Ten commandments for working with your county board

In a session on how county engineers can and should communicate with their county boards and the media, the first speaker caused quite a stir. “Our first speaker,” moderator Charles Cadenhead said, “is an author, shepherd, law-giver, and prophet. He was born in 1391 B.C. and spent most of his career in the Middle East where he encountered burning bushes and helped people cross the Red Sea. In his modern engineering career, he has dealt with burning issues and turbulent political waters—and has wandered the county highway department for 24 years. And here he is to present the 10 commandments for dealing with your county board—Moses!” At that point, Washington County, Minnesota, county engineer Don Theisen entered the room from the rear with great ceremony dressed in a “Moses” costume complete with flowing beard, hooded cloak, and a pair of Styrofoam “stone” tablets.

But Theisen was serious about his message. His 10 commandments for working with county boards are:

1. Establish a good relationship with your county board members. Learn their wives’ (or husbands’) names and their dogs’ names. In fact, establish good relationships with everyone else too because you never know who your next county board member will be.

2. Always be available to any county board member. Your staff knows that any time a county board member or county administrator calls, they are to interrupt you—pull you out of the meeting—and that goes 24/7.

3. Never embarrass a board member in public. Sooner or later, every board member will say something wrong. Unless someone’s going to die as a result of that, you can always correct the board member in private. If needed, explain why a board member can’t attend a meeting and say he or she is very interested in the topic and you’ll update them later.

4. Don’t ever speak negatively about a board member—not even in private. In fact, there’s no such thing as a private conversation in this day and age. Even if they insult you, take it professionally—not personally. Rise above it. If you go around saying you work for a bunch of idiots, what does that say about you?

5. Always give thanks and praise to the board. If a resident thanks you, say it was the board that made it possible. Agree with board members before the meeting that, if a
sticky issue goes a certain way, you’ll wear the black hat and let them wear the white hats.

6. Never ask the board what to do on an engineering issue. If you don’t want the board to run your department, don’t ask them to do it. The trick is to frame engineering decisions as policy issues. If there’s a sticky issue like a driveway permit you don’t want to grant, avoid focusing on that particular permit and make the discussion about the overall policy on access to roads.

7. Treat every complaint before the board as a top priority—and if you solve it, let the board member pass on the good news. When the board sends you a constituent’s complaint, always start the call to the constituent by saying “I’m following up on your discussion with Commissioner Smith.” And the faster the better! Respond the same day and at least tell the resident you’re working on it and when they can expect a complete response.

8. Provide the board with professional recommendations. Give them the professional pros and cons. And do it in a way that your neighbor could understand. Don’t tell people we build the roads this way because that’s the standard. Tell them we do it because, when Johnny goes off the road, we don’t want him to hit a power pole that will kill him. Always tell them a story.

9. Learn that you don’t need to respond to every comment. Let the bad ones go by, and let the board bask in the good comments. You also need to know when they’ve bought your milk so you don’t need to try to sell them the cow. Just let that vote be taken, and move on.

10. Never allow a bad vote to be taken. If you know you don’t have the votes, find a way to defer the vote to a later meeting. Say, “The board has asked good questions about this—and they’re still unanswered, so I’d be glad to come back at a future date with better information on this important issue.” Then work behind the scenes. Once a vote has been taken, it’s hard for officials to switch their votes.

Working with media

The next speaker, MnDOT director of communications Kevin Gutknecht, had a tough act to follow, but he held everyone’s attention with useful ideas about how to work with the media.

He observed that Americans think the news media are useful and important—but that they also think the media are more influenced by powerful interests than by what’s good for society. “And people think the local media [are] more trustworthy than national media. So when you need to communicate with the public, ask yourself, ‘Who serves the public that I want to reach—a reporter from the local newspaper or one from a national media outlet?’”

He also pointed out that, “With today’s competitive 24/7 news cycle, you have to get the news out fast or it might never get out at all—and that means you may need to compromise on depth of information in order to be heard. The good news is that the media crave information about transportation, and that puts us in a strong position because we’re the best source. But each reporter wants to find a different angle on the story. So you’ll be questioned more—and in fact, your credibility might be questioned.”

Next Gutknecht asked the rhetorical question, “What makes news news?”—and answered his question twice: as seen by the media themselves and as seen by the public. “The media care about proximity; they’re mostly interested in what happens in their immediate vicinity. Also, they’re looking for conflict. If someone opposes you, that’s when it becomes news. And the media’s favorite conflict is one between a homeowner and government.” From the public’s perspective, he said news means issues that are about money. “So they’re very interested in snowplowing, road construction, speed limits, and litter.”

