TMACOG
Expressway Needs Study
Phase 2A: Major Investment Study (MIS)

FINAL MIS REPORT

Toledo Metropolitan Area Council of Governments
(TMACOG)

April 2002
TMACOG Expressway Needs Study
Phase 2A: Major Investment Study (MIS)

FINAL MIS REPORT

Prepared For:
Toledo Metropolitan Area Council of Governments (TMACOG)

Prepared By:
Parsons Transportation Group

April 2002
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EXECUTIVE SUMMARY

ES-1 INTRODUCTION

The purpose of the TMACOG Expressway Needs Study: Phase 2A MIS is to provide transportation decision-makers with a planning tool to define the region's transportation needs, develop possible alternative solutions to meet those needs, evaluate the alternatives, and recommend a preferred alternative which would include a specific set of transportation improvements. For specific projects to receive federal funding for development and construction, a MIS must be completed. The MIS process evaluates a range of alternatives, including controlling travel demand, system management technologies, and providing additional public transit service.

The Toledo metropolitan area's expressway system has served the region since it was completed in 1972. The network of interstates, expressways, principal highways and major arterial roadways facilitate the movement of goods and people around and through Toledo for various business, commercial, residential, educational and recreational reasons. Since the early 1970's, population and employment opportunities in the Toledo metropolitan area have grown, especially in Springfield and Sylvania townships. Consequently, commercial, industrial, and residential developments have occurred over the years that have led to increased traffic congestion, lower levels of traffic service, access needs, and safety problems on the Toledo area expressways.

These growth conditions and the resulting problems on the expressway system were not anticipated in the original planning for the roadway network which spans between 30 and 50 years. In a number of areas around Toledo, peak traffic volumes exceed the roadway's design capacity. In other sections, the system does not meet present-day geometric standards as the design requirements for major highway systems have advanced. The age of the expressway system, which is now past its original design year, has contributed to the area's traffic problems. However, it also created the opportunity for system reconstruction to address the problems and needs that have been identified.

ES-2 MIS CORRIDORS

Phase 1 of the TMACOG Expressway Needs Study, which identified many of the systems' problems and deficiencies, defined eight project corridors. Phase 2A evaluated transportation improvements in two MIS corridors, which include the top four priority corridors from Phase 1. The first or western corridor extends from the I-475/I-75 system interchange in Perrysburg west and north along I-475/US-23 to the Michigan state line, including the I-475/US-23 system interchange near Sylvania. The second or northern corridor extends from the I-475/US-23 system interchange east along I-475 through the I-475/I-75 system interchange (locally known as the "Jeep Split") to just west of the I-75/I-280 system interchange (see Figure 1).

ES-3 PUBLIC AND STAKEHOLDER INVOLVEMENT
Public involvement has been an important part of the decision-making process for Phase 2A of the TMACOG Expressway Needs Study. As one of the first steps in the MIS study, a public involvement plan was developed (see Appendix D). Project planners believed it was important to involve those persons, businesses, public officials and organizations who use the expressway system, live near the expressways, or whose jurisdictions may be affected positively (economic benefits) or negatively (adverse impacts) by any proposed transportation improvements. As a result, input from transportation system users, area residents, civic leaders, private institutions, interest groups, and local, state and federal agencies was sought during the MIS study. The public involvement plan was designed to create an information exchange and other communication links to garner valuable input and to keep the public and various stakeholders informed.

The goals of the public involvement plan were: (1) to reaffirm Phase 1 transportation problems, needs and issues; (2) to involve stakeholders in developing possible transportation improvement solutions to meet study corridor needs; and (3) to create focused discussions with stakeholders, neighborhood groups and residents on the possible transportation alternatives. Section 3 of this report focuses on the scoping process, the MIS Scoping Committee, the stakeholder and public meetings, resource and regulatory agency contacts, and a brief public outreach summary.

ES-4 FINAL EVALUATION RESULTS

This report section presents the final list of expressway transportation improvement projects resulting from the TMACOG Expressway Needs Study MIS. The improvements are presented for each of two MIS corridors in priority order. They are the result of extensive discussions, review and evaluation by the MIS Scoping Committee (a.k.a. Planning Committee), the Transportation Council and by study consultants (Parsons Transportation Group) and TMACOG staff over the past eleven months. In addition to the evaluation of the individual transportation improvements, a project strategy incorporating the individual improvements into discrete project packages listed in priority order is presented for each MIS Corridor.

Ranking Results: The MIS Scoping Committee held two meetings in November 2000 (November 7th and 21st) to actively discuss and evaluate the draft improvement recommendations presented at the Transportation Summit in October 2000 and the Transportation Council on November 1. The Scoping Committee then established a priority ranking for the improvement alternatives in each MIS Corridor based upon evaluation criteria scoring. These rankings were reviewed by the Transportation Council in December 2000 and approved in January 2001. As a result of the evaluation process, the Committees ranked the transportation improvements in the order presented in Table ES-1 on the following page.
<table>
<thead>
<tr>
<th>Expressway Improvement Alternative</th>
<th>Total Score</th>
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<td><strong>FIRST MIS CORRIDOR - I-475 and US 23 from the I-75/I-475 System Interchange (in Perrysburg) to the Michigan state line</strong></td>
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<tr>
<td>Alternate 9: I-475/US 23 Widening from Alexis Road to Dussel Drive (including the improvement of the I-475/US 23 System interchange – Alternate #4)</td>
<td>179 points</td>
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<tr>
<td>Alternate 4: I-475/US-23 System Interchange Upgrade (with only the mainline widening necessitated by this improvement)</td>
<td>177 points</td>
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<tr>
<td>Alternate 6: New I-475 Interchange at US-20A/Salisbury Rd./Dussel Drive (with only the mainline widening necessitated by this improvement)</td>
<td>176 points</td>
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<td>Alternate 10: I-475/US 23 Widening from Alexis Road to I-75 (Perrysburg) (including the improvement of the I-475/US 23 system interchange - #4 - and the I-475 widening from Alexis Road to Dussel Drive - #9)</td>
<td>176 points</td>
</tr>
<tr>
<td>Alternate 7, Option A: I-475/I-75 System Interchange (Perrysburg) Upgrade (including the channelization and elimination of multilane weaves and adding Five Point Road interchange to accommodate these moves to SR 25)</td>
<td>164 points</td>
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<tr>
<td>Alternate 5, Option B: New Dorr Street Interchange</td>
<td>151 points</td>
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<tr>
<td><strong>SECOND MIS CORRIDOR - I-475 and I-75 from I-475/US-23 System Interchange to I-75/I-280 System Interchange</strong></td>
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<tr>
<td>Alternate 1, Option A: I-475/I-75 (“Jeep Split”) System Interchange Upgrade (adding lanes on one lane ramps, eliminating several left on/off ramps with only the mainline widening necessitated by this improvement)</td>
<td>168 points</td>
</tr>
<tr>
<td>Alternate 3: New Douglas Road Interchange ramps (for west “side” of interchange including collector/distributor to Monroe Street)</td>
<td>156 points</td>
</tr>
<tr>
<td>Alternate 8: I-475 Widening from US-23 to Monroe Street</td>
<td>155 points</td>
</tr>
<tr>
<td>Alternate 2: New Sylvania/West Toledo Interchange</td>
<td>143 points</td>
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<tr>
<td><strong>FOR BOTH MIS CORRIDORS</strong></td>
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<tr>
<td>Continue Share-A-Ride and Guaranteed-Ride-Home programs and Van Pool services; Maintain TARTA Park &amp; Ride facilities; Implement proposed Bike Path Projects in respective MIS corridor; Implement ITS and Incident Management programs on I-75 and I-475 in phases as recommended in the ITS Deployment Study and 2025 RTP–Update 2000; Maintain TARTA Bus Service; Expand TARTA Bus Service in eastern and western Lucas County and northern Wood County.</td>
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Several of the individual rating results were revised from the draft recommendations during the review process completed by the Committees based on changes to scores. In the final evaluation results for the first MIS Corridor, Alternate 9 ranked slightly higher than Alternates 4, 6 and 10. This was a change from the draft results that showed Alternate 4 ranked highest. For the second MIS Corridor, even though the scoring for the final evaluation results had changed slightly, the ranking did not change from the draft recommendations that were presented in October 2000. Alternate 1, Option A ranked the highest in this corridor.

**ES-5 FINAL RECOMMENDATIONS AND IMPLEMENTATION STRATEGY**

As a final step in the evaluation process, the Committee then discussed the results in each of the two MIS corridors and then defined projects to implement the rated improvements. These specific projects were then also listed in order. These project recommendations consider the ranking of improvements (presented in Section ES-4) as well as logical construction sequencing and available development work. TMACOG recommends the implementation of these projects as shown in Table ES-2. Figure ES-1 presents this recommendation graphically.

For the first MIS Corridor, Alternates 9, 4, 6, and 10 ranked very high and each alternate scored within 3 points of each other alternate. In addition, Alternate 10 contains the proposed improvements called for in Alternate 9 and Alternate 4. Therefore, it was decided to capitalize on existing work and advance a project to complete the first phase of Alternate 6, the new I-475 Interchange at US-20A/Salisbury Rd./Dussel Drive (#1). The next project listed includes widening part of I-475 from Airport Highway to US 24 (#2). Then completion of alternate 6 (US 20A interchange) is listed (#3). Following this a large project is necessitated because of the interrelationship of the recommended improvements and their impact on each other and the mainline of I-475 and the logical sequencing of construction that is apparent. This large “Western I-475” project (#4) is an upgrade to the I-475/US-23 System Interchange (including the Central Avenue interchange) and widening of I-475 from Alexis to Airport Highway including the addition of a Dorr Street interchange. Following this is a project to widen I-475 from US 24 to I-75 in Perrysburg (#5) and then a project to upgrade the I-475/I-75 System Interchange in Perrysburg (including the channelization and elimination of multiline weaves and adding Five Point Road interchange to accommodate these moves to SR 25) (#6) (See Table ES-2).

For the second MIS corridor, Alternate 1, Option A (I-475/I-75 (“Jeep Split-North Cove”) Interchange Upgrade) ranked twelve points higher than the other projects. This is listed as the first project in this corridor (#1). In addition, since Alternate 3 and Alternate 8 scored within 1 point of each other and Alternate 3 may require some widening as part of the project the next project listed is I-475 widening from US-23 to Monroe Street (#2). Following that is a Douglas Avenue Interchange project (#3), Sylvania Avenue Interchange project (#4), and the widening of I-75 from the systems interchange (North Cove) to I-280 (See Table ES-2).

Other non-highway construction recommended transportation improvements for the two MIS Corridors that resulted from the major investment study process are also listed for implementation.
TABLE ES-2
FINAL PROJECT STRATEGY
TMACOG Expressway MIS

FIRST MIS CORRIDOR
(I-475 and US 23 from the I-75/I-475 System Interchange (in Perrysburg) to the Michigan state line)

1. Complete Phase 1 of the US-20A/Salisbury Road/Dussel Drive interchange*
2. Widen I-475 from Airport Highway to US-24
3. Complete Phase 2 of the new US-20A/Salisbury Road/Dussel Drive interchange*
4. Complete the I-475/US-23 System Interchange and Central Avenue Interchange Upgrade including I-475 widening from Alexis Road to Airport Highway and Dorr Street Interchange.
5. Widen I-475 from US-24 to I-75 in Perrysburg
6. Complete the I-475/US-23 System Interchange Upgrade in Perrysburg Including Channelizing the Multi-lane Merges and a New Interchange at Five Point Road

SECOND MIS CORRIDOR
(I-475 and I-75 from I-475/US-23 System Interchange to I-75/I-280 System Interchange)

1. Complete the I-475/I-75 (“Jeep Split”) System Interchange Upgrade and only mainline widening necessitated by this project.
2. Widen I-475 from US-23 to Monroe Street (east of Secor).
3. Douglas Road Interchange Ramps (for west “side” of interchange including collector/distributor street to Monroe Street) New Sylvania/West Toledo Interchange (west of Talmadge Road)
4. Widen I-75 from Systems Interchange (North Cove) to I-280

FOR BOTH MIS CORRIDORS

Continue Share-A-Ride and Guaranteed-Ride-Home programs and Van Pool services;
Maintain TARTA Park & Ride facilities;
Implement proposed Bike Path Projects in respective MIS corridor;
Implement ITS and Incident Management programs on I-75 and I-475 in phases as recommended in the ITS Deployment Study and 2025 RTP–Update 2000;
Maintain TARTA Bus Service;
Expand TARTA Bus Service in eastern and western Lucas County and northern Wood County.

