

Safety Field Review of Route 46-East Holden to East Eddington

A safety field review of a 4.9 mile section of Route 46 from its intersection with Route 1A in East Holden north to the junction of Route 9 in East Eddington was conducted on September 5, 2000 to identify potential safety hazards. This report supplements the recently completed desktop crash analysis. The findings below summarize the field review findings. Photos of certain sections were also taken at this time.

Recommendations

I. General

Enforcement

1. A. Post the road to exclude trailer lengths in excess of 48'. Posting of trailer length limitations should be in feet and meters.
 - B. In order for the above signs to be effective, both speed and trailer length enforcement should be requested.

II. Specific Locations

1. Route 46 and 1A (1997-1999 crash costs = \$164,000)

Maintenance

- ✓ Remove lane striping on Route 1A eastbound and both lane merge warning signs.
- ✓ Reconfigure the offset left turn configuration on Route 1A to an opposing lane design. This may also allow shifting of lane configuration that would lessen the conflict of right turning southbound Route 46 trucks, with those waiting in the Route 1A eastbound left turn lane.

Capital

- ✓ Increase the turning radius of the right turn corner of Route 46 southbound. This may require construction of a retaining wall for the sloping lawn of the corner property.

2. Route 46 and Route 9 (1997-1999 crash costs = \$51,000)

Maintenance

- ✓ Close the intersection cut through at both ends to prevent use by any vehicles. Asphalt curbing may be the most efficient approach.
- ✓ Reevaluate placement of Stop Ahead warning signs. These need to be installed far enough in advance to provide reasonable warning, but not at an excessive distance before the intersection. (Division Traffic Engineer has already marked the new locations and will also be installing a curve warning sign)
- ✓ Install hazard warning signs in each direction for the drainage areas near the telephone utility building.

Capital

- ✓ Remove the skew out of the intersection and increase the turning radii, to improve ease of turning and visibility.
- ✓ Build up the Route 46 roadbed edges or lower the crown to remove severe crown, starting at about 150 feet south of the Route 9 intersection and continuing for about the next 350'

3. Just north of Hatcase Road

Maintenance

- ✓ Provide correct super-elevation for the curve.
- ✓ Widen the inside curve shoulder

Crash Analysis

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A full crash analysis with maps of three year history and ten year summary of crashes has been completed as part of the prior desktop review. That report noted three areas exhibiting a concentration of crashes:

- I. Portions of Route 46 from Mann Hill Road to Holden-Eddington town line (High Crash Location) – 37 crashes in 11 years.
- II. Intersections of Rte. 1A with Rte. 46, 51 crashes in 11 years.
- III. Intersections of Rte 9 with Rte 46, (High Crash Location) – 13 Crashes in 11 years.

Roadway Findings

This portion of Route 46 is posted at 45 mph speed limit, except for the Holden end (30 mph) and the Eddington end (35 mph). Observed travel speed exceeded the posted limit. There are no road construction or maintenance projects underway at this time within the study area. A significant amount of tractor trailer and truck traffic was observed, with trailer lengths up to 53' was observed, although over-length vehicles are not currently permitted. There are currently no posted signs regarding this restriction and we understand little, if any, enforcement. Road surface conditions are fair, though some areas of deterioration were noted. During the field review, the two areas looked at most closely were the end points of the reviewed roadway, where Route 46 has a junction with Route 1A at the southern point, and Route 9 at the northern end.

General Recommendation:

- **Route 46 and 1A** (Node 1907164-East Holden) is a four legged signalized intersection. Route 1A has channelized left turn lanes. A dedicated left turn phase exists on the east bound portion of Route 1A, but the other legs of the intersection do not. The Route 1A left turn lanes are offset from each other. Route 1A narrows in each direction to one lane after the intersection. The east bound leg is striped for two lanes and has a graphic lane merge sign. The westbound lane is not two lane striped following the traffic light, but has the same lane merge sign..

Route 46 southbound descends toward the traffic light. There is a Traffic Signal Ahead warning sign when approaching. The turning radius is tight for right turn tractor trailer traffic onto Route 1A towards Brewer. This results in the cab crossing into the left turn lane of Route 1A and the trailer traversing the sloped lawn of the inside corner property.

Route 46 and Route 9 (Node 1906067-East Eddington) is a “T” intersection with Route 46 having two stop signs. Because of a downgrade slope and a horizontal curve, there is a Curve warning sign and a Stop Sign Ahead warning sign prior to the intersection. Dual stop signs are installed on each near corner of the intersection. The intersection angle is slightly skewed, making turning difficult for longer vehicles. The right turn onto Route 9 has a tight turning radii. A stone drainage area located near a phone utility building just prior to the intersection presents a shoulder hazard. .

The outer edges of the roadbed from about 150' to 500' south of the intersection (between the telephone utility building and the southbound residence) have settled significantly, with

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settlement being more severe on the northbound side. The elevation difference between the crown and the road edge is about 12" to 15". About 350' of road would need to be repaired. Part of this roadway settlement may be exacerbated by the regular travel of heavy trucks.

The intersection also contains a well worn, heavily rutted dirt travelway. One vehicle was observed making a left turn from Route 9 onto Route 46 during the safety field review. The cut through entry point onto Route 46 gives the entering vehicle very limited visibility and presents a high hazard to vehicles.

Other Roadway observations:

- There are two drives on the southbound lane of Route 46 that service a school about a half mile north of the Route 1A intersection. The first driveway provides limited visibility when traveling in the southbound direction. There are oversized School Entrance warning signs in each travel direction with a 35 mph advisory speed plate, and it is understood that these signs would be upgraded to flashing warning signs at the school's expense. would share in the installation funding.
- Swet Hill Road (node 1907561), ties into the northbound lane of Route 46. There is a limited sight distance due to a hill when turning left. The field measured sight distance of 425' is marginal (450' recommended), but a hidden drive sign is posted.
- Just north of Hatcase Road (node 1907562), a crash resulting in three fatalities occurred in 1993. The vehicle operator had been drinking and was eluding police when he lost control of his vehicle. The road does curve at this point and shoulder width is inconsistent. The curved roadway is not super-elevated, but there is a curve warning sign posted with a 40 mph advisory plate. A fair amount of truck rubber on the roadway entering the curve was noted during the field visit, and trucks were observed coming into the curve too fast and encroaching on the opposing lane.