



US 20 Galena Bypass Citizen's Advisory Group



MEETING MINUTES

Date: November 15, 2007 cc: All Participants
F/203/02.3460.01

Date of Meeting: October 30, 2007

Meeting Place: Ramada Inn, Galena, IL

Project: US 20 (FAP 301) Galena Bypass
IDOT Job No. D-92-025-04
Teng Project No. 02-3460-01

Subject: October 30, 2007 Citizen's Advisory
Group (C.A.G.) Meeting

PARTICIPANTS:

<u>NAME</u>	<u>ORGANIZATION/ AFFILIATION</u>	<u>LOCATION</u>
Beth Baranski (BB)	C. A. G. Member	Galena
Tim Berning (TB)	C. A. G. Member	Galena
Jim Boho (JB)	C. A. G. Member	Galena
Ed Du Plessis (ED)	C. A. G. Member	Galena
Charles Fach (CF)	C. A. G. Member	Galena
Bill Fawell (BF)	C. A. G. Member	Galena
Melvin Gratton (MG)	C. A. G. Member	Galena
Frank Gruber (FG)	C. A. G. Member	Galena
Bob Johnson (BJ)	C. A. G. Member	Galena
Steve Keeffer (SK)	C. A. G. Member	Galena
Carol Mantey (CM)	C. A. G. Member	Galena
Joe Mattingley (JM)	C. A. G. Member	Galena
Bill Nybo (BN)	C. A. G. Member	Galena
Charles Pederson (CP)	C. A. G. Member	Galena
Valerie Stabenow (VS)	C. A. G. Member	Freeport
Andy Lewis (AL)	Galena City Engineer	Galena
Jerry Murdoch (JM)	Galena City Council	Galena
Mark Moran (MM)	Galena City Council	Galena
Tom Brusch (TBR)	City of Galena (Mayor)	Galena
Ron Smith (RS)	Jo Daviess County Board	Galena
Jay Dickerson (JD)	Galena Gazette	Galena

Paula Lange (PL)	Apple Canyon Lake Post	Apple Canyon
Todd Lincoln (TL)	City of Galena	Galena
Mark Nardini (MN)	IDOT Dist 2	Dixon
Masood Ahmad (MA)	IDOT Dist 2	Dixon
Cassandra Rodgers (CR)	IDOT Dist 2	Dixon
Steve Robery (SR)	IDOT Dist-2	Dixon
Mark Dvorak (MD)	Teng and Associates, Inc	Chicago
Joe Hoerner (JH)	Teng and Associates, Inc	Chicago
Tom Hoepf (TH)	Teng and Associates, Inc	Chicago
Todd Ude (TU)	Teng and Associates, Inc	Chicago

This meeting of the Citizen's Advisory Group was held primarily to discuss and arrive at consensus on bridge types and parapet treatments along the Galena Bypass. Continued discussion of aesthetic enhancement opportunities along the proposed Bypass was a secondary reason for the meeting. In addition, the meeting also included invited guests from the City of Galena and Jo Daviess County to solicit their opinions for information only as well as to provide a brief recap of the CAG effort to date. Members of the public were also in attendance. The following is the summary of items discussed and conclusions reached:

1. Introductions

The meeting began with introductions of all attendees present at 5:30 pm (see participants list above).

JH outlined the primary meeting objectives as noted above. JH reminded the group that this would be the last CAG for Teng's current work associated with the roadway grading plan design. In addition it is important to continue the discussion involving bridge designs and for the CAG members to come to a consensus on certain bridge design elements so that the CAG's ideas can be incorporated into Teng's preliminary bridge plans. This meeting will also summarize a list of issues that will be carried forward into the future Phase II engineering and public involvement processes.

