
BHJ Regional Bridge System Study

Millsop Community Center Weirton, West Virginia

Public Information Workshop

November 13, 2002

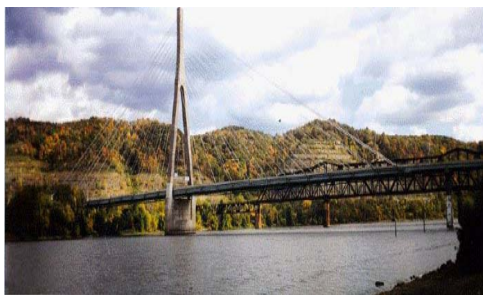
Background

The Brooke-Hancock-Jefferson Metropolitan Planning Commission, West Virginia Department of Transportation (WVDOT) and Ohio Department of Transportation (ODOT) have been working with the consulting firm of Edwards & Kelcey to try and determine the optimal number and location for a bridge or bridges to replace the existing Market Street Bridge and Fort Steuben Bridge. We have completed the following tasks:

- Development of Goals and Objectives
- Determination of the Need for a New Ohio River Crossing
- Development of Various Bridge Scenarios
- Travel Demand Model Analysis of Scenarios
- Review of Findings
- Solicit Public Input on Findings

Explanation of Scenarios

Various alternatives for bridge crossings were developed based on preliminary engineering. Locations were identified that could facilitate east west movements or to serve population centers on each side of the river. These include replacing the existing bridges in their current location as well as two options for a bridge in the southern portion of the planning area. These options formed the first six scenarios. Four additional scenarios were developed using a combination of bridges with northern and southern alternatives that were derived from the analysis of the previous alternatives. For analysis a 20-year planning period was used.



The Scenarios Are:

Baseline Scenario

- Baseline– Assumes only the Veterans Bridge with no operational improvements.

Southern Scenarios

- Scenario 2 – New southern bridge located in Wellsburg or an area south of Wellsburg.
- Scenario 3 – New southern bridge located between Wellsburg and Follansbee.

As a result of the comparison scenario 2 was selected as the preferred southern scenario.

Northern Scenarios

- Scenario 4 – New bridge at Market Street in existing location.
- Scenario 4a – New bridge at Market Street in existing location with connection to SR 7.
- Scenario 5 – New bridge aligned with Washington Street with connection to SR 7.
- Scenario 6 – New Fort Steuben Bridge in existing location with improved connections to SR 7 and WV 2.

As a result of the comparison scenario 5 was selected as the preferred northern scenario

Combined Scenarios

- Scenario 7 – All four bridges, Veterans, Fort Steuben, Preferred Southern, and Preferred Northern
- Scenario 8 - Veterans, Preferred Southern, Preferred Northern
- Scenario 9 – Veterans, Preferred Southern, Fort Steuben
- Scenario 10 – Veterans, Preferred Northern, Fort Steuben

Evaluation Criteria

Goals and objectives based on input received at public meetings, interviews, and local knowledge of the Bridge Advisory Committee members were used to evaluate the bridge scenarios. General goals such as, maintain and enhance transportation capacity, safety and reliability for

existing business, their employees, and all residents, were further broken down in specific measurable objectives (criteria). The criteria are as follows:

Quantitative

- Number of anticipated potential accidents and/or fatalities (annual)
- Percent of system at each level of service
- Vehicle hours of travel
- Vehicle miles of travel
- Reduction in total user costs
- Average travel time, selected external gateways to selected internal sites.
- Estimated vehicle emissions
- Potential land use impacts

Qualitative

- Potential for improved emergency response times
- Potential for alternative river crossings
- Potential for improved access to future industrial sites
- Technical feasibility
- Fiscal likelihood
- Probability to minimize potential environmental impacts

Evaluation of Scenarios

In order to simplify the review process, we have grouped the evaluation criteria into five categories: mobility, environmental impacts, cost effectiveness, safety, and regional economic growth.

