

BEFORE THE OFFICE OF THE COMMISSIONER OF RAILROADS

STATE OF WISCONSIN

On the Commissioner's Own Motion for a Determination of the Adequacy of Warning Devices at the Grade Crossing of the Union Pacific Railroad Co. Tracks with 7 Mile Road in the Village of Caledonia, Racine County

9040-RX-1218

FINDINGS OF FACT AND ORDER

On June 23, 2005, the Commissioner of Railroads directed the staff of the Office of the Commissioner of Railroads (OCR) to investigate the adequacy of warning devices under §195.28, Stats., at the grade crossing of the Union Pacific Railroad Co. (UP) tracks with 7 Mile Road in the Village of Caledonia, Racine County (Crossing No. 176 804B / NWB 69.45). This crossing is on the railroad's New Line subdivision.

According to the Village's web site, "On November 16, 2005, the State of Wisconsin allowed the Town of Caledonia to formally become known as the Village of Caledonia and empower the Village with all related responsibilities."

An OCR investigator inspected the crossings in June 2005. No hearing was held.

Findings of Fact

THE COMMISSIONER FINDS:

7 Mile Road is about 22' wide in the vicinity of the crossing and intersects the railroad tracks at an angle of 90°. The roadway ascends to the crossing on each approach at a grade of about 2%. 7 Mile Road carried an average daily traffic (ADT) of 1300 according to 2002 DOT records at a legal speed limit of 35 mph.

The UP operates 18 through train movements per day over the crossing at a timetable speed of 50 mph. The railroad operates 14 through movements and 4 switch movements each day. The crossing consists of one mainline track.

The exposure factor at this crossing is 23,400. The exposure factor equals the product of the number of trains per day and the number of highway vehicles per day, which yields a numerical value for the potential conflicts each day at the crossing.

Two train-vehicle accidents have occurred at this crossing since 1973. The accidents occurred in 1982 and 2004.

The Wisconsin Department of Transportation has produced a benefit-cost analysis for all at-grade crossings in the state. Installing new automatic flashing lights with gates and constant warning time circuitry at the 7 Mile Road crossing has a net benefit of about \$555,000. The benefit-cost ratio is about 4.21 meaning that the public will receive \$4.21 in safety benefits for each dollar expended.

Accidents that do occur here will likely be quite serious if a through train is involved due to their 50 mph speed. Train speed is strongly correlated with fatalities in train/vehicle accidents. More specifically, crossings with train speeds of 40 mph and over have a disproportionate number of fatalities. According to Federal Railroad Administration (FRA) statistics, nationally, in 1994 71% of fatalities occurred at crossings with train speeds of 40 mph+, even though only 26% of all crossings had train speeds of 40 mph+.

The crossing is presently protected with 12" incandescent automatic flashing lights and advance warning signs. The signals were installed in 1977. The existing warning devices are inadequate. The existing warning devices will be adequate until such time as the new warning devices are installed. In order to adequately protect public safety 12" LED automatic flashing lights with gates and constant warning time circuitry are needed.

There are also stop signs installed at the crossing. One of the stop signs is attached to the signal mast. The Manual on Uniform Traffic Control Devices (MUTCD) prohibits the combination of stop signs and train-activated automatic flashing lights. This combination gives motorists conflicting information that may lead to driver confusion. **The order requires that the Village remove the stop signs.**

Constant warning time circuitry adjusts for train speed and causes the crossing signals to always operate for the same amount of time before the train reaches the crossing, regardless of train speed. A motion detector simply detects the train operation, but does not adjust for train speed so that the amount of warning time varies based on train speed.

Light emitting diodes (LED) lamps replace incandescent bulbs. LEDs have higher conspicuity, a wider cone of vision, and longer life than incandescent lights. LEDs are especially useful on east-west roadways where the rising and setting sun may make the signals difficult to see.