*Asterisk denotes that specific project development activities are being undertaken by a local sponsor.
MIS Corridor 1

MIS Corridor 2

MIS PROJECT STRATEGY

Corridor 1
1. Dussel / 475 Interchange Improvement
2. Widen 475 - US 24 to Airport
3. US 20A / 475 Interchange
4. Western 475 - Sylvania Systems Interchange
   (Kettering / I-196 Interchange)
5. Widen 475 - US 24 to I-75
6. Perrysburg Systems Interchange /
   SR 25 Weave / Five Point Interchange

Corridor 2
1. Toledo Systems Interchange (North Cove)
2. Widen 475 - Monroe to US 23
3. Douglas interchange (west ramps)
4. New Sylvania Area Interchange / 475
5. Widen 75 - North Cove to 288
SECTION 1 INTRODUCTION

SECTION 1.1 INTRODUCTION

The Toledo metropolitan area's expressway system has served the region since it was completed in 1972. The network of interstates, expressways, principal highways and major arterial roadways facilitate the movement of goods and people around and through Toledo for various business, commercial, residential, educational and recreational reasons. Since the early 1970's, population and employment opportunities in the Toledo metropolitan area have grown, especially in Springfield and Sylvania townships. Consequently, commercial, industrial, and residential developments have occurred over the years that have led to increased traffic congestion, lower levels of traffic service, access needs, and safety problems on the Toledo area expressways.

These growth conditions and the resulting problems on the expressway system were not anticipated in the original planning for the roadway network. In a number of areas around Toledo, peak traffic volumes exceed the roadway's design capacity. In other sections, the system does not meet present-day geometric standards as the design requirements for major highway systems have advanced. The age of the expressway system, which is now past its original design year, has contributed to the area's traffic problems. However, it also created the opportunity for system reconstruction to address the problems and needs that have been identified.

1.2 STUDY BACKGROUND

Regional Transportation Planning

Transportation planning for the Toledo metropolitan area began in the early 1960's when public officials in southern Monroe, Lucas and Wood counties developed the Area Coordinating Committee. This ad hoc group of about 200 persons worked together to resolve many area wide problems, including transportation needs. Transportation was formally organized in 1962 when the Toledo Regional Area Plan for Action (TRAPA) was formed through cooperative agreements among Lucas, Wood and Monroe counties and the cities of Maumee, Oregon, Perrysburg, Sylvania and Toledo.

The Toledo Metropolitan Area Council of Governments (TMACOG) was formally created in the spring of 1968. TMACOG was established as a voluntary organization of local governments in Lucas and Wood counties, Erie, Bedford and Whiteford townships, and the city of Luna Pier in Monroe County, Michigan. At that time, TMACOG reviewed federally funded projects, discussed future planning, and addressed federal initiatives and local government needs. In 1974, TMACOG was designated by the State of Ohio as a Regional Planning and Development Organization with the addition of Ottawa, Sandusky and Erie counties to its region. As a result, TMACOG became a five-county Ohio and a
one-county Michigan planning region. In 1975, TMACOG assumed the official transportation planning role when TRAPA merged into TMACOG as the Transportation and Land Use Committee.

In 1984, the Railroad Task Force was formed to enable shippers, public officials, and rail representatives to work together on regional rail issues. The following year, TMACOG initiated the Share-A-Ride service to reduce automobile trips in the region and thus reduce gas consumption and improve air quality. In 1985, the region’s first transportation plan was developed and adopted. In 1997, the Year 2025 Long Range Transportation Plan was adopted. It set the stage for the implementation of several major transportation projects. The Clean Air Act Amendments of 1990 and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) gave TMACOG additional responsibilities regarding transportation planning. These laws allowed public officials to make decisions on the location of transportation facilities and the allocation of federal funds toward various types of transportation improvements.

**Year 2025 Transportation Plan - Update 2000**

TMACOG is now responsible for maintaining a continuing, cooperative, and comprehensive transportation planning process. This includes developing and continually updating a long-range transportation plan for the region. The plan is a guide for major investments in the Toledo area's multi-modal surface transportation system. The process in which the plan is developed and updated involves state, county, and local elected and appointed officials, local government professional staff, transportation providers and representatives of business, area residents, public interest and civic groups. TMACOG first adopted the current long-range transportation plan, Year 2025 Regional Transportation Plan in June 1996. The Final Plan was submitted to FHWA and ODOT in December 1996 with the joint FHWA/FTA air quality conformity finding being issued in the fall of 1997.

During the past three years several revisions to the plan have occurred as well as an overall review of plan goals, assumptions, and priorities. In June 2000, the Year 2025 Regional Transportation Plan - Update 2000 was approved by the TMACOG Board of Trustees and the Transportation Council. The purpose of this transportation planning document is to develop and implement a program of transportation projects and policies that will guide transportation investments for the region over the next twenty years. The 2025 Regional Transportation Plan includes all modes of transportation and the planned improvements are ranked based upon benefit and importance to the region and its transportation system. Joint FHWA/FTA air quality conformity finding on the Plan and the 2002-2005 Transportation Improvement Program (TIP) occurred in Summer 2001.

**Recent Transportation Planning Studies**

In 1996, TMACOG initiated the Expressway Needs Study. The Expressway Needs Study is a multi-year planning effort to review problems, needs and opportunities on the existing freeway system in Lucas and Wood counties in northwest Ohio. Phase I of the study reviewed the entire expressway system to identify existing and projected problem locations. The study first analyzed various congestion management strategies (CMS) to
reduce traffic congestion by means other than constructing new roadway projects. The study then analyzed the problem locations of the expressway system and identified three major types of issues: geometric (physical design) deficient locations, high accident locations, and traffic congestion locations. Phase 1 also included dividing the entire expressway system into eight corridors then ranking those corridors in terms of priority needs. The initial Phase 1 analysis results were completed in June 1997 with the final report being issued in June 1998 (report revised November 1998).

With the issuance of this Final MIS report, Phase 2A of the Expressway Needs Study has been completed. This phase of the study is a Major Investment Study (MIS). It has confirmed the needs identified during Phase 1. It has also included an extensive public and stakeholder involvement program, and a detailed study of alternative transportation solutions to solve the identified problems within the project corridors. Appendix A lists the MIS project goals, study process, and project issues.

1.3 STUDY PROCESS

The purpose of the Expressway Needs MIS is to provide transportation decision-makers with a planning tool to define the region's transportation needs, develop possible alternative solutions to meet those needs, evaluate the alternatives, and recommend a preferred alternative which would include a specific set of transportation improvements. For specific projects to receive federal funding for development and construction, a MIS must be completed. The MIS process evaluates a range of alternatives, including controlling travel demand, system management technologies, and providing additional public transit service.

The planning process for the MIS was originally initiated in accordance to the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. The study followed U. S. Department of Transportation (USDOT) procedures and requirements for conducting major investment studies under the "Final Rule on Statewide and Metropolitan Planning, October 28, 1993. One June 9 1998, the Transportation Equity Act for the 21st Century (TEA-21) became law. TEA-21 generally preserves the ISTEA's transportation process, but recommended that the MIS process be changed. The Federal Highway Administration (FHWA) recently issued (May 2000) the new Proposed Rules for Statewide and Metropolitan Planning. The Proposed Rules emphasize establishing purpose and need, developing a range of alternatives for analysis, and integrating the MIS process with the highway and transit planning processes under the National Environmental Policy Act (NEPA). In February 1999, the Ohio Department of Transportation (ODOT) issued updated guidance on the MIS process to be conducted for transportation projects in Ohio. In October 2000, ODOT conducted a two-day workshop that introduced a Five-Step Transportation Planning Process, which integrates the MIS process with early transportation planning and the ODOT 9-Step Preliminary Development Process (NEPA process). The draft and Final MIS reports are consistent with the ODOT guidance on major investment studies and the recent guidance issued as a part of ODOT's Five-Step Transportation Planning Process.
Section 2
PROBLEM STATEMENT

2.1 STUDY AREA

Phase 1 of the TMACOG Expressway Needs Study, which identified many of the systems' problems and deficiencies, defined eight project corridors. Phase 2A is evaluating transportation improvements in two MIS corridors, which include the top four priority corridors from Phase 1. The first or western corridor extends from the I-475/I-75 system interchange in Perrysburg west and north along I-475/US-23 to the Michigan state line, including the I-475/US-23 system interchange near Sylvania. The second or northern corridor extends from the I-475/US-23 system interchange east along I-475 through the I-475/I-75 system interchange (locally known as the "Jeep Split") to just west of the I-75/I-280 system interchange (see Figure 1). For Phase 2A Study purposes, the general width of each MIS corridor extends from at least ½ mile to one mile on either side of the major roadway’s centerline.

The study area includes the Ohio Turnpike, one major interstate route (I-75), one interstate beltway (I-475), three federally designated U.S. routes (U.S.20 (20A), U.S. 23 and U.S.24), seven state routes, and a system of arterial and collector streets serving the residents, businesses, and travelers in the Toledo area. The Maumee River, which serves as a navigational and recreational river, crosses through the southern portion of the study area (see Figure 2).

Interstate Highway System – Interstate routes in the area are the Ohio Turnpike (marked I-90/I-80), the I-75 interstate, and a beltway corridor: I-475/U.S. 23 (See Figure 2). From Toledo, the Ohio Turnpike is a major east-west route across Ohio extending east to Cleveland, Ohio and points beyond and extending west to South Bend and Gary, Indiana and Chicago, Illinois. I-75 runs north and south through several states. To the north of Toledo, I-75 goes through Detroit, Michigan to its northern most point in Michigan (the Canadian border) where the interstate terminates. To the south, I-75 travels to Cincinnati and points beyond. Within the project corridors, I-475 serves as a beltway connecting to I-75 north of downtown and again south of downtown. I-475 directs through traffic around the Toledo central business district and facilitates local and regional traffic in the western portion of the metropolitan area.

Principal Highways - Three principal U.S. highways pass through the project area: U.S. routes 20, 23, and 24. U.S. Route 20 is an east-west highway that travels to Cleveland to the east and into Indiana to the west. U.S. 23 is a north-south highway that to the north travels through Ann Arbor, Michigan to its terminus in northern Michigan. To the south, U.S. Route 23 runs through the state of Ohio, through Columbus and into Kentucky. The design of U.S. Route 23 varies from interstate standards (limited access) to a typical 2-lane roadway (unlimited access) to a divided highway configuration. U.S. Route 24 is another major route through Toledo that originates in Michigan, follows the Maumee
Figure 1
Phase 2A MIS Study Corridor
Figure 2
Toledo Expressway Needs Study Area
River through Toledo and the state of Ohio into Indiana. Other state-designated roadways in the project corridors are: State Routes 184, 51, 120 2, 65, 25, and 199.

Transit and Other Motorized and Non-Motorized Transportation Modes - Public transportation in the project corridors is provided by the Toledo Area Regional Transit Authority (TARTA) which operates a bus transit system throughout the Toledo metropolitan area. The transit system includes express, local, cross-town and circulator routes. Air travel in the Toledo area is accommodated by the Toledo Express Airport. Major freight rail (CN, CSX and NS railroads) and passenger rail (Amtrak) also pass through the Toledo metropolitan area and the project corridors. In addition, there are a number of existing and proposed bicycle/pedestrian paths within the project corridors to facilitate non-motorized travel.

2.2 EXISTING AND FUTURE LAND USE PATTERNS

The Toledo metropolitan area is a strong economic and employment center. It includes business services, retail, banking, shopping centers, industrial land uses, manufacturing and commercial goods distribution. Educational institutions, such as the University of Toledo, the corporate headquarters of Owens-Corning, and the new Daimler-Chrysler Jeep assembly plant are representative of the economic strength of Toledo. Toledo also is a major freight rail hub and shipping port for the Great Lakes region. Recent population and employment forecasts have shown that significant land use development and regional growth has occurred in the western portions of the Toledo metropolitan area. This is especially true for Springfield and Sylvania townships, which have increased in population and employment significantly during the past decade. Although downtown Toledo population has seen declines from 1980 to 1990, recent population and employment figures for Toledo have stabilized.

2.3 DOCUMENTATION OF NEEDS

The need for transportation investments in the Toledo metropolitan area, especially the project corridors, has become increasingly apparent over the past two decades. The expressway system, constructed in the late 1960's and early 1970's, continues to age. Substandard roadway design, lane imbalances, improper weaving movements and substandard interchange configurations are commonplace throughout the project corridors. Increased traffic congestion and increased crash frequency on the expressways have presented important issues to the region that need to be addressed. Moreover, projected regional growth and increased travel demand in the Toledo metropolitan area make transportation investments necessary. In addition, upgrading the expressway system in the project corridors to eliminate design deficiencies and worsening travel conditions has been part of the transportation planning process for more than a decade.

