



Louisville-Southern Indiana Ohio River Bridges Project

Meeting Summary

Section 4 Area Advisory Team Meeting

September 1, 2005

Summary by: Debby Taylor, H. W. Lochner, Inc.

The fifth Area Advisory Team Meeting was held on September 1, 2005 at the Harrods Creek Fire Station in Prospect, KY to discuss issues related to the Louisville-Southern Indiana Ohio River Bridges Project (LSIORBP) with the design consultant team for Section 4, H.W. Lochner, Inc.

The following were in attendance:

Area Advisory Team Members:

Jim Halvatgis	Bridgepointe
Mayor William Huff	City of Green Spring
Mayor Lonnie Falk	City of Prospect
Virginia Rauh	Committee to Save Harrods Creek (alternate)
Jennifer Osborne	Metro Council District 7 (alternate)
Kelly Downard	Metro Council District 16
Glen Stuckel	Metro Council District 17
Mohammed Nouri	Metro Planning and Design
Mark Adams	Metro Public Works
Kyles Broyles	Shadow Wood
Robin Jennings	St. Francis in the Fields
David Butke	Harbor at Harrods Creek (alternate)
Harold Friedly	Wolf Creek
Barbara Kelly	Wolf Pen Preservation Association (alternate)
Tony Yates	Wolf Pen Woods (alternate)

Project Team Members:

Bart Bryant	KYTC
Ed Cox	INDOT
Paul Boone	INDOT
John Sacksteder	CTS/GEC
Steven Nicaise	CTS/GEC
Chris Jones	CTS/GEC
Kevin Villier	CTS/GEC
Jim Klein	Lochner Design Team
Larry Williamson	Lochner Design Team
Chuck Craycraft	H.W. Lochner, Inc.



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Jerry Leslie
Debby Taylor

H.W. Lochner, Inc.
H.W. Lochner, Inc.

Additional Attendees:

Tim Lawson	Doe/Anderson
Pat Brierly	EHl Consultants
J.B. Williams	Section 2
Dan Carrier	Section 5
Ann Simms	City of Prospect (alternate)
Aida Copic	Metro Planning and Design (alternate)
Lee Walker	KY Ombudsman
Leslie Barras	River Fields
Meme Runyon	River Fields
Debbie Williams	102 Ash Run Road
Brent Nemec	7001 New Bern Court
Craig Oliver	5537 Forest Lake Drive
William E. Robinson	6485 Marina Drive
Mike and Jean McCann	River Road, P.O. 824

The meeting began at approximately 6:35 p.m.

1. WELCOME AND INTRODUCTIONS

1.1 The attendees were asked to sign in upon arrival and were given a copy of the meeting agenda and the AAT Handout, which included information for the topic of the meeting, tunnel portal design concepts. AAT Members had previously been mailed a Section 4 Bulletin summarizing the results of the polling exercise for bridge design concepts from the July 21, 2005 meeting and an agenda for the September 1, 2005 meeting. These Bulletins were also made available for attendees.

2. MEETING AGENDA ITEMS

- 2.1** The F.E.I.S. alignments and proposed right-of-way line were shown on the exhibits.
- 2.2** Jerry Leslie began the meeting with a presentation of the Agenda Overview.
- 2.3** Jerry presented several slides of the bridge types that had scored favorably during the last AAT Meeting on July 21, 2005 with the AAT Members. All of the designs that scored highest were arched designs.
- 2.4** Jerry presented an overview of the Exploratory Tunnel and the US 42 / KY 841 Widening and Ramp Relocation. He explained that the Exploratory Tunnel and ramp relocation is necessary for the geotechnical investigations needed for the ultimate tunnel design.
- 2.5** The AAT Members were offered an opportunity for questions and comments concerning the previous meetings, the presented US 42 / KY 841 Ramp Relocation, or any other issue of concern.



