

Do Your Intersections Have You Driving in Circles?

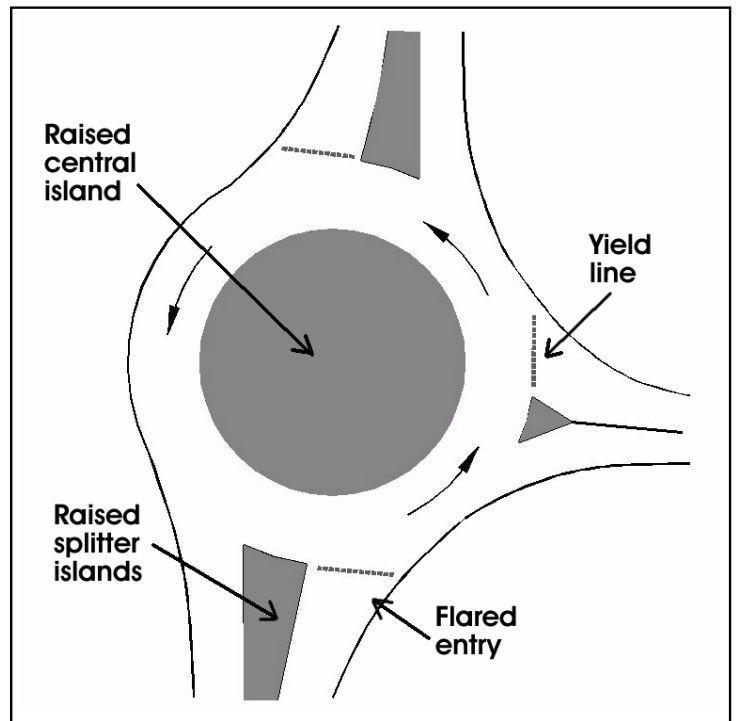
Many communities in western Wisconsin face increased traffic congestion due to rapidly growing populations and increased commuter traffic due to the proximity of the Minneapolis-St. Paul Metropolitan area. Traffic delays can negatively affect commerce, the environment, and quality of life. Innovations that will enhance traffic flow, ultimately leading to reduction of congestion, should always be considered when designing any transportation system. The roundabout is the newest form of intersection in the U.S. easing congestion at intersections once clogged with traffic.

Roundabouts are circular intersections with specific design and traffic control features. These features include yield control of all entering traffic, channelized approaches, and appropriate geometric curvature to ensure that travel speeds on the circulatory roadway are typically less than 30 mph. Several roundabouts are already in operation in Wisconsin and others are in the planning stages around the state.

Roundabouts have distinct characteristics that deserve consideration as one alternative to ease traffic congestion and to improve traffic flow. Roundabouts provide increased safety by reducing conflict points where accidents can occur and offer lower costs due to reduced electricity and maintenance when compared to operating a traffic light. Roundabouts usually encounter reduced delays in travel time from yielding rather than stopping and waiting for stop light signal changes which allows for a more environmentally friendly intersection.

Good roundabout design places a high priority on speed reduction and speed consistency. Such designs require that vehicles negotiate the roundabout through a series of turning maneuvers at low speeds. According to Wisconsin Department of Transportation, roundabouts provide safe and efficient traffic flow with a 90% reduction in fatal crashes, 76% reduction in injury crashes, 30-40% reduction in pedestrian crashes, and a 10% reduction in bicycle crashes.

Getting through a roundabout safely and correctly is a lot easier than it looks. As drivers enter a roundabout, they don't stop. Roundabouts move traffic in a counterclockwise circle. When drivers approach a



This example of a three-way roundabout illustrates the basic concept of how all roundabouts function to ease traffic congestion.

roundabout, they yield to traffic coming from the left and enter the roundabout by turning right.

When using roundabouts it is important to remember to **approach slowly**, watch for traffic signs, yield to pedestrians and bicyclists, and be prepared to stop. Always **enter to the right**, yield to circulating traffic on the left, and do not stop if the way is clear. A left turn can be completed by traveling around the central island. The roundabout is designed for travel in a one-way direction around the central island to maintain traffic flow and for traffic to always **exit to the right**.

