE MANANA, MASSINGALE, AND JOINER ROADS.

DOCKET NO. RR-03639A-08-0036

DECISION NO. 70704

OPINION AND ORDER

DATE OF HEARING: September 16, 2008

PLACE OF HEARING: Phoenix, Arizona

ADMINISTRATIVE LAW JUDGE: Sarah N. Harpring[1]

APPEARANCES: Mssrs. Anthony J. Hancock and Terrance L. Sims, Beaugureau, Hancock, Stoll & Schwartz, P.C., on behalf of the Union Pacific Railroad Company; and

Ms. Nancy Scott, Staff Attorney, Legal Division, on behalf of the Safety Division of the Arizona Corporation Commission.

BY THE COMMISSION:

On January 17, 2008, the Union Pacific Railroad Company ("Railroad") filed with the Arizona Corporation Commission ("Commission") an application for approval to alter three public at-grade crossings of the Railroad in the Town of Marana ("Town"), in Pima County, Arizona, by adding a second mainline track 20 feet from the center of the existing mainline track. The three crossings are identified as follows: Camino De Manana Road, DOT #741 097U; Massingale Road, DOT #741 100A; and Joiner Road, DOT #741 102N.

On June 9, 2008, the Railroad filed a Request for a Procedural Conference.

[1] Administrative Law Judge Marc Stern presided over the procedural conference in this matter.

On June 25, 2008, a Procedural Order was issued scheduling a procedural conference for July 17, 2008.

On July 17, 2008, a procedural conference was held before a duly authorized Administrative Law Judge ("ALJ") of the Commission at the Commission's offices in Phoenix, Arizona. The Railroad and the Commission's Safety Division Staff ("Staff") appeared through counsel. At the procedural conference, it was determined that a Procedural Order would be issued scheduling a hearing in this matter and establishing associated procedural deadlines and requirements.

On July 24, 2008, a Procedural Order was issued scheduling a hearing in this matter for September 16, 2008, and establishing other procedural requirements and deadlines.

On July 30, 2008, the Railroad filed responses to Staff's first set of data requests.

On July 31, 2008, the Railroad filed revised responses to Staff's first set of data requests.

On August 29, 2008, Staff filed a Motion for Extension of Deadline, requesting that the deadline for filing the Staff Report be extended from August 29 to September 5, 2008, due to storm damage to Staff's office that rendered it inaccessible. Staff also requested that the Railroad's deadline for objections be extended from September 9 to September 12, 2008.

On September 2, 2008, a Procedural Order was issued providing both deadline extensions requested by Staff.

On September 4, 2008, Staff filed its Staff Report recommending approval of the application.[2]

On September 15, 2008, the Railroad filed Certification of Notice stating that notice of the application and hearing had been provided by certified mail in July 2008 to the Town Engineer for the Town of Marana, the Division Manager for Traffic Engineering for Pima County, the Traffic Engineering Division of the Pima County Department of Transportation, the Engineer-Manager for the Utilities & Railroad Engineering Section of the Arizona Department of Transportation, the City of Tucson Department of Transportation, and the Engineering Administrator for the City of Tucson Department of Transportation. The Certification of Notice also stated that notice had been published in the *Arizona Daily Star* and *Tucson Citizen*, daily newspapers of general circulation in the Town of

[2] The Staff Report did not include a certification by Staff that a copy of the Staff Report was mailed to the Railroad. At the hearing, Staff verified that the Railroad had not been sent a copy of the Staff Report, but the Railroad stated that it had had sufficient opportunity to review the Staff Report to proceed with the hearing. (Tr. at 5.)

Marana and County of Pima, on August 1, 2008, and in the *Marana Weekly News*, a weekly publication of general circulation in the Town of Marana and County of Pima where the crossings are located, on August 6, 13, and 20, 2008.

On September 16, 2008, a full evidentiary hearing was held before a duly authorized ALJ of the Commission at the Commission's offices in Phoenix, Arizona. The Railroad and Staff appeared through counsel and presented testimony. Staff also presented documentary evidence in the form of the Staff Report.

* * * * * * * * * *

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 January 17, 2008, the Railroad filed with the Commission an application for approval to alter three public at-grade crossings of the Railroad in the Town of Marana in Pima County by adding a second mainline track, 20 feet from the center of the existing mainline track.