Communicate to the public through the media

Gutknecht said the job of the county engineer is to provide the media with clear, accurate, timely, and consistent information—because “that’s how you can help inform, educate, and involve citizens. That’s why it’s critical to the success of your agency to have good working relationships with the media.”

“When you need to give out information, the first decision is: Who’s going to handle it? A staff member? You? Or some other subject-matter expert? Next, decide how to communicate. And today, you have to develop both a traditional media strategy and a social media strategy. Will you get the news out by phone, e-mail, or by holding a news conference? Or should you use Facebook, Twitter, or YouTube? News releases are a good option because they allow you to send complex information to several media outlets simultaneously. At MnDOT, we’ve found that Twitter is a good way to send out our news releases. And YouTube has changed the nature of TV and video because it allows stories to remain available for extended periods.”
Choose the right medium for the message
Gutknecht characterized the various types of media that might want to interview an engineer: “The nature of TV makes reporters hungry for action. Also, they’re usually working on short deadlines. If you want to provide in-depth coverage of an issue, local cable TV is a good option. It’s a natural for transportation and transit projects.”

Next Gutknecht pointed out that, in general, TV and print media are talking to different audiences. “People who read print media usually have more advanced education,” he said, quoting a 2009 study by the consulting firm iMedia Advisory. “Print can give you more in-depth treatment and it automatically lends a certain weight to the content. And their stories tend to stick around longer.”

“While print media are having trouble surviving, radio is doing great,” he continued. “About 85 percent of people 12 years or older listen to radio every day. They typically listen to several stations, tuning in for short periods of time. Radio stories have less impact initially; you tend to forget the content because there’s always another story right afterwards. But the audience tends to be captive—often in the car.”

Control the interview; don’t be controlled
To illustrate how not to be interviewed, Gutknecht showed a video clip from The Bob Newhart Show in which Dr. Hartley is cajoled into an interview by a flirty TV host who proceeds to reveal herself as a diabolical attack journalist. The moral of the story, Gutknecht said, is to decide if it’s a good idea to allow yourself to be interviewed in the first place. Then he provided tips on how an engineer can maintain control when being interviewed.

Before the interview
“Be prepared! Contact your public affairs person, information coordinator, or other department heads for background on the reporter or the media outlet—and arrange to have those colleagues present during the interview. Be sure to inform your organization that you’re going to do the interview. When setting up the interview, ask the reporter what the scope will be—and who else has been interviewed—and what the deadline is. On TV, think about where you want to be interviewed and pay attention to the background of the camera shot. Get out of your office; you look like a bureaucrat there. Be interviewed where there’s action, like a job site. To prepare yourself, answer these questions: Why am I conducting the interview? Who is my audience and why do they care? How will information affect them?”

During the interview
Gutknecht provided excellent ideas on how to maintain focus during an interview:

- Keep it simple and brief; remember, they may only use a few seconds of what you say. Make it so your brother the art major can understand it.
- Prepare three main points that you want to get across and weave them throughout your answers.
- When you’ve answered the question once, stop talking.
- Avoid negative information; turn a negative question into a positive. To achieve that, talk about benefits, not features; for example, tell them the end result of the highway project—not about the delay.
- Don’t provide personal opinions; provide public information. If they ask “What do you think?” say you represent the county.
- Don’t go off the record; there’s no such thing for some reporters.
- Don’t say “No comment.” If you don’t know the answer, say so. And never comment on an issue in litigation; those issues should be tried in the courtroom, not in the media.
- Don’t speculate; your speculation will be taken as reality.

Next, he gave tips on personal appearance on TV:
- Control how you react to questions; don’t make funny faces.
- Keep your feet flat on the floor.
- Control your hands.
- Don’t label the question by saying, “That’s a good question.”
- Don’t say the reporter’s name during the interview; remember: you’re talking to the public.
- Sit still—don’t rock, chew gum, or slouch.
- Forget the camera; keep your eyes on the interviewer; that makes it easier to relax.
- Use a normal tone of voice.
- Remember the photographers and thank them; sometimes they have been there forever while the reporters come and go.

After the interview
Finally, Gutknecht talked about what to do after the interview:
- Monitor the coverage you get in all media.
- Thank them for a job well done—or if the story has factual errors, call the reporter and correct the inaccurate information. Print media will print a retraction. Broadcast media may or may not.
- Let your organization know you’ve done the interview.

