



Volume X
Number 4

BY DESIGN

Priority: Transportation

Increased State & Federal Funding Builds Momentum for Airport & Highway Upgrades



Recent allocations by Congress and the Minnesota State Legislature bode well for the people of Minnesota.

At the state level, the 2000 Legislature allocated approximately \$560 million to the Commissioner of Transportation to advance highway projects all across Minnesota. This new funding will help accelerate ten metro-area construction projects and twenty-two construction projects in greater Minnesota. Funding has also been allocated to create management plans for seven interregional highway corridors in greater Minnesota.

Nationally, recent signing of the Aviation Investment and Reform Act (AIR-21) by President Clinton has made available \$40 billion for investment in airport infrastructure throughout the United States.

Ron Roetzel, Manager of Bolton & Menk's Transportation Group, says these actions will have a significant impact on Minnesota cities,

"The **Interregional Corridor System Planning Project** will better connect regional trade centers and

customers. Safety, improved travel time and better access are issues that will be addressed primarily through improved intersection design and traffic controls."

According to Mn/DOT, the project's purpose is to strengthen regional highway corridors so that people will be better linked with jobs, distributors with manufacturers, shoppers with retailers, and tourists with recreational opportunities. Other concerns are safety, environmental preservation, integration of other modes of transportation, and proactive management of routes that are expected to see traffic volumes double by the year 2020.

Approximately 2% of the state's highway miles are included in the project; those highways carry nearly one-third of all vehicle miles traveled.

Elwyn Tinklenberg, State Commissioner of Transportation,

has emphasized that the project represents a fundamental change in the way the state looks at transportation projects.

"Instead of projects being divided by county or city lines, we're looking at key transportation corridors as a whole. Communities will work together to determine their transportation needs and how to address them."

Mn/DOT officials have stated that projects will be aggressively moved to completion by June 30, 2003. A carefully outlined management plan will facilitate the schedule.

Bolton & Menk, Inc. has been selected to redesign the intersection of Highways 169 and 19, and is also working to secure funding for

Transportation
Continued on page 3



New Employees Bring Experience

Manhart Joins Transportation Group



Stephen Manhart joined the staff of BMI's Burnsville office, Civil Division, bringing nearly twenty years of traffic and transportation engineering experience to the firm.

Steve Manhart

He is a registered profes-

sional engineer with a Bachelor of Science Degree in Civil Engineering from the University of Kansas, as well as a Bachelor of Arts Degree with Distinction in Geography from the University of Colorado. He is very experienced in assisting municipalities in developing and accomplishing a variety of transportation engineering projects including: transportation planning analysis, traffic operations and maintenance, access management, permanent and temporary traffic signal design, work zone traffic control, traffic corridor management, and Surface Transportation Program applications.

Most recently, Steve worked for five years as the Assistant Traffic Engineer for the City of Bloomington, Minnesota. While in Bloomington, Steve successfully secured nearly \$14 million in federal funding for city roadway projects. Steve is also a recognized leader in the transportation profession. He is now serving as the Vice President of the North Central Section of the Institute of Transportation Engineers (NCITE), a significant professional organization for transportation engineers in the three-state area of Minnesota, North Dakota, and South Dakota. In 2001, Steve will assume the office of President of NCITE.



Fairmont Downtown Plaza Project Receives Concrete Paving Award

The reconstruction of Downtown Plaza in Fairmont, Minnesota has received an award for outstanding concrete paving during the 1999 construction season from the Aggregate and Ready Mix Association of Minnesota. The award was received by H & W Contracting of Sioux Falls, prime contractor, HCI of Mankato, concrete sub-contractor, Bolton & Menk, project engineer, and the City of Fairmont, owner.

The project consisted of total reconstruction of five blocks of downtown business district including underground utilities, four blocks of concrete pavement, one block of bituminous pavement, paver walks and nodes, a downtown park and plaza area, new lighting, plantings, and other amenities.