2. The three crossings are located within the Town of Marana along approximately 5.21 miles of the Railroad's track, which runs from the southeast to the northwest, parallel to the Casa Grande Highway (north I-10 frontage road). From west to east, the three crossings are located as follows: Camino De Manana Road, DOT #741 097U; Massingale Road, DOT #741 100A; and Joiner Road, DOT #741 102N. Each of these roads runs north to south across the Railroad's tracks. Camino De Manana is 2.95 miles to the west from Massingale Road, which is 2.26 miles to the west from Joiner Road.

3. This application is part of the Railroad's double track project for their "Sunset Route" across Arizona.

4. Pursuant to the Procedural Order issued on July 24, 2008, the Railroad provided a copy of the application and of the Procedural Order by certified mail to the Town Engineer for the Town of Marana, the Division Manager for Traffic Engineering for Pima County, the Traffic Engineering Division of the Pima County Department of Transportation, the Engineer-Manager for

the Utilities & Railroad Engineering Section of the Arizona Department of Transportation, the City of Tucson Department of Transportation, and the Engineering Administrator for the City of Tucson Department of Transportation. The Railroad also had notice published in the *Arizona Daily Star* and *Tucson Citizen*, daily newspapers of general circulation in the Town of Marana and County of Pima, on August 1, 2008, and in the *Marana Weekly News*, a weekly publication of general circulation in the Town of Marana and County of Pima where the crossings are located, on August 6, 13, and 20, 2008.[3]

5. On September 16, 2008, a full evidentiary hearing was held before a duly authorized ALJ of the Commission at the Commission's offices in Phoenix, Arizona. The Railroad and Staff appeared through counsel and presented testimony. Staff also presented documentary evidence in the form of the Staff Report. No members of the public attended to provide comment.

6. The Town is the road authority for all three crossings. The Railroad testified that the Town supports the application. (Tr. at 22.)

7. According to Staff, the improvements recommended for the three crossings are consistent with safety measures employed at other crossings throughout the state and are in compliance with Commission rules. Staff also testified that the proposed improvements would greatly increase safety at the crossings. (Tr. at 38.)

Camino De Manana

8. The application proposes adding a second mainline track at this crossing, to the north of the existing mainline track. The Railroad plans to re-profile a portion of the two-lane rural asphalt road to meet the new track and to replace the existing incandescent flashing lights, gate mechanisms, bells, and detection circuitry with the latest industry standard equipment, including 12-inch LED flashing lights, gates, bells, and constant warning time circuitry.[4] The Railroad also will add a new concrete crossing surface and will replace any impacted pavement markings.

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[3] The Procedural Order of July 24, 2008, had required that publication of notice in the weekly publication be completed by August 19, 2008. The Railroad conferred with ALJ Stern before publication was made, and it was determined that the August 20, 2008, publication date was acceptable to satisfy the Procedural Order.

[4] Constant warning time circuitry sends a signal to the at-grade crossing to activate its functioning at the instant it detects a train's distance and measures the speed of the train to adjust the length of time that the crossing gates have to be closed, so that the crossing gates are closed only for the amount of time necessary for the train to move through safely, thereby avoiding motorist frustration and possible noncompliance caused by unnecessarily lengthy crossing gate closure.

9. The existing automatic gates, bells, and flashing lights at Camino De Manana were installed pursuant to Decision No. 48561 (January 13, 1978).

10. Based on traffic data provided to the Railroad by Jennifer Crumbliss of HDR Engineering, a Railroad contractor, and Keith Brann, Assistant Public Works Director for the Town of Marana, the average daily traffic ("ADT") for Camino De Manana in 2006 was 1,670 vehicles per day ("VPD"). The estimated ADT for the year 2030 is 22,400 VPD. Staff verified with Mr. Brann in August 2008 that the current ADT and ADT projections have not changed. The current Level of Service ("LOS") for Camino De Manana, based on the standards of the American Association of State Highway and Transportation Officials ("AASHTO") is LOS A, or least congested, for both northbound and southbound traffic.[5] The posted speed limit on Camino De Manana is 45 MPH.

11. Staff and Federal Railroad Administration ("FRA") records indicate that four accidents have occurred at the Camino De Manana crossing, resulting in no injuries or fatalities. In February 1979 and again in September 1983, trucks failed to stop for the warning devices and were struck. In November 1984 and again in June 2001, trucks stopped on the tracks and were struck. Records indicate that the warning devices were reported to be working as intended for all four accidents.