Writer: Richard Kronick
Editor: Pamela Snopl
Designer: Adam Babel

The University of Minnesota is an equal opportunity educator and employer.
This publication is available in alternative formats, if requested.
Words are insufficient to describe the depth of the divide generated over hundreds of years of conflict between Native Americans and all levels of U.S. government. But in the transportation field, some people are successfully making connections between Indian tribes and government agencies. That was evident in a technical session at the NACE conference titled “Tribal Technical Assistance Program: Tribes, Transportation, and You.” Four speakers discussed ways that tribal governments are cooperating with local, state, and federal transportation officials to build and maintain good roads in Indian Country.

### U.S. government and tribal roads

Ron Hall led off the session by summarizing major milestones in the U.S. government’s transportation-related dealings with the 565 federally recognized Indian tribes. One component of this was the creation of seven Tribal Technical Assistance Programs (TTAPs) in 1991 as part of ISTEA. The TTAPs are administered through the FHWA and are part of the nationwide Local Technical Assistance Program (LTAP). Hall is the director of the TTAP for the Four Corners states: Colorado, Utah, Arizona, and New Mexico. “When I get questions from a tribal government,” Hall said, “if I don’t have an answer, I can turn to the LTAP network and get answers quickly. A technical issue on a tribal road is the same as for any other road.” For more about TTAPs, see www.ltap.org/about/ttap.php.

#### Indian Self-Determination Act of 1960

Before 1960, Hall explained, Indian tribes received government services from federal agencies, such as the Bureau of Indian Affairs (BIA) and the Department of Housing and Urban Development (HUD), that operated outside the tribes. But in 1960, the Indian Self-Determination Act (Public Law 93-638) mandated the beginning of a shift to tribal self-management. Hall said the law “allows tribes to receive federal funds and deliver services through tribal programs for almost all services, including transportation, law enforcement, education, health care, clean water, and sewer. The tribes can negotiate contracts to perform all or any part of a program that benefits the tribe. People refer to these as ‘638 contracts.’”

#### Indian Reservation Roads (IRR) Program

The next big change in the relationship between tribes and the federal government was the Indian Reservation Roads (IRR) Program, which was part of the 1982 Surface Transportation Assistance Act. Hall said this was a major transition and said the official definition of “Indian Reservation Road” is important within the program: “It has nothing to do with who owns the road,” he said. “It refers to any public road
that’s located within or provides access to an Indian reservation or other tribal community. It can be a federal or state highway, a county road, BIA road, or Bureau of Land Management road.”

“The IRR Program,” he added, “was for reservation roads that previously were ineligible to receive federal aid money. It meant that reservations could receive money from the federal Highway Trust Fund. The BIA was directed to work with FHWA to create a reservation roads management program. But unfortunately, the program ran by the squeaky wheel method. The BIA managed the program and the tribes were not in the driver’s seat.”

Hall said the situation began to change in 1991. At that point, 2 percent of the IRR funding was set aside for tribal transportation planning. “That set the stage for a real transfer of the IRR program to the tribes.” He added that, in 1997, Congress restated that it was serious about wanting the tribes to manage their own transportation.

**SAFETEA-LU changes**

The next major advancement in giving tribes control of their roads came as part of the 2005 SAFETEA-LU Act. He outlined several major components of this legislation:

- Tribes can now avoid BIA and contract directly with the FHWA.
- A separate IRR Bridges Program authorized $70 million over the entire span of SAFETEA-LU with $14 million each year.
- Tribes can use up to 25 percent of their construction money for road maintenance. However, BIA has primary responsibility to obtain maintenance money—not from the Highway Trust Fund but from Department of Interior appropriations. “Road maintenance allocations haven’t changed in about 20 years and maintenance has always been underfunded,” Hall commented.
- Tribal-State Road Maintenance Agreements: “Congress said they wanted to encourage more cooperation between tribes and states, counties, and townships,” he said.
- Tribes can approve plans, specifications, and estimates (PS&E) as long as they have the stamp of a state-licensed engineer.
- Transportation funding from the federal Highway Trust Fund can be used with matching funds from local agencies for federal aid projects. “So a county or state agency can end up with a 100% federally funded project if it’s partnering with a tribe that has available IRR money. That can be used for any IRR road as long as it’s within the tribal planning process mandated by federal law.”

Hall added that both FHWA and the LTAPs are emphasizing safety in Indian Country. “The rate of people killed in crashes in Indian Country is higher than in the general population,” he said, “so we’re working to come up with real solutions and funding to change that.”