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Village of Baldwin Solves Longtime Flooding Problems

Most communities in this part of the country have experienced some degree of flooding due to heavy rainfall or spring thaws. The Village of Baldwin is no exception. In August 2001, Baldwin was deluged with rain, resulting in extensive flooding in the downtown and residential areas, as shown on the right.

After coping with varying degrees of flooding and related sewer system backups for many years, the Village decided to undertake a \$1.2 million storm water management project. The project began with a study of both the storm sewer and sanitary sewer systems, which determined that both systems needed major improvements.

One problem with the existing system was insufficient capacity in a storm water detention basin. To prevent future overflows, the capacity was doubled to 7 1/2 acre-feet of storage. The photo below shows the new storm water detention basin with an outfall structure in the lower left.



Expanded storm water detention basin doubled the storage capacity.

Another problem was the way in which storm water was being routed through the downtown and adjacent residential areas through pipes with insufficient capacity. To alleviate this problem, the Village received permission from Union Pacific Railroad to install storm sewer and sanitary sewer along railroad tracks that bypass the downtown and residential areas and direct storm water into a long drainage ditch leading to Rush River.

Rush River is an exceptional water resource and one of the finest trout streams in the Midwest. The Village is now able to better protect Rush River by limiting the amount of sediment, controlling peak flows, and limiting storm water pollutants discharged into the river.



August 2001 flooding in Baldwin, which resulted in damage to homes and temporary closing of U.S. Highway 12.

Altogether, the Village installed 3,000 ft. of new 60" storm sewer and replaced 1400 ft. of existing storm sewer with 48". In addition, the Village reconstructed the watermain on Newton Street, which is located in the central part of the Village adjacent to the well, while the street was under construction. These improvements all successfully contribute to the Village's plan to effectively manage storm water.

In order to help finance the cost of the storm sewer and sanitary sewer system improvements, the Village applied for and received a Community Development Block Grant in the amount of \$350,000, and utilized low bonding rates for the remainder.

The Village's successful implementation of this storm water management project will protect residents' health and property, and also protect Rush River from excessive storm water pollutants.

The editor of *The Baldwin Bulletin* confirmed the success of this project in a recent column: "When was it we received between three and four inches of rain? Either Tuesday or Wednesday, I think. Anyway, where was the usual street flooding in Baldwin? Well, it seems like there wasn't any in the usual locations. Can that be an indication that the new storm sewer is successful? I think so. Isn't that great news!"

Tom Hawley, Editor
The Baldwin Bulletin

If you would like further information regarding the Baldwin Storm Water Management Project, or would like to discuss flooding issues and grants for your community, please contact Mike Stoffel at Cedar Corporation at 715-235-9081 or 1-800-472-7372.

A Storm Water Utility Provides an Equitable Way to Recoup Stormwater Management Costs

The management of storm water is rapidly becoming one of the most important issues facing Wisconsin municipalities. Recent changes in state law now require the comprehensive management of storm water, which means municipalities need to consider new approaches to implementing and paying for the cost of storm water management.

The complexity of storm water management is increasingly dictating the creation of a public utility to regulate storm water in a similar manner as water, sewer, and electric utility systems are regulated. Any city, village or town may create a storm water utility.

Advantages of a Storm Water Utility

Organizational Efficiency: A stormwater management utility provides the structural mechanism for the proper management of storm water. Anticipated expenditures can be better analyzed and implemented within the structure of a separate municipal utility rather than as a part of general municipal operations.

Guaranteed Funding: Through the establishment of user fees, a municipality can create a consistent and ongoing source of revenues to fund the operations of the utility.

Equitable Cost Sharing: When a storm water utility is created for the entire municipality, all property owners pay a user fee based on an equitable formula.

Two Approaches to Determining Boundaries for a Storm Water Management District

A storm water utility is created based on a geographic district referred to as the storm water management district. One approach to creating a storm water management district is to include the whole area which comprises a storm water watershed. This would be the most effective tool in providing comprehensive management of the entire watershed. However, a common difficulty is that the storm water watershed usually includes areas located within several different municipalities. Being able to garner the cooperation and support from one or more adjoining towns in establishing a multi-jurisdictional storm water management district may not always be feasible.

