

5. SCREEN 1 – FATAL FLAW ANALYSIS

Building on the local transportation plans summarized in Section 1, the DTOGS project defined a universe of corridor alternatives. The universe of corridor alternatives included the eight corridors identified in SEMCOG’s 2030 RTP and six additional corridors within the DTOGS project area, for a total of fourteen corridors.

The purpose of the Screen 1 evaluation was to identify early in the process those potential rapid transit corridors that were improbable or impossible to finance, construct or operate efficiently, due to numerous factors such as lack of a significant transit market and significant and cost-prohibitive infrastructure and right-of-way requirements. The rapid transit corridors that pass muster in Screen 1 were then recommended for further analysis in Screen 2 in the next section of this report.

The fatal flaw analysis categorized the fourteen corridors into geographic sectors and identified fatal flaws of each corridor based on broad evaluation criteria.

5.1 Identification of Study Subsectors

An initial step in evaluating corridors was to identify geographic subsectors within the project area, presented in **Table 5-1** and **Figure 5-1** on the next page. Each subsector included a number of corridors with similar travel sheds.

**Table 5-1
Universe of Corridor Alternatives by Subsector**

West Subsector	Northwest Subsector
Ford Road (M-153) Ford Freeway (I-94) Fort Street (M-85) Michigan Avenue (US-12)	Grand River Avenue (M-5) Jeffries Freeway (I-96) Southfield Freeway (M-39)
North Subsector	Northeast Subsector
Chrysler Freeway / Fisher Freeway (I-75) Lodge Freeway (M-10) Woodward Avenue (M-1)	Gratiot Avenue (M-3) Van Dyke Street (M-53)
East Subsector	
Eight Mile Road (M-102) Jefferson Avenue	