12. The estimated cost of the proposed crossing improvements for Camino De Manana total $272,104 and break down to $248,944 for signal work and $23,160 for the crossing surface. The Railroad will pay the entire cost of these crossing improvements.

Massingale Road

13. The application proposes adding a second mainline track at this crossing to the north of the existing mainline track. The Railroad plans to re-profile a portion of the two-lane asphalt road to meet the new track and to replace the existing incandescent flashing lights, gate mechanisms, bells, and detection circuitry with the latest industry standard equipment, including 12-inch LED flashing

[5] According to the Staff Report, the AASHTO Geometric Design of Highways and Streets, 2004, uses LOS to characterize the operating conditions on a roadway in terms of traffic performance measures related to speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. LOS ranges from LOS A, least congested, to LOS F, most congested.

lights, gates, bells, and constant warning time circuitry. The Railroad also will add a new concrete crossing surface and will replace any impacted pavement markings.

14. The existing automatic gates, bells, and flashing lights at Massingale Road were installed pursuant to Decision No. 48247 (September 19, 1977).

15. Based on traffic data provided to the Railroad by Ms. Crumbliss and Mr. Brann, the ADT for Massingale Road in 2006 was 1,300 VPD. No future ADT projections are available for this crossing. Staff verified with Mr. Brann in August 2008 that the current ADT has not changed. The current LOS for Massingale Road, based on AASHTO standards, is LOS A, or least congested, for both northbound and southbound traffic. The posted speed limit on Massingale Road is 25 MPH.

16. Staff and FRA records indicate that four accidents have occurred at the Massingale Road crossing, resulting in no injuries and four fatalities. In May 1984, a car stopped on the tracks and was struck, resulting in no injuries or fatalities. In December 1986, a car failed to stop for the warning devices and was struck, resulting in three fatalities. In October 1989, the driver of a car failed to obey the warning devices and was struck and killed. In February 1999, the driver of a truck failed to obey the warning devices and was struck, resulting in no injuries or fatalities. Records indicate that the warning devices were working as intended for all four accidents.

17. Railroad expert witness E. Dean Carlson[6] testified that the constant warning time circuitry may help to prevent future accidents caused, as the past accidents appear to have been, by driver impatience. (Tr. at 18-19.)

18. The estimated cost of the proposed crossing improvements for Massingale Road total $258,021 and break down to $227,141 for signal work and $30,880 for the crossing surface. The Railroad will pay the entire cost of these crossing improvements.

Joiner Road

19. The application proposes adding a second mainline track at this crossing by replacing the existing siding track with mainline track, as there are currently two sets of tracks at this crossing.

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[6] Mr. Carlson retired from the Federal Highway Administration ("FHWA"), after 36 years of service, as its Executive Director. (Decision No. 70618 (November 19, 2008) at 10.) During his tenure at the FHWA, Mr. Carlson also served as the Director of Engineering and the Director of the Office of Highway Safety. (*Id.*) Mr. Carlson also served as the Secretary of Transportation for the State of Kansas for eight years. (*Id.*)

The Railroad plans to re-profile a portion of the two-lane rural asphalt road to meet the new track and to replace the existing incandescent flashing lights, gate mechanisms, bells, and detection circuitry with the latest industry standard equipment, including 12-inch LED flashing lights, gates, bells, and constant warning time circuitry. The Railroad also will add a new concrete crossing surface and will replace any impacted pavement markings.

20. The existing automatic gates, bells, and flashing lights at Joiner Road were installed pursuant to Decision No. 43655 (September 18, 1973).

21. Based on traffic data provided to the Railroad by Ms. Crumbliss and Mr. Brann, the ADT for Joiner Road in 2006 was 980 VPD. No future ADT projections are available for this crossing. Staff verified with Mr. Brann in August 2008 that the current ADT has not changed. The current LOS for Joiner Road, based on AASHTO standards, is LOS A, or least congested, for both northbound and southbound traffic. The posted speed limit on Joiner Road is 25 MPH.

22. Staff and FRA records indicate that one accident occurred at the Joiner Road crossing in October 1986, when a semi-tractor-trailer stopped on the tracks and was struck, resulting in no injuries or fatalities. Records indicate that the warning devices were working as intended at the time of the accident.

23. The estimated cost of the proposed crossing improvements for Joiner Road total $330,880 and break down to $300,000 for signal work and $30,880 for the crossing surface. The Railroad will pay the entire cost of these crossing improvements.