2. Project History

MD briefly reviewed the project history of the Phase I engineering for the 47 mile length of US 20 from Freeport to Galena, also known as the Glacier Shadow Pass. The objective of the Phase I study was to provide an improved transportation system, to provide a facility that properly addresses existing and projected system deficiencies, and to improve the safety and efficiency of the existing roadway system. Multiple alternates were reviewed, including new expressways and freeways on various alignments, as well as improvements to the existing facility. The Final Environmental Impact Statement for this project was approved and the Record of Decision was signed by the Federal Highway Administration on September 22, 2005

MD then discussed the Galena Bypass and its general scope. The proposed bypass includes the new four lane freeway and begins northwest of Galena near the intersection of Illinois

Route 84 and US 20 that extends west to East Dubuque. From there it heads east, curving around Galena while it spans over the Galena River and Old Stagecoach Trail. The bypass ends near Horseshoe Mound, measuring a total length of about 6.5 miles. The current engineering contract is for grading and embankment. The next engineering contract will be for the design of the final roadway pavement as well as all of the bridges. Construction would then follow. Currently, there is no funding available for the Second Phase for design, Construction, or for complete right of way acquisition.

3. CAG Formation Review Involvement

JH reviewed the purpose of the Citizens Advisory Group (CAG) and its formation. The CAG is an organization through which interested citizens provided public input on various aspects of the project design, such as aesthetics, environmental impacts, and construction impacts. The CAG also ensured compliance with commitments made during the Phase I Study and the development of the Environmental Impact Statement.

The process began in November of 2005 with an outreach program that contacted interested parties within Galena and the surrounding communities. In January 2006, the first meeting was held that reviewed the purpose of the CAG and offered membership to the group. In total, 27 Members have volunteered. There have been a total of 10 CAG Meetings as well as two (2) Sub Committee meetings. To date, there has been one (1) Public Meeting held in May of 2006 with another one planned for early 2008.

MD discussed the topic of the first several CAG meetings that revolved around geometric refinements to the Phase I design. Specifically;

1. Profile Refinement – The roadway profile was re-designed to avoid 3,000,000 Cubic Yards of borrow fill that was required under the Phase I profile. The enhanced profile optimizes construction cost, minimizes adverse impacts, and adheres to IDOT design policies and Phase I Commitments.
2. IL 84 Interchange – reviewed the interchange design and informed the CAG why the diamond interchange designed in the Phase I is still the preferred option due to cost, environmental and right of way impacts.
3. Horseshoe Mound –developed a new interchange design that is compatible with the limits of the Galena Bypass project and will allow for the future extension of the Glacier Shadow Pass. Reviewed multiple design options with the CAG and selected the option which minimized environmental and right of way impacts, reduced construction cost, improved traffic flow, and avoided traffic signals.

JH discussed additional topics reviewed by the CAG, most notably;

1. Forest and Prairie Mitigation/Landscaping – A Compensation Plan for the Bypass was developed that included a full species list, planting and maintenance procedures as well as monitoring plans. The report was developed with full collaboration with CAG members.

2. Wildlife Issues –Through coordination with IDNR and communications with the CAG, careful consideration was given to provide additional clearances at all mainline bridge crossings for large animal crossing points. Smaller drainage culverts will serve as crossings for small animals.
 3. Signage – Standard IDOT signage and commercial advertising signage for new freeway construction was reviewed. Topic to be further explored in future CAG meetings.
 4. Scenic Overlook – The Galena Bypass corridor was examined to identify areas for scenic opportunities. Due to the existing terrain, scenic opportunities are limited between Buckhill road and Stagecoach Trail road. After careful consideration, it was determined that a scenic overlook could not be properly designed within the project. Other feasible and more cost-effective methods would be explored to showcase Galena and surrounding areas.
 5. Lighting – A presentation was given by Bonnie Garrity of the International Dark Skies Association. Bonnie was in general agreement with IDOT light pole standards, light fixtures and general design for the Galena Bypass. It was stressed that lighting would be provided only at the interchanges. This topic will be further explored in later design stages when lighting design is looked at in detail. The CAG supports Dark Skies fundamentals.
 6. Bridge Design and aesthetics- Focus of last several meetings and continued in this meeting.
4. Bridge Design and Bridge Aesthetics

TU provided a short summary review of the bridge-specific activities which the CAG has been involved in. The distinction between bridges of “grade separation” type, “ravine crossing” type, and “major” type were summarized. The exploration of “detailing” priorities was described as the type of “piers, parapets and pylons” details which are applicable to any and all bridge structures on the bypass. In contrast, for the major bridge structures there is the additional question of overall type: for example arch or pier and girder bridge. The CAG has been informed of the pros, cons and possibilities associated with both levels of decision making and invited to comment.

