

Inter-Office Communication



To: Gary Cochenour, PE
From: Greg Baird, PE
By: Patricia Wetzel, PE
Date: April 26, 2011
Re: SCI-139-1.66, PID 84964
Preliminary Engineering Study Comments

Greg Baird and Patricia Wetzel have reviewed the above referenced study dated April 2011 and offer the following comments:

1. The signal warrant analysis should include the right turn reduction procedure outlined in the ODOT Traffic Engineering Manual, section 402-5.
2. The signal warrant analysis should be based on a turning movement count. We would recommend obtaining 12 hours of data, typically 6AM – 6PM.
3. The 2010 crash data has not yet been finalized. We would recommend reanalyzing the data to make sure that nothing changed after 2010 data is finalized. This should happen sometime in May.
4. We recommend adding an alternative that analyzes adding a left turn lane for SR 139 Northbound without adding the left turn lane for Rosemount Rd.
5. The turn lane warrant graphs 401-5aE & 401-9E are only applicable to unsignalized intersections. Please see the excerpt from the L&D Manual Volume I section 401.6.1 below:

401.6.1 Left Turn Lanes

Probably the single item having the most influence on intersection operation is the treatment of left turn vehicles. Left turn lanes are generally desirable at most intersections. However, cost and space requirements do not permit their inclusion in all situations. Intersection capacity analysis procedures of the current edition of the Highway Capacity Manual should be used to determine the number and use of left turn lanes. For design software and guidance see **Appendix C**. For unsignalized intersections, left turn lanes may also be needed if they meet warrants as provided in **Figures 401-5a, b, and c**. The warrants apply only to the free-flow approach of the unsignalized intersection.

6. It was noticed that the 2-lane Left Turn Lane Warrant graph 401-5aE indicates that the left turn percentage for SR 139 Northbound = 69%, but the left turn lane calculations indicate the left turn percentage = 41%. Also, the point plotted on the graph does not seem to match the volumes written below the graph.
7. It is recommended that an analysis need to be performed to determine the appropriate phasing if the signal remains, specifically if the SR 139 northbound left turn should be protected, protected/permissive, or permissive only.
8. Pedestrian accommodations need to be analyzed for any alternative to ensure that the recommendations are in compliance with the ODOT policies.
9. Consider angling the wing wall on the Rosemount side and pushing the guardrail back on Rosemount Rd. to gain more useable length out of the box.

Please let me know if you have any questions or if you need any additional information. Thank you for the opportunity to review this.