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- 2.5.1** A member questioned the location of the bridges for the ramp and Wolf Pen Branch Road.
 - 2.5.2** Mayor Falk commented on the safety improvements that would be realized from the ramp relocation for the travelers along US 42 and particularly for the Bridgepointe residents.
 - 2.5.3** Councilman Downard asked if the intersection would be signalized. Jerry explained that it would be and that the new signal would be synchronized with the existing signal at US 42 and Wolf Pen Branch Road
 - 2.5.4** The left turn capacity and backups were addressed. Jerry explained that the signalization would improve the left turn capacity.
 - 2.5.5** A member asked if the ramp relocation would have to be completely torn out again when ultimate construction begins. Jerry explained that we are designing the plans to tie into the ultimate as much as is possible and that the goal was to only significantly impact the US 42 / KY 841 intersection once.
 - 2.5.6** A member asked when the ramp relocation would begin. Jerry explained that the current schedule has the ramp relocation beginning in the spring of 2006.
 - 2.5.7** A member commented that something needs to be done concerning the excessive speed on US 42 from the intersection with Wolf Pen Branch Road down the hill to Harrods Creek. Excessive speed is a safety issue at entrances and approaches to US 42.
 - 2.5.8** Another member asked where the construction access for the Exploratory Tunnel would be. Jerry answered that the access would be in the present median area between the existing ramps.
 - 2.5.9** A member questioned how long it will take to complete the Exploratory Tunnel. Larry Williamson explained that it would take anywhere from nine to eighteen months to complete the necessary work for the Exploratory Tunnel.
 - 2.5.10** The cost for the Exploratory Tunnel was questioned and Jerry explained that was yet to be determined.
- 2.6** Larry Williamson gave a brief presentation concerning tunnel concept design, tunnel system requirements, and tunnel maintenance and operations. The following questions were asked during Larry's presentation:
- 2.6.1** A member asked who monitors the traffic in the tunnel. Larry explained that there will be a Control Center either on-site or remote that monitors the tunnel. This monitoring system is also used to help coordinate Fire/Life/Safety issues.
 - 2.6.2** Mark Adams briefly explained the current TRIMARC ITS monitoring system that is located at the Ninth Street Ramp. Jerry emphasized that coordination with state and local agencies for both ITS and Fire/Life/Safety, including MetroSafe, has already begun and is ongoing.



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- 2.6.3** A member asked if the tunnels will be equipped with generators in case of a power outage. Larry explained that the tunnels are anticipated to be equipped with two independent power feeds, one at each portal entrance. Emergency back-up generators are not anticipated at this time.
- 2.6.4** Mayor Falk voiced his concerns of a natural disaster such as a massive earthquake from the New Madrid fault. He asked if seismic activity is taken into account in the design of the tunnel. Larry explained that unless the fault directly intersects the tunnel, it is unlikely that there would be an adverse impact on the tunnel structure or operations. Risk analyses and seismic analyses are included as part of the tunnel design process.
- 2.6.5** A member asked if air inflow lines are necessary for the proposed tunnel. Larry explained that air inflow lines are not necessary for a tunnel of this length.
- 2.6.6** A member asked if the fans direct the air flow in the direction of traffic. Larry answered yes and explained that computer modeling for air flow will be used to help design the ventilation system required.
- 2.6.7** A member asked if the need for the East End Bridge will be reevaluated in light of current fuel prices and if there is money set aside now for construction. Jerry explained that the East End Bridge is justified or it wouldn't be a project and that money will be allocated in phases as the project progresses. Bart Bryant briefly explained the Financial Plan process currently underway and that money for the Exploratory Tunnel and ramp relocation is expected to become available when the Legislature meets in January of 2006.
- 2.6.8** A member asked when right-of-way acquisitions will take place. Jerry explained that the current schedule is for Right-of-way Plans to be completed in late 2006 with appraisals and acquisitions beginning in 2007.
- 2.6.9** A member asked what design methods are there for dealing with possible terrorism and earthquakes. Larry explained that the tunnel design will take into account FHWA and other standards, practices, and guidelines for such events.
- 2.6.10** A member asked if there will be any HAZMAT restrictions for traveling through the tunnel. Jerry explained that any restrictions are yet to be determined. However, all prior indications have been that this will be the HAZMAT route.
- 2.6.11** A member asked about the containment of runoff for the roadway and the tunnel. Jerry explained that containment facilities will be designed and constructed.
- 2.6.12** A member asked how many lanes in the tunnel. Jerry explained that the tunnel and proposed roadway will have three lanes each direction which will require two separate tunnel bores.
- 2.6.13** A member asked if possible floods had been considered. Jerry explained



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that the tunnel and roadway designs are based on the 500 year flood elevation.