Phase 1 of the Expressway Needs Study thoroughly documents the transportation needs assessment for the Toledo metropolitan area. The transportation needs of the project corridors are focused in four areas: system operations, system deficiencies, safety, and regional growth and accessibility. These sections of the draft MIS discusses these four areas of needs. For additional information, see the initial Draft Purpose and Need Statement for the TMACOG MIS Study in Appendix B, and the Phase I Summary: Problems and Corridors, in Appendix C.
2.3.1 SYSTEM OPERATIONS

As the Toledo metropolitan area continues to grow, especially in Springfield and Sylvania townships, increased travel demands are placed on the existing expressway network. This is evident in the growing traffic volumes and traffic congestion on the highways, especially I-475, in the project corridors. Traffic congestion is worse during morning and afternoon peak travel periods. Travel demand is projected to increase throughout the western portion of the Toledo metropolitan area as population and employment opportunities continue to increase over the next twenty years.

Figures 3 and 4 present the traffic congestion locations for the forecast year 2025 in the project corridors. Figure 3 presents the traffic congestion, measured in terms of Level of Service (LOS), for an average weekday. Figure 4 represents a typical design weekday level of traffic, which is the amount of traffic congestion between the expected highest peak levels and the average weekday condition (a worst case scenario). LOS is a rating that identifies the degree of congestion on a particular roadway segment. LOS ranges from A to F, with LOS A indicating the least congestion and best traffic flow and LOS F indicating the most congestion and worst traffic flow with routine vehicle back-ups and stop and go travel.

If no transportation investments are made in the project corridors, these two figures show that for the average 2025 weekday condition the I-75/I-475 system interchange, the I-475/U.S.Route 23 system interchange, the I-475/Central Avenue interchange, and the I-475/Dussel Drive interchange will operate at LOS F. Moreover, for the 2025 design weekday condition, virtually the entire I-475 beltway will be operating at LOS E or F (see Figures 3 and 4).

In the project corridors, traffic congestion can be highly variable throughout the day, and one congested location can affect another. For example, in the area of the I-475/U.S. Route 23 system interchange and the I-475/Central Avenue interchange, traffic back-ups at the I-475 off ramp (to Central Avenue) can cause traffic delays on the I-475 mainline. There are other locations, such as the I-75/I-475 system interchange, where traffic congestion or vehicle back-ups can spill over and cause traffic congestion throughout an entire interchange causing further traffic delays.

2.3.2 SYSTEM DEFICIENCIES

The expressway system was designed and constructed at least 30 years ago, with some roadway sections between 30 and 50 years old. For example, the Toledo to Detroit Expressway predates the nation’s interstate system of the mid 1950’s. During this time, roadway design standards have changed significantly. The current system network has a number of roadway design deficiencies that do not represent current engineering design practices when roadways are upgraded or new roadways are built. Consequently, over
FIGURE 4
PROJECTED LEVELS OF SERVICE PROBLEM AREAS
2025 DESIGN WEEKDAY
ALL ELEMENTS
the years the capacity and the efficiency of the expressway system has diminished. An
analysis of the expressway's design deficiencies was conducted during Phase I of the
TMACOG

Expressway Needs Study and several design deficiencies were identified. These design
deficiencies include: discontinuities in the number of basic lanes (AASHTO recommends
only one lane drop at a time); substandard ramp spacing (between entrance ramps and
exit ramps); left hand on-ramp and off-ramps (a design condition discouraged by
AASHTO); and lane imbalance (this condition creates a traffic weaving section and
increases forced lane changes).

Figure 5 presents the existing geometric deficiencies on the expressways in the project
corridors. The information shows that the three major system interchanges (I-75/I-475; I-
475/U.S.Route 23; and I-475/I-75 in Perrysburg) are currently deficient in design and
capacity to meet current and projected traffic demands. Specifically, on I-475 (from I-75
to U.S. Route 23) there are lane imbalance problems at the I-75 interchange, as well as
left-hand ramps; the I-75 to Jackman Road section has deficient ramp spacing; lane
imbalance occurs from I-75 to Monroe Street; and the interchange with U.S. Route 23 has
left-hand ramps. For I-475 (from U.S. Route 23 interchange south to I-75 interchange), a
two-sided weave exists at I-475 and Central Avenue; the basic number of lanes is
inconsistent; lane imbalance occurs at a number of locations; inadequate ramp spacing
exists between U.S. 25 and I-75 with a left to right weave on the westbound roadway and
a short weaving section on the eastbound roadway; and the interchange with I-75 has left-
hand ramps (see Figure 5).

2.3.3 SAFETY

The expressways in the project corridors have a history of high crash rates. Three years
of accident data was reviewed for the MIS corridors during Phase 1 of the Expressway
Needs Study. Additional crash analysis was conducted by ODOT District 2. The aging
expressway system, deficient roadway geometry and limited traffic capacity in some
areas of the expressway system all contribute to these high crash rates. Nationwide, the
average crash rate for urban freeways is 3.0 accidents per million vehicle miles of travel.
Several locations along I-475 have already exceeded the nationwide average for number
of crashes.

Figure 6 shows the existing high accident locations in the project corridors and presents
the accident rate per million vehicle miles of travel. Highway sections with higher than
average crash rates include the southern portion of the I-75/I-475 system interchange, I-
475 eastbound from Monroe Street to Douglas Road, I-475 westbound from Corey Road
to U.S. Route 23, and I-475 southbound from Airport Highway to Dussel Drive. I-75 and
I-475 in the vicinity of the system interchange near the old Jeep manufacturing plant is an
area approaching the national average for crashes. I-475 from this interchange to
Talmadge is also in this category. I-475 in the section between the Central Avenue
interchange and the U.S. 23 system interchange is also approaching the national average.
Moreover, two roadway sections near the I-75/I-475 interchange in Perrysburg (west of
SR 25 and east of SR 199) are also approaching the crash rate (see Figure 6). If no
transportation investments are made, crash rates may continue to increase on the
expressway system.
FIGURE 6
EXISTING HIGH ACCIDENT AREAS
According to the Federal Highway Administration (FHWA), estimates of the cost of crashes range from $1.4 to $2.8 million per fatality. Costs for an injury crash range from $11,000 to $59,000 per injury. Property damage costs are in the range of $2,000 to $3,000 per crash. As a result, vehicular accidents and crashes occur at a significant cost to the Toledo region.

When traffic crashes occur or vehicles break down on the roadways, traffic often comes to a complete stand still in the project corridors. It is then difficult for emergency vehicles and equipment to access the crash site or to quickly remove disabled vehicles because of the mainline vehicle back-ups and traffic congestion that is created on arterial roadways and streets, and the lack of full width shoulders on the roadways to access the site. Delays caused by crashes and other roadway incidents are anticipated to increase because of the projected growth in travel demand.

2.3.4 REGIONAL GROWTH AND ACCESSIBILITY

The area of highest growth in Toledo is in the western portion of the metropolitan area. Projected 2025 population and employment growth areas occur predominantly along the I-475 beltway, especially in Springfield, Sylvania, Monclova and Perrysburg townships, and in the cities of Maumee and Perrysburg. In general, transportation investments to meet the needs of this regional growth have lagged behind development. This area has undergone, and continues to undergo, a transition from rural to suburban residential and commercial/light industrial land uses.

Accessibility is a measure that compares the relative merit of a location with respect to the distribution of regional opportunities (employment, population) and the service provided by the transportation system to that location and other locations in the project corridors. Access to new and planned economic development is important to the region's economy. Also, good access to existing special economic generators, such as the Toledo Airport, major regional shopping centers, the industrial parks in Springfield and Sylvania townships, and the new Daimler-Chrysler Jeep assembly plant is important to maintain the region's economy. If no transportation investments were to occur in the project corridors, the region's ability to meet its growth and economic development needs may be compromised.
3.1 INTRODUCTION

Public involvement has been an important part of the decision-making process for Phase 2A of the TMACOG Expressway Needs Study. As one of the first steps in the MIS study, a public involvement plan was developed (see Appendix D). Project planners believed it was important to involve those persons, businesses, public officials and organizations who use the expressway system, live near the expressways, or whose jurisdictions may be affected positively (economic benefits) or negatively (adverse impacts) by any proposed transportation improvements. As a result, input from transportation system users, area residents, civic leaders, private institutions, interest groups, and local, state and federal agencies was sought during the MIS study. The public involvement plan was designed to create an information exchange and other communication links to garner valuable input and to keep the public and various stakeholders informed.

The goals of the public involvement plan were: (1) to reaffirm Phase 1 transportation problems, needs and issues; (2) to involve stakeholders in developing possible transportation improvement solutions to meet study corridor needs; and (3) to create focused discussions with stakeholders, neighborhood groups and residents on the possible transportation alternatives. The following paragraphs of this section focus on the scoping process, the MIS Scoping Committee, the stakeholder and public meetings, resource and regulatory agency contacts, and a brief public outreach summary.

3.2 SCOPING MEETINGS

MIS scoping requirements, as stated in Section 450.318 of the Metropolitan Planning Regulations (October 28, 1993), encourage the creation of a Scoping Committee comprised of the MPO, State Department of Transportation representatives, local officials, transit operators, community development and business leaders, and resource and regulatory agencies that might be affected. The MIS process also requires that opportunities be provided for residents and other stakeholders to participate. As part of scoping during Phase 1, a public officials' briefing was held in conjunction with regularly scheduled monthly Joint Transportation Committee meeting. Also, a public scoping meeting was held. Interested persons, stakeholders, and transportation agency representatives were invited to participate in the two meetings. Their comments focused on expressway system deficiencies, corridors to be studied, possible evaluation criteria for alternative solutions, and other important study issues, such as minimizing impacts to environmentally sensitive resources like wetlands.

Scoping activities continued throughout the MIS study as part of Phase 2A. An MIS Scoping Committee was established. The MIS Scoping Committee has provided the central planning oversight for the MIS study process. The MIS Scoping Committee is
comprised of all the TMACOG Planning Committee members plus additional members from jurisdictions within the MIS study corridors. These additional members include Perrysburg, Monclova, Springfield, and Sylvania townships, the cities of Maumee, Sylvania, and Toledo, Wood County Planning Commission, Toledo-Lucas County Planning Commission, and the Freight Commission of Wood County. The Scoping Committee held regular monthly meetings from April 2000 to February 2001 to discuss the area's transportation needs, possible solutions, the set of transportation alternatives, and the recommended set of project improvements that resulted from the MIS study.

3.3 PUBLIC AND STAKEHOLDER INVOLVEMENT

On June 19 and 20, July 17 and 18, and August 15, 2000, as part of the public involvement activities for the MIS Study, TMACOG held fourteen meetings with various stakeholders and users of the expressway system. Stakeholders included the Toledo Trucking Association, Ohio Contractors Association, the Taxi Cab owners and operators, concrete truck drivers, and emergency response personnel. They also included the Toledo-Lucas County Port Authority, the Daimler-Chrysler Jeep plant, the Toledo Hospital, and the University of Toledo. Also, at the request of the MIS Scoping Committee, Lucas and Wood county sheriffs and the state police were also interviewed. The many stakeholders identified transportation problems, such as the “Jeep Split”, I-475/US23 System interchange, need for new access on I-475 between Central Avenue and Airport Highway, and need for improvements to the Salisbury Road/Dussel Drive Interchange. These meetings confirmed the needs assessment results of the Phase 1 study and suggested possible alternative solutions to those problems, many of which were developed by the MIS study team and presented at the September 2000 public meetings. The stakeholder meetings provided an excellent opportunity for area residents and civic leaders to express opinions on what improvements should be done to Toledo's expressway system (See Appendix E for summaries of the stakeholder meetings).

Three public meetings were held to discuss possible transportation improvement solutions for Toledo's expressways. The meetings were held at the Eleanor M. Kahle Senior Center on Tuesday, September 26th; Springfield Township Hall on Wednesday, September 27th; and Southview High School Cafeteria on Thursday, September 28th. Exhibits and project information on the proposed improvement alternatives were reviewed and discussed with project planners and engineers. About 60 persons attended the meetings. The purpose of the three public meetings was to inform area residents, business and property owners, civic leaders and public officials of the project alternatives being considered during the Phase 2A of the TMACOG Expressway Needs Study. These expressway improvement alternatives, as well as travel demand management, transportation system management, and transit improvement alternatives, were developed in response to stakeholder input.

Some of the major construction expressway improvement alternatives may have effects on existing or planned land uses, communities or neighborhoods, or effects on the natural environment. Therefore, another purpose of the public meetings was to receive comments on the alternatives that were presented and the potential impacts, benefits or issues area residents believe are important.
Many participants who commented on the alternatives stated that something needs to be done at the I-75/I-475 system interchange ("Jeep Split"). Others thought a new interchange at Dorr Street (Alternative 5) would help relieve traffic congestion at Central Avenue and Airport Highway. Providing a full interchange at Douglas Avenue (Alternative 3), reconstructing the US20A/Salisbury Road/Dussel Drive interchange area, Alternative 6, and constructing a new Sylvania interchange (Alternative 2) received a number of favorable comments too. With regard to concerns expressed at the public meetings, most residents noted the traffic congestion during peak travel times, the back-ups (Central Avenue for example), the weaving movements in the major system interchanges (Jeep Split, I-475/US23, and I-475/I-75 in Perrysburg), and the numerous design deficiencies and unsafe conditions at many of the existing interchanges. See Appendix F for a summary of the public meetings and comments received.

