



State of Utah

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DEPARTMENT OF TRANSPORTATION

JOHN R. NJORD, P.E.
Executive Director

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Deputy Director

February 28, 2011

Matt Carter
Utah Transit Authority
669 West 200 South
Salt Lake City, UT 84101

Subject: Surveillance Report and Ruling
400 North, Vineyard: USDOT 254-903N

Dear Mr. Carter:

In accordance with Utah Administrative Rule R930-5, a highway railroad grade crossing surveillance review was conducted on February 22, 2011 for the above public at-grade crossing in Vineyard, Utah.

Review Team:

Eric Cheng, UDOT; Renee Spooner, UDOT; Randy Farnsworth, Vineyard (Mayor); Don Overson, Vineyard (City Engineer); Jim Marshall, UPRR; Bill Ince, UPRR; Reha Kamas, UPRR; Tyson Payne, UPRR; Jason Bleyl, UTA; Matt Carter, UTA; Matt Wildauer, Parsons/UTA; Travis Baxter, UTA; Ed Grampp, Anderson Geneva; Dennis Astill, Anderson Geneva; Jerry Grover, AGDI; Scott Hendricks, RB&G; Brett Paxton, HNTB; Travis Colledge, HNTB.

Existing Background Information:

The Crossing at 400 North in the Town of Vineyard historically was access for the former Geneva Steel site. The Geneva Steel site was sold and the current property owners elected to close the eastern leg of the access road with a fence and gate to allow authorized vehicle access only. The Town of Vineyard has since adopted a master road plan that shows an upgraded collector roadway across the crossing at 400 North and through the property site to the East.

The Utah Transit Authority (UTA) is constructing and plans to operate a commuter rail system from Salt Lake City to Provo. The rail line shares a corridor with the existing Union Pacific Railroad (UPRR) tracks and at this crossing UTA has added a main line track on the west side of the railroad corridor. Current freight traffic on the UPRR mainline is 8-20 trains per day. Proposed commuter rail traffic is estimated to be approximately 60 trains per day. Train speed through this location is planned to be 70 mph for the commuter rail line.

The Utah Department of Transportation (UDOT) is charged with authority and oversight over public at-grade crossings. Part of the Department's responsibility is to review highway-rail crossings and ensure that they operate safely for all parties that utilize them.

Due to the current road alignment geometry of 400 North, coupled with the addition of the commuter rail tracks to the West of the corridor, and current limited need for access to the private parcel to the East, UDOT had issued a temporary closure order to restrict access over what was deemed an un-safe crossing due to the existing geometric conditions. Because of the addition of UTA's tracks, the lights and gates were removed and no active safety devices are currently present at the crossing, UDOT finds that the crossing is unsafe because of the locked gate on east side of the crossing, lack of safety devices and the existing geometric conditions of the road alignment on the west side of the tracks. Based upon these current conditions, the crossing is ordered to be temporarily closed until the crossing improvements are installed and constructed.

The purpose of this surveillance review was to examine the current conditions of the roadway alignment and crossing configuration, receive stakeholder input as to preferred treatment of the crossing, identify what the future plans for the crossing consist of, and what measures need to be in place in order to reopen the crossing in a safe interim condition for the travelling public.

General Crossing Improvements:

1. The representatives from the Town of Vineyard requested that the crossing improvements be designed according to current conditions prior to the temporary closure and construction by UTA. The current conditions consist of the two lane paved road crossing the tracks with lights, gates and panels. Also, no city street exists on the east side of the tracks.
2. The parties agreed that Vineyard Road needs to be re-aligned because of the safety concerns. Road improvements on both sides of the approaches shall be in conformance to the Town of Vineyard standards and specifications. Design of road realignment on the west side of the crossing will be approved by Vineyard for road improvements and UDOT for safety components.
3. Pursuant to Utah Code Ann. Section 54-4-15.3, UDOT apportions 100% of the cost of the installing the lights, gates and crossing surface and other signaling equipment needed to operate lights and gates for the at-grade crossing required in this order to UTA.

Specific Crossing Improvements:

1. A substandard existing crossing has now been made unsafe by the addition of the mainline track by UTA. Consequently, the road has to be realigned to allow for minimum acceptable safety standards. Vineyard Road near the crossing will need to be realigned to the West in order to provide a minimum distance between the East edge of the roadway (Vineyard Road) and to the nearest gate arm to provide storage length for at

least two passenger vehicles that don't obstruct the traffic going north to west along 400 North. See *American Association of State Highway and Transportation Officials (AASHTO) Geometric Design of Highways and Streets – 2004 page 731* which addresses the case when highways are parallel to crossings.

2. Standard railroad lights, gates and crossing panels shall be installed at the crossing to match the re-aligned lane configuration as indicated by the Town of Vineyard. Standard railroad crossing signage shall be placed in accordance with the MUTCD and the UDOT Standard Drawing ST-7. UDOT Railroad Engineer shall review safety design plans prior to installation of device installation. UTA shall be responsible for these installations.

3. Road improvements on the east side of the crossing shall consist of a (2) lane paved roadway with a 120' diameter paved "knuckle" turn-around in accordance to Vineyard standards and approved by UDOT. The road improvement and future maintenance should be in consideration of meeting the driving public's perception/expectation as a public roadway. Vineyard has concurred they will be responsible to improve the east side of the road outside UPRR track. UPRR shall put the road approach that was taken out on the eastern most UPRR back in based upon the existing conditions of the approach.

4. If a Quiet Zone is going to be implemented in this area, standard raised 18" non-mountable concrete medians will need to be placed on both sides of the crossing. This feature would be used as a supplemental safety measure (SSM) for a quiet zone and would require Vineyard Road geometry to be realigned to the west to accommodate the placement of the median island. UDOT asks that if these additional items are required for the west approach based on the desire for a quiet zone that Vineyard and UTA work towards an equitable solution.

5. This crossing is to remain temporarily closed until all the recommended safety improvement have been completed and accepted by UDOT.

Short Term Action Items:

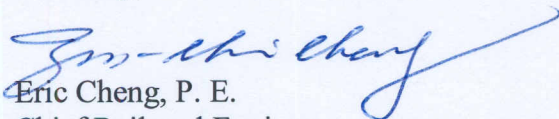
1. Vineyard will provide proposed roadway sections and widths to UTA within one week of the surveillance review.

2. Upon receiving the proposed roadway sections from the Town of Vineyard, UTA will generate possible design configuration concepts and scenarios and distribute to UDOT, UPRR and the Town of Vineyard for review within two weeks.

3. UDOT will approve proposed design concepts and safety devices or recommend revisions as needed.

If you have any questions regarding this Report and Ruling, please feel free to contact me at 801-965-4284.

Sincerely,

A handwritten signature in blue ink, appearing to read "Eric Cheng", with a long, sweeping flourish extending to the right.

Eric Cheng, P. E.
Chief Railroad Engineer

Cc: Renee Spooner, UDOT;
Randy Farnsworth, Vineyard (Mayor);
Don Overson, Vineyard;
Jim Marshall, UPRR;
Reha Kamas, UPRR;
Jason Bleyl, UTA;
Matt Wildauer, UTA;
Ed Grampp, Anderson Geneva;
Dennis Astill, Anderson Geneva;
Travis Colledge, HNTB/UDOT.