Train Volume and Crossing Usage

24. According to the Staff Report, data from the Railroad establish that an average of 48 trains per day (46 freight trains and 2 passenger trains) travel through the crossings presently, at a speed of 70 MPH for the freight trains and 79 MPH for the passenger trains. The number of freight trains is projected to increase to an average of 84 trains per day by the year 2016. The crossings are all used by Amtrak twice per day, three times per week. All train movements through these crossings are thru movements.

25. There are three schools in Pima County and the Town of Marana within the area of the

three crossings, including one elementary school, one middle school, and one high school.[7] The Transportation Operations Manager for the Marana Unified School District has stated that no school buses currently use any of these three crossings.

26. The nearest hospital to the crossings is Northwest Medical Center in Marana, located approximately 7.0 miles from the Camino De Manana crossing, 2.45 miles from the Massingale Road crossing, and 2.0 miles from the Joiner Road crossing. There is no evidence that the improvements and upgrades to be made to the three crossings at issue will adversely impact motorists' ability to reach the hospital.

Grade Separation/Crossing Elimination

27. Staff analyzed whether grade separation is warranted at any of the three crossings using the FHWA *Railroad-Highway Grade Crossing Handbook* ("FHWA Handbook").[8] The FHWA Handbook indicates that grade separation or crossing elimination should be considered when one or more of nine criteria are met. Staff created a chart, attached hereto and incorporated herein as Exhibit A, showing the results of Staff's analysis of the criteria for each of the three crossings.

28. Exhibit A shows that none of the three crossings currently meet any of the nine criteria in the FHWA Handbook, although all three crossings are projected to meet the criterion for average annual gross tonnage of 300 million or more by the year 2016. This determination is based on the current annual gross tonnage in excess of 217 million with volume of 46 freight trains per day and projected volume of 84 freight trains per day by 2016, with the trains also expected to be longer (8,000 feet long instead of the current length of 6,000 feet). In addition, Staff determined that the Camino De Manana crossing will meet the crossing exposure[9] criterion by the year 2030, with a crossing exposure of approximately 1.9 million, almost double the standard of 1 million for an urban area.

29. Staff testified that the criteria in the FHWA Handbook are only a screening tool and guideline and not necessarily determinative of whether a grade separation is necessary, so meeting

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[7] The elementary and middle schools are located in Marana, while the high school has a Tucson address.

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

[9] According to the Staff Report, crossing exposure is determined by multiplying the number of trains per day times the number of vehicles crossing per day.

one or more of the criteria does not automatically mean that grade separation is required. (Tr. at 38, 40.) Staff does not recommend grade separation at any of the three crossings at issue and testified that the crossings, with the improvements proposed in the application, will be safe without grade separation. (Tr. at 38-39, 43, 51.)

30. The Railroad's expert witness, Mr. Carlson, testified that the crossings can be improved and will be made safer without need for a grade separation. (Tr. at 8-14.)

31. The Town and the Arizona Department of Transportation ("ADOT") are currently developing the final design for a new traffic interchange on I-10 between the existing Avra Valley Road and Cortaro Road interchanges. The new roadway would connect Twin Peaks Road, west of the Santa Cruz River, to Camino De Manana and Linda Vista Boulevard on the east side of I-10. This project, known as the Twin Peaks Interchange Project, was included in the Regional Transportation Authority's transportation plan approved by voters in May 2006. The plans for this project propose construction of a grade-separated crossing at what is referred to as the Twin Peaks crossing and closure of the at-grade crossing at Camino De Manana. The Railroad testified that ADOT is preparing to file an application with the Commission for the Twin Peaks Interchange Project, to include closure of the Camino De Manana at-grade crossing and approval of the new grade-separated crossing. (Tr. at 39, 46.) Under the Project, Camino De Manana's path would be redirected so that it would cross at a different location, to the west of where it currently crosses; the new crossing would be the new, grade-separated Twin Peaks crossing. (Tr. at 32.) The final design for the project was completed in the summer of 2008. The construction bidding process for the project was expected to begin in October 2008, with construction to begin after Commission approval is obtained. Construction is projected to take approximately 18 months. The estimated total cost of the project is approximately $82 million and is to be shared by the federal government, ADOT, the Railroad, Pima County, the Town, and a private developer. Under the plans, the crossing at Camino De Manana would be closed for public use, but open for construction traffic, during construction, and the crossing would be permanently closed and the warning devices and concrete crossing surface removed after construction is completed.