3.4 RESOURCE AND REGULATORY AGENCY CONTACTS

Early in Phase 2A of the Expressway Needs Study, during scoping, contact letters were sent out to all of the state and federal resource and regulatory agencies. The agencies were informed of the MIS study, invited to participate with the MIS Scoping Committee, and invited to comment on any issues or concerns the agency may have regarding its particular resource or permitting interest. The agencies that were contacted include, but were not limited to, the U.S. Army Corp. of Engineers, U.S. EPA, U.S. Fish and Wildlife Service, Ohio EPA, Ohio State Historic Preservation Office, and the Ohio Department of Natural Resources. One letter was received from the U.S. Coast Guard. See Appendix G for the Coast Guard’s response.

3.5 PUBLIC OUTREACH SUMMARY

As already mentioned, a series of stakeholder meetings occurred during the summer of 2000 to verify transportation needs and concerns. On September 26, 27 and 28, 2000, the public was invited to comment on the project alternatives and the project materials regarding engineering, land use and environmental issues presented at the public meetings. Valuable comments were received from area residents about the proposed improvement alternatives. Should there be any changes or refinements to the alternatives? Did they prefer certain alternatives over others? What potential impacts or concerns were they concerned about regarding the alternatives? Answers were received on these and other important questions. Participants were asked to fill out comment sheets and turn them in to project planners and engineers or send additional comments or any project information requests to Mr. Dave Dysard, Transportation Director of TMACOG. See Appendix F for a summary of the comments received.

On October 19, 2000, a preliminary recommended set of transportation improvements was presented at the Transportation Summit in mid-October. Television and news coverage was done for the event. A number of questions about the proposed improvement alternatives and the MIS study were answered. The MIS Scoping Committee held two intensive workshop meetings in November 2000, to determine a final recommended list of improvements. A final Preferred Plan (set of transportation improvements in priority order) was presented to the Transportation Council for approval in early December 2000.
Additional discussions and recommendations about the preferred plan were accomplished at the January 3, 2001 Transportation Council meeting. The Draft MIS report, which documents the alternatives evaluation process and all the recommendations from the MIS study will now be sent to ODOT for review and comment.

The next steps after the MIS report is finalized will include the development of specific projects as funding becomes available. Project development activities will include preliminary engineering, environmental analysis, final design, and construction of the transportation improvement. Timing of these project development activities and actual project construction will vary and depend upon local and state approvals and available funding.
SECTION 4
ALTERNATIVES

SECTION 4.1 INTRODUCTION

This section describes the initial range of alternatives identified and developed for evaluation in Phase 2A of the Expressway Needs Study. These alternatives were subsequently analyzed against corridor evaluation criteria and the project needs assessment as part of the alternatives evaluation and screening process.

As defined in the draft Purpose and Need Statement, Appendix B, the purpose of the recommended transportation investments for the TMACOG Expressway Needs MIS Study is:

- To upgrade the Toledo metropolitan area expressway system by implementing recommended congestion management strategies, transit enhancements, and constructing minor and/or major interchange and roadway improvements;
- To improve traffic flow, level of service and safety in the study corridors by reducing traffic congestion and crash rates via recommended transportation investments and possible multi-modal connections;
- To accommodate existing and planned economic growth and improve regional accessibility.

As documented in Section 2.3 of the MIS report, the needs of the two MIS corridors are focused in four areas: (1) system operations, (2) system deficiencies, (3) safety, and (4) regional growth and accessibility. These four needs are used as the basis for the needs assessment conducted during the initial evaluation of alternatives. This needs assessment is consistent with the guidelines for ODOT’s 5-Step Planning Process.

Section 4.2 describes the process uses to identify these initial alternatives. Sections 4.3 through 4.8 describe each alternative that was considered, including an overview of its physical characteristics, and where applicable, a map showing the general location of each alternative and its major features.

SECTION 4.2 DEVELOPMENT OF ALTERNATIVES

Identifying the initial range of alternatives was based on reviewing previous studies, assessing potential improvement options to achieve study goals, establishing project needs assessment, reviewing information obtained from the public involvement process, and identifying the locations where alternative improvement solutions may satisfy identified needs.
One important previous study was the Status Report on the Transportation System Congestion for the Toledo Metropolitan Area, Final Report, September 1997 (revised 1998) (see Appendix H). In this study, various alternatives, both low-cost and higher cost improvement strategies, were combined and evaluated for their potential for relieving traffic congestion on the expressway system. The alternatives were generally grouped into three classes of congestion management strategies: demand management, operation management, and capital intensive investments. The study concluded, "The capital intensive improvement strategy was found to be the most effective in reducing travel congestion." The study further concluded that even though the capital intensive improvement strategy is more effective than the combined low cost strategies, selecting and implementing a strategy should be weighed against many other factors beyond the amount of reduced congestion. These factors would include feasibility, implementation costs, availability of funds, magnitude of transportation benefit to cost ratio, local and political support, and potential environmental impacts.

Another important study was the Expressway Needs Study, Phase 1-Problems and Corridors, June 1998 (Revised November 1998). As already noted, the purposes of this study were to: (1) identify transportation needs and investigate expressway or nearby related locations which have current or anticipated problems, and (2) segment the freeway system into corridors for further study, and to set priorities for further study of these corridors. Phase 1 of the Expressway Needs Study provided an excellent needs assessment of the expressway system in the Toledo metropolitan area.

As a result of previous studies, five major alternatives were developed for the MIS Study. These alternatives include the No-Build Alternative, Travel Demand Management (TDM) alternatives, Transportation System Management (TSM) alternatives, a Public Transit Improvement Alternative, and Build or Expressway Improvement alternatives.

**SECTION 4.3 NO-BUILD ALTERNATIVE**

The No-Build Alternative is defined as the existing transportation system plus other projects committed for implementation by the Year 2025. This alternative provides a baseline condition against which the environmental consequences of other alternatives can be compared.

To this end, the MIS Study team reviewed the 2025 Regional Transportation Plan (Update 2000) and the Transportation Improvement Program (TIP) projects and policies. The MIS Study team determined which ongoing and planned projects were either far enough along in development, showed strong priority in the region, or were committed to being completed before the year 2025 (the design year for the MIS study). Those projects that met these criteria and can be rationally expected to be constructed by 2025 were categorized as "committed." The committed projects were added to the existing 1995 modeling network to create a new network. The following is a list of the nine committed projects as determined for this study.
1. New Maumee River Crossing Bridge on I-280
2. Millard Ave Front St. to Cedar Point Rd. (Constructed)
3. Greenbelt Parkway # 3; Cherry St. to I-280 (Constructed)
4. I-75 widening from I-280 to State line (Constructed)
5. Greenbelt Parkway #2 (interchange with I-280) and #4 (Industrial access Rd.) (Constructed)
6. Buck Road bridge over I-75
7. Wales Road at I-75 bridge and interchange reconstruction (In Construction)
8. Maumee-Perrysburg bridge on US-20 widen to 4 lanes
9. Widen Airport Highway from Bryne Road to Reynolds Road.

In addition, the No Build alternative would continue normal maintenance activities of existing highways in project corridors. These activities include, for example, patching and overlaying the existing roadway pavement, re-decking bridges, and replacing damaged guardrail. Extensive analyses of the No-Build alternative and existing expressway conditions were conducted to determine the existing design deficiencies, high accident locations and low levels of service (LOS). The results of this analysis are summarized in Appendix C, Expressway Needs Study Summary - Phase 1 Problems and Corridors.

Recommendation: Due to the significant design deficiencies and low Level of Service (LOS) of the current expressway system, the No-Build Alternative does not address the project needs assessment. As noted the No-Build Alternative would be used as a baseline comparison for those projects that may be recommended for further study. During preliminary project development, the No-build Alternative would be carried forward for detailed baseline comparisons as required by the National Environmental Policy Act (NEPA).

SECTION 4.4 TRAVEL DEMAND MANAGEMENT (TDM) ALTERNATIVES

In the Expressway Needs Study Summary – Phase 1 Problems and Corridors, Figures 2, 4 and 5 show the existing geometric deficiencies on the freeway system and the projected levels of service (LOS) problem areas (see Appendix C). TDM is the process of reducing the amount of vehicle trips on the expressway system. TDM strategies encourage the use of alternatives to driving along or changing the time of day of the trips. These strategies increase the awareness of the options that are available for making a trip. Most of the time personal vehicle travel is the only means considered for making a trip. TDM
strategies are alternatives to driving alone thereby reducing traffic congestion and improving mobility.

TDM strategies focus primarily on reducing work travel. It is easiest to focus strategies on work trips because they are made at regular times of the day and have consistent destinations. The peak congestion periods usually occur during the morning and afternoon work commute times. Focusing TDM on work trips provides options for the single largest segment of travel and the travel that contributes to over half of the peak-hour congestion.

The TMACOG 's Status Report on the Transportation System Congestion for the Toledo Metropolitan Area, Final Report analyzed the effect of TDM strategies. The study found:

"The total effect of the various travel demand strategies is evaluated by decreasing the 2025 total vehicle-trip table by 3.5 percent. This 3.5 percent trip reduction factor is determined from information and date contained in the year 2025 Regional Transportation Plan. The 2025 percent trips estimated for transit, walking, and bicycling were attained as a result of a major planned improvement to existing transit operations (headway, addition of more transit lines, express service, expanded service area) and connecting and expanding existing bikeway network.

To evaluate the effect of demand management strategies such as Share A Ride, Vanpooling, Car Pooling, and telecommuting, the vehicle occupancy rates for each trip purpose were increased leading to fewer cars on the road.

Knowing that the 1990 percent transit share is only 0.76 percent of the total trips and existing matched trips through vanpooling and car pooling does not exceed 100 matched trips, the estimated 3.5 percent vehicle-trip reduction seems to be reasonable if the travel demand measures are pursued very actively."

Figure 7 illustrates the impact of TDM strategies on 2025 forecasted congestion.

**Section 4.4.1 Rideshare.** TMACOG administers a Share A Ride Program for the TMACOG six county area. Through its car-pooling program, TMACOG provides a free matchlist of people that share commute routes and work hours to help individuals identify other car poolers. TMACOG also administers the region's vanpooling program serving Detroit, Ann Arbor, and Findley. Vans provided by VanOhio (a program of Ohio Department of Transportation) allows groups from seven to fifteen commuters to share the expenses for the use of a van to drive to and from work every day. Ridesharing programs are included in TMACOG's demand forecasting analysis supporting their long-range transportation plan. The Share A Ride alternative has no physical characteristics.

**Recommendation:** Ridesharing programs often target work shifts because the majority of traffic congestion, air quality and safety problems occur during this period. While this rideshare programs do not specifically target project corridors, car pools and vanpools may use the two MIS corridors. National experience has shown that a successful rideshare program by itself will not provide sufficient relief from current and projected
FIGURE 7

2025 Forecasted Congestion -- Travel Demand Strategy

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Congestion

Congestion Relieved
congestion. In addition, all previous studies and the results of the program currently being implemented indicate that any major increase in the Share A Ride or Van Pool Programs will not provide the magnitude of change of trips using these alternate modes to reduce the congestion on the expressway system. Therefore, this alternative does not adequately address the project needs assessment.

Based on current programs and experience, a tripling of the existing staff for outreach will produce increases in the order of 100 to 200 additional matched trips per day. This is extremely low compared to traffic volumes on the interstate system leading to the conclusion that these programs will not impact expressway congestion in any meaningful way. However, a rideshare program could provide an effective supplement to a preferred set of transportation improvements in relieving congestion levels. Therefore, rideshare programs will be implicitly included as a component of the No-Build and Build alternatives.

Section 4.4.2 Guaranteed Ride Home. One drawback of ridesharing or using transit is the possibility that a commuter will be stranded due to an emergency or an unplanned schedule change. This could cause a person to miss his/her rideshare arrangement or a bus. TARTA's Guaranteed Ride Home program raises the comfort level for Share A Ride participants by providing transportation home should a schedule change arise. The Guaranteed Ride Home program is designed like an insurance policy and takes the worry out of commuting by providing participants with a taxi ride or car rental fare needed to get home. The service is available up to two times per year and is free to Share A Ride participants. Like the Share A Ride program, this alternative would not adequately address project needs assessment. The Guaranteed Ride Home alternative has no physical characteristics.

Recommendation: This alternative works in conjunction with other ridesharing strategies to increase the effectiveness of the programs. The Guaranteed Ride Home program will be implicitly included as a rideshare component of the No-Build and Build alternatives.