TU proceeded to present final, round up technical presentations on the main bridge detailing and type selections which have occupied the CAG over the past few meetings. The intent of these presentations was to answer requests for further information made by the CAG in past meetings, and to inform the CAG of how the Design Consultant’s recommendation to IDOT would be made in each of these areas. The point was made that CAG was requested to hear and evaluate the Design Consultant’s reasoning and recommendations, but to recognize that they are empowered to reach the same or different conclusions, and make either concurring or contradicting expressions of their preference.

SURFACE TEXTURES – TU recalled past discussions with the CAG about options for treating exposed concrete surfaces. These include un-enhanced, simple formed surfaces, formed surfaces enhanced with the use of form liner to create various types of relief patterns, surfaces clad in true masonry veneer, surfaces enhanced with form liner specifically to mimic

stone masonry and then stained to further improve the look. The prior discussions were at a conceptual level. The CAG's stated past preference for true masonry veneer was noted. Following the previous meeting, TU completed a short study of the State's experience in all of these types of finishes and prepared a summary memorandum for IDOT. TU summarized and presented the contents of this memo to the CAG.

Photos of the different types of treatment were presented, along with cost data from past IDOT projects which utilized these techniques. Relative to untreated concrete surfaces, form liner is estimated to add a premium of \$25/SF, form liner and stain (facsimile masonry a premium of \$30/SF, and true masonry cladding of \$40 to \$50/SF. From the perspective of maintenance, evidence distress or past repair was noted in two past uses of true masonry veneer. This is accounted for as a result of the additional interface that results when masonry is layered on top of concrete, creating an area to trap moisture. Monolithic concrete, with or without a form liner or coloration is considered more favorable from a durability and repairability standpoint. TU presented the Design Consultant's recommendation that while treatment of large exposed concrete surfaces should definitely remain under consideration, if a stone masonry motif was desired it would be acceptable and recommendable to achieve it through the careful use of form liner and staining, rather than true masonry veneer. Due to the distance and speed at which observers will pass these installations and based on the results demonstrated in previous projects, it is believed that virtually indistinguishable results can be achieved with form liner and staining, reducing the concerns for future maintainability.

PARAPETS AND RAILINGS – TU reviewed the different constraints that apply to development of a bridge parapet or railing. From the safety and performance side, all aspects of a parapet design need to be crash tested and approved by FHWA. In this part of the country, it is also important that snow can be plowed against the parapet with minimal risk of spill-through to traffic below. From the aesthetic side, the CAG has made clear their strong preference for rails with maximum openness which preserve as much of the view as possible from the bridges out to the surrounding landscape. Photos, renderings, and line-of-sight sketches for three types of parapets were reviewed: the standard IDOT 34" solid concrete parapet, the two-tube standard IDOT rail (T-2299, developed for retrofit applications), and the Minnesota single-rail design, developed for its aesthetic appeal. All are crash tested to TL-4. The single-rail and IDOT two-tube rail are very comparable in their measures of transparency, but the single-rail design has advantages from both the snow plowing and long-term maintenance perspectives. TU noted that the Design Consultant's technical recommendation would be for the Minnesota Single Rail concept, to be used uniformly on all Bypass bridges.

PIER FORMS – TU reviewed the concept of IDOT having standardized pier forms which are the first choice for typical bridge structures. These standards come in both "most basic" and "aesthetically enhanced" versions. It has been understood from past meetings that the overall forms of the piers is an item which can be considered for enhancement. In particular, past discussions with the CAG have demonstrated a preference for showing an arch motif in the design of the piers, and for the use of limestone masonry cladding if and where appropriate.

The idea of variations on a basic form, applicable to both tall and short piers, has been supported as a means of establishing unity and theme among the bypass structures. This basic understanding was reviewed as a means of ensuring communication between the CAG, IDOT and the Design Consultant had been clear. No finalized pier forms were presented.

BRIDGE TYPE: STAGECOACH TRAIL – Moving from detailing to the question of overall type of structure at the major bridges, TU presented the final findings of the technical Bridge Type Study for Stagecoach Trail. The types of “basic pier and girder”, “enhanced pier and girder” and “segmented arch” had been previously presented at a conceptual level. In response to CAG input at the last meeting, this list was extended to include a “conventional arch” version of the structure. The estimated construction cost of each was presented, and the Design Consultant’s technical recommendation for the segmented arch type was identified.