- 2.6.14** A member questioned the use of variable message boards. Jerry indicated that variable message boards will be installed and used for informational purposes including warnings for possible lane or bore closures.
- 2.6.15** The length of the Exploratory Tunnel was questioned as to whether it would extend the full length of the ultimate tunnel. Larry answered that the Exploratory Tunnel would not extend the full length of the proposed tunnel, but the total length has not been determined yet. The Exploratory Tunnel will provide much-needed geotechnical information.
- 2.6.16** A member asked what happens to the Exploratory Tunnel if the funding for the project is cut off. Jerry explained that the Financial Plan will be in place at that point and loss of funding shouldn't be an issue. The person then asked what might stop the Exploratory Tunnel. Jerry said that we don't anticipate stopping on this project.
- 2.6.17** A member asked if open cutting the tunnel had been considered. Jerry answered no.
- 2.6.18** Another member asked how the proposed tunnel compares in length to the Cochran Tunnel. Jerry answered that the proposed tunnel is approximately four times the length of the Cochran.
- 2.6.19** A member asked what is to be done about the noise at the portals. Jerry explained that Lochner is conducting noise studies to determine the necessary locations for sound walls as well as looking into new technology such as quiet pavement to reduce noise.
- 2.6.20** A member questioned if there would be a speed reduction upon entering the tunnel? Jerry answered that there would not be a speed reduction as the project was to be constructed to interstate standards.
- 2.7** Jim Klein presented an overview of the possible design options for tunnel portals.
 - 2.7.1** The proposed elevation of the off ramp was questioned as it rises over the freeway. Jerry explained that the ramp starts below grade and moves up to what is close to the present grade in the area of the intersection with US 42.
 - 2.7.2** A member questioned the height from the driving surface to the top of the sound walls in the Bridgepointe area. Jerry explained that this has not been determined yet due to sound studies not being completed.
 - 2.7.3** A member questioned what would be more noisy, a roadway above or below grade. Jerry explained that a depressed roadway would be less noisy and that the ongoing sound studies would be presented at a future AAT Meeting.
- 2.8** The AAT Members were asked to comment on the presented tunnel portal options for the South Portal.
 - 2.8.1** A member asked how much terracing would be required for the cut slopes. Jerry explained that we can't determine that until all of the geotechnical information has been completed and analyzed.



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- 2.8.2** A member asked if there is any way to buffer the truck traffic noise at the portals. Jerry explained that the grade leading to the tunnel is very slight and that the tunnel portals will be well lit to help eliminate the feeling of descending into a dark hole.
- 2.8.3** A member suggested enlarging the portals as a way to reduce noise.
- 2.8.4** Several members commented that they would like Option B better if it had the arch shown in Option A. Jim emphasized that combining elements from the different options is certainly allowable to achieve the best design possible for the area.
- 2.8.5** Another comment from a member was that Option A feels more open.
- 2.9** Jim presented the design concepts for the North Portal.
 - 2.9.1** The required clearance over River Road was questioned. Jerry explained that we would try to keep the clearance close to the minimum required in order to reduce impacts to the area.
 - 2.9.2** A member questioned the height of the lights at the North and South Portals and at River Road. Jerry answered that AAT Meeting No. 6 would cover lighting concepts.
 - 2.9.3** A member emphasized that high mast lighting is very objectionable.
 - 2.9.4** Another member asked the bridge span length over River Road. Jerry explained that span lengths could only be verified after the bridge type was determined.
 - 2.9.5** A member stated that it didn't appear that noise could be abated at the north portal as well as at the south portal location.
 - 2.9.6** The elevation of the structure over Harrods Creek was questioned. Again, it was explained that the structure type will help determine the final height of the structure.
 - 2.9.7** Kyle Broyles asked if Option B will eliminate the stream presently running through Shadow Wood. Jerry explained that the stream will not be eliminated entirely, but will be maintained as much as possible since it is an aesthetically attractive feature in the neighborhood. The drainage details will have to be worked out.
 - 2.9.8** A member questioned the practicality of a waterfalls at the north portal in relation to the freezing and thawing process.
 - 2.9.9** Jim asked the members if the north and south portals should be the same. The members responded that the portals didn't have to be identical, but at least similar in appearance. Several members added that they liked the arched shape with the more formal looking columns.
- 2.10** Jim presented the preferences of the previous design concepts from the earlier AAT Meetings concerning large fills, barrier, retaining, and sound walls, and structures. He presented some designs showing sound barriers on the bridge over Harrods Creek.
 - 2.10.1** A member in response to issues concerning the barrier wall and plant maintenance for the bridge asked if there couldn't be a combination contract



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of some sort combining bridge and tunnel maintenance. Jerry agreed that was a good idea and would be investigated.