Section 4.4.3 Park & Ride Facilities. Park & Ride facilities provide a location where motorists can park their vehicles and transfer to another mode of transportation or to form carpools and vanpools. TARTA currently operates the following Park & Ride facilities: Ames, Centennial Terrace, Central and Holland Sylvania, Franklin Park Mall, Maumee-Holiday Plaza, Miracle Mile Mall, Perrysburg-Country Charm Shopping Center, Perrysburg-River Place, Perrysburg-Zoar, Southland Mall, Southwyck Mall, Sylvania-St Joseph Church, Waterville-Second and South, and Waterville-Waterville Plaza. TARTA has no current plans to expand their Park & Ride facilities in capacity or number.

Recommendation: The Park & Ride alternative, as a "stand alone" alternative, does not address system design deficiencies and will minimally reduce congestion and accidents. Therefore, this TDM alternative only partially addresses the project needs assessment for transportation improvements. This alternative is consistent with local plans, requires little to no property acquisition or displacement, and produces minimal, if any, adverse impact on community cohesion and environmental resources. The existing Park & Ride facilities should be carried forward as a component of the no build and build alternatives.
Section 4.4.4  Employer-Based Trip Reduction Programs. Flexible work hours, as well as staggered work hours and compressed work weeks could be initiated by employers with no other support. Flexible work hours provide the opportunity to alter individual starting and ending times to better match transit schedules or ridesharing arrangements. Staggered work hours alter the standard starting and ending times for all groups of employees that allow the employees to make trips outside of the peak periods. Compressed work weeks lengthen the work day, shifting one or more trips outside of the peak period and reducing the number of trips per week the employee makes to work. Telecommuting allows an employee to work from home, eliminating the need to make the trip to work. As with alternative work schedules, telecommuting’s effectiveness depends on the number of employees eligible to telecommute.

At present, no metropolitan or employment center wide employer-based trip reduction program has been established.

Recommendation: This alternative only partially addresses needs assessment. It can reduce congestion and improve traffic flow especially in areas with relatively short peak travel demand periods. However, its ability to substantially increase capacity, improve safety through the elimination of design deficiencies, and enhance accessibility to areas of employment and residential populations is limited.

These alternative work-hour options may also have mixed impacts on transit and ridesharing. The staggered work hours and compressed work weeks may not coincide with transit schedules, thus forcing those who had previously used transit to drive to work. The alternative work hour options may also prompt employees who currently use transit or carpool to drive alone if they can do it during less congested times. Implementing these strategies must be done in a way that minimizes these negative impacts on transit and ridesharing. It is also unlikely such a program could be implemented in major employment and activity centers in a meaningful way.

Given the above conditions, the Employer-Based Trip Reduction alternative should not be carried forward as a "stand alone" alternative or as part of a regional transportation improvement solution.

Section 4.4.5  Growth Management. The Growth Management alternative is intended to limit the need for transportation infrastructure investments by considering alternatives to community growth forecasted under existing land use policies, regulations, or other government actions, and to facilitate the equitable distribution of transportation benefits and costs by changes in current local land use policies, regulations, and other government actions. Such policies may include adoption of growth boundaries, zoning changes, or limits on infrastructure expansion (i.e., water and sewer).
The Toledo area currently does not have a regional land use body or any existing legislation to direct regional land development patterns. This was discussed during the development of the year 2010 plan and land use growth control west of I-475. While it was recommended, it would prove ineffective because no tools or legislation were in place to regulate growth.

Population and employment growth was forecasted for the year 2025 Transportation Plan through a review by the public and governmental agencies. These bodies debated whether growth should be encouraged more into the rural areas as opposed to the infill concept. The population and employment growth scenario used in the plan was primarily around I-475 on the west and south and some in the southeast in the "Golden Triangle" area. Growth was also projected within and north of the City of Bowling Green. These growth areas are shown in Figure 8 for employment and Figure 9 for population.

**Recommendation:** Growth Management policies define the physical development patterns that the metropolitan transportation system must ultimately service. Absent any coordinated metropolitan land use controls, land development patterns and transportation system improvements often occur irrespective of one another. While regional growth controls may allow for an integrated approach to "future" land use and transportation development, land use and development policies are limited in their ability to address current issues including traffic congestion, safety, access, and design deficiencies.

Therefore, the Growth Management alternative is not a reasonable "stand alone" alternative and does not address the project needs assessment. This alternative should not be further evaluated at this time. If local support is heightened in the future, it may serve as one of several strategies for reducing projected congestion through enhanced land management practices.

**Section 4.4.6 Non-motorized Transportation Modes.** The Non-motorized Transportation Mode alternatives, including bicycling and walking, are often overlooked as viable commuter alternatives in the United States. To its credit, the Toledo metropolitan area has already begun implementation of a regional bikeway system. TMACOG, in their 2025 Transportation Plan, Update 2000 (see Figure 10 for the update 2000 - Revised Bike Network), presents a vision for the full build-out of a comprehensive bikeway system providing for a 5 percent split of trips to the bikeway system. This system will ultimately serve major trip generators, transit park and ride lots, and residential communities. The financially constrained component of the 2025 Regional Transportation Plan recommends the following bikeway improvements in and around the project corridors.

- Wabash Cannonball Trail-North Fork
- Wabash Cannonball Trail-South Fork
- Wabash Cannonball Trail-Connector
- McCord Bike Zone Angola to Airport Highway
FIGURE 10
2025 TRANSPORTATION PLAN
Revised Bicycle Network

LEGEND
- Bicycle Paths
  - Existing Path
  - Proposed Path
  - Path Under Development
- Streets with Bicycle Lanes
  - Existing Lanes
  - Proposed Lanes
- Other Bike Network Streets
  - Network Street
  - Network Street+Minor Improvements Needed*
  - Network Street+Improvements Needed to Reduce Hazards**
  - Other
    - Proposed Bicycle Facility-Type To be Determined***

* Minor improvements generally mean paved berms (at least 6") or widened outside lanes (14 foot) to increase the safety and security of the cyclist

** Improvements to reduce hazards include adding bike lanes or paved berms on streets and bridges that are narrow and/or heavily traveled, plus eliminating hazards to cyclists caused by angled rail ties, sudden changes in road width, merging traffic, dangerous intersections, etc.

*** Types of facilities include bike paths, bike lanes, paved berms and widened (14 foot) bicycle travel lanes.
Pedestrian facilities provide another option to trip makers. The choice to walk can be made for all trip purposes. Pedestrian facilities can also influence transit usage. At least one end of the transit trip includes a pedestrian trip.

The 2025 Transportation Plan, Update 2000 also contains specific strategies pedestrian transportation needs in the TMACOG Region. These include improving pedestrian facilities by:

- Working to provide sidewalks and crosswalks near/to schools;
- Improving sidewalk snow removal;
- Promoting development of community sidewalk/pedestrian plans;
- Developing access plans for major facilities, especially for new schools;
- Developing strategies for filling sidewalk gaps in existing development;
- Developing strategies for providing sidewalks where needed in unincorporated areas; and
- Establishing recommended sidewalk widths.

The Non-motorized Transportation Mode alternative was modeled by modifying the trip table for all trips. It therefore applies to all areas of the modeled area, which is consistent with the development of the total bike system. There is no existing mode split being run for bikeways in the program.

The Non-motorized Transportation Mode alternative would not eliminate the need to make the majority of trips by auto or transit. However, safe biking and pedestrian environments increase mobility for some segments of the population and provide other travel options for residents and commuters in the corridor. When linked to transit facilities, improving nontraditional transportation facilities can further encourage transit use.
TMACOG EXPRESSWAY NEEDS STUDY

FIGURE 11
2025 CONGESTION ON E+C HIGHWAY NETWORK
WITH TRANSIT AND BIKE STRATEGY

Congestion Locations
For example, the effect of the bike and transit systems in combination is shown in Figure 11. Since the Transit system alone, evaluated previously, did not show reductions in congestion, this combination will reflect any changes due to adding the bike system. It was noticed that reductions from the congested condition (Level of Service "E" and "F") to un-congested (Level of Service "D" or better) occurs on only the configuration which includes the bikeway system. It is significant that the sum of the mode splits for bike and transit accounts for a 5 percent trip reduction while none of the other strategies except for the lane additions are expected to provide trip mode changes with this order of magnitude. However, this is still not sufficient to significantly impact the travel demand needs and design deficiencies apparent in the expressway system.

Recommendation: The Non-motorized Transportation alternative only partially addresses project needs assessment. This alternative may help reduce congestion on arterials, improve pedestrian safety, and enhance pedestrian accessibility. This alternative is also consistent with local plans and the region's long-range transportation plan. However, the Non-motorized Transportation Mode alternative is limited in its ability to increase expressway system capacity, reduce congestion, eliminate design deficiencies, increase access, and improve vehicular safety. Therefore, this alternative is not a reasonable "stand alone" alternative. However, it may contribute to addressing the MIS corridors’ needs as part of a build alternative. The Non-motorized Transportation alternative should be carried forward for evaluation into the next phases of analyses and preliminary project development. Current bicycle and pedestrian projects already included in the Regional Transportation Plan - Update 2000 should be pursued. Moreover, opportunities to add bike paths and sidewalks or complete links of the proposed bike plan should be considered when improvements to major arterials and local streets are made.

Section 4.4.7 Congestion Pricing. The Congestion Pricing alternative involves the implementation of financial incentives or disincentives to the MIS corridors experiencing existing or projected traffic congestion. Congestion pricing alternatives have the potential to produce the greatest impacts. These strategies can range from parking fees, ridesharing subsidies, transit subsidies, gas tax changes and tolls. Toll facilities or other congestion pricing techniques are types of financial incentives/disincentives to reduce congestion.

While a wide range of congestion pricing options are possible, such programs have only met with limited success nationally. Locally, the use of congestion pricing or the implementation of any tolls in Northwest Ohio has generally been unfavorably received by the public and is viewed as politically unacceptable. Tolls are already in place on the Ohio Turnpike, which serves the area, and recent toll increases have been met with widespread disagreement. These new tolls have been viewed as unacceptable unless there is a statewide program for implementing tolls or congestion pricing. The concern has been that localized implementation of congestion pricing might be viewed as a disincentive for economic growth in this area compared to other areas of the state. Although studying the network shows congestion on sections of the expressway, it is not of the severity occurring in larger metropolitan areas that have implemented congestion pricing. Moreover, implementing congestion pricing on the expressway system would require a major capital investment in toll infrastructure (toll booths, etc).
Recommendation: The Congestion Pricing alternative would not adequately address the needs assessment for this project. This alternative can improve traffic flow by reducing congestion, but only on the expressway or freeway where the strategy is implemented. Based on public attitudes and opinions and the type of congestion in this area, tolls are not likely to be implemented. Tolls are generally perceived as being either ineffective or unnecessary. This alternative may also increase traffic on non-toll roadways, discourage area investment, and its potential to increase capacity, improve safety, and enhance accessibility is limited. Other methods of reducing congestion would prove more acceptable and produce greater impacts for the more local congestion in the system. Therefore, the congestion pricing alternative should not be carried forward for further consideration either as a "stand alone" alternative or a part of a No-Build or Build alternative.
SECTION 4.5 TRANSPORTATION SYSTEMS MANAGEMENT
(TSM) ALTERNATIVES

The TDM strategies discussed in the previous section deal with vehicle reduction measures. Other operational improvement strategies include Transportation System Management (TSM) measures that relate to capacity and operational enhancement. These TSM measures can range from relatively minor expenditures (with little or no construction) to those involving major expenditures and construction. There are several options available that may be implemented in the MIS corridors to increase traffic capacity.

TMACAOG's Status Report on the Transportation System Congestion for the Toledo Metropolitan Area, Final Report considered several TSM strategies including access management, incident management, Intelligent Transportation Systems (ITS), and operational improvements.

"... the operational improvement strategies are evaluated by increasing the capacity of congested links within each corridor by 5 percent. This 5 percent capacity increase is estimated to reflect the effect of interconnecting and synchronizing traffic signals in travel corridors and improving design geometry (channelization) at intersections."

Figure 12 illustrates the cumulative impacts of TSM strategies on 2025 forecasted congestion.

Section 4.5.1 Operational Improvements. The Operational Improvement alternative improves travel on arterial routes competing with the freeway system. These improvements include the interconnecting or synchronizing traffic signals along a competing arterial route and improving design geometry at intersections. Evaluated as part of the Expressway Needs Study, Phase I: Problems and Corridors, the impact of an operational improvement strategy was simulated by increasing capacity on arterial routes competing with the freeway a specified percentage. As a rule of thumb, a 5 percent capacity increase was considered to be achievable.
FIGURE 12

2025 Forecasted Congestion -- Operational Management Strategy

Congestion
Congestion Relieved
Figure 13 shows the locations where congestion was relieved due to the operational improvements. Even though 220 congested links experienced a decrease in volume due to the operational improvements, only 17 links were relieved from congestion. This is an indication that the decrease in traffic volume was not large enough to make the V/C ratio lower than 1.25.