BRIDGE TYPE: GALENA RIVER AND CN RR – A very similar discussion for the types of structures studied in the adjacent Galena River valley was given. For this structure, the Design Consultant’s technical recommendation is for the conventional arch type of structure.

IMPROVED RENDERINGS – at the previous meeting, the CAG expressed three concerns regarding the imagery used to present the bridge types. (1) the renderings were considered to be simplified and need more detail with the surrounding topography (2) the bridges should be refined with some aesthetic enhancements to really help in visualizing what these very large structures will look like on the landscape. (3) the views selected for rendering did not answer questions about how much of both bridges could be seen at one time, how much of one bridge could be seen from the other, etc. TU presented a series of more detailed renderings to aid the CAG in visualizing the completed Bypass structures (at Stagecoach Trail and Galena River specifically).

Bridge Type Discussion

ED questioned the use of arches as the theme for Galena Bypass. He felt that it was more appropriate to use linear features and limestone.

JB discussed that the previous CAG meeting formed a consensus that Arches would be used as a theme for different aspects throughout the project.

JB asked for TU to further expand on Teng’s recommendation for a segmented arch type bridge design versus a conventional arch for the Stagecoach Trail Bridge.

TU noted that even though the construction costs between the two bridge types are similar, there are two main differences. First, the segmented arch can be built utilizing steel girder superstructures while the conventional arch uses a concrete girder superstructure. There are perceived advantages regarding future possible concrete deck replacement when steel girders are used. Second, the segmented arch is a structurally more efficient solution for this case, as a result of the curve of the roadway, and the

clearance constraint imposed by the existing location of Stagecoach Trail. The clearance in particular leads the conventional arch to a longer and flatter configuration, resulting in a bigger arch rib, carrying larger thrust forces, requiring large foundations, etc. TU pointed out that when comparing a bridge with long steel girder spans to a bridge with a shorter concrete girder spans, one would expect the concrete girder bridge to be significantly less expensive. The fact that the two are estimated to cost the same in this case is a testament to the reduced efficiency of the conventional arch solution.

CF questioned if the conventional arch design could have steel girders instead of concrete. TU explained that it could but then there would be additional cost/premium of as much as 10% to the structure. It still can be done, but not recommended.

CM wanted clarification that the costs for each bridge alternate is for the entire bridge structure. TU concurred.

JM requested clarification on what was agreed upon from the last meeting with respect to bridge pier design and parapets.

JB noted that, due to the importance of the CAG recommendation to this topic, it was agreed upon that the bridge aesthetic issue would be reviewed again, hopefully with more input from additional CAG members as well as invited guests from the City of Galena and the Jo Daviess County Board.

JM then asked for clarification from TU regarding his caution towards the conventional arch. Specifically did the curvature of the horizontal alignment of the roadway also contribute to the difficulty with the conventional arch design. TU stated that the curvature of the roadway was slight enough that it cannot really be considered a fatal flaw for the conventional arch design. The major concerns with arch designs outlined above were reiterated. TU stated that it was at least notable that the segmented arch, which picks up the curved superstructure at only two points, can be considered an easier structural solution than the conventional arch.

BB noted her appeal for the conventional arch design for both the Galena River as well as the Stagecoach Trail Bridge. IDOT should decide the girder type (steel or concrete).

SK questioned why the cheapest option was not selected for Stagecoach Trail Bridge. TU described how the IDOT Bridge Type Study process does require consideration of factors beyond first cost. These include life cycle cost and constructability, and in the present case should also include aesthetics. TU noted that in the Design Consultant's view, the Stagecoach Trail Bridge in particular was the most visible and most likely to become a landmark span. When all of these factors are considered together, the premium associated with the segmented arch over a typical pier and girder form was considered an appropriate investment.

