

# The Detroit River International Crossing **Additional Screening of Alternatives**



June 2007

**Detroit River International Crossing Study  
Additional Screening of Alternatives  
June 2007**

**1. Introduction**

Since December 2005, when the Detroit River International Crossing (DRIC) Illustrative Alternatives Analysis concluded, Practical Alternatives have been defined, refined and evaluated to reduce the number to a few options that are the most practical, i.e., the best opportunity to be implemented. The area of continued analysis, where the Practical Alternatives are located in the U.S. was defined in December 2005. It lies between Zug Island and the foot of the Ambassador Bridge and between the Detroit River and I-75 (Figure 1).

**Figure 1  
Area of Continued Analysis**



Through a series of workshops held from December 2005 to March 2006, the “zone” within which the plazas would be located was determined in concert with the public. Once the plaza zone was defined, plaza concepts were developed to fit within it. Then interchange concepts were established to connect each plaza to I-75. This resulted in thirteen alternatives (Table 1, plus Figure 2 for X-10 crossings and Figures 3A and 3B for X-11 crossings). Large wall graphics are available of these graphics and they will also be available on the Web ([www.partnershipborderstudy.com](http://www.partnershipborderstudy.com)). Impacts were then measured and the resultant data displayed for public review in March 2006.<sup>1</sup> Subsequently, the plazas and interchanges were refined and, along with their impacts, were presented to the public in December 2006.<sup>1</sup> That information is included in Attachment A.

Following the December 5 public meetings, the interchanges were subject to a detailed “peer group” review called Value Analysis/Value Planning, conducted from January 29 to February 2, 2007. The results of Value Planning are included in Attachment B of this report. Additionally, the General Services Administration (GSA) (the “landlord” of the federal government) and the U.S. Customs and Border Protection Agency (CBP – an agency of the U.S. Department of Homeland Security) reviewed the plazas. The GSA/CBP comments are included in Attachment C. By combining the impact assessment information, the results of the Value Analysis/Value Planning and the input from GSA/CBP, the basis to screen the plazas and interchanges of the Practical Alternatives is formed. That evaluation is intended to retain only those with the best opportunity to be implemented, i.e., the most practical, and the others eliminated from further detailed analysis. Before the description of the evaluation process begins, the labeling nomenclature of Alternatives, Interchanges and Plazas, shown in Table 1, is provided to accompany the evaluation.

**Table 1  
Labeling Nomenclature**

Practical Alternative #	Interchange	Plaza	Crossing
1	A	P-a	X-10
2	B	P-a	
3	C	P-a	
4	D	P-a	
5	E	P-a	
6	A	P-b	X-11
7	A	P-c	
8	B	P-b	
9	B	P-c	
10	C	P-b	
11	C	P-c	
12	D	P-b	
13	F	P-d	

<sup>1</sup> Refer to U.S. Public Meetings on Web site [www.partnershipborderstudy.com](http://www.partnershipborderstudy.com).

Figure 2  
X-10 Crossing Alternatives  
#1 through #5



Figure 3A  
X-11 Crossing Alternatives  
#6 through #9

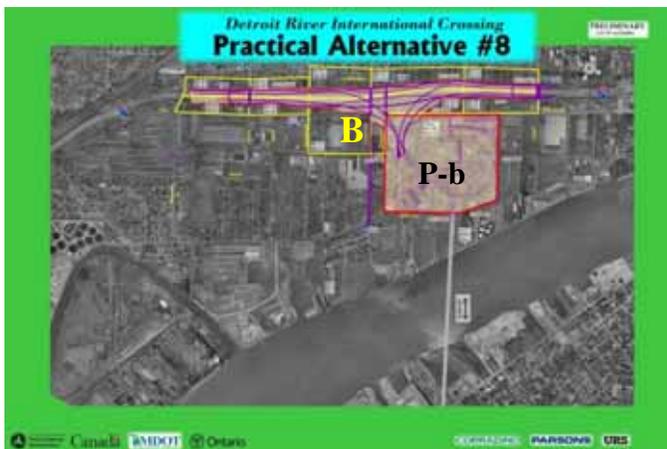
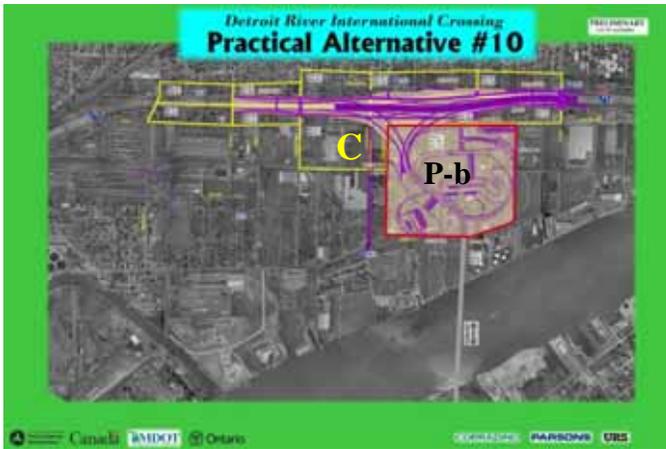


Figure 3B  
X-11 Crossing Alternatives  
#10 through #13



## **2. Impact Assessment Information**

A review of the impact data included in Attachment A indicates there is little difference between or among alternatives in terms of significant impacts, in type or number. The one exception is that utilities to accommodate Plaza P-b will affect Fort Wayne. As there is an alternative to avoiding this impact, the P-b plaza is not considered a desirable alternative. Additionally, the most directly affected community spoke out at the March 2006 Local Advisory Council and public meetings, stressing the interchanges of Alternatives #4, #12 and #13 are unacceptable because they would “isolate” the most viable residential enclave remaining in Delray. Those alternatives would also affect the block-long Produce Terminal, which is potentially eligible for listing on the *National Register of Historic Places*. The law states (the Department of Transportation Act of 1966) that if there is a reasonable and prudent alternative to taking this property, that alternative must be chosen instead. There are reasonable options.

## **3. Value Analysis (VA)/Value Planning (VP) Results**

The week-long Value Planning workshop was focused on the interchange connecting the plaza to I-75 on the U.S. side. The workshop was organized into two distinct parts, one to review, analyze and evaluate the alternatives (Value Analysis), and the second to speculate on improvements to these alternatives or propose new interchanges (Value Planning).

Six alternative interchanges have been identified to connect the plaza to I-75 (A through F in Figure 2). Adding ramps to and from I-75 to the plaza makes it necessary to close some roads crossing I-75. Alternatives A through C are “three-legged” interchanges, which would maintain different crossroads. For example, the Waterman Street crossing over I-75 would be eliminated for Interchanges A and B, but maintained under Interchange C. Livernois Avenue would be maintained under Interchanges A and B, but eliminated under Interchange C. Dragoon Street would be eliminated under both Interchanges A and C and maintained under Interchange B.

Alternatives D and F are known as “split” interchanges. Interchange D would eliminate crossings at Livernois Avenue, Dragoon Street and Junction Street, while Interchange F would maintain these crossings. Interchange F would switch the location of the exit and entrance ramps.

Interchange E is also a three-legged interchange similar to Interchanges A through C; however, ramps would be relocated to the east to maximize the distance from Southwestern High School. Because of grade conflicts, street crossings at Livernois Avenue, Dragoon Street and Junction Street would be eliminated.

A seventh option was tested during Value Analysis as a modification to Interchange A. The objective was to limit cost and impacts. It did not succeed in these areas and, therefore, was eliminated.

Performance and acceptance criteria were developed to rank each of the six interchange alternatives. Conceptual-level costs were also examined. The criteria for performance included:

- Access to/from plaza;
- Traffic operations on I-75;
- Local access within corridor;
- Local traffic operations; and,
- Bridge geometry/retaining wall.

The acceptance criteria included:

- Protect community/neighborhood characteristics;
- Impact to neighborhoods to north and south;
- Constructability;
- Impact to utilities;
- Driver comfort; and,
- Impact to Delray.

Using the performance criteria, the engineers involved in the value planning scored each of the interchanges. The scoring for each criterion was based on a 0 to 5 rating, 5 being the highest and 0 being unacceptable. All alternatives ranked between (3.0) to (4.0), which is good performance (Table 2).

Using the same procedure, each interchange was evaluated and ranked using the acceptance criteria. The six interchanges ranked between 2.43 (Interchange D) and 3.71 (Interchange A). Interchanges D and E both would impact the Delray community to a higher degree than the others, substantially impacting the acceptance of either of these two alternatives.