Recommendation: The Operational Improvement alternative only partially addresses project needs assessment. While operational management may have potential to shift traffic from freeways to competing arterials, the shift is not enough to materially affect traffic congestion at key expressway locations. This shifting of traffic to competing arterials may also create conflicts with locally adopted land use plans and community character. Such improvement may also require right of way acquisitions. In addition, this alternative does little to improve access, improve safety, and eliminate design deficiencies on the expressway system. Therefore, the Operation Management alternative is not considered a viable "stand alone" alternative. It should be retained for further evaluation as part of a larger build transportation improvements alternative.

Section 4.5.2 Intelligent Transportation Systems (ITS). The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) provided for the establishment of the Intelligent Transportation System (ITS) Program. ITS is the application of electronic, computer, and communication technology to vehicles and roadways to increase safety, reduce congestion, enhance mobility, minimize environmental impact, increase energy efficiency, and promote economic productivity for a healthier economy.

Application of ITS technologies enables the existing physical transportation capacity to be used more efficiently and effectively. While many systems already in place have been operational for only a few years, there have been indications that programs such as freeway management systems can increase safety by reducing accidents and minimizing travel times by producing real time information for travelers' use.

The ITS Strategic Deployment Plan prepared for TMACOG evaluated ITS applications and identified those that could provide a safer, cleaner, more efficient and "user friendly" transportation system for the Toledo area. Much of the congestion experienced in the Toledo Metropolitan area is related to incidents, thus many of the projects proposed in the Strategic Development Plan focus on incident management. The ITS Strategic Deployment Plan recommends the following types of ITS services: incident management, freeway/incident management, transit system, Arterial management, advanced notification rail system, traveler information, and emergency vehicle AVL system.

- The Incident Management Program is the coordinated, pre-planned use of human and technological resources to safely restore roadways to normal operating conditions after the occurrence of a traffic incident. Recommended projects include planned incident diversion routes, mutual aid coordination, quick removal policy, news media coordination, a jurisdictional response map, and service patrols.

- The objective of the Freeway/Incident Management System is to reduce congestion and accidents on freeway corridors through the incident management program plus deployment of computer, communications and detection systems on the freeways.
The short-term recommendation is to deploy system components on portion of northern I-75 and I-475.

• The purpose of the Transit Systems projects is to improve the operating efficiency of public transit. An automatic vehicle location (AVL) system will give the transit operator the exact location of all buses. This information can be used to provide "real time" schedule information to the public via kiosks, the internet, and local radio stations. A transit priority system would allow transit vehicles to extend the "green" light at signalized intersection, resulting in improved travel times.

• The Arterial Management System is traffic responsive signal system on high traffic roads in the Toledo area. This includes coordinating signals of adjoining communities. System components include fiber optic communication system sensors, and emergency vehicle preemption.

• The purpose of the Advanced Notification Rail System projects is to divert traffic from at-grade crossings to grade separated crossings when trains are approaching. Motorists would be informed by railroad crossing information signs. Another type of railroad crossing system will equip railroad gates with sensors so that their status could automatically be transmitted to emergency vehicles.

• The Traveler Information projects will provide transportation agencies and the public with a wide range of information that will promote more efficient use of the transportation system. Real time information will be dispersed to the public via a traveler advisory telephone system and information kiosks throughout the area.

• The Emergency Vehicle AVL System enables an emergency vehicle's position to be tracked as it travels the roadway network. This information is transmitted to a traffic operations center for dispersion to appropriate personnel/agencies.

In addition, TMACOG's 2025 Transportation Plan, Update 2000 recommends implementation of a freeway incident management system on portions of I-475, I-75, and I-280 in their financially constrained plan.
Recommendation: The ITS strategies as described above have the potential to reduce non-recurring traffic congestion, improve safety especially during roadway incidents, and minimize impacts on surrounding communities and the environment. This alternative is also financially feasible, and is consistent with the region's long-range transportation plan. However, the ability of this alternative to reduce recurring congestion, eliminate design deficiencies, improve accessibility to major employment centers, and decrease accident rates on I-75 and I-475 is clearly limited. Therefore, this alternative only partially meets project needs assessment and is not recommended as a reasonable "stand alone" alternative. It may, however, contribute to an overall solution as part of a build transportation improvement alternative. The ITS alternative should be included for further study during the next round of analyses.

Section 4.5.3 Access Management. The types of improvements suggested by the Access Management alternative might also be considered as being included in the Operational Improvements alternative. While certain strategies in access management could be applied to the expressway network they apply primarily to arterials. The application of improvements such as signal coordination, signal spacing, the use of non-traversable medians, the spacing of medians and intersection spacing are all improvements were tested as part of the 5 percent increase in capacity.

Recommendation: The Access Management alternative primarily focuses on arterial improvements. It therefore does not meet the needs assessment for this study. The Access Management Alternative should not be carried forward as a "stand alone" or as part of a larger transportation solution.

SECTION 4.6 HIGH OCCUPANCY VEHICLES (HOV) ALTERNATIVE

The use of High Occupancy Vehicles (HOV) has proven to be effective in certain applications and specific types of metropolitan areas. HOV facilities are most effective in extremely congested freeway corridors where the incentive for faster travel time in HOV's is used to offset the perceived negatives of sharing a vehicle between multiple users and entices travelers into carpools or transit vehicles. This leads to the general understanding that HOV strategies apply best for large metropolitan area with expressways leading to major centers such as the CBD of the area and with large volumes on the expressway being carried form area with high trip generation into an area of high attractions on multiple lane facilities. This allows for various applications to be considered for HOV including dedication of one lane specifically for HOV vehicles, possibly building additional lanes either inside or outside of the existing lanes and providing the necessary access for reverse flow during AM and PM periods.

Recommendation: Research from Houston, Dallas, and California recommends that HOV lanes be considered under the following circumstances: 1) intense recurring congestion on mainline with ADT of 15,000-20,000 vehicles per lane and peak hour average speeds on mainlines (during non-incident conditions) or 30 mph or less; and 2) traffic patterns conducive to be served by rideshare services and peak period home based trips of 6,000 or more with 65-75 percent longer than five miles. In reviewing traffic conditions these conditions do not exist in the Toledo metropolitan region. For future projections, only two very short segments approach these values.
In addition, the vast majority of expressway segments in the Toledo region have a basic 4-lane configuration and dedicating one of the general travel lanes to HOV would result in sub-standard travel lanes for the route. This eliminates dedication of existing lanes for these facilities. New lanes for HOV facilities are not feasible in the more congested central city expressway corridors where they might have the best potential to have an impact. Intense development along these corridors and adding lanes would be highly disruptive to the surrounding community and very costly.

HOV concepts were specifically considered as part of the 2010 Regional Transportation Plan. They were not recommended because of the expense of building and dedicating new lanes, and the relatively low volumes of traffic with a low probability of significant transfer of trips from single occupancy vehicles to multiple occupancy vehicles. Little has changes since the 2010 Plan either in system concepts, in major changes in magnitudes of projected traffic volumes or refinements in HOV concepts to suggest HOV could provide major impacts on the expressway system. For these reasons, the HOV alternative is not recommended as an effective strategy for improving the expressway system, and will not be included in future analyses.

SECTION 4.7 PUBLIC TRANSIT IMPROVEMENT ALTERNATIVE

The potential impact of Public Transit Improvements has been evaluated using the computer modeling programs at ODOT Technical Services. The development of improvements in the Transit System were included in the 2025 Transportation Plan. The improvements included additional area coverage on the western part of the study area by adding routes on both McCord Road and on Reynolds Road to improve the direct North/South travel between the City of Sylvania and the City of Perrysburg. This included coverage at Southwyck and at Franklin Park Malls. To provide access from these new routes, the existing route structure, which was the basis of all improvements were extended along existing east/west corridors to intersect with the new N-S routes. This provided a transfer capability between the new north/south routes and the existing system. Two shorter routes also circumferentially oriented, were added in the inner city area to provide more direct cross town movements without the requirement for a transfer. These improvements were also based on the analysis of trip table movements from the traffic model which supported the need for service for the new trips in the growth area. Both of these improvements reduced the necessity of a trip to the CBD with the added requirement of transferring to outbound buses to make a cross-town trip.

New routes were also added in the Cities of Oregon and Northwood east of the CBD. A new system was added in Bowling Green with a connector service from Bowling Green to Toledo. The traffic modeling included those routes in the model area, but did not include the Bowling Green system or the connector.

The service levels for the transit system were based on the review of the available funding and therefore reflects what the planning area views as a maximum transit system. Since the Long Range Plan reviewed the transit alternatives, the transit service improvements recommended in the plan were used to evaluate this alternative. Moreover
other forms of public transit, such as light-rail transit, commuter rail, and personal rail transit in downtown Toledo, have been discussed and studied in other studies conducted by TMACOG. These transit modes, in addition to freight/passenger rail and air transport from the Toledo Express Airport for the movement of goods and people were not considered feasible alternatives, at this time, for the region.

The analysis of the Transit options were tested both for the 2025 Transportation Plan and for the Expressway Needs Study with similar results. The Expressway study results are shown in Figure 14. The analysis indicated there are no changes in Level of Service on any of the Expressway segments when the transit improvements are added. This was as expected since the existing system in 1996 is servicing only about 1.5 percent of the total trips. The new service areas operating at 30-minute headways are not likely to provide mode splits much in excess of this percentage. These results are similar to those obtained in the 2025 Transportation Plan in that congestion was not significantly impacted at these levels of transit.

**Recommendation:** The Public Transit Improvement Alternative would not address design deficiencies or significantly reduce traffic congestion on the expressway system. It would also not adequately address traffic safety and does not meet project needs assessment. Therefore, it is recommended that the Public Transit Improvements Alternative not be carried forward for further evaluation. However, maintaining existing TARTA bus transit services and expanding bus service into western Lucas County and northern Wood County as public transit demand rises, is recommended as an integral part of any Build Alternative.

### 4.8 EXPRESSWAY IMPROVEMENT ALTERNATIVES

As a result of an extensive needs assessment conducted during Phase 1 of the Expressway Needs Study, public and stakeholder involvement and MIS Scoping committee discussions conducted during Phase 2A, ten Expressway Improvement Alternatives, that would require major construction and capital investment, were developed in response to identified transportation problems and needs. These identified needs and problems – existing design deficiencies, high levels of traffic congestion, low levels of service, and high accident locations – are documented in the Phase 1 Expressway Needs Report (revised June 1998). The ten expressway improvement alternatives are listed as follows and also include the needs each of the alternatives have been developed to address:

- **Alternate 1:** I-475 / I-75 (“Jeep Split”) Interchange Upgrade (geometric deficiencies, including ramp spacing, left on/off ramps, basic lane discontinuity; high accident area, levels of service (LOS) E and F at existing interchange)
• Alternate 2: New Sylvania / West Toledo Interchange  
(needed access, high accident location, traffic congestion at I-475/US23 system interchange)

• Alternate 3: New Douglas Avenue Interchange Ramps  
(needed access; geometric deficiencies, including lane imbalance and improper spacing; high accident location, LOS E)

• Alternate 4: I-475 / US Route 23 Interchange Upgrade  
(existing traffic congestion, geometric deficiency including left on/off ramp, high accident area, LOS E and F)

• Alternate 5: New Interchange at Dorr, Bancroft or Hill Avenue  
(needed access, projected LOS of E and F at existing access points)

• Alternate 6: New US-20A / Salisbury Rd. / Dussel Dr. Interchange  
(needed access to commercial development, high accident location, LOS F)

• Alternate 7: I-475 / I-75 (Perrysburg) Interchange Upgrade  
(existing geometric deficiencies including left on/off ramps and spacing deficiencies; high accident locations near interchange; LOS E and F near interchange)

• Alternate 8: I-475 Widening (US-23 to Monroe Street)  
(reduce traffic congestion, two high accident locations, LOS E and F)

• Alternate 9: I-475 Widening (Monroe Street to Dussel Drive)  
(improve travel capacity, LOS E)

• Alternate 10: I-475 Widening (Monroe Street to I-75 Perrysburg)  
(improve travel capacity, high accident location, LOS E and F)

Figure 15, Sheets 1-14 graphically present the proposed roadway improvements for each alternate as well as potential impacts, benefits and issues.