SK also questioned the additional cost of re-decking in 25 years for the concrete bridge versus the Steel girder bridge for the Galena River. TU explained that there is little hard data and that differing opinions abound on the need for and practicality of replacing deck only on concrete girder bridges. It was also recognized that the systems in place do not allow an owner to “capture” the first cost savings in building a concrete girder bridge, and then use it 25 years in the future to compensate for a more difficult or costly deck replacement. It is the Design Consultant’s interpretation that, in general, the State would prefer to put steel girders into service for a structure of this size and type.

TBR noted that regardless of type, the sheer scale of these bridges will make them unlike anything else in Galena, and remarkable in that sense. As such, his preference would be the lowest cost option for the bridge and parapet design and not to invest even more money in modifying their appearance from one type to another.

ED questioned if these bridges can be seen together at one time and by how many people. TU explained that from the existing Stagecoach Trail bridge over the Galena River, both bridges will be partially visible. However, they can not be seen together within a peripheral view due to the wide angle view between the two bridges. Both bridges are more than 2500’ from this vantage point, and the Galena River bridge will be more than 50% obscured by the terrain and vegetation. SK noted that the average daily traffic on Stagecoach Trail is about 2000.

JM noted that from the last meeting, there was discussion that the existing Stagecoach Trail road was in conflict with the conventional arch design due to the arch span touching the ground close to the existing Stagecoach Trail road. TU updated the CAG that the arch span length was increased to avoid this issue.

It was decided that there would be an informal poll that would include all CAG members as well as invited guests. Afterwards, the CAG would vote and the outcome would be recorded in the meeting minutes.

Informal polling of CAG and Guests noted majority for the Conventional Arch design option for the Galena River.

The CAG reviewed and voted on the following Galena River Bridge Type Options:

1. bridge design shall be enhanced pier and girder
2. bridge design shall be Conventional arch

The CAG votes were recorded and accepted as follows:

- 2 members voted for option #1
- 11 members voted for option #2

Informal polling of CAG and Guests noted majority for the Conventional Arch design option for the Stagecoach Trail Bridge.

The CAG reviewed and voted on the following Bridge Type Options:

1. bridge design shall be enhanced pier and girder
2. bridge design shall be Conventional arch
3. bridge design shall be Segmented arch

The CAG votes were recorded and accepted as follows:

- 4 members voted for option #1
- 9 members voted for option #2
- 0 members voted for option #3

Bridge Parapet Design Discussion

BN asked TU for a visual height example of conventional wall versus the Minnesota Single Rail. TU and TH displayed height variances against a wall and demonstrated the anticipated view for the motoring public.

MN noted that the edge of roadway is slightly higher than the edge of shoulder (where the parapet will be positioned). As such, the parapet will appear slightly lower than 2'-10". In addition, VS noted that a lot of people will be driving SUVs which will have better views of the surrounding areas.

BB offered her support to the Minnesota Rail design type for the bridge parapet.

SK asked the cost premium for the Minnesota rail parapet versus the conventional design. TU noted that he had no costs available, however felt comfortable that it was not an unreasonable premium due to the fact that it is an approved parapet wall type for the state of Minnesota.

Informal polling of CAG and Guests regarding bridge parapet design noted a majority for the Minnesota Rail option.

The CAG reviewed and voted on the following Bridge Parapet Type Options:

1. All bridges have standard concrete parapet design
2. All bridges have Minnesota rail design
3. All bridges have open rail design with transition concrete parapets, where required.

The CAG votes were recorded and accepted as follows:

- 0 members voted for option #1
- 14 members voted for option #2
- 0 members voted for option #3

Surface Texture Enhancement Discussion

MG and BB noted their dislike for formliners. BB made the point that its “total authenticity” is what makes Galena so unique, and that the introduction of an artificial device such as concrete formed and stained to look like limestone, whether detectable or not, would be a mistake.

JM questioned if any limestone enhancements would be appropriate for the Stagecoach Trail and Galena River bridges. TH noted that most likely they would be omitted from these structures. TU added that possibly the foundation base of the arches and piers; however, it can be further explored at a later date.

JB noted that limestone would be more appropriate at the smaller bridges.

CF stated that the stone used on the existing US 20 over Galena River bridge in downtown was Mankato Stone, and not native limestone, and that this was probably the cause of the cracking experienced on that bridge.

CP noted that in Texas, formliners with a star are embedded in bridge piers. These types of designs could be incorporated in bridge piers on this project.