**Table 2  
Interchange Value-Planning Rating Summary**

Criterion	Interchange A	Interchange B	Interchange C	Interchange D	Interchange E	Interchange F
Performance	3.79	3.61	3.62	3.18	3.42	3.53
Acceptance	3.71	3.59	3.31	2.43	2.70	3.26
Cost	4.60	3.80	4.60	2.30	4.50	3.10

Below-par evaluation  
Source: Benesch

Conceptual-level interchange cost estimates were prepared by the DRIC Study Team for the cost screening. The costs included construction, right-of-way acquisition and remediation for known significant environmental impacts at sites officially listed by various governmental agencies. The cost estimates range from \$178 million to \$255 million. The lower the cost, the higher the performance score. All options, but Interchange D, were judged to be within a reasonable range for a project of this type.

The results summarized in Table 2 indicate Interchange D falls into the “less than good” category overall and is a candidate for elimination. It is connected to Alternatives #4, #12 and #13. Interchange E, tied to Alternative #5, has impacts on the community that result in a low score. While this interchange is continued in the analysis because of high scores in other categories, two conceptual alternatives were developed to focus on mitigation of neighborhoods impacts– Interchange G on Figure 4 and Interchange H on Figure 5. Interchange concept G is being advanced for further engineering analysis. Interchange H has been eliminated from further consideration because, with the knowledge that the Delray rail line will remain in service (albeit with less traffic than today, if cooperation on adjustments continues with the railroads) the ramps between I-75 and the plaza must clear the rail line as well as Fort Street. Such ramps would be 40 feet above grade which would cause undesirable steep grades on ramps entering and exiting the plaza. The excess height would make it practically impossible to provide local access to the community directly from the plaza. These engineering considerations eliminate Interchange Alternative H from further consideration.

Figure 4  
Alternative #14  
Interchange Concept G Developed  
Through Value Planning

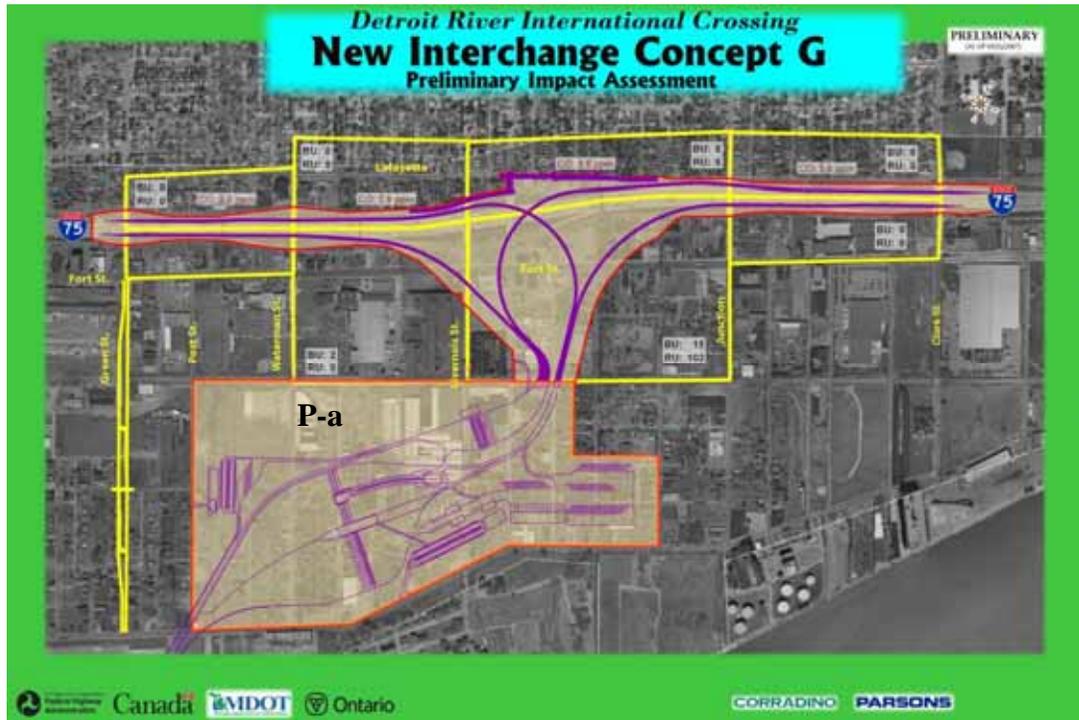
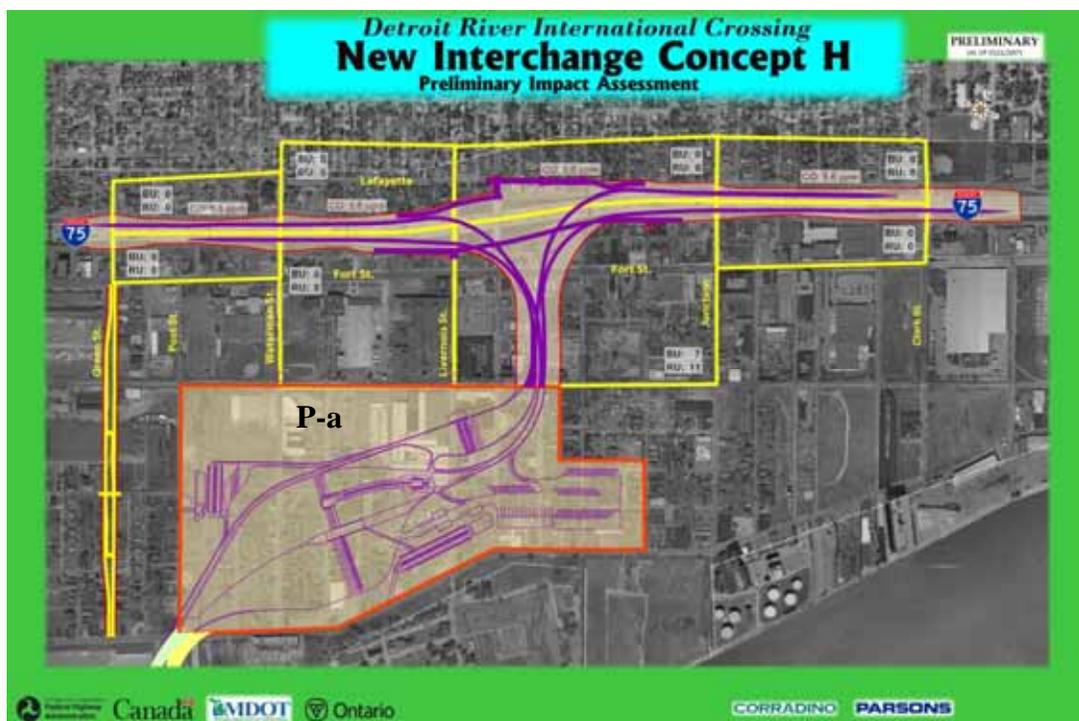


Figure 5  
Alternative #15  
Interchange Concept H Developed  
Through Value Planning



## 4. Plaza Analysis

In February and March 2007, the General Services Administration (GSA), in combination with the U.S. Customs and Border Protection Agency (CBP), provided detailed input to each of the four DRIC plaza concepts (Figure 6). These concepts are particularly valuable as GSA will control the plaza by purchase or lease and CBP will be responsible for its use. Simply stated, it will be their plaza.

In summary, the GSA/CBP comments are as follows:

### Plaza P-a

- Reduces security issue along RR track;
- Good service and employee access;
- Fewest compromises;
- Smooth traffic flow;
- Away from Mistersky; and,
- DTE Substation could be an issue.

### Plaza P-b

- Limited flexibility/expandability;
- Difficulty relocating Duty Free for future outbound inspection;
- Circuitous return to Canada;
- Poor employee access;
- Does not allow for smooth traffic flow; and,
- Bridge adjacent to Mistersky.

### Plaza P-c

- Reduces security issue along RR track;
- Questions regarding service and employee access;
- Move broker building closer to commercial building;
- Smooth traffic flow;
- Limited flexibility/expandability;
- Bridge adjacent to Mistersky; and,
- Outbound traffic/employee mix.