Finally, Hall listed resources for tribal road issues:

- TTAP websites that can be found at www.LTAP.org
- Three offices within FHWA: Office of Planning, Office of Legislative and Governmental Affairs, and Federal Lands Highways
- AASHTO’s web page dealing with tribal consultation
- Transportation Research Board’s Committee on Native American Transportation Issues—soon to publish its Guidebook For Successful Communication, Cooperation, and Coordination Strategies Between Transportation Agencies and Tribal Communities
- NCHRP 366—Synthesis on Tribal Transportation Programs
- National Tribal Transportation Conference—Nashville, Tennessee, Nov 14-17, 2011.

The next two presenters were Dave Enblom, the county engineer in Cass County, Minnesota, and Art Chase, operations manager for Leech Lake Reservation Tribal Roads. Both provided examples of cooperation between their agencies.

Enblom discussed a successful collaboration among his agency, Chase’s agency, and Rogers township: “Fifteen years ago, our county identified a wide range of tribal-county issues: law enforcement, child welfare, human services—and also transportation. One of the transportation issues involved the level of service on Indian Service Road (ISR) 6, which provides access to Boy Lake in northeast Cass County, Minnesota. Because it’s a route that primarily serves non-Indians, it wasn’t a high priority for the tribe—but it was a high priority for the county and Rogers Township. At the county, we wanted to identify a project that could exemplify how the reservation and the county could work together.”

Enblom explained that the area traversed by the road is a patchwork of lands owned by Chippewa National Forest, the Leech Lake Reservation, and private parties: “It’s in a very rural part of Cass County, about 30 miles from the closest incorporated town. For a long time, the road had been in rough shape. It goes through wetlands and was
often impassable in the springtime.” He outlined the road’s history:

• In the mid-70s, there was informal cooperation on routine maintenance. The county took over maintenance of the road. In return, the tribe worked on some county roads closer to its headquarters at the town of Cass Lake; that cooperation ended in the mid-1990s.

• In 2001, Leech Lake Tribal Roads facilitated a reconstruction upgrade—a lift and drainage project. To do this, they took advantage of the U.S. Navy SEABEEs Walking Shield program. Coordinated through the BIA, that program made SEABEEs available to Indian reservations for road improvement in rural areas. Cass County participated by placing the final gravel surface.

• In 2002, Cass County wanted to be sure ISR 6 didn’t deteriorate, so the county entered into a formal operation and maintenance agreement with Rogers Township, and the Leech Lake Tribe. With the tribe contributing by bringing in the SEABEEs to reconstruct, the county agreed to handle ongoing maintenance.

• In 2008, ISR 6 was wearing out. In response, the Cass County Board of Commissioners passed a resolution to secure funds for additional upgrades and improvements in support of Leech Lake Tribal Roads.

• In 2009, a new agreement was reached. It stated that the county would do maintenance; the tribe would pay for any betterment such as additional gravel or blacktop; and the county, tribe, and township would all contribute funds. A major component of this agreement was that ISR 6, which had been an IRR road, was also formally designated as Cass County Road 172. This allowed the county to use its tax revenue to upgrade the road. In addition, it allowed the county to fund improvements beyond the agreement—to treat it as any other county road.

• In 2010, the Leech Lake Tribe obtained ARRA funds and devoted a significant amount of those funds to improvement of the road.

Enblom said there’s no guarantee that the existing agreement will go forward when new leaders are elected and that any party can pull out with notice. But, he said, “Probably, no one will pull out unless there’s a problem. So that puts the responsibility on the county highway department to make sure everything runs smoothly. By making it a county road, it becomes harder for the county to back out. There would need to be hearings—and the neighbors near the lake would not like to see the road deteriorate.”

In conclusion, Enblom noted that the success of this project has led to cooperation between the county and the tribe on non-transportation-related issues, such as law enforcement and out-of-home placement for children. “It really worked out well. Art’s department and our department all feel that we led the way on cooperation between tribal and county officials.”

Leech Lake Tribal Roads

Art Chase followed with another success story. He said that, in 1998, when Leech Lake Tribal Roads began, it had a director (himself) and two technicians. “We were crowded into a 14 x 14 room, and our budget was $492,000 for construction and maintenance on 98 miles of BIA roads. With that level of funding, all you can do is save until you can afford to do a project.”

“But by 2009, we had 1,817 miles of roads on our inventory because we were able to count the BIA, state, county, township, and federal roads. With that increase, our annual budget was $7M. Now we have seven people in our maintenance department and six in our construction department. When we started, we had one grader, one dump truck, and one sweeper. Now we have five dump trucks, two graders, three sweepers, and a sign truck, so we can do a lot more. We’ve done three roads working with Dave Enblom of Cass County and another one with Beltrami and Itasca Counties. We’ve also worked on 12 roads with ARRA funds. But now the federal government wants to change the rules again; they don’t want us to be able to count some of the state and county roads in our inventory. If that happens, we will lose some of our funding.”