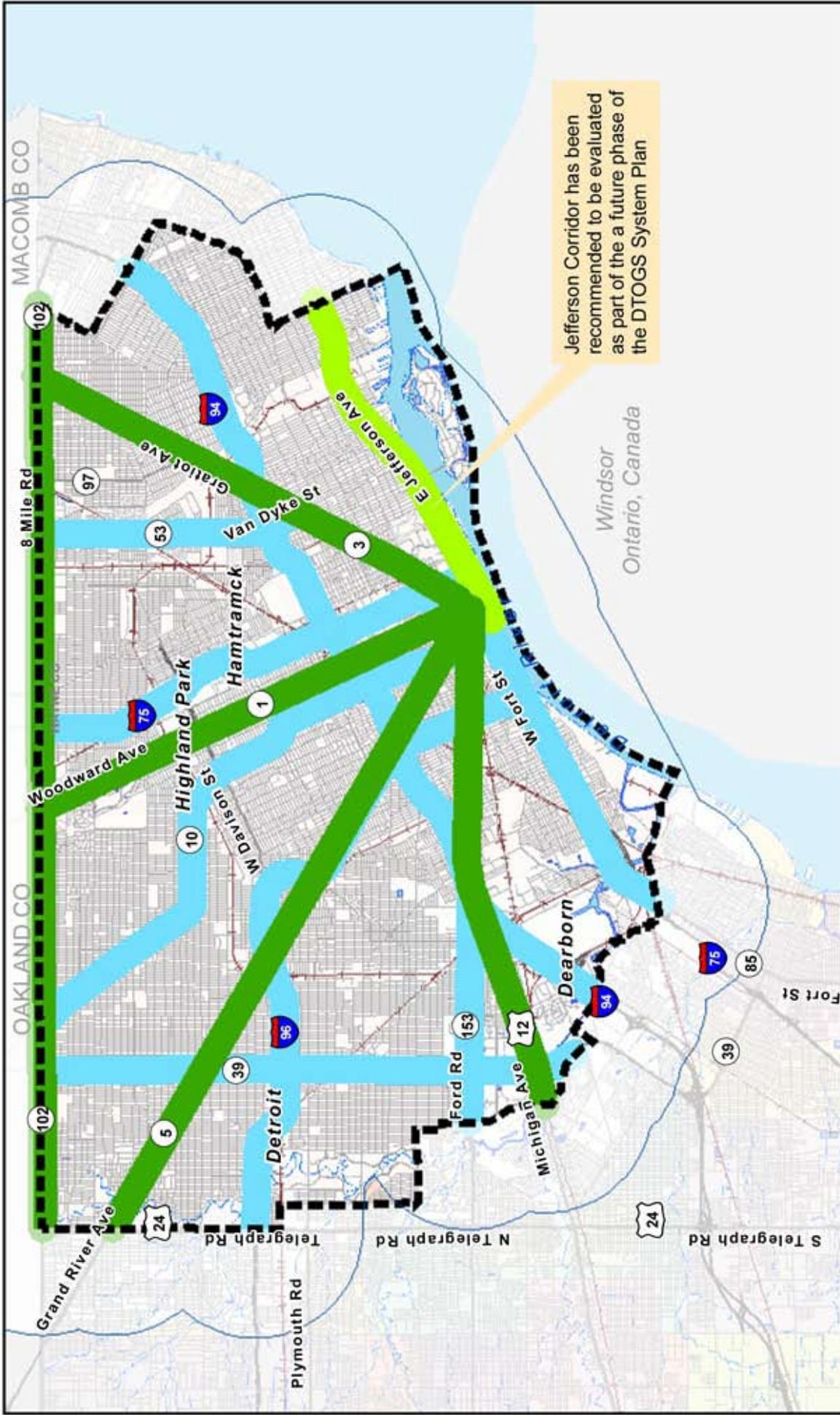


Figure 5-1

Recommended Corridors for Screen 2

January 5, 2007



5.2 Screen 1 Evaluation

Based on evaluation criteria presented in **Table 5-2**, developed according to the DTOGS project goals and objectives, the universe of corridor were analyzed at a broad level. The fatal flaws analysis identified the corridors which would best serve the project area and meet project objectives. The analysis employed a five-point scoring scheme: A corridor that was rated “Very Good” against a criterion garnered five points, while a rating of “Very Poor” received one point. Additionally, to emphasize the importance of population and employment density on transit trip patronage, these criteria received twice the number of points. These and other socio-economic and social equity criteria were applied to a two-mile wide area (one mile on either side of the corridor).

Table 5-2
Screen 1 Evaluation Criteria

Socio-Economic Criteria	Social Equity Criteria
Total population and density Total employment and density	Zero car households Population below poverty level Population over 65
Community Goals & Objectives Criteria	Conceptual Engineering Criteria
Consistency with corridor plans Consistency with SEMCOG plans and City of Detroit master plan	Potential capital cost estimate Potential right-of-way availability
Transportation Criteria	Other Factors Criteria
Number of major trip generators ADT on major roadways in corridor ADT on parallel roadways Average daily ridership on transit	Public perception Development potential Technical Committee recommendation

Table 5-5 at the end of this section presents the results of the fatal flaw analysis.

5.3 Stakeholder Interviews

In addition to the broad technical analysis undertaken in Screen 1, and consistent with the DTOGS project's public participation process, a series of stakeholder interviews were conducted in autumn of 2006 with community representatives who have a stake in transportation and development/redevelopment activities within the study area. These interviews gathered input from community stakeholders regarding needs, wants, and expectations of rapid transit in the DTOGS project area. The DTOGS project team identified twenty-seven individuals whose expertise and insight were considered critical to understanding development and transportation issues. **Table 5-3** on the next page presents the list of stakeholders who participated in these interviews. Participants were civic and community leaders, including representatives from the business community, educational institutions, and government agencies. A questionnaire was developed by the DTOGS project Team. Interviews lasted from thirty minutes to two hours.

Growth and Redevelopment

The majority of the interview participants indicated the need to develop a transportation system that would enhance development and redevelopment in the DTOGS project area. Interview participants acknowledged challenges associated with flat employment levels, economic restructuring and the slowdown in housing market. However, recent experiences to the contrary highlighted some of the strengths of the Detroit area.

A number of neighborhoods were the focus of recent investment. The perception was that demand outstripped supply in some areas. Interview participants believed that Mexicantown, Corktown and Eastern Market would continue to grow, as would the waterfront area including GM, Belle Isle and Hart Plaza. While the school system was a concern, the understanding was that empty nesters and young adults, in search of more urban lifestyles, were fueling much of this growth. An increase in the number of entertainment uses, including casinos and sporting events, was also occurring. Participants also anticipated growth along the Jefferson Corridor from the Ambassador Bridge to the Belle Isle Bridge. Some anticipated Jefferson Avenue as a beautiful boulevard, but that land use regulations (i.e., rezoning) would require changes.

Table 5-3
List of Stakeholder Interview Participants¹

Name and Title of Representative	Title	Organization
Larry Alexander	President and CEO	Detroit Convention and Visitors Bureau
Katherine Beebe	Executive Director	Eastern Market Corporation
Arthur Blackwell	Financial Manager	City of Highland Park
Richard Blouse	President and CEO	Detroit Regional Chamber
Donna Burke (representing Gail Torreano)	Vice President, External Affairs	AT&T
Honorable Kenneth Cockrel	President	Detroit City Council
Matthew Cullen	General Manager, Economic Development and Enterprise Services	General Motors Corporation
Peter Cummings	Chairman	RAM Development Company
Michael Duggan	CEO	Detroit Medical Center
John Hertel	Executive Director	Regional Transit Coordinating Council
Harvey Hollins (representing Irvin Reid)	Vice President, Government and Community Affairs	Wayne State University
Atanas Ilitch	President	Olympia Development
Dr. Curtis Ivery	Chancellor	Wayne County Community College District
Denise Knoblock Starr (representing Peter Karmanos)	Chief Administrative Officer	Compuware
Saundra Nelson (representing Robert Ficano)	Director of Special Projects	Wayne County Department of Public Service
James Nicholson	President and CEO	PVS Chemicals, Inc.
Megan Owens	Executive Director	Transportation Riders United
Cynthia Pasky	President	Strategic Staffing Solutions
Charlie Pryde	Director of Public Policy	Ford Motor Company
Doug Rothwell	President	Detroit Renaissance, Inc.
Shirley Stancato	President and CEO	New Detroit, Inc.
Paul Tait	Executive Director	SEMCOG
Reverent Marvin Winans	Senior Pastor	Perfecting Church