- 2.10.2** A member asked if some sort of integrated system to make the transparent barrier walls self-cleaning couldn't be designed.
- 2.10.3** Another member emphasized that he didn't want to be able to see the traffic through the transparent sound walls. Jerry explained that the transparent or translucent walls are lighter than concrete walls. The weight of the sound walls must be taken into account in the overall bridge design.
- 2.10.4** A member asked what guarantees are there that the designs preferred by the AAT and the community at large will be implemented in the design of the project. What if financing isn't available to build the amenities chosen? Jerry explained that the MOA requires that all of these issues be taken into account and mitigated if necessary and that money was set up in the original estimates for the mitigation requirement.
- 2.10.5** Kyle Broyles indicated that he likes the combination solid and transparent wall on the Harrods Creek Bridge. He asked who would make the final design choice. Jerry explained that the Bi-state Management Team has the final say on all design for the project, but they are committed to the mitigation efforts as well.
- 2.10.6** An AAT Member asked if a final presentation will be given showing the final designs chosen. Jerry explained that these design options are part of our Design and Aesthetic Guidelines document that is currently being developed in coordination with the Historic Preservation Plan and will be presented to the AAT upon completion.
- 2.10.7** Another member reiterated the desire for arched portals for the tunnel.
- 2.10.8** Another member suggested some sort of heating mechanism for snow and ice abatement for the elevated portions of the proposed roadway.
- 2.10.9** A member asked if a physical 3-D model of the project could be created. Jerry said we would investigate the possibility.
- 2.10.10** A member asked when the concepts would be finished. Jerry answered at the end of 2005 or early 2006.
- 2.10.11** Tony Yates asked if the handouts and bulletins could be posted on the project website to help get the information out to more people than attend the AAT Meetings. Jerry promised to investigate the possibility.
- 2.11** Jerry presented the meeting wrap-up and opened the floor to audience comments and questions.
 - 2.11.1** Leslie Barras of River Fields asked if the ROD and the MOA could be added back to the project website in an easier to find location. This will be investigated.
 - 2.11.2** Leslie questioned if boring or blasting would be the construction method for the Exploratory Tunnel. Jerry explained the plans are still preliminary and that method has not been determined yet.



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- 2.11.3 Leslie asked about the elevation at the north portal and if sufficient cover exists. Jerry explained the 500 year flood elevation vertical parameters and that the FEIS vertical profile has 15' +/- of cover at the north portal.
- 2.11.4 Leslie questioned the grade from the river bridge to the north portal. Jerry explained that the grade is very minimal.
- 2.11.5 Leslie supports the implementation of a public involvement process for the development of the Financial Plan.
- 2.11.6 Brent Nemec asked if photo radar would be used to control speed in the tunnel. Bart explained that this would be a privacy issue and would require Legislative action.
- 2.11.7 Both audience and AAT Members voiced their concerns with excessive speed in the tunnel.
- 2.11.8 Brent Nemec asked how large the Exploratory Tunnel shaft will be. Jerry answered approximately 12' by 16' (in all probability the tunnel will be square or rectangular).
- 2.11.9 Harold Friedly asked for the 500 year flood parameter to be explained more fully and re-emphasized his thoughts on drainage being a very serious issue. The 500 year flood elevation for the area was identified and explained.
- 2.11.10 Barbara Kelly and Robin Jennings both requested public participation in the Financial Plan development.
- 2.12 The meeting adjourned at approximately 8:40 p.m.
- 2.13 The Meeting Memory follows:

SDC 4 AAT Meeting #5

9/1/05

Meeting Memory

SECTION 4 EAST END APPROACH
AREA ADVISORY TEAM

9-1-05

Special Structure for Wolf Pen Branch Road and ramp structure

Signalization at US 42

Synchronized with Wolf Pen Branch Road signal

Improved safety at Bridgepointe entrance

Increased left turn capacity

US 42 reconfiguration

Ties into the ultimate construction as much as possible



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When?

2006

What about speed reduction in area on US 42 down to Harrods Creek?

Excessive speed on US 42

Safety at entrances and approaches

Construction access to Exploratory Tunnel?

Median area

How long to do Exploratory Tunnel?

9 to 18 months. Exploratory Tunnel will start at end of 2006-early 2007 at present schedule.

What is the cost for the Exploratory Tunnel?

To be determined

Who monitors traffic in tunnel?