The second approach is to create a storm water management district entirely within the boundary of the municipality. In following this approach, the municipality is the only entity in control of management. Consequently, it is easier for the municipality to create management policies, establish user fees, collect the fees, and amend or modify utility management practices.



The cost of constructing and maintaining storm water detention ponds such as this one, can be covered by user fees charged to all property owners through a storm water management utility.

What to Consider in Establishing User Fees

After creating a capital improvements plan for present and future expenditures, the storm water utility would establish the method of distributing costs throughout the municipality through user fees.

User fees are typically based on both the quantity and quality of storm water runoff. All properties within the district, including schools, churches, residential, commercial, and industrial properties are subject to the user fee.

The primary method of applying the user fee is through the use of an Equivalent Residential Unit (ERU). An ERU represents the impervious area of a typical single family residential lot (driveway, rooftop, or other non-porous surface area). Other property classifications, such as multi-family residential, commercial, industrial or institutional, are assessed a user fee based on the number of ERUs of relative impervious area for that property classification. For example, an industrial or commercial property with a large rooftop and parking lot would be assigned several ERUs as a basis for their user fee.

Although there is no specific formula for assigning ERUs to different property classifications, there are generally accepted criteria that municipalities typically use.

If you would like additional information, please call Russ Kiviniemi at 715-235-9081 or 1-800-472-7372.

Roundabouts, continued

Many issues influence the amount of economic investment necessary for any type of intersection. Costs associated with roundabouts include construction costs, engineering and design fees, land acquisition, and maintenance costs. According to the Insurance Institute for Highway Safety, roundabouts are less expensive than intersections controlled by traffic signals. Environmental and aesthetic benefits also add to the attraction of this type of intersection.

Roundabouts cut vehicle emissions and fuel consumption by reducing the time drivers sit idling at intersections, and

landscaping on the islands replaces the asphalt of conventional intersections offering visual appeal. Roundabouts can also create visual gateways to communities or neighborhoods, and in commercial areas they can improve access to adjacent properties.

Cedar Corporation recommends that a thorough analysis be completed and compared to other alternatives before a roundabout can be selected for an intersection. To determine the appropriate solution for your community, or for further information about roundabouts, please contact Mike Stoffel at 715-235-9081 or 1-800-472-7372.

Asbestos Regulations Apply to Training Burns, Demolition, and Renovation

Asbestos is a naturally occurring mineral and a known human carcinogen with no safe level of exposure. Commonly used in the mid 1900's as fireproofing, thermal insulation, and a strengthening agent in cement products (siding), roofing shingles, felts, floor tiles, vinyl flooring, adhesives, caulks, joint compounds, and sheetrock; asbestos is found in literally hundreds of products.

Although, regulated since 1971 as a hazardous air pollutant, a common misconception is that asbestos is no longer used in new construction or renovation. However, asbestos containing materials are still imported into the U.S. market.

The Wisconsin DNR requires an asbestos assessment and report to be completed along with a permit and fee for most building demolition or renovation projects, independent of the structure's age. If the asbestos assessment determines the presence of asbestos-containing materials, these materials may require abatement (removal) prior to the commencement of any demolition or renovation. Asbestos products which do not require removal prior to demolition must be properly disposed of in a licensed landfill. Also, any structures which are used for fire training burns require all asbestos products be removed for proper disposal.

Not sure if these regulations apply to you? Cedar Corporation can answer any questions and conduct asbestos inspections as part of your project. We can assist with completing the necessary documentation and work with the Wisconsin DNR to obtain any necessary permits. Please contact Rick Bilodeau or Mitch Evenson for more information at 715-235-9081 or 1-800-472-7372.

Mold, Is It Really Toxic?

See our next edition of Cedar Commentary for important information on mold. Cedar Corporation conducts indoor air quality (IAQ) assessments, including mold investigations and removal. Contact Rick Bilodeau at 715-235-9081 or 1-800-472-7372 if you have questions.

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