Participants also believed that the New Center area, which includes the Gallery District and Wayne State University (WSU), would grow as the student enrollment grows. Wayne County Community College District (WCCCD) was also experiencing a substantial growth in its student population on all of its campuses. Condos were being built in the University and Midtown Districts. Interview participants believed that the dynamics of the new population,

¹ List as of November 2006.

more pedestrian traffic, and nearby cultural, gallery and entertainment districts would further spur growth and investment.

Transportation and Redevelopment

The sense among most participants was that without a mass transportation system, access to jobs, entertainment, sporting events, shopping, educational institutions and neighborhoods would be limited and parking problems would escalate. Some believed that individual redevelopment efforts did not depend on improved transit; but many believed that transit could help stimulate redevelopment. Without a high-capacity transit option, there was concern that growth would be limited, resulting in worsening congestion, high parking costs and parking lots consuming prime development locations.

Existing Transit Services

Interview participants indicated that the current system does not adequately meet the needs of its users, and that two transit providers is inefficient. Safety, speed and scheduling unreliability were stated as deficiencies in the current system. Also, participants suggested that the City of Detroit should better market the system including its recent improvements. Participants believed that the current transit system was inadequate in connecting transit-dependent persons with jobs, and visitors, and that suburbanites were not encouraged to use the system to meet their needs.

Support for Enhanced Rapid Transit System

The interview participants unanimously indicated their support of an enhanced mass transit system that has regional appeal. Overwhelmingly, they suggested implementing an integrated system comprised of light rail and enhanced bus service. Because of its limited service area and maintenance costs, they did not see expansion of the People Mover as a viable option. Participants emphasized regional connections, user-friendliness, park-and-ride facilities, connections between lines, and safety/security (including at stations/stops). Participants suggested combining DDOT and SMART or other forms of better coordination.

Participants believed that the system should service the entire DTOGS project area and expand to neighboring areas. A majority of participants stated that the priority focus for transit should be in Downtown, serving Woodward Avenue, the riverfront, WSU and New Center. Accessing the airport and outlying neighborhoods were also stated as priorities.

Implementation of Rapid Transit

In addition to planning, stakeholders cited the need for strong leadership and support from elected officials in developing an effective mass transit system. Stakeholders cited a number of local and federal sources of funding to implement rapid transit in Detroit. Stakeholders opposed the use of local property tax to generate revenue, however, which was seen as having a potentially negative impact on the city.

Appendix A presents a complete summary of the stakeholder meetings.

5.4 Public Input

The DTOGS project conducted its first set of public meetings in March 2007. One of the instruments used to obtain feedback in the DTOGS project was a survey requesting the public's preference for the fourteen corridors that defined the universe of corridor alternatives. **Table 5-4** presents the survey responses provided by the public at that time.

Table 5-4
Corridor Preference as Surveyed on March 2007

Corridor Name	Most Important	Second Most Important	Third Most Important	Total Responses
Eight Mile	5	19	28	52
Ford (M-153)	3	6	10	19
Fort	4	4	6	14
Grand River	14	10	28	52
Gratiot	11	21	48	80
Chrysler Freeway (I-75)	31	38	21	90
Ford Freeway (I-94)	30	51	24	105
Jefferson	12	19	34	65
Jeffries Freeway (I-96)	9	15	17	41
Lodge Freeway (M-10)	13	27	31	71
Michigan	14	55	41	110
Southfield Freeway (M-39)	1	4	6	11
Van Dyke	3	11	10	24
Woodward	189	49	17	255
Total Responses	339	329	321	989

5.5 Recommended Corridors for Screen 2 Evaluation

The Screen 1 evaluation reduced the number of corridors from fourteen to five. **Table 5-5** at the end of this section summarizes the ranking of the fourteen corridors. All six of the regional highway corridors were eliminated during this screening process. This was due to relatively low scores on criteria related to conceptual engineering, as well as how they met

community goals and objectives. Rapid transit in any of these corridors would entail significant right-of-way requirements and result in high capital costs associated with reconstruction of the freeway and related infrastructure (e.g., bridges, ramps, side streets). The nature of freeway right-of-way would also limit opportunities for transit-oriented development.

