Workshop Meeting Notes

Intersection Reconstruction at Twin Bluff Middle School and Crossing Improvements
Phase 1 - Intersection Concept Study

Meeting Date: February 23, 2016, 12:30 – 2:30
Red Wing Public Works, Conference Room

Present

K. Anderson - RW Public Schools
G. Grove – Stantec
K. Johnson – RW Public School
G. Morien-Stantec
C. Palmatier – RW Public Schools
J. Selkirk – First Student
T. Fidler – Stantec
D. Hove – RW City Council
M. Leise – Live Healthy RW
D. Munson – RW City Council
B. Peterson – Red Wing
J. Greenwood – Goodhue Co.
G. Isakson – Goodhue Co.
T. McLeete – Stantec
J. Owens – Red Wing
R. Rosenthal – Red Wing

Purpose

- Review efforts to date to improve roadway and crossing safety at Twin Bluff Middle School
- Present alternatives to reconstruct the intersection at Twin Bluff Road & Pioneer Road to improve traffic and pedestrian safety.
- Generate stakeholder discussion concerning traffic and pedestrian movements around Twin Bluff School and for intersection reconstruction alternatives. Identify benefits, concerns and preferences.

City of Red Wing plans to reconstruct the Twin Bluff Road & Pioneer Road intersection in 2017. Steps are being taken to move this project forward. A Phase 1 project is underway with Stantec to identify the preferred intersection alternative. The results from this workshop meeting and any follow up activities will be presented in a recommendation report to city staff.

Workshop Agenda

1. Introductions with representatives from City Council, City Staff, Red Wing Public Schools, Goodhue County, Live Healthy Red Wing, First Student and Stantec.
2. Stantec presented a brief summary of Safe Routes to School (SRTS) successful grants for planning and infrastructure development.
3. Stantec presented issues and recommendations resulting from previous SRTS planning studies.
4. A SRTS Infrastructure Grant was awarded to the City. Project estimate is $528,575 and is based on a T-intersection layout alternative.

5. City Staff wants to step back and confirm a preferred intersection layout. Workshop is designed to involve stakeholders to help with the decision process.

6. City and County share roadway responsibilities at this intersection. City will lead the project and coordinate planning and design activities with Goodhue County.

7. City performed traffic counts. Traffic modeling is based on these counts with time of year adjustments and projected increases.

8. Stantec presented four alternatives and traffic modeling for each. A) Double T, B) Double T (stretched), C)Single Roundabout w/T, D) Double Roundabout

Discussion Notes

1. School District is considering bus/parent entrance and exit changes at Twin Bluff. School referendum coming – could help finance a project. District is a willing partner in this project and will consider proposals that could impact school property.

2. Changes to the bus entrance and exit were discussed in the past and proposed changes would be considered.

3. Buses needing ADA accommodation use the north entrance. The lower entrance is typical for bus pickup/drop doesn't work with current grades.

4. Twelve buses are running this year. Range is 8-12 buses each year

5. Upper lot isn't set up to accommodate buses. Would need to be reconfigured.

6. Double T Alternative Discussion
    a. Probably least cost alternative
    b. Works for traffic flow now. Will see issues with traffic flow at peak times now and future with stop conditions on Pioneer.
    c. Eliminates some parking on Pioneer and Twin Bluff
    d. Eliminating street parking has some pedestrian safety benefits. Forces drop off on school property.
    e. Add pedestrian crossing at T intersection on Pioneer. Add RRFB

7. Double T Alternative (west T moved west) Discussion
    a. Still have traffic flow issues similar to first Double T Alternative.
    b. Stop conditions on Pioneer
    c. Slows traffic in the stretch between intersections
    d. Could consider no stop through at one of two T intersections on Pioneer (not preferred)
    e. Encroaches on school (ball field) property.
    f. Could consider left turn acceleration lane form south Twin Bluff on to Pioneer