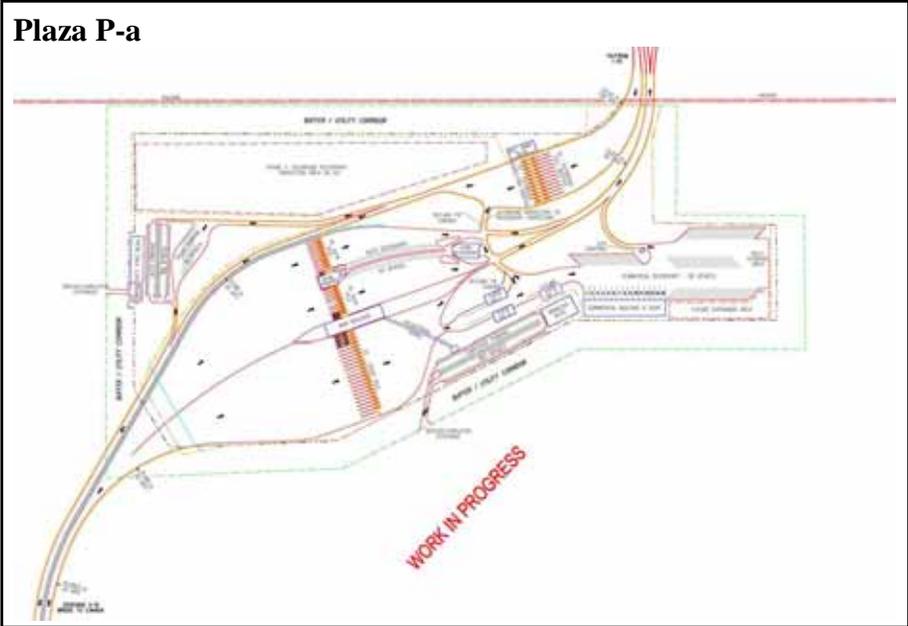
### Plaza P-d

- Secondary commercial in close proximity to Southwestern High School;
- Outbound separated from inbound;
- Traffic flow is not smooth;
- Refused entry vehicles require flag control;
- Bridge adjacent to Mistersky; and,
- Perimeter security along RR track.

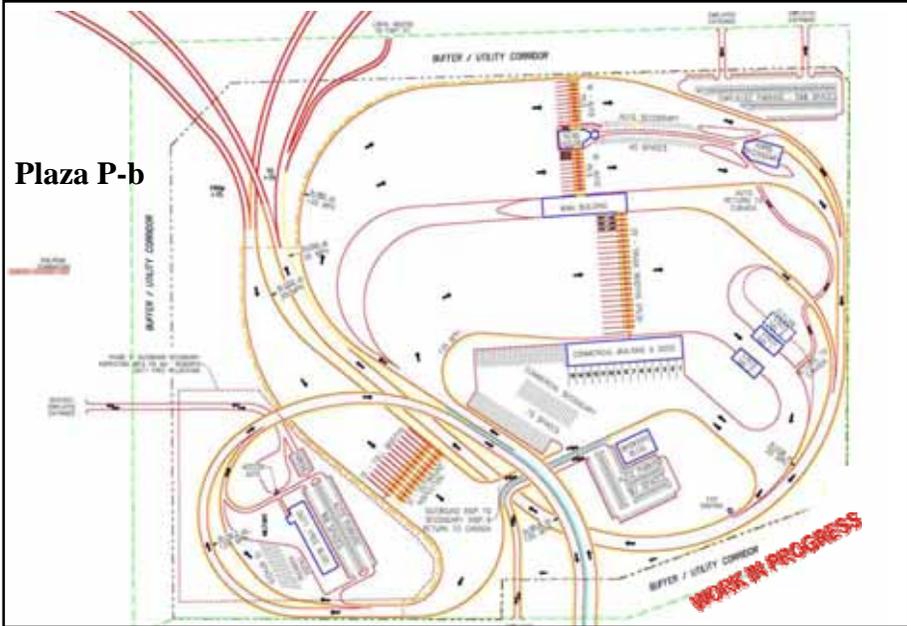
Based on this input, Plaza P-b is proposed for elimination. The biggest flaw with Plaza P-b is that it would require abandoning the Delray rail line. It also has circuitous traffic flow patterns and limited flexibility and expandability. Plaza P-b is attached to Alternatives #6, #8, #10 and #12. Plaza P-d is proposed for elimination largely because of: 1) the large separation between inbound and outbound inspection functions; 2) its secondary commercial area's proximity to Southwestern High School and the possible effects that might create; and, 3) its limited flexibility and expandability. This plaza is connected to Alternative #13.

Figure 6  
Alternative Plaza Layouts

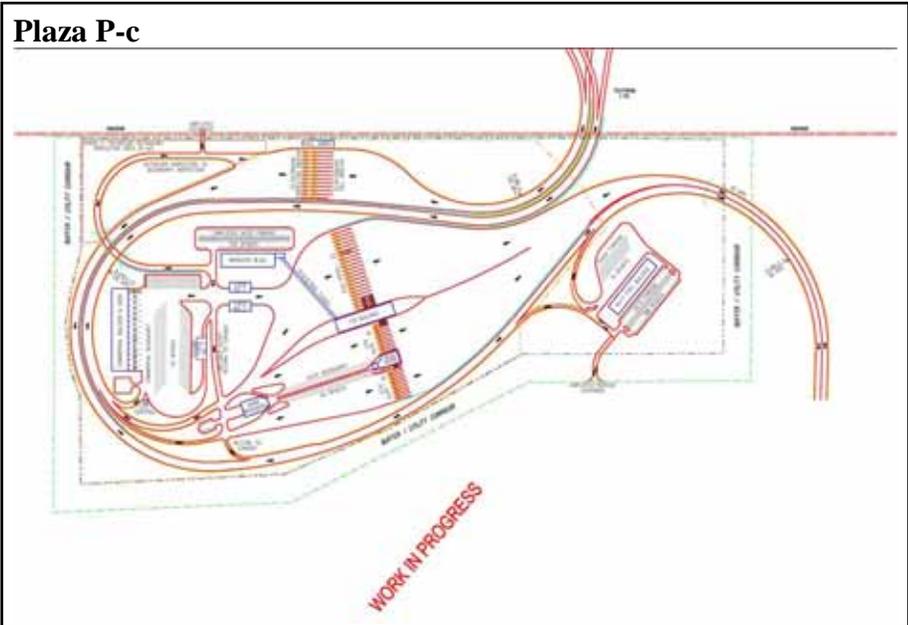
Plaza P-a



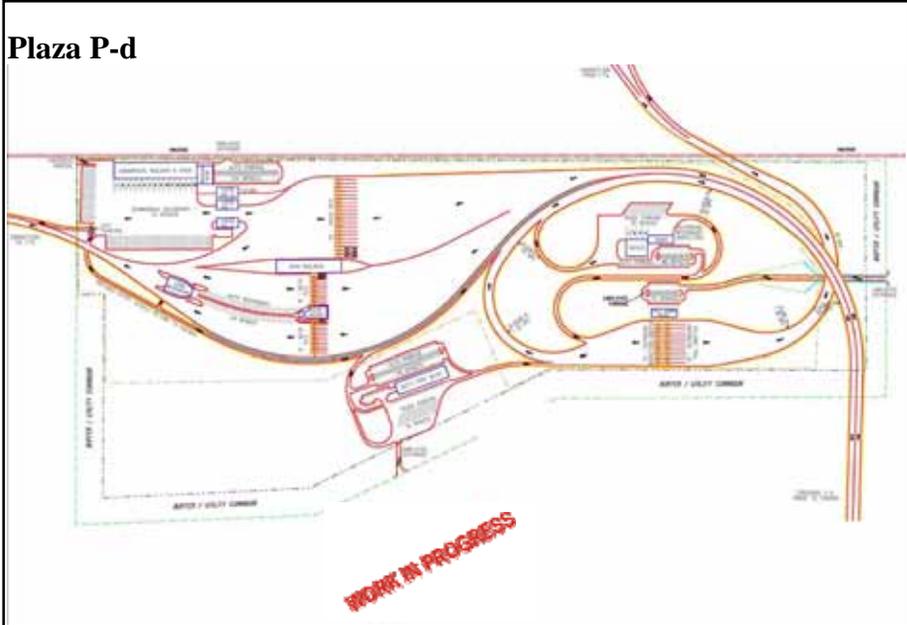
Plaza P-b



Plaza P-c



Plaza P-d



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**5. Summary**

Based upon the information presented above, Alternatives #4, #6, #8, #10, #12, #13 and #15 are proposed for elimination, while Alternatives #1, #2, #3, #5, #7, #9, #11 and #14 are proposed for further analysis. The footprints of the composite of the crossing system components (interchange, plaza and bridge) associated with the original list of alternatives and the revised footprint of the proposed reduced list of alternatives, are shown on Figures 7 and 8, with an overlay of the two footprints provided on Figure 9. These results do not imply or favor a specific crossing as the remaining alternatives can accommodate a crossing in both the X-10 and X-11 Corridors.