Vetted with public feedback from the survey of corridor preference conducted in March 2007, the remaining corridors recommended for further analysis in Screen 2 are:

- Eight Mile Road
- Grand River Avenue
- Gratiot Avenue
- Michigan Avenue
- Woodward Avenue

The Jefferson Avenue Corridor made the top five in the public survey although it had the sixth highest score in the Screen 1 technical assessment. However, with continued public interest, the DTOGS Technical Committee expressed a commitment that Jefferson Avenue be part of a future phase of rapid transit development. For purposes of this Alternatives Analysis, however, Jefferson Avenue fell from consideration for initial implementation of rapid transit.

**Table 5-5
Screen 1 Fatal Flaw Analysis – Results
West Subsector Corridors**

Evaluation Criteria	West Subsector Corridors							
	Fort Corridor		US 12 (Michigan) Corridor		M-153 (Ford) Corridor		I-94 Corridor	
	2-Mile Buffer	Rating	2-Mile Buffer	Rating	2-Mile Buffer	Rating	2-Mile Buffer	Rating
Socio-Economic Criteria								
Total population	140,930	⊙	230,226	⊙	157,441	⊙	478,161	●
Population density (persons / square mile)	3,602	⊙	4,563	●	5,366	●	6,050	●
Total employment	185,180	●	267,686	●	90,735	⊙	256,880	●
Employment density (jobs / square mile)	4,734	●	5,305	●	3,092	⊙	3,250	⊙
Social Equity Criteria								
Zero Car Households	8,148	⊙	11,547	⊙	4,659	⊙	21,929	⊙
Population Below Poverty Level	39,829	⊙	62,751	⊙	38,093	⊙	126,874	●
Population Over 65	16,221	⊙	28,944	⊙	19,137	⊙	5,4929	●
Community Goals and Objectives Criteria								
Consistency with Corridor Plans	Corridor considered in conceptual SpeedLink network and Downtown to Detroit Metro Airport Rail Study.	●	Corridor considered in conceptual SpeedLink network, Downtown to Detroit Metro Airport Rail Study and Ann Arbor-Downtown Detroit Study.	●	Corridor currently under consideration in Ann Arbor-Downtown Detroit Study.	●	MDOT I-94 Corridor Study recommends no transit on I-94.	⊙
Consistency with SEMCOG plans and City of Detroit Master Plan	Rapid transit corridor considered in transit plan.	●	Rapid transit corridor considered in transit plan.	●	Previously considered, but eliminated from further study.	⊙	Previously considered, but eliminated from further study.	⊙
Conceptual Engineering Criteria								
Potential capital cost estimate	Potential high-cost item is clearance under Ambassador Bridge. Fort Street is a major truck route, so truck traffic and transitway should be designed accordingly.	●	Potential high-cost items include relocation of overhead utilities and reconstruction at underpasses to provide sufficient underclearance.	●	Major cost items include widening under the Greenfield and CP Rail bridges.	●	Significant impacts on existing structures and limited right-of-way available for widening to accommodate exclusive transitway.	⊙
Potential right-of-way availability	Existing right-of-way may not be sufficient to accommodate truck traffic and a potential transitway.	⊙	Sufficient right-of-way for most of the corridor, slightly limited in downtown, east of Cass Avenue.	●	Road is discontinuous at Wyoming Ave. Connecting through McGraw or parallel roads would be costly.	⊙	Limited right-of-way available for widening to accommodate exclusive transitway.	⊙
Transportation Criteria								
Number of Major Trip Generators	136	⊙	198	●	92	⊙	305	●
Average Daily Traffic on major roadways serving corridor	11,400 to 12,300	⊙	14,800 to 23,500	●	39,700	●	No counts within buffer	NA

Evaluation Criteria	West Subsector Corridors							
	Fort Corridor		US 12 (Michigan) Corridor		M-153 (Ford) Corridor		I-94 Corridor	
	2-Mile Buffer	Rating	2-Mile Buffer	Rating	2-Mile Buffer	Rating	2-Mile Buffer	Rating
Average Daily Traffic on major parallel roadways serving corridor	Jefferson – 7,100 to 21,200 Dix – 7,100 to 10,900 Michigan – 14,800		Warren - 22,000 to 26,700 Ford – 39,700 Fort – 11,400 to 12,300		Warren – 22,000 to 26,700 Michigan – 23,500		Mack – 10,700 to 30,000 Warren(East of Woodward) – 15,600 Warren(West of Woodward) – 22,200 to 26,700 Michigan – 23,500 Dix – 7,700 to 10,900 Ford – 39,700	
Average Daily Ridership on transit routes serving corridor	DDOT Route 19 - 1,900 SMART Route 110 – 100** SMART Route 125 – 1,645** SMART Route 150 – 120**	●	DDOT Route 37 – 1,400 SMART Route 200/201 – 2,720**	●	SMART Route 250 – 360** SMART Route 255 – 240**	○	No transit service	○
Average Daily Ridership on transit routes serving parallel corridors	Jefferson DDOT Route 25 – 3,700 SMART Route 610/615 – 1,340** SMART Route 620/625 – 110** SMART Route 635 – 125** Michigan DDOT Route 37 – 1,400 SMART Route 200/201 – 2,720**		Warren DDOT Route 14/70 – 7,300 Ford SMART Route 250 – 360** SMART Route 255 – 240** Fort DDOT Route 19 - 1,900 SMART Route 110 – 100** SMART Route 125 – 1,645** SMART Route 150 – 120**		Warren DDOT Route 14/70 – 7,300 Michigan DDOT Route 37 – 1,400 SMART Route 200/201 – 2,720**		Mack DDOT Route 31 – 3,800 Warren DDOT Route 14/70 – 7,300 Michigan DDOT Route 37 – 1,400 SMART Route 200/201 – 2,720**	
Other Factors Criteria								
Public Perception	Not viewed as a corridor that needs rapid transit	○	Viewed as a corridor that needs rapid transit	●	Not viewed as a corridor that needs rapid transit	○	Not viewed as a corridor that needs rapid transit	○
West Subsector Corridor Total Rating	61 points		78 points		50 points		61 points	
West Subsector Corridor Recommendation	Set aside from further evaluation as part of DTOGS Transit Alternatives Analysis		Recommended for 2 mile buffer evaluation as part of DTOGS Transit Alternatives Analysis		Set aside from further evaluation as part of DTOGS Transit Alternatives Analysis		Set aside from further evaluation as part of DTOGS Transit Alternatives Analysis	