Recommendation: The ten alternates and their associated options that comprise the expressway improvement alternatives do help eliminate design deficiencies, reduce traffic congestion, and improve level of service and traffic safety on the expressway system. These alternatives also significantly addresses project needs assessment as well as provide new access points and system capacity to accommodate regional growth and development. Therefore, all of the expressway improvement alternatives were recommended to be carried forward for further detailed evaluation and priority ranking during this MIS Study.
ALTERATE 1, OPTION A: I-475/I-75 INTERCHANGE (JEEP SPLICE) UPGRADE

ROADWAY IMPROVEMENTS
- Relocate I-75 median within interchange
- Construct additional northbound I-75 lane from eastbound I-475
- Construct additional I-75 northbound lane to Blanchard Avenue interchange
- Construct additional I-75 southbound lane on ramp to westbound I-75
- Construct interchange connectors to westbound I-75
- Construct exit ramp to Blanchard Avenue
- Construct exit ramp to Upton Avenue

Results: Addresses geometric deficiencies and improves interchange capacity, traffic flow and level of service

LAND USE AND ENVIRONMENTAL IMPACTS
- Potential for significant wetland, water quality, floodplain impacts to Upton Drainage Area
- Potential 100-year storms from Willys and Jermain parks
- Potential for 2 residential displacements

BENEFITS
- Capacity for additional travel lane for I-475 to I-75 northbound
- Eliminate weaving from I-475 eastbound to I-75 northbound
- Improve access to I-75
- Add capacity for additional travel lane for I-75 southbound to I-475
- Westbound

ADDITIONAL ISSUES
- Need to provide a local street connection between Jeep Plant
- Quality of existing rail points
- Need to modify Amtrak operations
- Does not address I-75 traffic capacity

FIGURE 15 (Sheet 1 of 14)
**ALTERNATE 2: NEW SYLVANIA INTERCHANGE**

**ROADWAY IMPROVEMENTS**
- Construct a westbound I-475 off-ramp to Sylvania Avenue
- Construct an on-ramp to I-475 eastbound from Sylvania Avenue
- Including I-475 overpass

**Result:** Provide new access to Sylvania Township

**LAND USE AND ENVIRONMENTAL IMPACTS**
- New ROE needed
- Wetland impacts
- Potential water quality/floodplain impacts to Ottawa River
- Potential impact to Camp Wawasee and Wildwood Metropark

**BENEFITS**
- Potential to reduce traffic congestion at existing I-475 access points (Corey Road and Central Avenue)
- May improve one high accident location
- New access to regional growth area

**ADDITIONAL ISSUES**
- Tie into eastbound I-475 exit ramp to Corey Road
- Tie into westbound I-475 on-ramp from Corey Road
- Potential traffic impacts to Sylvania Avenue

**LEGEND**
- PROPOSED
- PROPOSED
- EXISTING

**FIGURE 15 (Sheet 3 of 14)**
ALTERNATE 3: COMPLETE DOUGLAS AVENUE INTERCHANGE

ROADWAY IMPROVEMENTS
- Add westbound I-475 on-ramp
- Add eastbound I-475 off-ramp
- Construct C-D lane from existing eastbound I-475 off-ramp to Monroe Street

Result: Provides improved access to Toledo Hospital and Toledo University.

LAND USE AND ENVIRONMENTAL IMPACTS
- Potential for at least twenty one residential displacements
- Potential increase in traffic noise

BENEFITS
- Provides full interchange at Douglas Avenue
- May improve traffic congestion at existing I-475 access points (i.e., Monroe Street and Secor)
- Potential to improve one high accident location

ADDITIONAL ISSUES
- Need to extend the three-lane I-475 westbound section to Secor exit ramp
- Need to modify the north side of Monroe Street structure

FIGURE 16 (Sheet 4 of 14)
ALTERNATE 5, OPTION B: NEW I-475 INTERCHANGE AT DORR STREET

ROADWAY IMPROVEMENTS

- Construct new interchange at Dorr Street
- Construct additional lane southbound from the proposed interchange to the Airport Hwy - SR 2 interchange
- Construct additional lane eastbound from the proposed interchange to the Central Avenue (Interchange)

Goals: Provide new local access to Springfield and Sylvania Township and City of Toledo. Also, provides new access to Toledo University.

LAND USE AND ENVIRONMENTAL IMPACTS

- Potential for 3 residential displacements
- Potential impacts to nurseries/landscaping business
- Potential water quality impacts
- Increased traffic noise along Dorr Street

BENEFITS

- Provides new interchange access between Central Avenue and Airport Highway (SR 2)
- Improve traffic congestion at Central Avenue and Airport Highway
- May improve safety at Central Avenue interchange (long vehicle queues at exit ramp from southbound I-475/US 23)
- Provides new access to regional growth areas
- Provides improved access to Toledo University

ADDITIONAL ISSUES

- Need to modify Airport Hwy - SR 2 interchange at 5-way points
- Need to modify Central Avenue interchange at 5-way points
- Need to widen the intersection I-475/US 23 structure at Mill Avenue
- Does not address I-475 traffic capacity (see Alternatives 9 and 10)
- Need to widen Dorr Street on both sides of I-475/US 23 interchange

LEGEND

--- PROPOSED

--- PROPOSED

--- EXISTING

FIGURE 15 (Sheet 7 of 14)
ALTERNATE 5: OPTION C: NEW I-475 INTERCHANGE AT HILL STREET

ROADWAY IMPROVEMENTS

- New interchange at Hill Avenue
- Construct additional lanes southbound from the proposed interchange to the Airport Hwy - SR 2 interchange
- Construct additional lanes northbound from the proposed interchange to the Central Avenue interchange
- Result: Provide new local access to Springfield Township and City of Toledo

ENVIRONMENTAL IMPACTS

- Potential for about 30 residential displacements
- Wetland and water quality impacts
- Increased traffic noise along Hill Street
- Potential for environmental justice concerns

BENEFITS

- Provides new interchange access between Central Avenue and Airport Highway
- May improve traffic congestion at Central Avenue and Airport Highway
- Provides new access to regional growth areas

ADDITIONAL ISSUES

- Need to modify Airport Hwy - SR 2 interchange at tie-in points
- Need to modify Central Avenue interchange at tie-in points
- Need to widen northbound I-475/US 83 structure at Dorr Street
- Does not address I-475 traffic capacity issues (see Alternatives B and D)
- May need to widen Hill Avenue on both sides of I-475/U.S 83 interchange

FIGURE 15 (Sheet 8 of 14)
PRELIMINARY CONCEPTUAL

LEGEND

- - PROPOSED
- - PROPOSED
- - EXISTING

ROADWAY IMPROVEMENTS
- Add northbound and southbound lane to I-475/US 23 mainline
- Add Dussel Drive interchange improvements
- Construct new interchange at US 20A
- Construct connecting roads between US 20A and Salisbury Road/Dussel Drive

Result: Addresses design deficiencies at I-475/Dussel Drive interchange. Provides new access to interstate system and Toledo Airport.

LAND USE AND ENVIRONMENTAL IMPACTS
- Minor impacts anticipated
- Terminal connected to interchange ROW
- Potential ROW needed from 2 businesses
- ROW needed from woodland
- Potential utility impacts

BENEFITS
- Improves traffic capacity deficiencies of existing I-475/Dussel Drive interchange
- Decreases traffic congestion along Salisbury Road and Dussel Drive
- Potential to improve one high accident location
- Improves access to interstate system in area of planned regional growth
- Provides improved access to Toledo Airport

ADDITIONAL ISSUES
- Need to widen I-475/US 23 northbound and southbound structures over VanFolk and Western Railroads
- Need to widen I-475/US 23 northbound and southbound structures over the Ohio Turnpike

FIGURE 15 (Sheet 9 of 14)
PRELIMINARY CONCEPTUAL

PROHIBIT MOVEMENT FROM I-75 NB TO SR-25 WB EXIT RAMP

LEGEND

--- PROPOSED

PROPOSED

EXISTING

ALTERNATE 7, OPTION A: I-475/I-75 INTERCHANGE (PERRYSSBURG) UPGRADE, INCLUDING NEW FIVE POINTS/I-75 INTERCHANGE

ROADWAY IMPROVEMENTS

- Construct new interchange at Five-Points/I-75
- Place concrete barrier to prohibit northbound I-75 traffic from exiting at SR 25
- Place concrete barrier to prohibit eastbound SR 25 traffic from accessing northbound I-75


LAND USE AND ENVIRONMENTAL IMPACTS

- Conversion of farmland to interchange ROW
- Potential for two residential displacements
- Wetland impacts

BEFITS

- Provide new access to I-75 interstate and regional growth area
- Improve one high-accident location
- Eliminate weave conditions and conflict points in the I-475/I-75/SR25 interchange

ADDITIONAL ISSUES

- Need to widen existing pavement between I-75 and SR 25
- Improvements to the existing roadway between the new Five-Points/I-75 interchange and SR 25
- Need to coordinate with ODOT's I-75 MIS regarding I-75 mainline

FIGURE 15 (Sheet 10 of 14)
ALTERNATE 7, OPTION B: I-475/I-75 INTERCHANGE (PERRYSBURG) UPGRADE

ROADWAY IMPROVEMENTS
• Construct new loop ramps on west side of SR 25 interchange to replace existing SR 25 interchange

Results: Eliminates traffic weaving problems between I-75/I-475 Systems Interchange and SR 25 Interchange

LAND USE AND ENVIRONMENTAL IMPACTS
• ROW needed for improvements
• Potential impact to existing businesses

BENEFITS
• Improve one high accident location
• Eliminate weave conditions and conflict points in the I-475/I-75/US23 interchanges
• Maintains existing I-475/I-75 systems interchange access

ADDITIONAL ISSUES
• Modify SR 25 to provide turn lanes for new ramps

FIGURE 15 (Sheet 11 of 14)
ALTERNATIVE B: I-475 WIDENING FROM WORKHORITY STREET TO US ROUTE 24

ROADWAY IMPROVEMENTS
- Add new northbound and southbound lanes on I-475/US 23 from Airport Street frontage Road to US 24 interchange
- Relocate I-475/US 23 in the area of the proposed interchange
- Relocate westbound I-475 to southbound I-475/US 23 frontage Road
- Construct new bridge for southbound I-475/US 23 ramp to eastbound I-475 over relocated I-475/US 23 medians

Result: Addresses geometric deficiencies and improves I-475 capacity, traffic flow and level of service

ENVIRONMENTAL IMPACTS
- No site needed. Construction to take place in open space
- No effects anticipated

BENEFITS
- Improved traffic capacity along I-475/US 23 corridor
- Facilitates the inclusion of potential additional access points (four interchanges)
- Reduces traffic congestion and improves levels of service
- Increases safety at high accident locations

ADDITIONAL ISSUES
- Need to modify existing medians at tie-in points

FIGURE 15 (Sheet 13 of 14)
Section 5
EVALUATION OF EXPRESSWAY IMPROVEMENT ALTERNATIVES

5.1 INTRODUCTION TO METHODOLOGY

This section presents the methodology for evaluating the transportation alternatives that was developed for the TMACOG Expressway Needs Phase 2A: Major Investment Study (MIS) corridors. The evaluation approach used qualitative and quantitative data and information to evaluate and define differences between the alternatives. Those differences in benefits, impacts and costs provided a basis for making decisions about the recommended draft improvement alternatives and, ultimately, a preferred set of transportation improvements in the Toledo metropolitan area.

5.2 EVALUATION ASSUMPTIONS

Within the framework of the MIS study, the evaluation process measured the relative merits and desirability of the transportation alternatives. The evaluation process: (1) differentiated among the alternatives with regard to benefits, costs and impacts; (2) noted any tradeoffs among alternatives; (3) provided quantitative (as available) as well as qualitative information; (4) recognized uncertainties, opportunities and constraints, and (5) recognized that different stakeholders and community interests will place different relative values on the transportation alternatives and the criteria used to evaluate the alternatives. The evaluation methodology was organized to translate design and analysis results into information that would support the recommendation of draft alternatives and the selection of a preferred plan of transportation improvements.

The current baseline year of 2000 was used as the reference for existing conditions. The year 2025 was used as the planning year relative to implementation of proposed transportation improvements that would be recommended. This was done to be consistent with the planning year for the TMACOG Transportation Plan 2025 (Update 2000). As a reminder, for the western MIS corridor, the study limits begin at the I-75/I-475 systems interchange near Perrysburg (south of downtown Toledo) and follow I-475 north through Springfield and Sylvania Townships to the Michigan state line north of the US 23/I-475 systems interchange. For the northern MIS corridor, the study limits begin at the US 23/I-475 systems interchange (northwest side of Toledo) and follow I-475 east through the I-75/I-475 systems interchange (north of downtown Toledo) to just west of the I-75/I-280 systems interchange.
5.3 EVALUATION CATEGORIES AND CRITERIA

The transportation alternatives that were developed in response to identified and defined needs in the MIS corridors were evaluated against a series of evaluation criteria. These evaluation criteria represent five distinct planning and design categories. The five categories are: transportation, land use, socio-economic, environmental, and costs and financial. Table 1 lists the five categories and their associated evaluation criteria.