This information has been reviewed and accepted by the DRIC Partnership. It is now subject to public input before finalization. Once finalized, the basis will be formed of alternatives to undergo detailed analysis in the Draft Environmental Impact Statement.

**Table 3  
Status of Interchanges and Plazas following Value Planning, GSA/CBP and Public Input**

Alternative	Interchange	Plaza	Crossing	Proposed Status
#1	A	P-a	X-10	Retain for future analysis
#2	B	P-a		Retain for future analysis
#3	C	P-a		Retain for future analysis
<del>#4</del>	<del>D</del> <sup>1,2</sup>	P-a		Eliminate from further analysis <sup>1,2</sup>
#5	E	P-a		Retain for future analysis
<del>#6</del>	A	<del>P-b</del> <sup>3,4</sup>	X-11	Eliminate from further analysis <sup>3,4</sup>
#7	A	P-c		Retain for future analysis
<del>#8</del>	B	<del>P-b</del> <sup>3,4</sup>		Eliminate from further analysis <sup>3,4</sup>
#9	B	P-c		Retain for future analysis
<del>#10</del>	C	<del>P-b</del> <sup>3,4</sup>		Eliminate from further analysis <sup>3,4</sup>
#11	C	P-c		Retain for future analysis
<del>#12</del>	<del>D</del> <sup>1,2</sup>	<del>P-b</del> <sup>3,4</sup>		Eliminate from further analysis <sup>1,2,3,4</sup>
<del>#13</del>	<del>F</del> <sup>1</sup>	<del>P-d</del> <sup>4</sup>	Eliminate from further analysis <sup>1,4</sup>	
#14	G	P-a	X-10	Retain for future analysis
<del>#15</del>	<del>H</del> <sup>2</sup>	P-a	X-10	Eliminate from further analysis <sup>2</sup>

<sup>1</sup>Unacceptable community impacts.

<sup>2</sup>Unacceptable engineering impacts.

<sup>3</sup>Unacceptable impacts on Fort Wayne due to proposed utility placement.

<sup>4</sup>Unacceptable impacts as judged by U.S. General Services Administration/Customs and Border Protection Agency input.

**Figure 7**  
**Crossing System Footprint, January 1, 2007**



**Figure 8**  
**Crossing System Footprint, June 20, 2007**



**Figure 9**  
**Composite Crossing System Footprint**



i:\projects\3600\wp\reports\practical alternatives\additional screening\text.doc

## **Attachment A**

# **Detroit River International Crossing Study Impact Data Survey**

## **Interchange Data**

**Detroit River International Crossing Study  
Evaluation of Practical Alternatives  
Supporting Data - Interchange Only**

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FOR DISCUSSION PURPOSES ONLY  
11-15-06

Evaluation Factor	Performance Measure Category	Description/Units	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative	Alternative		
			1	2	3	4	5	6	7	8	9	10	11	12	13		
<b>Protect Community / Neighborhood Characteristics</b>	Traffic Impacts	Streets Closed (permanently)	Number	8	7	9	9	6	8	8	7	7	9	9	9	1	
		Streets Crossed	Number	9	9	13	12	9	9	9	9	13	13	12	12	12	
		Streets Rerouted	Number	5	3	4	3	4	5	5	3	3	4	3	0	0	
		Streets with Interchange	Number	1	1	1	2	1	1	1	1	1	1	2	5	5	
		Raillines Crossed	Number	2	2	2	5	2	2	2	2	2	2	5	5	5	
	Noise	Frontline Exposure	Number of dwelling units exposed	109	109	101	107	88	109	109	109	109	101	101	107	28	
		Significant Receptors <sup>1</sup> Exposures	Number /Specify	11	10	10	7	9	11	11	10	11	10	10	7	8	
	Community Cohesion/ Character	Positive/Negative/Neutral		Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	
	Potential Acquisition	Residential Units	Occupied	184	180	190	171	233	184	184	180	180	190	190	171	29	
			Vacant	2	1	1	1	2	2	2	1	1	1	1	1	0	
		Residential Population	Number	451	441	466	419	571	451	451	441	441	466	466	419	71	
			Active	18	17	25	25	25	15	18	14	17	20	25	26	22	
		Business Units	Vacant	14	14	19	16	19	14	14	14	14	19	19	16	10	
			Estimated Employees in affected Census Blocks <sup>2</sup>	Number	60-80	50-70	90-130	90-130	80-110	60-80	60-80	50-70	50-70	90-130	90-130	90-130	60-80
		Other Land Uses Affected <sup>3</sup>	Schools		1	1	0	1	1	1	1	1	0	0	1	0	
			Senior Service Facilities		0	0	0	0	0	0	0	0	0	0	0	0	
			City/Government Facilities		1	1	1	0	2	1	1	1	1	1	0	2	
			Places of Worship		3	4	4	4	2	3	4	4	4	4	4	4	
			Medical Facilities		1	1	1	0	1	1	1	1	1	1	0	0	
			State/Federal Government Facilities		1	1	1	0	1	1	1	1	1	1	0	1	
			Community Services/Parks		0	0	0	0	0	0	0	0	0	0	0	0	
	Vacant																
	Environmental Justice / Title VI	EJ Populations in affected Census Block Groups	EJ Population (non poverty)	6,689	6,689	5,619	6,757	6,583	6,689	6,689	6,689	6,689	5,619	5,619	6,757	6,994	
			Population Groups Affected	American Indian, Hispanic	American Indian, Hispanic	American Indian, Hispanic	American Indian, Hispanic	Hispanic	American Indian, Hispanic	American Indian, Hispanic	American Indian, Hispanic	American Indian, Hispanic	American Indian, Hispanic	American Indian, Hispanic	American Indian, Hispanic	American Indian, Hispanic	American Indian, Hispanic
			% Households in Poverty / Above or Below 9.9% Regional Threshold <sup>4</sup>	31.6%/Above	31.6%/Above	32.4%/Above	33.7%/Above	30.8%/Above	31.6%/Above	31.6%/Above	31.6%/Above	31.6%/Above	32.4%/Above	32.4%/Above	33.7%/Above	33.9%/Above	
		Households in poverty	866	866	717	953	797	866	866	866	866	866	717	717	953	1,038	
	Title VI Groups in Census Tracts	Presence of Regionally Prominent Ancestral Groups	None	None	None	None	None	None	None	None	None	None	None	None	None		

Notes:  
1. Sensitive noise receptors are historic sites, medical facilities, parks, places of worship, schools, within fifty meters of an alignment, plaza, or crossing.  
Alt.1,6,7 - All Saints Church, Faith Tabernacle, New Beginning Ministry, El Abrigo Altimo, Military Ave. Church, Michigan Bell Bldg, Fort & Green Police Station, Beard School  
Alt.2,8,9 - All Saints Church, Faith Tabernacle, New Beginning Ministry, Military Ave. Church, Michigan Bell Bldg, Fort & Green Police Station, Beard Early Learning School  
Alt.3,10,11 - All Saints Church, Faith Tabernacle, New Beginning Ministry, El Abrigo Altimo, Michigan Bell Bldg, Fort & Green Police Station, Beard Early Learning School  
Alt. 4 - Old Landmark Church, Faith Tabernacle Church, New Beginning, El Abrigo Altimo, Michigan Bell Bldg, Fort & Green Police Station  
Alt. 5 - First Latin American, Detroit Friends Meeting Quakers, El Abrigo Altimo, Michigan Bell Bldg, Fort & Green Police Station, Beard Early Learning School, Detroit Savings Banks  
Alt. 12 - Faith Tabernacle Church, New Beginning, El Abrigo Altimo, Michigan Bell Bldg, Fort & Green Police Station  
Alt. 13 - Faith Tabernacle Church, New Beginning, El Abrigo Altimo, Detroit Friends Meeting Quakers, Early Learning Beard School, Michigan Bell Bldg, Fort & Green Police Station  
2. Employee estimates provided by Tetrad Computer Applications and are based on employees per Census Block Group - proportionately disaggregated to the block level for blocks within or partially within plaza boundaries. Plazas have been field surveyed t  
3. Potential Acquisitions  
Alt 1,6,7 - Partial Beard Early Learning Center, First Latin America, Detroit Friends Meeting Quakers, Old Landmark Church, Partial Detroit Public Safety Building/Homeland Security, Metromatrix Services  
Alt. 2, 8, 9 - Partial Beard Early Learning Center, First Latin America, Old Landmark Church, Detroit Friends Meeting Quakers, Military Ave Church, Partial Detroit Public Safety Building/Homeland Security, Metromatrix Human Services  
Alt. 3, 10, 11 - First Latin America, Old Landmark Church, Military Ave Church, Detroit Friends Meeting Quakers, Partial Detroit Public Safety Building  
Alt. 4 - Beard Early Learning Center, First Latin America, Detroit Friends Meeting Quakers, All Saints Church, Military Ave. Church  
Alt. 5 - Partial Beard Early Learning Center, Military Avenue Church, Old Landmark Church, City Waste Disposal Facility, Partial Detroit Public Safety Building/Homeland Security, Metromatrix Human Services  
Alt. 12 - Beard Early Learning Center, Military Avenue Church, First Latin American, All Saints Church, Detroit Friends Meeting Quakers, Partial Detroit Public Safety Building  
Alt. 13 - First Latin America, All Saint, Old Landmark, Military Ave Church, City Waste Disposal Facility, Partial Detroit Public Safety Building/Homeland Security  
4. The poverty threshold for the SEMCOG region is 9.9%. Block groups with percentage of households living in poverty above 9.9% qualify as environmental justice communities.  
PPO Receptors: Southwestern High School, Apt. Bldg @ Campbell and Fischer Service Dr., Ft. Wayne, Unemployment Office  
5. Community Cohesion could/will be improved as a result of the master planning for the area relating to the urban fabric and how the crossing system fits with that fabric.