** SMART average weekday ridership for October 2006 provided, DDOT average weekday ridership for May 2006 provided.

● Very Good - Corridor meets criterion very well = 5 points
 ● Good - Corridor meets criterion well = 4 points
 ● Fair - Corridor meets criterion sufficiently = 3 points
 ○ Poor - Corridor does not meet criterion = 2 points
 ○ Very Poor - Corridor significantly does not meet criterion = 1 point

Note: Population (both Total Population and Population Density) and Employment (both Total Employment and Employment Density) criteria double weighted based on recommendation of Technical Committee on November 30, 2006.

Table 5-5 (continued)
Screen 1 Fatal Flaw Analysis – Results
Northwest Subsector Corridors

Evaluation Criteria	Northwest Subsector Corridors					
	M-39 Corridor		Grand River Corridor		I-96 Corridor	
	2-Mile Buffer	Rating	2-Mile Buffer	Rating	2-Mile Buffer	Rating
Socio-Economic Criteria						
Total population	295,955	●	417,662	●	400,031	●
Population density (persons / square mile)	5,642	●	6,498	●	6,265	●
Total employment	150,977	⊙	254,594	●	210,229	⊙
Employment density (jobs / square mile)	2,878	⊙	3,961	⊙	3,292	⊙
Social Equity Criteria						
Zero Car Households	6,286	○	45,016	●	41,547	●
Population Below Poverty Level	53,197	⊙	104,365	●	105,008	●
Population Over 65	30,503	⊙	18,684	○	18,403	⊙
Community Goals and Objectives Criteria						
Consistency with Corridor Plans	MDOT corridor plans not recommending transitway on freeway.	○	Corridor considered in conceptual SpeedLink network.	●	MDOT corridor plans not recommending transitway on interstate.	○
Consistency with SEMCOG plans and City of Detroit Master Plan	Previously considered, but eliminated from further study.	⊙	Rapid transit corridor considered in transit plan.	●	Corridor not considered for rapid transit.	○
Conceptual Engineering Criteria						
Potential capital cost estimate	Significant impacts on existing structures within the corridor to accommodate exclusive transitway. High cost associated with right-of-way acquisition.	⊙	Potential high-cost items: relocation of overhead utilities; reconstruction to provide sufficient underclearance at existing railroad bridges (near Warren Avenue).	●	Requires major reconstruction to accommodate transitway. Significant impacts on structures, ramps and side streets.	○
Potential right-of-way availability	Would require significant right-of-way acquisition to accommodate exclusive transitway.	⊙	Sufficient right-of-way for most of corridor, although limited east of Cass Avenue in downtown.	●	Limited to no spare right-of-way available to accommodate a transitway.	○
Transportation Criteria						
Number of Major Trip Generators	142	⊙	246	●	218	●
Average Daily Traffic on major roadways serving corridor	No Counts Available	NA	9,300 to 13,000	⊙	7,300*	⊙
Average Daily Traffic on major parallel roadways serving corridor	Evergreen – 13,100 to 16,800 Greenfield – 10,800 to 37,300		I-96 – 7,300* M-10 – 11,800*		Grand River – 9,300 to 13,000 M-10 – 11,800*	
Average Daily Ridership on transit routes serving corridor	DDOT Route 46 - 720	⊙	DDOT Route 21 – 9,900 SMART Route 305 – 930**	●	SMART Route 810/820 – 430**	○
Average Daily Ridership on transit routes serving parallel corridors	Evergreen DDOT Route 60 – 2000 Greenfield DDOT Route 22 – 4,000 SMART Route 415/420 – 2,180**		I-96 SMART Route 810/820 – 430** M-10 DDOT Route 78 – 840 SMART Route 851 – 385**		Warren DDOT Route 14/70 – 7,300 Michigan DDOT Route 37 – 1,400 SMART Route 200/201 – 2,720**	
Other Factors Criteria						