Mobility

All of the scenarios were assessed to determine which options provide the greatest increases in mobility. Mobility was measured through a variety of factors including travel time, vehicle miles traveled (VMT), and vehicle hours traveled (VHT). In the mobility category both of the **Southern Scenarios** rated high in improving mobility throughout the region. Of these two scenarios the greatest improvement in mobility came with **Scenario 2**.

A review of the **Northern Scenarios** showed that there would be little improvement over the current mobility levels. Of those alternatives, **Scenario 5**, however, did provide some reductions in VMT and VHT and can be considered to provide some improvements in mobility.

Scenario 7 showed the greatest improvements in mobility in the **Combined Scenarios**. This is due largely to the fact

that this scenario includes the existing Veterans Bridge as well as the construction of three additional bridges.

Scenario 8 (Veterans Bridge, southern bridge near Wellsburg and a new bridge at Washington Street) also showed similar improvements in overall mobility.

Environmental Impacts

Each of the bridge scenarios was evaluated to determine the amount of negative impacts on the environment. To assess environmental impacts we evaluated the potential existence of threatened and endangered species, hazardous materials sites, historic sites, public facilities, and floodplains or wetlands. Air quality impacts were also included in this assessment.

Scenario 2 of the **Southern Scenarios** was determined to have the least amount of environmental impacts. This is due to the fact that a new southern bridge would require a shorter span in comparison to the other bridge alternatives. This bridge would also create fewer impacts at touch down point on either side of the river. In addition, **Scenario 2** would help to improve air quality in the region by reducing overall travel.

Scenarios 4 and **6** rated highest in the **Northern Scenarios** because there would be minimal environmental impact resulting from replacing a structure in its existing location. **Scenario 5** also ranked well in this group as it provides the greatest reduction in vehicle emissions that would improve air quality.

The **Combined Scenario** options do not fare as well as some of the other alternatives in this category due to the disruption of the physical environment resulting from the construction of three new bridges. **Scenario 7** does however show reductions in vehicle emissions and improvements in air quality.

Safety

To measure improvements in safety, each scenario was evaluated based on its potential for annual accidents, improved emergency response times, and alternate river crossings.

For the **Southern Scenarios**, it was found that **Scenario 2** provided the greatest improvements in safety as this option provided reductions in annual accidents, and emergency response times, as well as alternate river crossings.

In the safety category there was no clear winner among the **Northern Scenarios**. Each option provided improvements in emergency response times and as well as alternate river crossings. Of these, **Scenario 4**, showed the largest reduction in annual accidents.

Scenario 7 provided the greatest safety improvements of the **Combined Scenarios** by reducing annual accidents and emergency response times, as well as improving overall mobility in the region.

Cost Effectiveness

To determine cost effectiveness for each scenario we evaluated the capital cost for each bridge as well as any potential reductions in total user cost. Capital costs are costs associated with the construction of new bridges or the replacement of existing bridges. Reductions in user cost refer to the financial savings realized by individuals and businesses due to increased mobility. Construction costs used in this study are preliminary and are subject to review and modifications.

Both of the **Southern Scenarios** provided major reductions in total user cost, but when compared to the remaining scenarios have a higher capital cost thereby reducing their overall cost effectiveness. Of these options, **Scenario 2** provided the greatest reduction in user costs at \$12.7 million per year and capital costs at \$43.8 million for a two-lane structure and \$51.5 million for a four-lane structure.

Scenario 6 provides the lowest capital cost of the **Northern Scenarios** at \$31 million for a two-lane structure and \$32 million for a four-lane structure. The greatest reductions in total user cost, however, came with **Scenario 5** at \$3.9 million.

In the **Combined Scenarios** the greatest capital cost savings was associated with **Scenario 10**. Total user costs were lowest under **Scenario 7**; however, due to the fact that this scenario includes the construction of three new bridges the capital costs are much higher thereby reducing the overall cost effectiveness of this option.