Informal polling of CAG and Guests for surface texture enhancements noted the majority voting for the formliner with stain option, however, multiple voters also preferred the masonry option.

The CAG reviewed and voted on the following Surface Texture Enhancements:

1. Formed concrete with no design enhancements
2. Formed concrete with formliner patterning (any type)
3. Formed concrete with limestone masonry pattern and stain to simulate coloration
4. Formed concrete with a true masonry veneer design

The CAG votes were recorded and accepted as follows:

- 0 members voted for option #1
- 2 members voted for option #2
- 5 members voted for option #3
- 7 members voted for option #4

5. Other Design Opportunities

JH reviewed the enhancement opportunities that the CAG had previously identified to be carried forward to the next phase of design and asked the Group for any additional thoughts.

Multiple CAG members discussed the need to further explore the possible impacts to deer and for IDOT to review advance warning devices for the motoring public. CR indicated that the Indiana Tollway is currently conducting a study using deer sensors.

JM noted that for option c) that “formliners” should be removed from the list.

MG questioned what happens to land that IDOT purchases if construction doesn’t immediately begin, but lags over many years?

MN noted that IDOT typically rents the land, sometimes to the original landowner until the property is needed.

BN noted that Tourism and Signage still needs to be addressed. The topic could be identified as “Tourism Sensitivity”. Signs such as “Historic Galena Keep Right” should be explored.

MA noted that this could be explored in the next phase of CAG involvement.

SR noted that the emergency access along the Galena Bypass at Council Hill road is currently under design and review. An Access Justification Report will be submitted to FHWA for concurrence.

The final working list is as follows:

- a. Consistent Design Theme
- b. Arch as Design Element
- c. Natural Stone Preference
- d. Reduced Number of Bridge Piers
- e. Open Parapets/Rails at Bridges
- f. Bike Path Crossings
- g. Dark Skies Sensitivity
- h. Increased Landscape Areas
- i. Increased Mitigation Areas
- j. Scenic Easements
- k. Land Stewardship
- l. Deer sensors
- m. Tourism Sensitivity /Signage
- n. Emergency access

JB noted that this list is just a starting point and is not intended to limit the focus of the next Phase of CAG and design.

VS noted that it would be good for Teng and IDOT continue with the project

6. Public Meeting II

JH noted that the next Public Meeting will be hosted in the 1st quarter of 2008. The location will be at the Galena Convention Center and volunteers would be appreciated.

PM and JB noted that we will need signup times for volunteers.

7. Meeting Recap

- Teng briefly reviewed the issues that the CAG has been involved with to date and updated the invited guests on the status of the project in general.
- The CAG expressed a preference for a three span arch structure over the Galena River and a single span arch structure over Stagecoach Trail. A consensus was achieved via vote by CAG members.
- The members expressed a preference for the Minnesota Single-Rail parapet over the standard concrete F-Shape or the T-2299 two-tube steel rail. A consensus was achieved via vote by CAG members.
- The members expressed split opinions regarding concrete surface enhancement, with a majority preferring true masonry cladding. Preferences were recorded via a vote by CAG members.
- The Design Team (Teng and IDOT) will proceed with preliminary bridge designs, identifying and implementing aesthetic enhancements in a manner consistent with their understanding of the CAG's preferences and priorities, and within the needs and dictates of roadway safety and economy.
- Additional enhancement opportunities were identified for further review and refinement during the next phase of design.
- The next Public Meeting will be held in the first quarter of 2008. Volunteers will be needed from the CAG. to help assist in the Meeting

JH reminded the group that the Forum will remain accessible and operational at least until the date of the second Public Meeting. JH noted that all detailed information resulting from the public process (topics, meeting minutes, commitment updates) will remain part of the Forum record and CAG members are therefore encouraged to continue to make comments to these issues.

JB BJ, JH, and SR thanked the group for their effort and hope to continue with funding for the project.

The foregoing is the writer's understanding of the matters discussed and the conclusions reached in summary form. This will become part of the project record and is the basis upon which we will proceed

Very truly yours,

TENG & ASSOCIATES, INC.

Mark Dvorak

Mark Dvorak, PE
Project Engineer