Evaluation Criteria	Northwest Subsector Corridors					
	M-39 Corridor		Grand River Corridor		I-96 Corridor	
	2-Mile Buffer	Rating	2-Mile Buffer	Rating	2-Mile Buffer	Rating
Public Perception	Not viewed as a corridor that needs rapid transit	○	Viewed as a corridor that needs rapid transit	●	Not viewed as a corridor that needs rapid transit	○
Northwest Subsector Corridor Total Rating	50 points		86 points		60 points	
Northwest Subsector Corridor Recommendation	Set aside from further evaluation as part of DTOGS Transit Alternatives Analysis		Recommended for 2 mile buffer evaluation as part of DTOGS Transit Alternatives Analysis		Set aside from further evaluation as part of DTOGS Transit Alternatives Analysis	

* One-way counts.

** SMART average weekday ridership for October 2006 provided, DDOT average weekday ridership for May 2006 provided.

● Very Good - Corridor meets criterion very well = 5 points

● Good - Corridor meets criterion well = 4 points

○ Fair - Corridor meets criterion sufficiently = 3 points

○ Poor - Corridor does not meet criterion = 2 points

○ Very Poor - Corridor significantly does not meet criterion = 1 point

Note: Population (both Total Population and Population Density) and Employment (both Total Employment and Employment Density) criteria double weighted based on recommendation of Technical Committee on November 30, 2006.

Table 5-5 (continued)
Screen 1 Fatal Flaw Analysis – Results
Northeast Subsector Corridors

Evaluation Criteria	Northeast Subsector Corridors			
	Van Dyke Corridor		Gratiot Corridor	
	2-Mile Buffer	Rating	2-Mile Buffer	Rating
Socio-Economic Criteria				
Total population	194,195	⊙	276,544	⊙
Population density (persons / square mile)	6,044	●	5,745	●
Total employment	89,815	⊙	224,316	●
Employment density (jobs / square mile)	2,795	⊙	4,660	●
Social Equity Criteria				
Zero Car Households	6,992	○	12,123	⊙
Population Below Poverty Level	49,466	⊙	71,244	⊙
Population Over 65	19,866	⊙	28,207	⊙
Community Goals and Objectives Criteria				
Consistency with Corridor Plans	Corridor considered in conceptual SpeedLink network.	●	Corridor considered in conceptual SpeedLink network.	●
Consistency with SEMCOG plans and City of Detroit Master Plan	Rapid transit corridor considered in transit plan.	●	Rapid transit corridor considered in transit plan.	●
Conceptual Engineering Criteria				
Potential capital cost estimate	Potential high-cost items include: relocation of overhead utilities; grade separation with freight railroad; connection to downtown.	●	Potential high-cost items include: grade-separation with freight railroad near French Avenue; connection to downtown; potential relocation of overhead utilities.	●
Potential right-of-way availability	Similar right-of-way width as Gratiot Avenue.	●	Wide corridor; potential removal of existing on-street parking spaces in some areas. Corridor is ripe for redevelopment, so parking demand could be addressed in other ways.	●
Transportation Criteria				
Number of Major Trip Generators	115	⊙	203	●
Average Daily Traffic on major roadways serving corridor	10,600	⊙	14,400 to 47,800	●
Average Daily Traffic on major parallel roadways serving corridor	Conant – Mt. Elliot – 5,900 to 19,200		Van Dyke – 10,600 Jefferson – 7,100 to 21,200 Mack – 13,900 Warren – 15,600 to 26,100	
Average Daily Ridership on transit routes serving corridor	DDOT Route 48 – 4,900 SMART Route 510 – 2,860**	●	DDOT Routes 34 & 76 – 8,000 SMART Route 510 – 2,860** SMART Route 530 – 210** SMART Route 560 – 5,715** SMART Route 580 – 120**	●

Evaluation Criteria	Northeast Subsector Corridors			
	Van Dyke Corridor		Gratiot Corridor	
	2-Mile Buffer	Rating	2-Mile Buffer	Rating
Average Daily Ridership on transit routes serving parallel corridors	Conant DDOT Route 12 – 1,100 Mt. Elliot DDOT Route 24 - 230		Van Dyke DDOT Route 48 – 4,900 SMART Route 510 – 2,860** Jefferson DDOT Route 25 – 3,700 SMART Route 610/615 – 1,340** SMART Route 620/625 – 110** SMART Route 635 – 125** Mack DDOT Route 31 – 3,800 Warren DDOT Route 14/70 – 7,300	
Other Factors Criteria				
Public Perception	Not viewed as a corridor that needs rapid transit	○	Viewed as a corridor that needs rapid transit	●
Northeast Subsector Corridor Total Rating	60 points		81 points	
Northeast Subsector Corridor Recommendation	Set aside from further evaluation as part of DTOGS Transit Alternatives Analysis		Recommended for 2 mile buffer evaluation as part of DTOGS Transit Alternatives Analysis	

* One-way counts.