**Detroit River International Crossing Study  
Evaluation of Practical Alternatives  
Supporting Data - Interchange Only**

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Evaluation Factor	Performance Measure Category		Description/Units	Alternative											
	Official Plans	Consistency		1	2	3	4	5	6	7	8	9	10	11	12
Maintain Consistency w/Local Planning	Official Plans	Consistency	YES/NO	Yes											
	Other Plans	Consistency	YES/NO	Yes1											
	Environmental Sites	Leaking Undgrd. Stor. Tanks	Number	4	4	3	5	3	4	4	4	3	3	7	5
	Affecting Plan	EPA/DEQ Hazmat TSD Facility	Number	1	1	1	1	1	1	1	1	1	1	1	1
	Implementation	National Priority List (Superfund)	Number	0	0	0	0	0	0	0	0	0	0	0	0
	(single sites may have multiple designations)	RTK Cerclis (Superfund)	Number	1	1	0	2	1	1	1	1	0	0	3	2
		Michigan Contaminated Site	Number	0	0	0	1	0	0	0	0	0	0	0	1

Residential-low-to medium density planned SE corner of PPO outline officially and unofficially

1. Based on master planning being designed with community input as part of the D R I C Study.

**Detroit River International Crossing Study  
Evaluation of Practical Alternatives  
Supporting Data - Interchange Only**

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Evaluation Factor	Performance Measure Category	Description/Units	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Alternative 7	Alternative 8	Alternative 9	Alternative 10	Alternative 11	Alternative 12	Alternative 13	
<b>Protect Cultural Resources</b>	Above Ground Historic Resources <sup>1</sup>	Historic Districts (1)	Number	0	0	0	0	0	0	0	0	0	0	0	0	
		Listed NRHP Sites/Structures (2)	Number	0	0	0	0	0	0	0	0	0	0	0	0	0
		Listed SHRS Sites/ Structures	Number	0	0	0	0	0	0	0	0	0	0	0	0	0
		Locally Listed Sites/Structures	Number	0	0	0	0	0	0	0	0	0	0	0	0	0
	Archaeology <sup>1</sup>	Potentially Eligible Sites/Str. (3)	Number	2	3	3	4	3	2	2	3	3	3	3	3	5
		Prev. Recorded Sites	Number	0	0	0	0	0	0	0	0	0	0	0	0	0
	Below Ground Resources <sup>1</sup>	Potential to Find/Record	High/Med/Low	Low	Low	Low	Low	Low								
		All Public Parks	Number/ Acres	0	0	0	0	0	0	0	0	0	0	0	0	0
	Parkland	6(f) Parks	Number/Specify	0	0	0	0	0	0	0	0	0	0	0	0	0
		Coastal Zone Management	Number of Projects/Specify <sup>2</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0

(1) Hubbard Farms Historic District, roughly bounded by Clark, Lafayette, W. Grand Blv., and Vernor.  
 (2) Frank H. Beard School, 840 Waterman.  
 (3) Alt. 1 - Olivet Church, 707 Lewerenz; Apartment Building, 760 Campbell.  
 Alt. 2 - Olivet Church, 707 Lewerenz; Turnsteads (Fisher Body), 6307 W. Fort; Apartment Bldg, 760 Campbell.  
 Alt. 3 - Olivet Church, 707 Lewerenz; Turnsteads (Fisher Body), 6307 W. Fort; Apartment Bldg, 760 Campbell.  
 Alt. 4 - All Saints Church, 7800 W. Fort; Produce Terminal, 7201 W. Fort; Turnsteads (Fisher Body), 6307 W. Fort; Apartment Bldg, 760 Campbell.  
 Alt. 5 - Olivet Church, 707 Lewerenz; Apartment Bldg, 760 Campbell; Detroit Savings Bank, 5705 W. Fort.  
 Alt. 6 - Olivet Church, 707 Lewerenz; Apartment Bldg, 760 Campbell.  
 Alt. 7 - Olivet Church, 707 Lewerenz; Apartment Bldg, 760 Campbell.  
 Alt. 8 - Olivet Church, 707 Lewerenz; Turnsteads (Fisher Body), 6307 W. Fort; Apartment Bldg, 760 Campbell.  
 Alt. 9 - Olivet Church, 707 Lewerenz; Turnsteads (Fisher Body), 6307 W. Fort; Apartment Bldg, 760 Campbell.  
 Alt. 10 - Olivet Church, 707 Lewerenz; Turnsteads (Fisher Body), 6307 W. Fort; Apartment Bldg, 760 Campbell.  
 Alt. 11 - Olivet Church, 707 Lewerenz; Turnsteads (Fisher Body), 6307 W. Fort; Apartment Bldg, 760 Campbell.  
 Alt. 12 - All Saints Church, 7800 W. Fort; Turnsteads (Fisher Body), 6307 W. Fort; Apartment Bldg, 760 Campbell.  
 Alt. 13 - All Saints Church, 7800 W. Fort; Produce Terminal, 7201 W. Fort; Michigan Bell (Vinewood Exc) Building, 7400 W. Fort; Fort & Green Police Station, 7104 W. Fort; Olivet Church, 707 Lewerenz.

**Detroit River International Crossing Study  
Evaluation of Practical Alternatives  
Supporting Data - Interchange Only**

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Evaluation Factor	Performance Measure Category	Description/Units	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Alternative 7	Alternative 8	Alternative 9	Alternative 10	Alternative 11	Alternative 12	Alternative 13	
<b>Protect The Natural Environment</b>	Surface Water	Floodplain	Number/Acres	0	0	0	0	0	0	0	0	0	0	0	0	0
		Surface Run Off	Acres	10	10	10	14	11	9	10	9	10	8	10	14	11
		Primary Streams <sup>1</sup>	Number/Specify	0	0	0	0	0	0	0	0	0	0	0	0	0
		Secondary Streams <sup>2</sup>	Number/Specify	0	0	0	0	0	0	0	0	0	0	0	0	0
	Groundwater	Other Water-crossings	Number/Specify	0	0	0	0	0	0	0	0	0	0	0	0	0
		Municipal Wells	Number	0	0	0	0	0	0	0	0	0	0	0	0	0
		Water In-takes	Number/Specify	0	0	0	0	0	0	0	0	0	0	0	0	0
	Significant Habitat	Wetlands	Acres	0	0	0	0	0	0	0	0	0	0	0	0	0
		Fens / Bogs	Number/Acres	0	0	0	0	0	0	0	0	0	0	0	0	0
		Endangered Species	Potential Species	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
		Designated Wildlife Refuges	Number/Acres	0	0	0	0	0	0	0	0	0	0	0	0	0
	Prime/Unique Farmland	Farmland	Acres	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mineral Resources	Salt /Limestone	Type/Specify	Salt	Salt	Salt	Salt	Salt								

Notes:  
 1: Primary Streams are classified as water courses with an average width greater than 50ft/15m  
 2: Secondary streams are classified as water courses with an average width less than 50ft/15m.