Project planning and lighting design was completed by city engineering staff. Detailed design and construction contract administration was provided by Bolton & Menk. In addition to serving as direct, on-site liaison with affected downtown businesses, Bolton & Menk also coordinated public communications for the project through the media, Chamber of Commerce and City.

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Offices:
515 N. Riverfront Drive
Mankato, MN 56001-3499
Phone 507-625-4171 FAX 507-625-4177

219 North Main Street
Fairmont, MN 56031-1833
Phone 507-238-4738 FAX 507-238-4732

140 First Avenue North, P.O. Box 434
Sleepy Eye, MN 56085-0434
Phone 507-794-5541 FAX 507-794-5542

1515 East Highway 13
Burnsville, MN 55337-6857
Phone 952-890-0509 FAX 952-890-8065

bmi@bolton-menk.com

316 Fourth Street Southwest
P.O. Box 895
Willmar, MN 56201-0895
Phone 320-231-3956 FAX 320-231-9710

2730 Ford Street, P.O. Box 668
Ames, IA 50010-0668
Phone 515-233-6100 FAX 515-233-4430

108 North Water Street
Liberty, MO 64068-1787
Phone 816-792-5100 FAX 816-792-2133

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Buffalo Simplifies Utility Management with GPS/GIS Inventory



Faced with rapid community expansion and daily calls for information about the city's infrastructure, the City of Buffalo began a complete electronic inventory of its water and sewer system in 2000. Led by City Engineer Brad DeWolf, of Bolton & Menk, and Buffalo's Senior Engineering Technician, Jeff Swenson, the project team utilized Global Positioning System (GPS) and Geographic Information System (GIS) technologies to facilitate the process.

GPS and GIS technologies are relatively new to cities as a means of collecting system data. They promise to enhance and simplify record-keeping and system management. Swenson says the vision is to "add intelligence" to maps with accurate, complete data that's available instantly on the computer.

"Envision a field manager with a laptop and a GPS unit in his truck. He can locate a manhole and access all the data he needs for maintenance right there — no extended search for off-street manholes, no paper, no extra trips. The size, material, condition, location, and age of the manhole is at his fingertips."

This convenience and accuracy begins with use of GPS as a surveying tool. GPS coordinates are used to create accurate, computer-

ized maps. Descriptive data is entered as collected in the field, as maintenance is performed, or when more information becomes available. Field data entry is a plus, Swenson says, because it's efficient, and because parameters can be set to reduce entry errors.

DeWolf lauds the computerized system as smart, safe, and easy to back up for duplicate storage, as compared with more unwieldy paper records. In his experience, benefits are also evident when a developer wants to add on to a current system, or when emergencies arise. The comprehensive, accessible information is also a significant asset in the development of a city's long-range capital improvement plan.

Currently, the City of Buffalo is using its GPS/GIS data to put together a maintenance project that will eliminate small or non-water-tight manhole lids from its wastewater system. The goal of the project is to minimize treatment of stormwater, and thus reduce costs. Swenson says this is a project that would not have happened without the GPS/GIS system, as the location of manholes in need of repair, among 1200 in the system, would be daunting without it.

"It helps us focus on projects that bring us a return," he explains, "and the benefits will multiply as we customize the system software and make it easy to use in the field."

Bolton & Menk has recently added services and reorganized transportation personnel to better meet our clients' needs. Our services include:

Surface Transportation (Highways & Streets)

- Preliminary Design
- Final Design
- Right-of-Way Plans
- Construction Staging Plans
- Signing & Striping Plans
- Environmental Assessments, Project Memorandums & others following the Highway Development Process
- Construction Management
- Funding Coordination (State Aid & TEA-21)

Traffic & Operations

- Site Impact Studies
- Signalization (including Justification Reports, Design, Layout, & Coordination)
- Geometric Layout & Capacity Analysis (Intersection & Roadway)
- Traffic Calming & Traffic Control Analysis
- Signing & Striping Layouts
- Street Lighting & Layouts