** SMART average weekday ridership for October 2006 provided, DDOT average weekday ridership for May 2006 provided.

● Very Good - Corridor meets criterion very well = 5 points

● Good - Corridor meets criterion well = 4 points

● Fair - Corridor meets criterion sufficiently = 3 points

○ Poor - Corridor does not meet criterion = 2 points

○ Very Poor - Corridor significantly does not meet criterion = 1 point

Note: Population (both Total Population and Population Density) and Employment (both Total Employment and Employment Density) criteria double weighted based on recommendation of Technical Committee on November 30, 2006.

Table 5-5 (continued)
Screen 1 Fatal Flaw Analysis – Results
North Subsector Corridors

Evaluation Criteria	North Subsector Corridors					
	Woodward Corridor		I-75 Corridor		M-10 (Lodge Freeway) Corridor	
	2-Mile Buffer	Rating	2-Mile Buffer	Rating	2-Mile Buffer	Rating
Socio-Economic Criteria						
Total population	273,208	⊙	247,634	⊙	372,813	●
Population density (persons / square mile)	5,893	●	5,230	●	6,118	●
Total employment	261,877	●	249,823	●	302,856	●
Employment density (jobs / square mile)	5,648	●	5,276	●	4,970	●
Social Equity Criteria						
Zero Car Households	15,123	⊙	13,442	⊙	17,761	⊙
Population Below Poverty Level	69,289	⊙	64,724	●	88,238	●
Population Over 65	35,664	●	30,769	⊙	48,478	●
Community Goals and Objectives Criteria						
Consistency with Corridor Plans	Corridor considered in conceptual SpeedLink network.	●	MDOT corridor plans not recommending transitway on interstate.	○	MDOT corridor plans not recommending transitway on freeway.	○
Consistency with SEMCOG plans and City of Detroit Master Plan	Rapid transit corridor considered in transit plan.	●	Corridor not considered for rapid transit.	○	Previously considered, but eliminated from further study.	⊙
Conceptual Engineering Criteria						
Potential capital cost estimate	Major costs are reconstruction at the Amtrak overpass to provide sufficient under-clearance, and right-of-way acquisition and potential utility relocations in downtown.	●	Incorporation of transit improvements would require major reconstruction within the freeway corridor (bents, ramps, side streets).	⊙	Incorporation of transit improvements would require major reconstruction within the freeway corridor (bents, ramps, side streets), especially at the I-75 and I-94 interchanges, and in downtown in the vicinity of Cobo Hall.	⊙
Potential right-of-way availability	Sufficient right-of-way north Park Avenue / Witherell Street, but limited to the south, further into downtown.	●	Sufficient right-of-way north of Gratiot; limited in downtown.	⊙	Right-of-way may be limited at major interchanges (I-75 and I-94) and downtown in the vicinity of Cobo Hall.	⊙
Transportation Criteria						
Number of Major Trip Generators	211	●	194	●	257	●
Average Daily Traffic on major roadways serving corridor	11,100 – 24,600	●	8,600	⊙	11,800	⊙
Average Daily Traffic on major parallel roadways serving corridor	Rosa Parks Blvd – 4,100 to 10,400* M-10 – 11,800* I-75 – 8,600*		M-10 – 11,800* Woodward – 11,100 to 24,600 Conant-Mt.Elliot – 11,400 to 19,200		Grand River – 9,300 to 13,000 Woodward – 11,100 to 24,600 I-75 – 8,600	
Average Daily Ridership on transit routes serving corridor	DDOT Route 53 – 13,100 SMART Route 410 – 1,650** SMART Route 440/450/460 – 4,760** SMART Route 445/475 – 270** SMART Route 465 – 305** SMART Route 495 – 2,330**	●	No transit service	○	DDOT Route 78 – 840 SMART Route 851 – 385**	⊙