Source of funding: The OCR has reviewed this crossing as part of a corridor review of UP crossings on this line in Racine County. In this order the Office of the Commissioner of Railroads is ordering the installation of automatic flashing lights with gates and constant warning time circuitry at the 7 Mile Road crossing of the Union Pacific Railroad Co. tracks. The Commissioner has determined that the Spring Street and Gittings Road crossings (crossing nos. 176 870N and 176 867F) should be investigated for potential closure. Closure of any crossing requires a public hearing. The investigation and hearing with respect to these potential closures is currently being conducted under a separate docket (9040-RX-1217). A separate notice of hearing will be issued by the OCR at a later date.

Because this order is part of a corridor review, the UP has agreed to pay 20% of the cost for the signal materials and installation costs. Public funds will be used for the remaining 80%. The public contribution shall be capped at \$120,000. Notwithstanding this cap on the public contributions, the UP may recover its proportionate share of its demonstrated actual reasonable and necessary costs.

Conclusion on the Issue

THE COMMISSIONER CONCLUDES:

1. That in order to adequately protect and promote public safety, it is necessary to install and maintain 12" LED automatic flashing lights with gates and constant warning time circuitry at the crossing of the tracks of Union Pacific Railroad Co. with 7 Mile Road in the Village of Caledonia, Racine County.

2. That in order to adequately protect and promote public safety at the crossing of the tracks of Union Pacific Railroad Co. with 7 Mile Road in the Village of Caledonia, Racine County, it is necessary to remove the existing stop signs at the crossing.

Conclusion of Law

THE COMMISSIONER CONCLUDES:

That the jurisdiction of the Office of the Commissioner of Railroads under §195.28, Stats., extends to this matter. Accordingly, the Office enters an order consistent with the findings of fact.

Order

THE COMMISSIONER ORDERS:

1. That the **Union Pacific Railroad Co.** shall install and maintain 12" LED automatic flashing lights with gates, and constant warning time circuitry with appropriate appurtenances in accordance with such plans as are filed with and approved by the Office of the Commissioner of Railroads at the crossing of its tracks with 7 Mile Road at-grade in the Village of Caledonia, Racine County by **December 31, 2008** (Crossing No. 176 804B / NWB 69.45).

2. That the **Union Pacific Railroad Co.** shall submit to the Office of the Commissioner of Railroads signal and circuit plans with the cost estimate of its proposed installation and upon completion of the signal project, a detailed statement of the actual cost to the Office and to the Wisconsin Department of Transportation.

3. That the signal installation work herein ordered shall not begin until the district office of the Wisconsin Department of Transportation informs the railroad that they may start such work and such start notice will not be issued until appropriate federal aid or other funding arrangements have been assured. The cost of the new project initiated before the start notice will not be reimbursed with public funds and shall be the responsibility of the railroad.

4. That the **Village of Caledonia** shall remove the stop signs from the crossing of the Union Pacific Railroad Co. tracks with **7 Mile Road** at-grade in the Village of Caledonia, Racine County by **August 25, 2006** (Crossing No. 176 804B / NWB 69.45).

5. That the **State of Wisconsin** shall pay 80% of the cost (up to a **maximum contribution of \$120,000 per crossing**) and the **Union Pacific Railroad Co.** shall bear 20% of the cost of the crossing signal materials and labor. In addition, the **Union Pacific Railroad Co.** shall pay any cost assessed to the railroad pursuant to §195.60, Stats., for the investigation of this matter by the Office. The railroad shall not pass on those assessment costs either directly or indirectly. The maximum funding provided by the **State of Wisconsin** may be adjusted to reflect the actual reasonable and necessary cost of the materials and installation. The actual reasonable and necessary costs shall be determined by the **Office of the Commissioner of Railroads** after hearing, if necessary.

6. That if the petitioner, railroad or any interested party objects to this order and requests a hearing within 20 days of the date of this order in writing, the Office will hold a public hearing.

7. That jurisdiction is retained.

Dated at Madison, Wisconsin, (August 2, 2006) .

By the Office of the Commissioner of Railroads.

Rodney W. Kreunen
Commissioner of Railroads