8. Squared Intersection Discussion
    a. Would require large property impacts at all four legs.

9. Single Roundabout Discussion
    a. Could change bus entrance to bus exit. Would reduce current waiting to exit on Pioneer.
    b. Property impacts at NE side of the roundabout. Consider moving circle west. Could be a geometric issue with move. Might impact parking/grades on west side.
    c. Add RRFB to pedestrian crossing west side of T intersection on Pioneer Road.
    d. Consider restricting left turn from Twin Bluff on to Pioneer at T intersection. Force right onto roundabout. Not a lot of support this this. In heavy traffic could turn right and use roundabout as an option.
    e. Consider extending lanes to eliminate street parking. Benefits pedestrian safety.
    f. General agreement that traffic safety is improved and flows work.
    g. Pedestrian flashers in the roundabout? Not used
    h. Roundabouts are problems for visually impaired. Could add signage to notify drivers.
    i. Will a roundabout work with grades on Pioneer? Road grades increase significantly going west. Yes they should work fine. Have dealt with greater differences on other projects. Can also play with cross slopes to manage drainage.
    j. Could add $200-$300k to current project budget

10. Double Roundabout Discussion
    a. No Stop condition
    b. Most expensive
    c. Could design single roundabout now and add second in the future.

11. How could the roundabout option be financed? Could supplement current SRTS grant. Current grant is significant now, might be difficult to amend. Using federal funds adds complications and cost.

12. What experience does Stantec have with roundabouts near a school? Are there increased concerns for pedestrian (small child) safety? Anticipate this concern by parents and School Board. They are used effectively near schools. Will research this and provide information.

13. May want to consider a presentation to the School Board especially if roundabout is a strong consideration.

Follow up Items

1. Look at moving the location of the single roundabout west to reduce property impacts

2. Provide information about the use of roundabouts near schools

3. Provide better cost estimate information for roundabout alternative

4. Participant to provide comments on and ranking of alternatives within one week.

Workshop Follow-up Notes

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Follow-up Items:

Meeting notes and PowerPoint presentation attached for reference

1. Look at moving the location of the single roundabout west to reduce property impacts.

Drawing is attached. Circle was moved west. Potential impact to the parking lot and retaining wall may be needed to manage grade differences. Bus entrance changed to exit based on meeting discussions, but could be changed back to an entrance too.

VISSIM model available as .AVI video clip and is located on project .FTP site.

2. Provide information about the use of roundabouts near schools.

See the attached and following links:

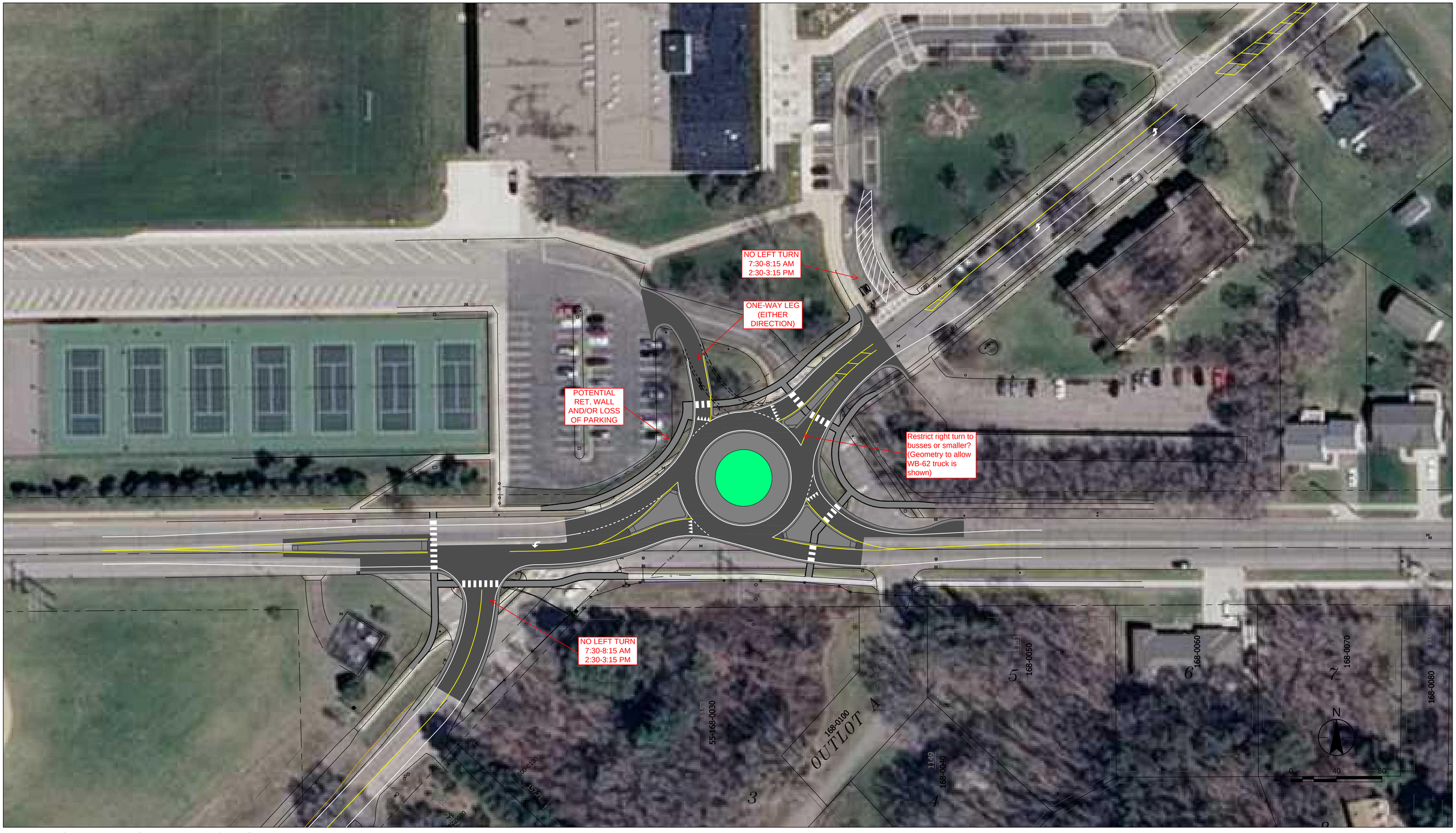
http://www.roundaboutresources.org/roundabouts-near-schools.html

