



CITY OF CONCORD

New Hampshire's Main Street™
Community Development Department

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FROM: Robert J. Mack, PE, PTOE
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SUBJECT: Traffic Considerations
Proposed Whitney Road Rezoning

This memorandum summarizes staff comments regarding potential traffic considerations related to the January 2018 proposal by Interchange Development, LLC to rezone portions of the Whitney Road area for a higher density of Highway Commercial development than currently permitted. The current conceptual-level development proposal includes the addition of about 276,580 sf of mixed retail/commercial/warehousing uses on about 42 acres of land to the southeast of the Hoit Road/Whitney Road intersection. This memo is an update of a September 28, 2017 memo which reviewed a similar development proposal of August 2, 2017. A key consideration is the need to address improvements to the Hoit Road/Whitney Road intersection that will be required to service increased traffic demands on Whitney Road associated with further development.

The need and timing for additional intersection improvements was initially documented in the May 2012 Traffic Impact and Site Access Study (TISAS) prepared by Stephen G. Pernaw & Company, Inc., for the development of the gas station/coffee shop on the southeast corner of the Hoit/Whitney intersection. This study assessed traffic access needs for the initial development of the gas station/coffee shop, as well as for the hypothetical full development of the Highway-Commercial zoned land to the south and east. At the time, this hypothetical 'full development' scenario assumed potential addition of a retail center of about 46,000 square feet. Staff review of the TISAS was summarized in a September 24, 2012 memorandum and included the following pertinent findings:

- The gas station/coffee shop was projected to utilize much of the available capacity of the Whitney Road approach to Hoit Road as a two-way STOP controlled intersection. *This projection has been generally realized in that, since that development, daily traffic flows on Whitney road just south of Hoit Road have increased from about 1,000 vehicles per day to about 5,000 vehicles per day. Peak hour delays for left-turning vehicles are now notable, with staff aware of increasing concerns from delayed drivers.*
- The TISAS found that minimum traffic-volume warrants for traffic signalization would nearly, but not quite met following the opening of the gas station/coffee shop.

Staff feels that this continues to be the case. However staff does concur with the TISAS finding that signal warrants will be clearly met if an additional 46,000 sf of retail space is added beyond the current gas station/coffee shop development. With this potential future expansion of retail development, the TISAS reports that substantial intersection enlargement would be needed in addition to installation of traffic signals. This would include the widening of Hoit Road in the area of the intersection to provide a five-lane section: two through lanes in each direction plus a dedicated left-turn lane.

As this intersection is under the jurisdiction of the New Hampshire Department of Transportation, staff met with NHDOT District 5 staff in 2012 to discuss the potential for traffic signal and other intersection improvements. NHDOT felt that traffic signals could be considered when traffic volumes increased sufficiently to meet warrants. They also echoed the findings of the TISAS that signalization will require Hoit Road to be widened to five lanes easterly of the Merrimack River bridge and through the subject intersection in order provide necessary capacity and minimize extended stop-and-go delays along the mainline highway approaches to the signals. Because of the close proximity of the subject intersection to the southbound ramps at I-93 Exit 17, NHDOT further required that any mainline lane widening at the intersection be extended further east to the southbound on-ramp intersection. Staff has more recently suggested that a multi-lane roundabout might be considered as an alternative solution to signalization as the need for extended lane-widening along Hoit Road might be substantially reduced.

Improvements at this intersection (CIP 30) are currently programmed in FY 2025. \$2.25M is the current budget estimate, with \$2.05M anticipated from donations (by private development) and \$0.20M anticipated from general impact fees. Central NH Regional Planning Commission (NHRPC) has included this project in its current FY19-28 10-year Transportation Improvement Plan for the region, ranking it as the No. 4 project of 6 total. CNHRPC submitted this recommendation to the NHDOT, however the subject project is not being considered in the current draft of the State's latest 10-year plan.

The potential growth of a vibrant and robust commercial development along the Whitney Road corridor will require safe and efficient access from Hoit Road. That being said, with or without rezoning, staff concurs with the previously-referenced TISAS that substantial intersection traffic control improvements be considered with the next significant, traffic-generating land development along Whitney Road. This should include, at a minimum, either traffic signalization (with accompanying multi-lane, approach widening) or a multi-lane roundabout. The extent, feasibility and cost of either improvement option will need to be more fully engineered and vetted with the NHDOT at the appropriate time. Given the increased magnitude of the current long-range development proposal, the level of Hoit Road intersection and roadway improvements envisioned in the 2012 TISAS will need to be reassessed in order to appropriately plan for future traffic growth along Whitney Road, including the City's long-term plan for a potential Whitney Road extension to Sewalls Falls Road. Additional improvements to Whitney Road may also be needed as site driveways are added or expanded, but they can be evaluated in more detail as future site plans are engineered.