## **Plaza Data**

**Detroit River International Crossing Study  
Evaluation of Practical Alternatives  
Supporting Data - Plazas Only**

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Evaluation Factor	Performance Measure Category		Description/Units	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8	Alt. 9	Alt. 10	Alt. 11	Alt. 12	Alt. 13	
	Performance Measure Category	Description/Units															
Noise	Frontline Exposure	Number of dwelling units exposed		101	101	101	101	101	95	105	95	105	95	105	95	72	
	Significant Receptors <sup>1</sup> Exposures	Number /Specify <sup>1</sup>		2	2	2	2	2	2	2	2	2	2	2	2	2	
Community Cohesion/ Character	Positive/Negative/Neutral			Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>	Neutral <sup>5</sup>					
Potential Acquisition	Residential Units	Occupied		151	151	151	151	151	113	168	113	168	113	168	113	160	
		Vacant		4	4	4	4	4	0	17	0	17	0	17	0	4	
	Residential Population	Number		370	370	370	370	370	277	412	277	412	277	412	277	392	
		Active		18	18	18	18	18	26	18	26	18	26	18	26	22	
	Business Units	Active		18	18	18	18	18	26	18	26	18	26	18	26	22	
		Vacant		11	11	11	11	11	11	8	11	11	8	11	11	5	
	Estimated Employees in affected Census Blocks <sup>2</sup>	Number		281	281	281	281	281	294	281	294	281	294	281	294	304	
		Schools		0	0	0	0	0	0	0	0	0	0	0	0	0	
	Other Land Uses Affected <sup>3</sup>	Senior Service Facilities		0	0	0	0	0	0	0	0	0	0	0	0	0	
		City/Government Facilities		2	2	2	2	2	1	2	1	2	1	2	1	2	
		Places of Worship		3	3	3	3	3	1	3	1	3	1	3	1	3	
		Medical Facilities		0	0	0	0	0	1	0	1	0	1	0	1	0	
		State/Federal Government Facilities		1	1	1	1	1	0	1	0	1	0	1	0	0	
Community Services			0	0	0	0	0	0	0	0	0	0	0	0	0		
Vacant			0	0	0	0	0	0	0	0	0	0	0	0	0		
EJ Population (non poverty)			1,524	1,524	1,524	1,524	1,524	617	1,524	617	1,524	617	1,524	617	1,524		
Environmental Justice / Title VI	EJ Populations in affected Census Block Groups	Population Groups Affected		African American, American Indian, Hispanic	American Indian, Hispanic	African American, American Indian, Hispanic	American Indian, Hispanic	African American, American Indian, Hispanic	American Indian, Hispanic	African American, American Indian, Hispanic	American Indian, Hispanic	African American, American Indian, Hispanic					
		% Households in Poverty / Above or Below 9.9% Regional Threshold <sup>4</sup>		39.6%/Above	39.6%/Above	39.6%/Above	39.6%/Above	39.6%/Above	37.5%/Above	39.6%/Above	37.5%/Above	39.6%/Above	37.5%/Above	39.6%/Above	37.5%/Above	39.6%/Above	
		Households in poverty		296	296	296	296	296	138	296	138	296	138	296	138	296	
Title VI Groups in Census Tracts	Presence of Regionally Prominent Ancestral Groups			None	None	None	None	None	None	None	None	None	None	None	None	None	
				None	None	None	None	None	None	None	None	None	None	None	None	None	
Public Safety/ Security (Plaza Only)	Proximity to Industry <sup>6</sup>	Number of heavy industry businesses w/i 1/2 mile		3	3	3	3	3	2	3	2	3	2	3	2	3	
		Number of medium industry businesses w/i 1/2 mile		6	6	6	6	6	5	6	5	6	5	6	5	6	
		Number of light industry/office businesses w/i 1000ft/300m		4	4	4	4	4	3	4	3	4	3	4	3	3	
	Proximity to Residential / Retail	Number of residences w/i 500ft/150m		49	49	49	49	49	94	59	94	59	94	59	94	68	
		Number of businesses w/i 500ft/150m		10	10	10	10	10	30	11	30	11	30	11	30	13	
	Proximity to Hazardous Materials	Number of EPA/DEQ Hazmat TSD Facilities w/i 500ft/150m		0	0	0	0	0	0	0	0	0	0	0	0	0	
		Distance to nearest fire station (mi)		0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	
	Emergency Response	Distance to nearest police station (mi)		0.9	0.9	0.9	0.9	0.9	0.9	0.5	0.9	0.5	0.9	0.5	0.9	0.5	0.8
		Number of streets closed (perm.)		14	14	14	14	14	14	17	14	17	14	17	14	17	
		Number of streets closed (during const.)		11	11	11	11	11	11	11	16	11	16	11	16	11	15
Mainline Railines Rerouted			2	2	2	2	2	2	2	5	2	5	2	5	2	3	

Notes:  
1. Sensitive noise receptors are historic sites, medical facilities, parks, places of worship, schools, within fifty meters an interchange, plaza, or crossing.  
Alt. 1-13: Historic Fort Wayne & Southwestern High School  
2. Employee estimates provided by Tetrad Computer Applications and are based on employees per Census Block Group - proportionately disaggregated to the block level for blocks within or partially within plaza boundaries. Plazas have been field surveyed t  
3. Alt. 1-5: Rademacher Recreation Center, Detroit Sewer and Water Department, New Day Church, Saint Paul AME, Abundant Life Apostolic Overcoming Holy Church, Family Independence Agency  
Alt. 6,8,10,12: City Waste Disposal Facility, Greater Apostolic Faith Church  
Alt. 7,9,11: Rademacher Recreation Center, Detroit Sewer and Water Department, New Day Church, Saint Paul AME, Abundant Life Apostolic Overcoming Holy Church, MetroMatrix Human Services, Family Independence Agency  
Alt. 13: Rademacher Recreation Center, Detroit Sewer and Water Department, New Day Church, Saint Paul AME, Abundant Life Apostolic Overcoming Holy Church  
4. The poverty threshold for the SEMCOG region is 9.9%. Block groups with percentage of households living in poverty above 9.9% qualify as environmental justice communities.  
PPO Receptors: Southwestern High School, Apt. Bldg @ Campbell and Fischer Service Dr., Ft. Wayne, Unemployment Office  
5. Community Cohesion could/will be improved as a result of the master planning for the area relating to the urban fabric and how the crossing system fits with that fabric.  
6. Alt. 1-5: (H) Mistersky Power Station, Detroit Thomas Edison Plant, Lafarge (M) Arvin Meritor, Produce Terminal, Hascal Steel, Progressive Distribution Center, Bridgewater Interiors, Yellow Trucking  
Alt. 6,8,10,12: (H) Mistersky Power Station, Detroit Thomas Edison Plant (M) Port of Detroit, O.J. Logistics, Arvin Meritor, Bridgewater Interiors, Progressive Distribution Center  
Alt. 7,9,11: (H) Mistersky Power Station, Detroit Thomas Edison Plant, Lafarge (M) Arvin Meritor, Produce Terminal, Progressive Distribution Center, Yellow Trucking, Bridgewater Interiors  
Alt. 13: (H) Mistersky Power Station, Detroit Thomas Edison Plant, Lafarge (M) Arvin Meritor, Produce Terminal, OJ Logistics, Progressive Distribution Center, Yellow Trucking, Bridgewater Interiors

**Detroit River International Crossing Study  
Evaluation of Practical Alternatives  
Supporting Data - Plazas Only**

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Evaluation Factor	Performance Measure Category		Description/Units	Alt. 1-5	Alt. 6,8,10,12	Alt. 7,9,11	Alt. 13
				No	Yes	No	No
<b>Maintain Consistency w/Local Planning</b>	Official Plans	Consistency	YES/NO	No	Yes	No	No
	Other Plans	Consistency	YES/NO	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>
	Environmental Sites Affecting Plan Implementation (single sites may have multiple designations)	Leaking Undgrd. Stor. Tanks	Number	1	3	1	2
		EPA/DEQ Hazmat TSD Facility	Number	0	0	0	0
		National Priority List (Superfund)	Number	0	0	0	0
		RTK Cerclis (Superfund)	Number	2	2	2	2
Michigan Contaminated Site	Number	3	2	3	3		