http://guide.saferoutesinfo.org/engineering/roundabouts.cfm

http://pedbikesafe.org/PEDSAFE/casestudies_detail.cfm?CM_NUM=25&CS_NUM=49

http://www.dot.state.mn.us/roundabouts/index.html

http://www.dot.state.mn.us/metro/projects/hwy61and97/



ROUNDABOUT AND SINGLE TEE

CITY OF RED WING

SRTS - INTERSECTION CONCEPT STUDY

FIGURE 2

DATE: 2/23/2016 PROJ. NO.: 193803461

Stantec
2335 Highway 36 W
St. Paul, MN 55113
www.stantec.com

Plot Date: 02/25/2016 - 2:55pm
Drawing name: V:\1938\active\193803461\CAD\Dwg\193803461_PG2.dwg
Xrefs: 193803461_XSV2; 193803461_XSV1; 193803461_XSN02; 193803461_XPNO2

Wisconsin Roundabouts Calm Traffic, Improve School Zone Safety

Location

Green Bay, Wisconsin
(Central United States)

Implementation Stage

- Planning
- Design
- Construction

Roundabout Type/Setting

Single and multi-lane roundabouts

Target Audience

- General Public
- Elected Officials
- School Officials

Strategies Employed

- Meetings with the public
- Field trips to the roundabout site
- An easily adaptable PowerPoint presentation
- A follow-on study comparing before and after statistics and conditions

> "People were expecting *European Vacation* [the movie]. They had never seen what we were talking about."
>
> – Cole Runge, Brown County Planning Commission

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Background

In 1999, the intersection outside of a Green Bay, Wisconsin, metro area elementary and middle school complex located near a major highway had become a problem. As traffic volume on the adjacent highway grew, local officials became concerned about vehicle speed. The county sheriff got involved, and eventually the community decided to prohibit children from walking and biking to school out of concern for their safety. Plans to build a new high school on the same road were also underway, which exacerbated local residents' safety concerns.

Local Brown County officials had the option to expand the highway to four lanes to accommodate projected growth, adding turn lanes and traffic signals, but transportation planners and local residents feared this option would make the school zone less safe. The Brown County Planning Commission recommended constructing two simple roundabouts to calm traffic in and around the school zones and improve safety and access for pedestrians and bicyclists. But local residents, unclear about how a roundabout intersection would work, were vocal in their opposition. A concerted effort to obtain public support for these school zone roundabouts was needed.

Approach

Once transportation planners settled on roundabouts as the best option for enhancing the safety and traffic flow of the school zone, they approached the schools' administrators and the local school board to explain what they wanted to do, how a roundabout intersection would work, and why they believed it was the safest and best option. Planners addressed their concerns, answered their questions, and obtained their valuable support, which helped pave the way for a public announcement about the plan.