32. The Railroad testified that the proposed upgrades for the Camino De Manana crossing may only be in place for a year or less. (Tr. at 22.) The Railroad testified that the materials would not be reused after removal, but that the double track project is so important that it still is cost-effective to make the improvements. (Tr. at 25.) The Railroad also testified that if the grade-separated Twin Peaks crossing is constructed before the Railroad begins construction of its crossing improvements at Camino De Manana, the Railroad will not make the safety equipment upgrades at Camino De Manana proposed in the application, although the Railroad will still put in the second mainline track. (Tr. at 27-28.)

Staff's Recommendations

33. Staff recommends that the application be approved. Based on its review of all applicable data, Staff believes that the proposed crossing alterations are reasonable and in the public interest. Staff also believes that the measures proposed by the Railroad are consistent with other similar at-grade crossings in the state and will provide for the public's safety.

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

CONCLUSIONS OF LAW

1. The Commission has jurisdiction over the Railroad 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. Alteration of the crossings as proposed in the application is necessary 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 alteration of the crossings, the Railroad should maintain the crossings in accordance with A.A.C. R14-5-104.

ORDER

IT IS THEREFORE ORDERED that the Union Pacific Railroad Company's application is hereby approved.

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

IT IS FURTHER ORDERED that the Union Pacific Railroad Company shall maintain the crossings at Camino De Manana Road, Massingale Road, and Joiner Road, in the Town of Marana, Pima County, Arizona in compliance with A.A.C. R14-5-104.

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IT IS FURTHER ORDERED that the Union Pacific Railroad Company shall file, every five years from the effective date of this Decision, with the Commission's Docket Control, as a compliance item in this docket, an update on the average daily traffic count at each of the three crossings described in the application. The updated average daily traffic count shall be obtained from the road authority or a contractor hired by the Railroad.

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, BRIAN C. McNEIL, 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 20TH day of JAN, 2009.

BRIAN C. McNEIL
EXECUTIVE DIRECTOR

DISSENT _____

DISSENT _____

MES:db

SERVICE LIST FOR: UNION PACIFIC RAILROAD COMPANY

DOCKET NO.: RR-03639A-08-0036

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EXHIBIT A

FHWA Guidelines Regarding Grade Separation

The Federal Highway Administration (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:

		Camino De Manana	Massingale	Joiner
The highway is a part of the designated Interstate Highway System	Crossing Currently meets the criteria	No	No	No
	Crossing meets the criteria by 2030	No	No	No
The highway is otherwise designed to have full controlled access	Crossing Currently meets the criteria	No	No	No
	Crossing meets the criteria by 2030	No	No	No
The posted highway speed equals or exceeds 70 mph	Crossing Currently meets the criteria	No	No	No
	Crossing meets the criteria by 2030	No	No	No
AADT exceeds 100,000 in urban areas or 50,000 in rural areas	Crossing Currently meets the criteria	No	No	No
	Crossing meets the criteria by 2030	No	N/A	N/A
Maximum authorized train speed exceeds 110 mph	Crossing Currently meets the criteria	No	No	No
	Crossing meets the criteria by 2030	No	No	No
An average of 150 or more trains per day or 300 million gross tons/year	Crossing Currently meets the criteria	No	No	No
	Crossing meets the criteria by 2030[i]	Yes	Yes	Yes
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	No	No
	Crossing meets the criteria by 2030[ii]	Yes	No	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	No	No
	Crossing meets the criteria by 2030	Unknown	Unknown	Unknown
Vehicle delay exceeds 40 vehicle hours per day	Crossing Currently meets the criteria	No	No	No
	Crossing meets the criteria by 2030	No	N/A	N/A

N/A = Information was not available.

This table utilizes the most recent projected ADT data as follows: Camino De Manana – 22,400 (2030), Massingale – N/A, Joiner– N/A

[1] The Railroad is projected to exceed 300 million gross tons as of 2016. This projection is based on the fact that the Railroad is currently exceeding 217 million gross tons with 46 trains per day and is projected to run twice the number of trains (at lengths of up to 8,000 feet instead of the current length of 6,000 feet) by 2016.

[2] The projected crossing exposures utilizing the most recent projected VPD data are as follows: Camino De Manana – 1.9 million, Massingale – N/A, Joiner- N/A.