



State of Utah

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DEPARTMENT OF TRANSPORTATION

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Deputy Director

FILE

CROSSING: PUBLIC:  
STATE UT CITY Orem  
STREET/HWY PVT - Geneva  
MP 708.19 Provo SUB  
DOT 254903N

April 2, 2008

Jason Bleyl  
Civil Design Lead  
UTA  
669 West 200 South  
Salt Lake City, Utah 84101

Subject: Surveillance Report  
Various Locations in Lindon and Orem  
DOT Crossing Nos.: 254902G, 254903N, 806939Y, 254906J, 806934P

Attendees: Eric Cheng, UDOT; Jim Marshall, UPRR; Adam Cowie, Lindon; Mark Christensen, Lindon/JUB; John Buttenob, HDR; Travis Baxter, UTA; Jason Bleyl, UTA/PB; John Blumenkamp UTA/HDR, Sam Wells, UTA/Parsons; Neal Winterton, Orem; Paul Goodrich, Orem; D Warnock, HNTB

Mr. Stanger:

**Background Information:**

The Utah Transit Authority (UTA) is proposing to construct and operate a commuter rail system from Salt Lake City through Lindon and Orem, to Provo. The rail line will share a corridor with the Union Pacific Railroad (UPRR). Current freight traffic on the UPRR mainline is 8-20 trains per day. Proposed commuter rail traffic is approximately 60 trains per day. The Utah Department of Transportation has reviewed the existing conditions of the crossings listed in this report in conjunction with UTA, UPRR, and Local Officials. It is UTA's intention to replace all of the existing switches and track and install one or two new parallel tracks next to the existing tracks, in most locations.

**General Requirements:**

Pursuant to sections 54-4-14 and 54-4-15, UCA, and Utah Administrative Rule R930-5, the Utah Department of Transportation hereby issues the following mandatory requirements to be implemented due to the increase in rail traffic at each crossing. The requirements noted in this report detail the improvements that must be in place to allow for commuter rail traffic.

Required for each at grade crossing in the light rail transit corridor:

1. Installation of insulated concrete surface, extending two feet beyond outside of shoulder/sidewalk. Replace all UPRR non-insulated concrete panels with insulate panels.
2. Installation of standard flashing lights, gates and bells. Led flashing lights to be used in all new and existing installations when a lamp assembly is replaced.
3. Constant Warning Time (CWT) track circuitry to be installed at each crossing.
4. Install new controller houses in neutral quadrants of each crossing.

5. Signs and striping to be installed as per current edition of MUTCD. This includes, but is not limited to, crossbucks, advance warning signs, RxR paint messages, stop bars, and shoulder/lane striping.
6. All medians to be non-mountable barrier curb. Use UDOT type B3 or equivalent. Medians to be constructed beginning at 10 ft. from edge of rail, but effective length of median is measured from the gate arm.
7. Three-Quad and Four-Quad systems to have loop detection for exit gate management and operation.
8. All tracks in the crossing area to cross roadway at the same elevation, or on an even plane to prevent an uneven ride for automobile traffic.
9. Conform to applicable UDOT standard drawings, where applicable.
10. Gate arms must have a gap no greater than 1 foot from tip of gate to edge of median, or no more than 2 feet in places where two gates extend from opposite sides of the lanes.
11. UDOT shall have option to retain all salvage circuitry and controllers. UTA to contact UDOT on each specific crossing about which salvage items UDOT wants.

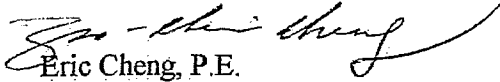
**Crossing Specific Requirements:**

1. DOT No. 254902G, 600 South Lindon
  - a. Remove existing lights and gates and install new flashing lights and gates and raised median barrier.
  - b. Widen road to accommodate the large truck and boat trailer traffic which uses this crossing.
  - c. When the Vinyard Connector Road is constructed by UDOT, this crossing will be closed and a flyover for the new road will be constructed at this location.
  - d. The proposed trail/sidewalk must cross adjacent to the north side of 600 South Street. Crossing panels to be extended to accommodate this 8' wide sidewalk.
2. DOT No. 254903N, Private Crossing to Geneva
  - a. This crossing is to be closed.
3. DOT No. 806939Y, 400 South Orem
  - a. Remove existing lights and gates and install new flashing lights and gates and raised median barrier.
  - b. When installing west island, provide two left turn lanes westbound.
  - c. Match cross section of 400 South west of tracks.
  - d. Provide signal preemption for Geneva Road/400 South intersection signal.
  - e. Coordinate crossing widths and betterments with Orem City.
4. DOT No. 254906J, 800 South Orem,
  - a. Remove access to house on southwest quadrant. This will probably require purchasing the property.
  - b. Remove existing lights and gates and install new flashing lights and gates and raised median barrier.
  - c. Coordinate crossing widths and betterments with Orem City.
5. DOT No. 8/06934P, 2000 South Orem,
  - a. Remove existing lights and gates and install new flashing lights and gates and raised median barrier.
  - b. Remove driveway/road in northeast quadrant.
  - c. Talk to both Orem and Provo Cities about a future tie of the signals with the UPRR tracks to the east. 2000 South is the boundary between the cities.

d. Coordinate crossing widths and betterments with Orem and Provo Cities.

If you have any questions regarding this letter, please feel free to contact me at (801) 965-4284.

Sincerely,



Eric Cheng, P.E.  
UDOT Chief Railroad Engineer

Cc: Jim Marshall, UPRR  
D Warnock, HNTB Corporation  
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