

## THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION



Victoria F. Sheehan Commissioner

DUNBARTON
NH 13 / NH 77 (Page's Corner)
Intersection safety evaluation

William Cass, P.E. Assistant Commissioner

Bureau of Highway Design Room 200

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November 1, 2018

Chief Daniel Sklut Dunbarton Police Department 18 Robert Rogers Road Dunbarton, NH 03046

Dear Chief Sklut:

I am writing to thank you, the Selectmen, and Sgt. Remillard for meeting with Michael O'Donnell and me at Page's Corner on August 1. I think we had a very worthwhile discussion of the safety challenges and potential changes that could be considered to address them. I am also writing to present the Department's recommendations for safety improvements at the intersection and to seek your input on these potential changes.

At our August 1 meeting we discussed the operational issues that you have observed at the intersection, and reviewed three potential short-term alternatives and one long-term alternative to address your concerns. The main concerns that were shared by everyone include the failure of NH 13 westbound traffic to observe the 35 mph speed zone near the intersection, and the frequency of NH 77 eastbound traffic either running the stop sign or failing to properly yield to conflicting traffic. Despite the fatal crash that occurred in 2017, all agreed that there aren't many crashes at the intersection, but close calls and confusion due to the uncommon three-way stop condition are frequent.

The alternatives we reviewed are described below including some of the relevant details we discussed, as well as the advantages and disadvantages of each.

1. Short-term option: Retain the existing three-way stop condition but modify the signs to make them more conspicuous to reduce the occurrence of stop sign running. The stop signs on NH 13 and Jewett Road could be enlarged to 36", but the NH 77 stop and 'stop ahead' signs are already oversized. This option should also include clearing along the south side of NH 77 to ensure an adequate line of sight looking left from NH 13 northbound, as suggested by the Selectmen. This option might reduce stop sign running northbound or southbound, but it will not address the key issue of the driver confusion inherent in the three-way stop condition.

- 2. Short-term option: Eliminate the stop sign on NH 77 eastbound to create a more common two-way stop operation. This change would allow Page's Corner to operate more simply with free flow for eastbound and westbound traffic and stop control northbound and southbound, thus eliminating the driver confusion caused by the existing three-way stop condition. However, the elimination of the stop condition on NH 77 may make northbound and southbound drivers vulnerable to being struck from the west if they do not recognize the new traffic pattern.
- 3. Short-term option: Add a stop sign on NH 13 westbound to create an all-way stop condition. This would be the safest alternative by creating an orderly, low-speed traffic operation that is familiar to drivers. Also, under current traffic volumes the intersection would continue to operate efficiently with short delays. There was some discussion of whether the wide pavement on NH 13 northbound at the intersection could be narrowed, but a turning analysis has shown that all the existing pavement is needed to accommodate right-turning trucks.
- 4. Long-term option: Construct a roundabout. A roundabout would function safely and efficiently under existing and future traffic volumes, but would be costly to construct and may affect private property abutting the intersection. This alternative could be retained as a future consideration if short-term improvements do not adequately address the intersection safety issues.

Upon consideration of these options the NHDOT recommends moving forward with alternative 3, including the addition of a stop sign on NH 13 westbound and the creation of a four-way stop condition for the reasons noted above. This change would need to be accompanied by appropriate temporary measures to inform motorists, particularly on NH 13 westbound, of the new traffic control.

Please review the options and the NHDOT's recommended action with the selectmen and other stakeholders and provide feedback. I am confident we can reach consensus on an appropriate course of action.

Sincerely,

Michael J. Dugas, P.E.

State Highway Safety Engineer

MJD/mjd

cc: W. Cass

W. Lambert