



FUSS & O'NEILL

September 13, 2011

Ms. Lynn Stoddard
192 Ravine Road
Storrs, CT 06268-1503

Re: Intersection Sight Distance Analysis
Storrs Road Property, Mansfield, CT

Dear Ms. Stoddard:

Fuss & O'Neill has performed an intersection sight distance analysis per your request for your property located on the south side of Storrs Road (Route 195) in Mansfield, CT, approximately one quarter mile west of Baxter Road. This letter documents the findings of the sight distance analysis.

Intersection sight distance requirements are set forth by the Connecticut Department of Transportation (CTDOT) in the 2003 *Highway Design Manual*. These requirements are typically required to be met for any new driveway intersections with State roadways. Construction of a new driveway along Storrs Road will require grading and paving work within the State right-of-way, which will therefore require an Encroachment Permit from CTDOT. During the permit review process, the Department will verify that the proposed driveway is consistent with the required intersection sight distance criteria.

Intersection sight distance was measured at the proposed site driveway location, located approximately 450 feet east of Rockridge Road. Looking left (west), 860 feet of sight distance is available, while further sight distance is limited by the horizontal curve on Storrs Road. Looking right (east), 580 feet of sight distance is available. Further sight distance to the right is limited by the crest vertical curve in the roadway.

Required intersection sight distance is based on the 85th percentile design speed of the roadway. In order to determine speeds on Storrs Road, we utilized a radar gun to obtain 100 speed readings for vehicles traveling in the westbound direction. Speeds were measured only for free flowing vehicles, not including trailing vehicles in larger groups/platoons. This process indicated that the 85th percentile speed in the westbound direction is 55 miles per hour. Based on this speed, at least 610 feet of intersection sight distance is required, indicating that the proposed site driveway location provides insufficient sight distance for safe egress from the site.

We also reviewed other potential locations for a new driveway along the site frontage on Storrs Road. Shifting the driveway approximately 200 feet to the east will increase the sight distance looking to the right to approximately 900 feet, which comfortably exceeds the

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CTDOT criteria. Sight distance looking to the left is also improved to approximately 950 feet. This location would provide safer egress for vehicles turning left out of the proposed facility. Furthermore, this alternate driveway location would provide significantly better visibility for drivers approaching the site, allowing them to see the sign and driveway earlier as they approach. Construction of a driveway at this location would not impact the existing utility pole locations nor the existing guiderail, however would have increased wetlands impacts compared to the first location.

Based on the above sight distance analysis, Fuss & O'Neill recommends that the driveway be installed at the alternate easterly location, providing for safer access for visitors and improved visibility to signage. It may however be possible to work with CTDOT in the hope that they will allow access at the westerly driveway location. Given that the intersection sight distance is within 30 feet of the criteria and the driveway will have low traffic volume, it may be possible to obtain approval for the westerly driveway location, should it be deemed infeasible to construct the easterly driveway.

Moving forward, we recommend that the wetlands be flagged in order to accurately identify the potential impacts related to each driveway alternative. That information will allow you to make an informed decision on which driveway alternative is most appropriate.

Please feel free to call us if you have any questions or comments regarding the information provided in this letter. Thank you.

Sincerely,

Patrick Baxter, PE
Senior Transportation Engineer

Reviewed by:

Mark Vertucci, PE, PTOE
Senior Project Manager