Chase described a current project: “It’s an old, winding 13-mile road that has no shoulders. There have been a lot of fatal accidents there. After two years of work with Beltrami County and the U.S. Forestry Service, we have a plan to rebuild that road. We’re going to add a 7-foot shoulder and straighten the curves.”

He also said that a lot of time to plan work on reservation roads is taken up in dealing with allotment issues. Allotment is a term used in the 1887 Dawes Act and several more recent laws. In an effort to get Indians to become farmers, the Dawes Act allotted 40-acre plots of reservation land to individual families. Over the years, ownership of these land parcels has been divided and re-divided as those families grew. Chase explained that, today, any work on roads touching allotment properties must be approved by 51% of the allottees. “In some cases,” he said, “there may be 100 allottees on one allotment, and we have to try to contact every one of them!”
Minnesota Advocacy Council for Tribal Transportation

The next speaker was Mike Robinson, MnDOT’s district engineer for District 1 based in Duluth. He described the Minnesota Advocacy Council for Tribal Transportation (ACTT), which has representation from all of the following:

- The 11 Indian tribes in Minnesota
- Executive Director of the Minnesota Indian Affairs Council (MIAC), a group composed of the chairs of the 11 tribes
- FHWA’s Minnesota office
- MnDOT—including Robinson, another MnDOT district engineer, and Linda Aitken, whose title is tribal liaison. Robinson said, “I can’t say enough about the value that Linda Aitken has brought to this group!”
- BIA
- A representative of county engineers, currently Dave Enblom
- A city engineering representative
- U.S. Forest Service
- Michigan TTAP, which represents the eastern half of the United States

Established in 2006, ACTT’s mission is “to establish a coherent strategy for Indian reservation transportation through effective collaboration and partnerships.” Robinson emphasized that the group is effective because it has representation from all of the tribes “at a level in their organization where they can not necessarily speak for their tribes, but certainly serve as a liaison to their tribal councils when action is required.” He further explained that decisions are made by tribal consensus. “I and the other district engineer are not part of the decision making. We’re there to assist in any way we can.”

ACTT meets quarterly to resolve issues and provide training. Robinson explained that “Issues can be brought up by anyone; the criterion for deciding whether to address an issue is whether the committee determines that resolution would be beneficial to all or most of the tribes.” One issue that comes up annually is tribal communications in which state, local, and tribal governments talk about their highway improvement plans for the next four years. “That’s been very helpful,” said Robinson. “It creates understanding so we don’t catch anyone by surprise. In the past, tribes have sometimes been surprised by our projects in their areas where they have resource or cultural issues. Through this process, it has opened up the communication with the right people at the table.”

In the training component, experts are brought in to make presentations to the committee. “This sometimes leads to the formulation of issues that may require the committee’s action,” Robinson said. He added that another major function is ACTT’s annual Minnesota Tribal Transportation Planning Conference; he encouraged everyone to attend it. Robinson described two successful issues that have led to policy changes for MnDOT and the tribes. The first dealt with roadside vegetation. “MnDOT is concerned that invasive species or volunteer growth may become a safety issue,” he said. “Our typical response is to use a herbicide and eventually to mechanically remove it. But that’s a sensitive issue on reservations. They don’t want us to use herbicides because it can harm the plant life they want to protect—and there are potential groundwater issues. So the committee developed a memorandum of understanding. It’s not a contract. All it says is that MnDOT will always contact the tribe and work collaboratively.” He showed the first of these memoranda of understanding and said, “This was the first in the country, and it received an award from the FHWA in 2009 for environmental stewardship. We’re very proud of it.”

Robinson’s second example dealt with reservation road signs: “MnDOT had worked with individual tribal governments to develop a policy on signs that direct people to casinos. Then one of the tribal members brought a related issue to the ACTT committee. Their concern was that there’s a lot more going on at reservations than casino activity, and they want people to understand that. So the ACTT group worked with MnDOT signing experts and we developed standards that in general agree with the MUTCD but are specific to tribal needs. This has been a very successful program for the state and the tribes—and the counties are free to use these signs as well.”

In closing, Robinson emphasized this: “It’s through the respect that happens in this group that a lot of success happens.”
Effective Lobbying Techniques

In a session on effective political lobbying techniques, the two speakers were in perfect harmony on their key points. Dennis McGrann, a professional congressional lobbyist with the public relations firm Lockridge Grindal Nauen, P.L.L.P., and Margaret Donahoe, executive director of the Minnesota Transportation Alliance, emphasized that engineers have power! “Polling and focus groups tell us that what engineers say has high value with the public,” Donahoe said. “They think engineers are knowledgeable and that they don’t have hidden agendas—so engineers can have a lot of impact by getting involved and talking to elected officials.”