Planning

- Corridor Studies
- Transportation Plan Studies
- Site Impact Studies
- Parking Studies
- Traffic Calming Studies
- Volume Studies (including ADT for State Aid needs)
- Traffic Control Warrant Analysis

Airports

- Master Plans & Airport Layout Plans
- Environmental Assessments
- Airport Zoning
- Design & Construction Documents for Federal & State-funded Projects
- Construction Management
- Funding Coordination (State Aid & AIR-21)

AIR-21 Offers New Opportunity for General Aviation Airports

Transportation

Continued from page 1

the City of Jordan and Mn/DOT Metro Division to continue planning improvements for the intersection of trunk highways 169 and 282.

Bolton and Menk has recently been selected by the City of Willmar to perform an analysis of nine signalized intersections along First Street. The analysis will evaluate the existing operation of the traffic signal systems within the corridor, provide improved signal timing plans, and provide recommendations for any interim and future signal system and intersection improvements.

AIR-21, the Aviation Investment and Reform Act, represents a \$10 billion increase in federal funding for airport infrastructure improvements during the next three years. As part of the total \$40 billion package, the general aviation airports receive dedicated funds at twenty percent of their CIP, capped at \$150,000 annually. This, in the words of Bud Schuster, chairman of the House Transportation and

Infrastructure Committee, "will at last give our aviation system the help it needs."

He explains, "With AIR-21, the money the traveling public pays in ticket taxes will finally be dedicated solely to improving the safety and efficiency of our aviation system. This legislation goes a long way toward relieving our overburdened aviation system without raising taxes."

Most AIR-21 funding is earmarked for air-side improvements and much-needed airport construction projects. All sectors of the airport and airway system will benefit; funding will have an impact on passenger safety, the environment around airports, and competition between airlines.

In Minnesota, estimated funds will increase to \$17 million from a previous allocation of \$8.4 million. This is a good time for Minnesota cities to indicate which projects they would like to pursue. More information is available from Ron Roetzel, Manager Bolton & Menk Transportation Group (952-890-0509, or ronro@boltonmenk.com).

Comfrey Sees the End of Tornado Recovery



In Comfrey, Minnesota, recovery from the 1998 tornado is almost complete. Forced by nearly total destruction to

reassess use of facilities within the community, rebuild structures, and invest in improved public infrastructure, the City now looks ahead to years of stability and a return to the rhythms of small town life.

Bolton & Menk's Andy Kehren, Comfrey's City Engineer, says that because the storm struck during March, when road restrictions are in effect, the investment in street repair and utility improvements was significant.

"All the heavy equipment used for the initial clean-up of debris took it's toll on streets," Kehren explains. "They were literally destroyed. Because the streets had to be totally rebuilt,

it made sense to assess the condition of the infrastructure under the streets before construction took place."

Comfrey's sanitary sewer system was evaluated using televised data. Crushed clay tile pipes were discovered, and the decision was made to reconstruct a large part of the system. Kehren says, however, that in the scheme of things, streets were not the number one priority.

"At first, assistance to residents was the primary concern. Then, as it became possible, we assessed the condition of city structures and helped secure funding for repair and improvement of utilities. Streets came last. They were completed in October of this year."

Comfrey residents have experienced radical changes since the tornado, changes Kehren says have been challenging.

"When you look at what these people have experienced, it's hard to find a silver lining. But they've done their best to turn the disaster into an opportunity to reorganize and maximize efficiencies. They're now using a new school that includes day care and a public library. The community center, City offices, emergency services and Post Office have been combined into one facility. They've also tackled some tasks that may have been considered before, but not undertaken. And the street and utility improvements are good for the next seventy-five years."

Comfrey City Clerk, Linda Friesen, says one small project is yet underway, but that people are essentially moving on.

"Every day, the new streets and church remind me that we're approaching a 'new normal'. It's a good feeling."

www.bolton-menk.com

Attn. Circulation
515 North Riverfront Drive
Mankato, MN 56001-3471

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