Evaluation Criteria	North Subsector Corridors					
	Woodward Corridor		I-75 Corridor		M-10 (Lodge Freeway) Corridor	
	2-Mile Buffer	Rating	2-Mile Buffer	Rating	2-Mile Buffer	Rating
Average Daily Ridership on transit routes serving parallel corridors	Rosa Parks Blvd DDOT Route 18 – 5,500 M-10 DDOT Route 78 – 840 SMART Route 851 – 385**		M-10 DDOT Route 78 – 840 SMART Route 851 – 385** Woodward DDOT Route 53 – 13,100 SMART Route 410 – 1,650** SMART Route 440/450/460 – 4,760** SMART Route 445/475 – 270** SMART Route 465 – 305** SMART Route 495 – 2,330** Conant DDOT Route 12 – 1,100 Mt. Elliot DDOT Route 24 - 230		Grand River DDOT Route 21 – 9,900 SMART Route 305 – 930** Woodward DDOT Route 53 – 13,100 SMART Route 410 – 1,650** SMART Route 440/450/460 – 4,760** SMART Route 445/475 – 270** SMART Route 465 – 305** SMART Route 495 – 2,330**	
Other Factors Criteria						
Public Perception	Viewed as a corridor that needs rapid transit	●	Not viewed as a corridor that needs rapid transit	○	Not viewed as a corridor that needs rapid transit	○
North Subsector Corridor Total Rating	83 points		60 points		67 points	
North Subsector Corridor Recommendation	Recommended for 2 mile buffer evaluation as part of DTOGS Transit Alternatives Analysis		Set aside from further evaluation as part of DTOGS Transit Alternatives Analysis		Set aside from further evaluation as part of DTOGS Transit Alternatives Analysis	

* One-way counts.

** SMART average weekday ridership for October 2006 provided, DDOT average weekday ridership for May 2006 provided.

● **Very Good** - Corridor meets criterion very well = 5 points

● **Good** - Corridor meets criterion well = 4 points

○ **Fair** - Corridor meets criterion sufficiently = 3 points

○ **Poor** - Corridor does not meet criterion = 2 points

○ **Very Poor** - Corridor significantly does not meet criterion = 1 point

Note: Population (both Total Population and Population Density) and Employment (both Total Employment and Employment Density) criteria double weighted based on recommendation of Technical Committee on November 30, 2006.

Table 5-5 (continued)
Screen 1 Fatal Flaw Analysis – Results
East Subsector Corridors

Evaluation Criteria	East Subsector Corridors			
	Jefferson Corridor		M-102 (8 Mile) Corridor	
	2-Mile Buffer	Rating	2-Mile Buffer	Rating
Socio-Economic Criteria				
Total population	14,227	⊙	490,242	●
Population density (persons / square mile)	3,610	⊙	6,030	●
Total employment	182,867	●	229,482	●
Employment density (jobs / square mile)	4,578	●	2,823	⊙
Social Equity Criteria				
Zero Car Households	9,377	⊙	6,808	○
Population Below Poverty Level	40,418	⊙	56,693	⊙
Population Over 65	19,187	⊙	54,972	●
Community Goals and Objectives Criteria				
Consistency with Corridor Plans	Corridor not consider in previous plans.	⊙	Corridor considered in conceptual SpeedLink network.	●
Consistency with SEMCOG plans and City of Detroit Master Plan	Rapid transit corridor considered in transit plan.	●	Rapid transit corridor considered in transit plan.	●
Conceptual Engineering Criteria				
Potential capital cost estimate	Area with potentially relatively high construction cost is at I-375.	●	Potential major cost item is mitigating any impacts on existing overhead utilities.	●
Potential right-of-way availability	Areas with potential limitation are at I-375 and Cobo Hall.	●	Sufficient right-of-way exists, particularly in the median.	●
Transportation Criteria				
Number of Major Trip Generators	137	●	241	●
Average Daily Traffic on major roadways serving corridor	7,100 to 21,200	●	9,000 to 35,100*	●
Average Daily Traffic on major parallel roadways serving corridor	Mack – 13,300 to 19,900; Warren – 15,600; Gratiot – 14,400		7-Mile – 16,500 to 31,000; McNichols – 14,300 to 22,100	
Average Daily Ridership on transit routes serving corridor	DDOT Route 25 – 3,700 SMART Route 610/615 – 1,340** SMART Route 620/625 – 110** SMART Route 635 – 125**	●	DDOT Route 17 – 4,600	●
Average Daily Ridership on transit routes serving parallel corridors	Mack DDOT Route 31 – 3,800 Warren DDOT Route 14/70 – 7,300		7-Mile DDOT Route 45 – 8,000 Warren DDOT Route 32 – 5,900	
Other Factors Criteria				
Public Perception	Viewed as a corridor that needs rapid transit	●	Viewed as a corridor that may need enhanced transit service	⊙
East Subsector Corridor Total Rating	70 points		78 points	
East Subsector Corridor Recommendation	Set aside for further evaluation as part of DTOGS Phase 2 Analysis		Recommended for 2 mile buffer evaluation as part of DTOGS Transit Alternatives Analysis	

* One-way counts.

** SMART average weekday ridership for October 2006 provided, DDOT average weekday ridership for May 2006 provided.

● **Very Good** - Corridor meets criterion very well = 5 points

● **Good** - Corridor meets criterion well = 4 points

⊙ **Fair** - Corridor meets criterion sufficiently = 3 points

⊙ **Poor** - Corridor does not meet criterion = 2 points

○ **Very Poor** - Corridor significantly does not meet criterion = 1 point

Note: Population (both Total Population and Population Density) and Employment (both Total Employment and Employment Density) criteria double weighted based on recommendation of Technical Committee on November 30, 2006.

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