To illustrate her point, Donahoe discussed President Obama’s 2011 State of the Union Address. She said it is remarkable that the president referenced the 2010 ASCE Report Card (“When our own engineers graded our nation’s infrastructure, they gave it a D,” he said). “The fact that a group of engineers put that report together—and it ends up in the State of the Union Address—shows what can happen when people work together,” she said.

Both speakers also emphasized that engineers can amplify their innate power by joining coalitions—and that coalitions are especially effective when they bring together disparate groups. Donahoe gave the example of a 2008 Minnesota transportation coalition that included organized labor and numerous chambers of commerce—organizations that are on opposite sides of many issues. “Just the fact that they were working together on transportation got the attention of the Minnesota legislature and was instrumental in raising the state’s gas tax for the first time in decades,” she said.

Counterbalancing the idea of strength in numbers, both speakers emphasized the importance of personal meetings with legislators and members of Congress. “You have to show up in D.C.,” McGrann said. “It demonstrates the commitment you have to what you’re advocating.” He added that a D.C. trip should include visits with federal agencies such as the FHWA and FAA.

Become respected and feared

“The natural state of politics is inertia,” Donahoe said. “You have to figure out how to create a sense of urgency.” She said you do that with a coordinated media presence and by developing relationships with lawmakers. “If they ignore you, you won’t get anywhere unless the conversation becomes public. So letters to the editor and guest editorials all count. Legislators read the local newspapers all the time. We’re in competition with other issues, so we have to keep talking or we won’t be heard. It shows legislators that we’re really going to do something about it.”

“You want to be both respected and feared,” Donahoe continued. “But you don’t want to be a bully, so it’s a balancing act. You have to find a hook. What are people concerned about right now? Using potholes, flooding, or rising gas prices as issues makes it personal and more compelling. They make it local. Get your issue on the moving bandwagon. That’s how we find the political will to do what needs to be done.” She also suggested using professional lobbyists “because they have relation-
ships with legislators and Congress that you don’t have.”

The speakers also agreed that it’s essential to be in the lobbying game for the long haul. McGrann pointed out that, while members of Congress may retain their positions for years, their staffers, who are the gatekeepers to those members, tend to come and go every few years. So it’s important to communicate frequently with the Congress members’ offices. McGrann said engineers who regularly send useful information on transportation issues to Congress members find that the members start calling those engineers for information—and that the Congress member may then begin advocating on behalf of the engineering community to federal agencies such as the FHWA.

Both speakers emphasized that communication with Congress can come in many ways. “Write letters,” said McGrann, “and say nice things, keeping in mind that when you write to Congress, your letter becomes a public document. And copy everyone under the sun—appropriate Congress members, relevant congressional subcommittee chairs, federal agencies, and your coalition stakeholders.”

In outlining the appropriate content of a letter to Congress, McGrann quoted Hubert Humphrey, who (among many others) said: “First tell ‘em what you’re gonna tell ‘em. Then tell ‘em. Then tell ‘em what you told ‘em.” In other words, begin with an overview that provides background on state and local involvement, previous funding history, and a clear explanation of the federal need and jurisdiction. Then expand with details that show why the project is needed and who among the public (voters to the Congress member!) will benefit from the project. Then end with a summary of key points followed by a call to action. Next follow up with a phone call to the member’s office to confirm receipt of your letter.

Know the process

Both speakers also emphasized the importance of understanding the Congressional process. For example, Donahoe said that, because the word “earmark” has acquired such a negative connotation, it has been replaced with “home state projects”—a phrase now being used in authorization bills. McGrann said many Congress members have publicly sworn off voting for such local projects, so it’s essential to know which ones to write to. But he added that you still need to lobby the members who won’t vote for a local project because those members have the power to kill projects proposed by the members who are willing to propose and vote for local projects.

Another critical aspect of the Congressional process discussed by McGrann is the difference between authorization and appropriation. He explained that the normal sequence is authorization first and then appropriation. For example, ISTEA and SAFETEA-LU were huge multi-year authorization laws. But no projects could actually begin under those laws until appropriation laws were passed in subsequent years. McGrann explained that 12 appropriation bills are passed each year in the Senate and 12 more are passed in the House—each usually handled by the committee with jurisdiction over the issue central to that bill. He added that a project may eventually receive greater funding in the appropriation phase than was stated for it in the authorization phase.