Residential-low-to medium density planned SE corner of PPO outline officially and unofficially

1. Based on master planning being designed with community input as part of the D R I C Study.

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**Detroit River International Crossing Study  
Evaluation of Practical Alternatives  
Supporting Data - Plazas Only**

Evaluation Factor	Performance Measure Category	Description/Units	Alt. 1-5	Alt. 6,8,10,12	Alt. 7,9,11	Alt. 13	
Protect Cultural Resources	Above Ground Historic Resources	Historic Districts	Number	0	0	0	0
		Listed NRHP Sites/Structures	Number	0	0	0	0
		Listed SHRS Sites/ Structures	Number	0	0	0	0
		Locally Listed Sites/Structures	Number	0	0	0	0
		Potentially Eligible Sites/Str.	Number	1(1)	2(2)	1(1)	1(1)
	Archaeology	Prev. Recorded Sites	Number	2(3)	2(4)	2(5)	2(5)
		Below Ground Resources	Potential to Find/Record	High/Med/Low	Medium	Medium	Medium
	Parkland	All Public Parks	Number/ Acres	1	1/2.24	1/2.24	1/2.24
		6(f) Parks	Number/Specify	0	0	0	0
		Coastal Zone Management	Number of Projects/Specify	0	0	0	0

Notes:

(1) ; St. Paul A.M.E. Church, 581-585 S. Rademacher

(2) Roberts Brass Mfg. Co. (vacant), 5401-5409 E. Fort; Detroit Savings Bank, 5705 W. Fort

(3) 20WN382, King David's Lodge Cemetery-Jewish 1870 (dating and name of cemetery is believed to be in error. It is more likely the Detroit City Lodge (Jewish) Cemetery located "north of Fort Street west, about 3 miles from City Hall" [Polk's Detroit City Directory 1886:68]); 20WN6, Carsten Mound

(4) 20WN382, King David's Lodge Cemetery-Jewish 1870 (dating and name of cemetery is believed to be in error. It is more likely the Detroit City Lodge (Jewish) Cemetery located "north of Fort Street west, about 3 miles from City Hall" [Polk's Detroit City Directory 1886:68]); 20WN407, Collot 2 (c. 1796 farmstead location as depicted on Collot Map of Detroit Settlement-conjectural location)

(5) 20WN382, King David's Lodge Cemetery-Jewish 1870 (dating and name of cemetery is believed to be in error. It is more likely the Detroit City Lodge (Jewish) Cemetery located "north of Fort Street west, about 3 miles from City Hall" [Polk's Detroit City Directory 1886:68]); 20WN6, Carsten Mound

**Detroit River International Crossing Study  
Evaluation of Practical Alternatives  
Supporting Data - Plazas Only**

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Evaluation Factor	Performance Measure Category	Description/Units	Alt. 1-5	Alt. 6,8,10,12	Alt. 7,9,11	Alt. 13	
Protect The Natural Environment	Surface Water	Floodplain	Number/Acres	0	0/0	0/0	0/0
		Surface Run Off	Acres	164	158	173	175
		Primary Streams	Number/Specify	0	0	0	0
		Secondary Streams	Number/Specify	0	0	0	0
		Other Water-crossings	Number/Specify	0	0	0	0
	Groundwater	Municipal Wells	Number	0	0	0	0
		Water In-takes	Number/Specify	0	0	0	0
	Significant Habitat	Wetlands	Acres	0	0	0	0
		Fens / Bogs	Number/Acres	0	0	0	0
		Endangered Species <sup>3</sup>	Potential Species	0	0	0	0
		Designated Wildlife Refuges	Number/Acres	0/0	0/0	0/0	0/0
	Prime/Unique Farmland	Farmland	Acres	0	0	0	0
	Mineral Resources	Salt /Limestone	Type/Specify	Salt	Salt	Salt	Salt

Notes:

1: Primary Streams are classified as water courses with an average width greater than 50ft/15m

2: Secondary streams are classified as water courses with an average width less than 50ft/15m.

3: Based on preliminary site investigation of the plaza sites (viewing from public access points), none of the plant or animal species listed as endangered species within the quads for this region are expected to occur within the boundaries of the plazas

## **Attachment B**

# **Detroit River International Crossing Study Value Planning Results**

# Value Analysis/Value Planning Study

Detroit River International Crossing  
DRIC

February 2, 2007



**benesch**

## **VA/VP Scope**

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**The VE process is divided into two sections;**

**Value Analysis (VA)**

**and**

**Value Planning (VP)**

## VA/VP Scope

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1. Review the 7 alternatives of the interchange that links the Plaza and I-75 and **validate** its merits. (Value Analysis)
2. **Explore other feasible alternatives** to assure that all viable options are considered. (Value Planning)

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# **Section #1**

# **Value Analysis**

# Performance Matrix

**Excellent = 5**  
**Very Good = 4**  
**Good = 3**  
**Acceptable = 2**  
**Poor = 1**  
**Unacceptable = 0**

Criteria	Weight of Importance (1-10)	Interchange 1		Interchange 2		Interchange 3		Interchange 4		Interchange 5		Interchange 6		Interchange 1 Mod	
		Rating (1-5)	Weighted Rating	Rating (1-5)	Weighted Rating										
1 Access to and From Plaza	10	4.6	46.0	4.6	46.0	4.0	40.0	3.0	30.0	2.8	28.0	4.6	46.0	4.6	46.0
2 Traffic Operations on I-75	10	4.2	42.0	3.2	32.0	4.0	40.0	3.6	36.0	3.4	34.0	3.8	38.0	3.4	34.0
3 Local Access within Corridor	7	3.0	21.0	3.0	21.0	3.0	21.0	3.6	25.2	3.8	26.6	2.8	19.6	3.0	21.0
4 Local Traffic Operations	6	3.0	18.0	4.0	24.0	2.6	15.6	2.8	16.8	4.4	26.4	2.4	14.4	4.0	24.0
5 Bridge Geometry/Retaining Walls	5	3.4	17.0	2.8	14.0	4.2	21.0	2.6	13.0	3.0	15.0	3.2	16.0	3.0	15.0
<b>Total Weighted Rating</b>	<b>38</b>		<b>144</b>		<b>137</b>		<b>138</b>		<b>121</b>		<b>130</b>		<b>134</b>		<b>140</b>
<b>Average Weighted Rating</b>		<b>3.79</b>		<b>3.61</b>		<b>3.62</b>		<b>3.18</b>		<b>3.42</b>		<b>3.53</b>		<b>3.68</b>	

# Acceptance Matrix

Criteria	Weight of Importance	Interchange 1		Interchange 2		Interchange 3		Interchange 4		Interchange 5		Interchange 6		Interchange 1Mod	
		Rating	Weighted Rating	Rating	Weighted Rating										
		(1-5)		(1-5)		(1-5)		(1-5)		(1-5)		(1-5)		(1-5)	
Protect Community/Neighborhood	10	4.0	40.0	4.0	40.0	3.8	38.0	1.6	16.0	2.2	22.0	3.0	30.0	3.8	38.0
1 Characteristics															
2 Impact to NS Neighborhood	7	3.6	25.2	3.6	25.2	4.0	28.0	2.4	16.8	2.2	15.4	3.0	21.0	3.6	25.2
3 Constructability	8	3.4	27.2	3.4	27.2	2.2	17.6	3.0	24.0	3.6	28.8	3.4	27.2	3.4	27.2
4 Impact to Utilities	6	3.8	22.8	3.8	22.8	2.4	14.4	2.2	13.2	2.2	13.2	3.0	18.0	3.4	20.4
5 Driver comfort	9	3.6	32.4	3.0	27.0	3.6	32.4	3.2	28.8	3.4	30.6	3.2	28.8	4.0	36.0
6 Impact to EW Neighborhood	7	3.8	26.6	3.8	26.6	3.6	25.2	2.2	15.4	2.4	16.8	4.0	28.0	4.0	28.0
Total Weighted Rating	47		174		169		156		114		127		153		175
Average Weighted Rating		3.71		3.59		3.31		2.43		2.70		3.26		3.72	

Excellent = 5  
 Very Good = 4  
 Good = 3  
 Acceptable = 2  
 Poor = 1  
 Unacceptable = 0