Regional Economic Growth

This category looked at how additional river crossings and their location could improve regional economic growth. Items reviewed to evaluate potential regional economic growth included improved access to existing industrial sites, improved access to future industrial sites, and the ability to accommodate heavy and large vehicles.

Scenario 2 rated highest of the **Southern Scenarios** in this category. This is due to its ability to accommodate heavy and large vehicles as well as the increased service provided to the southern portion of the planning area.

Scenarios 6 rated highest for the **Northern Scenarios** as it provides the best service to future

industrial sites. Other scenarios in this group were downgraded in this category due to truck restrictions on Market Street.

When looking at the **Combined Scenarios** it was determined that **Scenario 7** provided the largest economic benefit to the region due to the increased access to both existing and future industrial sites as well as significant improvements in the mobility of commercial traffic.

Preferred Alternatives by Category

Scenarios		Evaluation Categories				
		Mobility	Environmental Impact	Safety	Cost Effectiveness	Regional Economic Growth
Baseline	1					
Southern	2	X	X	X	X	X
	3					
Northern	4		X	X		
	4a					
	5	X	X		X	
	6		X		X	X
Combined	7	X	X	X	X	X
	8					
	9					
	10				X	

Questions and Answers

1. What is the purpose of this Study and why do we need this study?

The purpose of this study is to present preliminary findings and conclusions. Through a 34-member study committee, this study will provide a bridge recommendation based upon the technical expertise of a bridge study consultant, Edwards and Kelcey.

The need for a new bridge in the project area is the region's number one transportation need.

2. What is the purpose of this meeting?

To obtain public comment on a proposal (s) which will affect the general public and business.

3. Where do we go from here?

- The consultant will incorporate public information comments into his study report.
- The 34 member Bridge Advisory Committee will consider the technical results of the consultant and make a recommendation to the BHJ Technical Advisory Committee.
- The BHJ Technical Advisory Committee will make a recommendation to the BHJ Policy Committee, the federally recognized regional agency for transportation planning.
- The BHJ Policy Committee will adopt or defer a bridge option.
- Both the West Virginia and Ohio Departments of Transportation will take this bridge option under consider.



Upon reaching a local and state consensus, project-funding efforts will begin.

4. Is this my last chance to comment on the bridge projects?

No. Upon completion of this study a preferred scenario will be selected, narrowing down the bridge choices to the one or few that best meet the goals and objectives of the study. Next, a study will be completed for the preferred scenario to ensure it complies with the National Environmental Policy Act (NEPA). This study will fully discuss the purpose of and need for the proposed transportation improvements, evaluate alternatives, and analyze the project's impacts on both the human and natural environments. This will be very detailed and at a very specific location. The completion of this study and subsequent review and approval by the Federal Highway Administration will clear the way for

project funding and construction. Topics that the NEPA study will address include:

- Neighborhood and community impacts
- Efficiency and safety of travel
- Relocation of homes and businesses
- Economy of project area
- Historic properties and sites
- Wildlife and plant communities
- Water quality
- Floodplains
- Farmland and land use plans of project area
- Hazardous materials involvement
 - Traffic noise and air quality

Public Involvement in Planning Process

Public involvement is an integral part of the planning process. The concerns of citizens and interest groups are always considered during project planning studies. Often, additional project alternatives are studied, or existing alternatives

revised, based on comments received from the public. **YOUR THOUGHTS AND CONCERNS ARE IMPORTANT TO US. PLEASE FILL OUT A COMMENT SHEET!**

For Further Information...

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This document was prepared for the Brooke-Hancock-Jefferson Metropolitan Planning Commission (BHJ) in cooperation with the Ohio Department of Transportation (ODOT) and the West Virginia Department of Transportation (WVDOT). Funding for this study was provided by ODOT and WVDOT.

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With Assistance from