In summing up, McGrann said this: “Don’t underestimate yourself! Remember what long-time Speaker of the House Thomas ‘Tip’ O’Neil said: ‘All politics is local!’”

---

**Writer:** Richard Kronick  
**Editor:** Pamela Snopl  
**Designer:** Adam Babel
Rural Intelligent Transportation Systems

In a technical session at the 2011 NACE conference, Dennis Foderberg of SEH Inc. discussed intelligent transportation systems (ITS) developed by SEH in collaboration with Network Transportation Technologies, Inc. These systems address the problem of crashes on low-volume roads. Foderberg noted that, nationally, about two-thirds of fatalities due to crashes occur on rural roads and that most of these are caused by unsafe speed, failure to yield, or some form of driver inattention. In response, he discussed four types of systems that have been deployed since 2007 to warn drivers with flashing lights built into otherwise typical looking MUTCD-approved signs:

• Intersection Warning System—activates lights on a “Look For Traffic” sign when a vehicle approaches on the crossroad.
• Stop Sign Warning System—activates lights on a STOP sign as a vehicle approaches the sign.
• Curve Warning System—activates lights on curve signs when vehicles are being operated above safe speed.
• Driver Behavior Evaluation System—records data on vehicle behavior that can be analyzed and used as a design input.

Design characteristics

“The systems we’re developing are all made of commercial off-the-shelf components,” Foderberg said. “The only proprietary component is the software containing algorithms that we’re developing.” He described several major characteristics of the systems:

• They are dynamic in the sense that lights flash in direct response to vehicle behavior. He said this is their most important characteristic and added that “if something is always the same like a rumble strip, sooner or later people begin to ignore it.” All the dynamic lights in these systems are triggered by Doppler radar.
• They are solar/battery-powered because in most rural places AC power is unavailable. This also makes the systems relatively portable. He noted that one of the few design issues is keeping moisture away from the batteries.
• Their modular design and small size make the systems relatively easy to install and maintain by county staff. Compact size is important because there is limited right-of-way in many places where the systems are needed.
• They are relatively low cost. Foderberg noted that a typical traffic light system
costs about $250,000, whereas these systems cost about an order of magnitude less. For example, he said three intersection warning systems installed in Wright County, Minnesota, cost about $46,000 each. “As with any technology,” he added, “the first few are costly, but the next 1,000 are much less expensive.”

- Each system has a fault indicator that becomes visible when power has been interrupted.

**System configuration**

Figure 1 shows the basic components common to all the systems. Each system is made up of detection nodes that trigger the sign nodes.

Figure 1: Detection node (left) and sign node (right)

**Results**

Foderberg discussed the system that has been deployed the longest—about four years. This is an intersection warning system at County Road 47 and Lawndale Lane in a rural part of Hennepin County, Minnesota—a location where there had been a significant number of crashes. An evaluation of the system conducted by SRF Consulting Group, Inc. showed that, since deployment, there had been a reduction from 3.9 to 1.8 “conflicts” per 1,000 vehicles—and no fatalities related to the system. Drivers who used the intersection judged the system to be “reliable and effective at warning [them] of approaching cross-street traffic.”

Other results:

- 94.2% were aware of the sign.
- 88.5% understood the meaning of the sign.
- 79.4% had improved awareness of approaching traffic.
- 65.2% are more likely to stop when the sign is flashing.
- Half indicated they pay more attention when the sign is flashing.

In addition, the system was found to be operational 98.6% of the time during a six-month test period.

**Driver Behavior Evaluation System**

The Driver Behavior Evaluation System (DBES) is different from the other three systems, all of which are designed to warn drivers. Foderberg said the DBES “was developed in response to county engineers who told us they really don’t know what drivers are doing.” A prototype DBES that is now deployed in Olmsted County, Minnesota, records exactly what vehicles are doing: slowing down, stopping, etc., and outputs data to a spreadsheet.
Design and Maintenance of Roundabouts

In a technical session at the annual NACE conference, Bill Klingbeil of HR Green and Tim Arvidson of Stonebrooke Engineering held forth on what they’ve learned about designing modern roundabouts. With nearly 100 roundabout designs between them, they knew what they were talking about.

Why roundabouts?
“Projects succeed or fail on their problem statements,” Klingbeil said. “For a roundabout, you need a strong one stating why you’re doing it because the public will challenge you. Roundabouts put forward as landscaping features or gateways often fail in the first public involvement meeting.” He went on to say the legitimate justifications for roundabouts are safety and their ability to handle traffic. He described a safety success story in Scott County, Minnesota: “There had been four or five fatalities at the intersection of Highways 13 and 2. But since 2006 when a roundabout went in, there has been just one minor crash.”