# Value Index

				Interchange 1	Interchange 2	Interchange 3	Interchange 4	Interchange 5	Interchange 6	Interchange 1 Mod	
Ratings	Performance - P			3.79	3.61	3.62	3.18	3.42	3.53	3.68	
	Acceptance - A			3.71	3.59	3.31	2.43	2.70	3.26	3.72	
	Cost - C			4.60	3.80	4.60	2.30	3.70	4.00	3.30	
	P	A	C								
Value Index	1	1	1	4.03	3.67	3.84	2.64	3.27	3.59	3.57	
	2	1	1	3.97	3.65	3.79	2.77	3.31	3.58	3.60	
	1	2	1	3.95	3.65	3.71	2.59	3.13	3.51	3.61	
	1	1	2	4.17	3.70	4.03	2.55	3.38	3.70	3.50	
	2	2	1	3.92	3.64	3.69	2.71	3.19	3.51	3.62	
	2	1	2	4.10	3.68	3.95	2.68	3.39	3.66	3.54	
	1	2	2	4.08	3.68	3.89	2.53	3.24	3.61	3.54	

# Summary

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- **Based on the evaluation, Interchanges 1 and 3 are ranked the highest.**
- **If cost is not part of the evaluation at this stage, Interchange 1 Mod should also be considered.**
- **In general, all interchange options are rated good for performance.**

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# **Section #2**

# **Value Planning**

# Interchange VP1



# Interchange VP1

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- **Advantages:**
  - Maintain Clark and Springwells Interchanges.
  - Localizes impacts to Service Drives.
  - Requires less ROW.
  - Reduces impacts North of I-75.
- **Disadvantages:**
  - Design speed 30 MPH in circle.
  - Close Livernois bridge.
  - Closes Livernois/Dragon Interchange.
  - Impacts 64 unit Building.

# Interchange VP3



## **Interchange VP3**

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- **Advantages:**
  - **Maintain Clark and Springwells Interchanges.**
  - **Localizes impacts to Service Drives.**
  - **Requires less ROW.**
  - **Reduces impacts North of I-75.**
  - **Localizes impact to Delray.**
  - **Less Bridge area.**
  - **Reduces bridges over Fort Street.**

## **Interchange VP3**

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- **Disadvantages:**
  - **Design speed 30 MPH.**
  - **Close Dragoon and Livernois Bridges.**
  - **Close Livernois/Dragoon Interchange.**
  - **Discontinuity in Service Drives.**

# Recommendations

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- **VP Team recommends that Interchanges VP1 and VP3 be considered for further study.**

# **Design Suggestions**

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- 1. Reconstruct I-75 between River Rouge Bridge and Grand Boulevard.**
- 2. Reconstruct I-75 between Springwells and Grand Boulevard.**
- 3. Reconstruct I-75 within Project Limits.**
- 4. Create CD roads and Eliminate Service Drives.**

## **Design Suggestions**

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- 5. Abandon Local roads between Fort Street and NB Service Drive.**
- 6. Combine Plaza and Local Off Ramps.**
- 7. Combine Plaza and Local On Ramps.**
- 8. Close I-75 during Construction.**

## **Design Suggestions**

---

- 9. Perform ROW acquisition early.**
- 10. Perform utility relocation early.**
- 11. Use Purchase contract for long lead items.**
- 12. Start detailed survey early.**
- 13. Perform SUE advance contract.**

## **Attachment C**

### **Detroit River International Crossing Study GSA/CBP Input to Plaza Concepts**

**Attachment C**  
**Detroit River International Crossing Study**  
**GSA/CBP Input to Plaza Concepts**

The following is the input provided to the DRIC plaza evaluation. This information is particularly invaluable as GSA will control the plaza by purchase or lease and CBP will control its use. Simply stated, it is their plaza.

**Plaza Alpha**

This plaza functions with Interchanges 1, 1-Modified, 2, 3, 4, and 6. This plaza connects to Crossing X-10 (A&B). The following is a summary of the significant GSA/CBP comments regarding this plaza:

- Appears to provide better defense against railroad security risk.
- Appears to provide better, more convenient service vehicle and employee access to the site.
- Return to Canada lanes look doable, but probably need further study for traffic management and safety.
- This scheme has the fewest initial compromises. It doesn't totally land lock for future NII, etc.
- Footprint allows for smooth traffic flow throughout the plaza.
- Bridge crossing is away from Mistersky Power Plant.
- Plaza footprint has room for future expansion.
- Roadways connecting the plaza and I-75 have easy access to and from the plaza.
- Bridge crossing is too close to DTE Substation, which may be a security concern.

**Plaza Beta**

This plaza functions with Interchanges 1, 1-Modified, 2, 3, and 4. This plaza connects to Crossing X-11(C). The following is a summary of the significant GSA/CBP comments regarding this Plaza:

- A compact plan limits flexibility and expandability opportunities.
- Although terminating the railroad should satisfy safety and security concerns within the port of entry, are there other transportation or rail operation implications associated with this "dead end?"
- If the need for outbound inspections becomes a reality, there is no place to relocate the duty-free operation, which creates the potential for an expensive and litigious situation because of loss of income stream to project proponents.
- The circuitous return to Canada lanes appear confusing. The potential seems high to lose a rejected vehicle to the U.S. expressways. The exit control station looks to be too far upstream to be effective in turning back a rejected vehicle.
- The plaza footprint does not allow for smooth traffic flow throughout the plaza.
- The bridge crossing is adjacent to the Mistersky Power Plant, which may be a security concern.
- The roadways connecting the plaza and I-75 do not have easy access to and from the plaza.

**Plaza Gamma**

This plaza functions with Interchanges 1, 1-Modified, 2, 3, 4, and 6. This plaza connects to Crossing X-11(C). The following is a summary of the significant GSA/CBP comments regarding this plaza:

- Safety concern in mixing employee vehicle traffic with outbound inspection traffic.
- Perimeter security along railroad track likely to be a concern of CBP.
- Commercial Secondary Inspection looks to be more workable here than in other schemes.
- Broker building traffic interacts heavily with Commercial Inspection facility. It should be closer to accommodate high level of foot traffic safely.

- Limited flexibility and expandability options.
- Plaza footprint allows for smooth traffic flow throughout.
- Roadways connecting the plaza and I-75 have easy access to and from the plaza.
- Bridge crossing is adjacent to the Mistersky Power Plant. This may be a security concern.

The comment regarding flexibility/expandability can be addressed through simple modifications to the plaza's design.

### **Plaza Delta**

Unlike other plazas that function with different combinations of interchanges, this plaza only functions with Interchange 5. This plaza connects to Crossing X-11(C). The following is a summary of the GSA/CBP comments regarding this plaza:

- The close proximity of Secondary Commercial Inspection to Southwestern High School seems to be an adverse environmental condition.
- Outbound inspection facilities located away from main port of entry facilities become an essentially separate, stand-alone port of entry. This makes it difficult to take advantage of economies of scale in facilities and services; manpower increase in inspection officers and supervisor/management positions.
- The foot traffic from commercial vehicle parking spaces to the inspection building face a safety hazard by oncoming and exiting traffic.
- Exit control and refused entry vehicle traffic appears to need flag control to direct traffic.
- Perimeter security along the railroad tracks is likely to be a concern of CBP.
- The plaza footprint appears to have room for future expansion.
- The plaza footprint does not allow for smooth traffic flow throughout the plaza.
- The bridge crossing is next to the Mistersky Power Plant. This may be a security concern.
- Roadways connecting the plaza and I-75 do not have easy access to and from the plaza.

In addition to the comments from GSA/CBP above, an engineering analysis of this plaza shows that the Secondary Commercial Inspection area is more constrained and there is less flexibility in the plaza operations than Plaza 6, which also connects to Crossing X-11(C), while the footprint and impacts are comparable.

### **General Comments About All Plazas**

- Concern for the potential liability for "return" traffic having to cross through commercial traffic.
- Recommended plan – for port operation the southernmost crossing option provides site plans that meet needs.
- Commercial maneuvering – each of the options has the incoming commercial traffic passing through the maneuvering area to the cargo docks. (Flow is good enough for this study, but will require changes when actual design starts.)
- The space for the VACIS operation will need to be increased in width and length.
- The location of toll plazas in all schemes constrains site flexibility to meet future needs. It was suggested moving them closer to the site perimeters.
- There is a possible need for seized vehicle impound lots.
- USDA-APHIS livestock inspection facilities should be located away from other areas of activity. Noise and distractions can be aggravating to animals and consequently pose safety problems for inspectors. This area should be downwind of other occupied or active areas. There are concerns about waste cleanup. Parked trucks will need some distance between them to prevent the transfer of airborne pathogens between livestock.