Monitoring system; Fire/Life/Safety coordination; Control Center

TRIMARC-9th St. Ramp

Yes – coordination is ongoing

Will be part of MetroSafe and coordinate with Frankfort.

Generators for tunnel?

Not anticipated at this time

Concerns of a disaster from New Madrid

Seismic possibilities taken into account for design of tunnel?

Generators will be needed for a disaster?

*Unless fault directly affects the tunnel
Risk analysis and seismic analysis*

Air inflow lines necessary?

Not necessary for this length of tunnel.



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Fans direct air flow in direction of traffic?

Yes. Computer modeling for air flow.

Will the need for East End Bridge be re-evaluated in light of fuel prices?

East End justified.

Is there money set aside for construction?

Money will be allocated in phases. Money is available for Exploratory Tunnel and is expected to be authorized for the ramp relocation in January when Legislature meets.

When will Right-of-way take place?

Late 2006 for Right-of-way Plans. 2007 for Right-of-way current schedule. On schedule.

What design methods for dealing with possible terrorism and earthquakes?

Tunnel design takes an explosion into account.

Any HAZMAT restrictions?

To be determined.

Containment of runoff?

Containment facility will be constructed.

Tunnel lanes?

Two bores – three lanes each.

Special drainage considerations – flood waters?

500 year flood elevation design.

Variable message boards.

Yes.

Length of Exploratory Tunnel?

To be determined. Exploratory Tunnel will offer much needed geotechnical information.

Angled borings

Length determined by findings

If funding is cut off, what happens to Exploratory Tunnel?

KYTC will be responsible to secure and seal the tunnel



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What might stop Exploratory Tunnel?

Don't anticipate stopping

Open cut tunnel considered?

No.

Compare to Cochran Tunnel

4 times length.

Noise at portals?

Quiet pavement, sound walls

Will there be a speed reduction in the tunnel?

No – Interstate design

Elevation of off ramp

Starts below and moves up to grade at intersection

Height of driving surface to top of sound wall?

Height of sound walls not determined yet.

Noise above/below grade

Depressed, less sound, study ongoing.

South Portal Option A

Terracing on cut slopes

Geotech needed to determine rock cut slopes.

Any way to buffer truck traffic noise at portals?

Slight grade helps.

Lighting design – no dark hole feeling.

Will enlarging portals reduce noise?

Option B

Can B have arch of A?

Yes.



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Option A feels more open

North Portal

How high over River Road?

Minimum clearance to reduce impacts.

What is height of lights on Option A South Portal?

Height of lights on River Road?

AAT 6 to cover lighting concepts.

High mast lighting very objectionable.

Span length over River Road?

Structure type determines.

Can noise be abated as well on the north end as south end?

Elevation over Harrods Creek

North Portal Option A-B

Stream in Shadow Wood

Option B eliminates Shadow Wood stream?

Not entirely

Want to keep Shadow Wood stream

Look at drainage details

Frozen waterfall practical?

Waterfall recessed.

Should portals be same design?

-Similar appearance

-Curved shape w/ formal columns

Preferences of previous design options.

Sound barriers on bridge.



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Could bridge maintenance be in conjunction with tunnel maintenance?

Will be investigated.

Integrated system to clean transparent barrier walls?

Why do we want to see the traffic?

Weight of barriers must be taken into account in structure design

What guarantees that the project will be constructed with designs preferred by AAT and community input? What if financing isn't available?

MOA requires mitigation.

Likes combination wall plus solid

Who decides the final design?

BSMT – committed to process.

Final presentation given showing what was chosen?

Yes.

Design Guidelines. Coordination with Historic Preservation Plan.

Arched Portals

Heating for elevated portions?

Physical 3-D model possible?

Investigate.

When will concepts be finished?

End of 2005 -- early 2006

Can you post images on website?

Can handouts and bulletins be posted on website?

Audience Comments

ROD or MOA need to be added back to website in easier to find location

Boring or blasting as part of Exploratory Tunnel?



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To be determined
Elevation of north portal?
Vertical parameters 500 year flood.

North Portal cover?
15' +/- lowest cover point

Grade from River to north portal?

Public Process for Financial Plan?

Photo radar in tunnel?
Law enforcement issue – would need to be determined a problem.
Privacy issues-would require Legislative action.

Speed control is a good idea.

How large will tunnel shaft be?

Can you drill on private property?

What is 500 year flood?

Drainage is a serious issue.

Public participation in Financial Plan development.

End of meeting



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