One lane or two?
Klingbeil also warned against trying to justify a two-lane roundabout on the basis that traffic will increase later. He said drivers in two-lane roundabouts with low traffic volumes tend to increase their speeds and may ignore lane markings, which can lead to crashes. He added that a better strategy may be to build a one-lane roundabout with room for expansion.

“In multi-lane roundabouts,” Klingbeil said, “there’s a problem with keeping trucks in their own lanes. You have to determine if trucks will be able to enter with single-lane entries or if they need both lanes to enter. And does the truck use both lanes in the circulating lanes?” In addition to these design issues, Klingbeil said greater attention needs to be given to driver training.

Snow in roundabouts
In the past, Klingbeil said, roundabouts have sometimes been designed too tight for snowplows; he listed several issues:
- Is the entry wide enough for the plow to get in? (he recommended 22-foot entries)
- Is the truck apron designed so it can be plowed?
- Is the truck apron designed for the plow’s weight?
He also discussed strategies for reducing the amount of snow in roundabouts:

- Snow drift modeling software developed by the University of Minnesota and MnDOT
- Designing sufficient snow berm space into the roundabout
- Corn rows
- Tree rows
- Snow fences
- Living snow fences
- Designing based on prevailing wind and amount of snow fall

Lighting

Klingbeil discussed the need for good lighting in roundabouts—especially in rural locations where there may be no other light source. He said Roundabouts: An Informal Guide published by FHWA (available online) does a good job of explaining lighting needs. In the absence of lighting in a rural roundabout, he added, retroreflective signage should be used and should be positioned at headlight level rather than the 7-foot MUTCD standard.

Construction and maintenance

Klingbeil emphasized the need for communication between designers and construction personnel and listed some issues: “Striping in roundabouts is not all tangent and not all parallel. So if you measure from the side of the curb, you can end with striping that doesn’t match up. And do you use paint or poly preform? Grinding the stripes in prevents them from being torn up by the plows. Also, be sure signs are placed perpendicular to the line of sight.”

Oversize vehicles in roundabouts

Both experts focused attention on how to accommodate oversize vehicles in roundabouts. “Though people used to say you design for WB 62 or WB 67,” Arvidson said, “today, there are much larger trailers that may need to go through roundabouts.” He and Klingbeil showed examples—100-foot-long articulated vehicles with sophisticated steerable rear ends—many carrying wind turbine components. Arvidson used the diagram in Figure 1 to illustrate the problems faced by these vehicles. “Both the center island and the outside edges can be obstacles,” he commented.

Arvidson went on to point out that there’s a fundamental trade-off involved in getting oversize vehicles through roundabouts. “To fit the big load through, if you widen and/or increase the radii of the entry lanes and/or increase the diameter of the circle, you will allow all drivers to increase their speeds. That’s likely to produce crashes and therefore begins to negate the safety factor that was the major justification for the roundabout in the first place.”

Klingbeil added: “There’s no silver bullet for the oversize vehicle problem. In fact, I find that about one out of three projects that starts out as a roundabout ends up being something else because of this issue. You have to think about all of the issues, all of the stakeholders, and use all of the tools available.” He listed several such tools:

- Separated right turns
- J turns
- Mountable curb
- Removable signs
- Truck aprons
- Reinforced soil in the central island
- External truck apron

Klingbeil showed a European roundabout with no raised center island—only a circle painted on the flat asphalt. “Everyone there is familiar with how to drive roundabouts, so they can get away with simply painting a circle,” he commented.

Both experts agreed that, in many cases, the solution is to design a roundabout that will at least allow oversize vehicles to move straight through—even if it will not allow them to make left or right turns. An audience member in the trucking industry agreed that straight-through movement is usually what’s required to get oversize loads where they’re
going. Klingbeil showed the example in Figure 2, currently under construction in Moorhead, Minnesota, as one solution. The left offset of the entry lanes will accommodate straight-through movement of 115-foot 13-axle vehicles.

Arvidson also discussed the possibility of a cut-through lane straight across the center island, as in the photo on page 1.

In concluding, Arvidson said, “People keep asking for standardized roundabout designs that can accommodate all vehicle sizes. And we keep saying ‘Sorry, every intersection is different, and every vehicle is different. We need to know the configuration of the available space and of the vehicles that need to navigate the intersection.’” He added, however, that it would be useful to have a database of roundabout designs for specific situations.