However, even with this support, local residents resisted this unfamiliar intersection alternative. It quickly became apparent that most of those who objected believed that roundabouts would increase congestion and possibly cause even more crashes, endangering students. There were also several objections based on weather concerns: Green Bay averages nearly 50 inches of snowfall per year, and many residents were concerned whether the roundabout could be maintained during severe winter weather.

To address the multitude of concerns and misunderstanding regarding roundabouts, transportation planning officials visited the elected bodies of the affected communities and held public meetings, inviting residents to come and voice their concerns. For these meetings, the County provided knowledgeable transportation planning and engineering representatives, who educated local residents about the dramatic safety benefits of roundabouts. They shared roundabout experiences from other locales, such as Vermont and Colorado, that have similar winter climates, which the residents accepted as relevant, "apples to apples," comparisons.

Planners also brought visual aids to explain the differences between roundabouts and traffic circles, which turned out to be extremely useful. By walking through the

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May 2011

Figure 1: Overhead view of the second Lineville Road roundabout, neighboring a local school complex (in lower left corner).

Lessons Learned

- Be prepared. Before approaching any individuals or groups, anticipate questions and concerns and have the information needed to address them.
- Don't reinvent the wheel. Roundabouts have been used more frequently in the last decade, and many localities have studied various safety aspects of roundabouts. There are a lot of statistics available from areas similar to those where roundabouts are being considered.
- Perseverance through educational outreach is important.
- Create an image of what the reconstructed intersection will look like without a roundabout. When people see pictures of a roundabout versus the multilane signalized intersection alternative to accommodate the same level of traffic, they often start to reconsider the value of a roundabout.

Learn More

Cole Runge

Principal Planner/MPO Director
Brown County Planning Commission

920.448.6480
runge_cm@co.brown.wi.us

Jeffrey Shaw

Intersections Program Manager
FHWA Office of Safety

708.283.3524
jeffrey.shaw@dot.gov

differences between roundabouts and traffic circles, the County succeeded in shifting public perception, and residents became supportive.

As the roundabouts began to take shape during construction, Green Bay planners shuttled groups of students and school officials to the construction site, allowing them to walk through the new intersections and discussing how they were going to work. The Planning Commission videotaped the "before" intersection and the "after" intersection and developed a video to be used for subsequent roundabout outreach in the State.

Results

Brown County's outreach efforts paid off: Since 1999, Brown County, the Wisconsin Department of Transportation, and the county's communities have built 26 roundabouts in the county, and the county and its partners plan to build at least 33 more within the next 6 years. While many people initially confused roundabouts with traffic circles, the concerted effort to educate the public and clarify key misunderstandings helped the county successfully gain public support. Targeting the school board and administrators whose schools were affected by the change, as well as local residents and elected officials, was gutsy but effective. Once construction was completed, the increased safety results spoke for themselves.

A follow-up study conducted in 2001 showed that at one of the roundabout locations, the number of vehicles entering the intersection increased from 5,600 per day in 1998 before the roundabout construction to 10,800 per day in 2001, and yet crashes and injuries decreased significantly, from an average of three crashes and five injures per year during the 1996-1998 period to no reported crashes between August 1999 and October 2001.

The sheriff's department was so pleased with the safety improvements and speed calming effects from the roundabouts that, in 2000, the previous prohibition policy was reversed, allowing students to walk and bike to school.

Outreach Investment

The cost of the outreach effort, relative to the cost of implementing the roundabouts, was very low. There was a small investment in slides and staff labor for presentations, but aside from labor, there were very few additional investments.

Related Products

General Information Website
"Roundabouts and Traffic Calming,"
http://www.co.brown.wi.us/departments/page_925e870c916d/?department=2317176c7f00&subdepartment=b4d10bb9388e

Presentation
"Pedestrian Safety at Roundabouts Presentation for Howard-Suamico School Board,"
http://www.co.brown.wi.us/i/f/export/file/Ped%20safety%20at%20roundabouts%20for%20HS%20school%20board%20-%20November%2026,%202007.pdf

Video
Lineville Road Roundabout Footage
http://www.public.applications.co.brown.wi.us/Plan/PlanningFolder/Video/Roundabout/Roundabout_All.WMv

Study
Lineville Road Roundabout Study
http://www.co.brown.wi.us/i/f/export/file/lineville_roundabout_study.pdf