TABLE 1: Expressway Needs Phase 2A - Evaluation Categories and Criteria

<table>
<thead>
<tr>
<th>Categories</th>
<th>Criteria</th>
</tr>
</thead>
</table>
| I. Transportation | Design Deficiencies  
| | Level of Congestion  
| | Accidents  
| | Safety  
| | System Compatibility |
| II. Land Use Transportation Plan | Consistency with Local Plans and Regional ROW Acquisitions/Displacements |
| III. Socio-Economic | Regional Growth/Economic Development  
| | Community Impacts, including Environmental Justice |
| IV. Environmental | Environmental Resources (including wetlands, streams, parks, other natural resources, and historic/cultural resources)  
| | Hazardous Materials |
| V. Financial | Financial Feasibility |

The evaluation criteria for transportation addressed expressway system design deficiencies, existing and projected traffic congestion, high accident locations, and design safety. Overall expressway system compatibility was also addressed for each of the recommended alternatives.

The evaluation criteria for land use addressed transportation/land use relationships as well as compatibility with local plans and the Regional Transportation Plan. Also, the number of displacements and ROW acquisition was addressed. For the socio-economic criteria, economic development and redevelopment areas as well as important areas for regional growth in the MIS corridors were evaluated. In addition, community impacts resulting from the proposed alternatives, including any environmental justice concerns or noise impacts were addressed.

For the environmental evaluation criteria, a number of potential impacts associated with the alternatives' effect on wetlands, streams, parks and other natural resources (including threatened and endangered species), and historic and/or cultural resources were addressed. The potential for hazardous materials concerns or contaminated sites will also be addressed. For the financial criteria, the alternatives were evaluated in terms of the feasibility of the alternatives to be funded, and cost-effectiveness (benefits of improvements vs. costs).
5.4 EVALUATION MEASURES

For each criterion, there were measures that were identified that aided in the evaluation of the study alternatives. A measure is a unit of analysis, associated with particular criteria, that is used to estimate the performance, impact, benefit or cost of an alternative. The measures are both qualitative and quantitative. Therefore, both professional judgements and specific data (as available) were used to reliably estimate the potential impacts, benefits and costs of the alternatives being evaluated. Table 2 presents the measures that were used in the evaluation process.

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Deficiencies</td>
<td>Number of design features that do not meet current geometric standards</td>
</tr>
<tr>
<td>Level of Congestion</td>
<td>Level of Service (LOS) at intersection, interchange, or mainline locations</td>
</tr>
<tr>
<td>Accidents</td>
<td>Number and locations of high accident areas</td>
</tr>
<tr>
<td>Safety</td>
<td>Number of traffic movement conflict points (e.g., interchange on-ramps, excessive weave or poor sight distance locations) and potential pedestrian/bicyclist/traffic conflict points</td>
</tr>
<tr>
<td>System Compatibility</td>
<td>Compatibility in function and use with regard to design and operation of rest of expressway system</td>
</tr>
<tr>
<td>Consistency with Local Plans/RTP</td>
<td>Consistent with or identified in local plans; compatibility with or inclusion in Regional Transportation Plan (RTP)- Update 2000</td>
</tr>
<tr>
<td>ROW acquisitions/Displacements</td>
<td>Number of properties with ROW taken or residences/businesses displaced</td>
</tr>
<tr>
<td>Regional Growth/Economic Development</td>
<td>Ability to enhance access to major employment areas, residential populations, trade areas or existing and planned development</td>
</tr>
<tr>
<td>Community Impacts/Environmental Justice</td>
<td>Number of impacts with regard to community cohesion and access to services; proximity to lower income, minority, and special populations; equity distribution of investments vs. impacts/costs; potential changes in noise levels at sensitive receptors</td>
</tr>
<tr>
<td>Environmental Resources</td>
<td>ROW acquisition, displacement, or impact on wetlands, streams, parks, or other natural resources or impact on function of those resources; displacement or impact on historic, archaeological or other cultural resources</td>
</tr>
<tr>
<td>Hazardous Materials</td>
<td>Number and location of known LUST’s or hazardous waste sites</td>
</tr>
<tr>
<td>Financial Feasibility</td>
<td>Available funding resources for capital investments; qualitative assessment of benefits vs. costs relationships</td>
</tr>
</tbody>
</table>
5.5 EVALUATION PROCESS STEPS

The overall evaluation process was comprised of eight basic steps as stated in this section. The alternatives evaluation was an iterative process used to analyze, differentiate among, and ultimately refine alternatives to a preferred plan or set of transportation improvements. Results from this process became the basis for the technical recommendation of a preferred alternative. The eight steps are:

Step 1: Define Project Objectives

Establish the basic purposes to be achieved by the study and by making transportation investments.

Step 2: Develop Evaluation Criteria and Measures

Identify criteria and measures needed to determine the performance, impacts, benefits and/or costs of the alternatives.

Step 3: Identify Logical Corridor Alternatives/Modes

Develop consistent, complete range of alternatives, including TSM/TDM and transit options, for evaluation.

Step 4: Develop Candidate Transportation Alternatives

Identify and develop alternatives for various geographic segments of MIS corridors that meet needs identified for that corridor segment during Phase I Expressway Needs Study and stakeholder involvement during Phase 2A.

Step 5: Analyze Costs, Benefits, and Impacts of MIS Corridor Alternatives

Analyze qualitatively and quantitatively the performance of the alternatives using the selected set of evaluation criteria and measures. Identify strengths and weaknesses, costs, benefits and impacts of each alternative being considered.

Step 6: Compare Alternatives and Identify Trade-offs

Compare the relative merits, strengths and weaknesses of the alternatives and evaluate the trade-offs and differences between alternatives. Refine alternatives and determine the best sets of transportation improvements that meet overall study needs in MIS corridors.

Step 7: Recommend Draft Alternatives/ Prepare Draft MIS Report

Translate the findings of Steps 5 and 6 into an appropriate draft MIS report using tabular and visual formats to summarize and present the technical information for input into public discussions and the decision-making process.
Step 8: Select Preferred Alternative/Issue Final MIS Report

The goal of the evaluation process is ultimately to support a technical recommendation on a preferred set of transportation improvements (preferred alternative) that will best meet the needs of the MIS corridors. The defined set of transportation improvements will be prioritized with regard to importance and need to help facilitate their implementation. The evaluation results and recommended preferred alternative will be summarized in the Final MIS Report.

5.6 EVALUATION RESULTS

5.6.1 Introduction.

The purpose of this section is to present the evaluation comparison results among the ten expressway improvement alternatives for potential transportation, land use, socio-economic and environmental benefits and impacts of the proposed build expressway improvement alternatives. Implementing any major transportation improvement could potentially affect the existing transportation system, the built and natural environment, the communities and local economies at and near each of the proposed improvement locations. Effects or impacts can be either adverse or beneficial. A socio-economic and environmental screening analysis consistent with the National Environmental Policy Act (NEPA) was conducted to identify any significant transportation, land use, socio-economic, or environmental issues that might constrain the implementation of any of the proposed improvement alternatives. The MIS study team also conducted field investigations and an environmental database review of the locations for the ten expressway improvement alternates.

As part of the evaluation process, information from previous reports and studies as available was reviewed. U.S. Geological Survey quadrangle maps (2.5 inches equals 1 mile) were also reviewed for each of the proposed expressway improvement alternates. The 2025 Regional Transportation Plan and land use plans for Lucas and Wood counties and the City of Toledo were examined. National environmental data bases were searched as well to determine potential hazardous materials sites (CERCLA, RCRA, Superfund), historic and cultural resources (National Register or "eligible for listing" sites), possible threatened and endangered species (U.S. Fish & Wildlife lists), and wetlands, floodplains and water resources (NWRI, USGS, other mapping) that may be near or adjacent to the improvement locations. Also, detailed visual inspections during field visits of the proposed transportation improvement locations were also conducted.

The following pages of this section provide the results of the socio-economic and environmental screening analysis and alternatives evaluation. The potential beneficial or adverse impacts for each route are stated for the following resource areas: transportation, land use, socio-economics, including community impacts such as environmental justice and noise, environmental impacts including water quality/wetlands/floodplains, biological resources (including threatened and endangered species), historic and cultural resources, and hazardous substances. A brief discussion of the general short-term construction impacts that would be anticipated for major transportation improvements is
included. Financial considerations for each of the expressway improvement alternatives are also addressed. This screening analysis and evaluation comparison information was used in the overall evaluation and ranking of each of the proposed transportation improvements alternates.

5.6.2 Evaluation Results Summary.

Table 3, the Draft Evaluation Matrix, presents the draft evaluation results of the Expressway Improvement Alternatives using the criteria as already described. The following paragraphs discuss the transportation, land use socio-economic, environmental and financial considerations for each of the alternatives that are summarized in Table 3.

- Alternatives 4, 5, 6, 7, 8, 9 and 10 are located in MIS Corridor 1.
- Alternatives 1, 2, 3 are located in MIS Corridor 2

5.6.3 Transportation Considerations.

With regard to design deficiencies, Alternates 1, 4 and 6 would improve existing design deficiencies at the I-75/I-475 system interchange ("Jeep Split"), I-475/US 23 system interchange, and US-20A/Salisbury Road/Dussel drive interchange, respectively. Alternates 3, 7B, and Alternate 8 would have significant potential to reduce design deficiencies that currently exist at the interchanges. The other alternates, Alternates 2, 5, 7A, 9 and 10 would have little effect improving existing design deficiencies since these alternates would be providing new access and widening existing I-475 to provide additional system capacity (see Table 3).

For level of traffic congestion and Level of Service (LOS), all alternates and their associated options would provide improved capacity, better traffic flow and LOS. The major interchange improvements, Alternates 1, 4, and 6, would provide the most improvement with regard to reduced level of congestion. The I-475 widening alternates, Alternates 8, 9 and 10, would improve traffic capacity and LOS during peak travel periods. In addition, the new interchange alternates, Alternates 2, 3, 5, and 7A, would improve traffic flow and LOS around and near the new interchange locations.

All Expressway Improvement Alternatives would improve at least one high accident location, except Alternate 5 (potential new access on I-475 mainline) which would have no effect. Alternates 1A and 1B, and Alternate 9 would improve two high accident locations and Alternates 8 and 10 would improve three high accident locations.

Traffic safety impacts are related to changes in traffic volumes and congestion during peak travel times, and in increased traffic volumes at roadway crossings and interchanges. The current expressway design deficiencies and improper weaving movements could present more opportunity for vehicle conflicts. With regard to improved safety, the alternates which include major system interchange upgrades, Alternates 1A, 1B, Alternate 4, and Alternates 7A and 7B would improve safety significantly by eliminating excessive traffic weave movements and conflict points. Other alternates that include either interchange upgrades or new access would have some
potential to improve safety conditions. Alternates 9 and 10, which include adding lanes to the mainline of I-475, would have little or no effect on current safety conditions.

All Expressway Improvement Alternatives and their associated options are compatible with the existing expressway system. Those alternates that improve access to the interstate, Alternates 2, 3, 5, 6, and 7A have a high degree of compatibility. Alternates 1A and 1B would require closing existing ramps at Jackman, Jeep and Willys parkways. Also, Alternate 10 would require a new bridge crossing at the Maumee River. This new river crossing makes it less compatible than other alternates that do not require such major river bridge construction.

5.6.4 Land Use Considerations.

Consistency with Local Plans/Regional Transportation Plan (RTP) – Since the expressway system has been in operation for about 30 years, the arterial roadways and interstates have been incorporated into local county, township and City of Toledo land use and comprehensive plans as integral parts of the transportation infrastructure. Therefore, the proposed Expressway Improvement Alternatives are generally compatible with existing land uses and consistent with local plans. Also, existing zoning appears to accommodate the major improvement alternatives. Several of the alternates, such as Alternates 3, 5 and 6, would directly respond to land use trends toward commercial and industrial development and/or high-density residential near the proposed locations of these improvements.

All Expressway Improvement Alternatives are consistent with local and regional transportation plans. All proposed improvements are included in the RTP – Update 2000 except Alternate 1B and Alternate 10. For Alternate 10, the transportation plan does not specify limits of improvement. A new interchange on I-475 between Central Avenue and Airport Highway (Alternate 5) is noted in the RTP – Update 2000, although no cross street is named.

ROW Acquisition/Potential Displacements - Construction of new system interchanges, new on/off ramps at existing interchanges or other major improvement facilities would require property acquisition. In many cases, such as at a new interchange location, it may be necessary to acquire additional land for the improvements. This is true for all the alternates except Alternate 9 and 10, which would not require any additional ROW along the mainline. Alternates 1A, 1B, 3, 5, 7A and 8 would require the most ROW. Alternate 10 may require some ROW for the possible new bridge crossing over the Maumee River.

Direct land use impacts for the alternates would vary. Moreover, displacements of businesses and residences would occur on several of the expressway alternatives. Alternate 8 would potentially displace the most residences with 68 residences and 3 business displacements. Alternates 1B and 3 would displace approximately 20 displacements with Alternate 5C potentially displacing 30 residences. Alternate 4 would require 8 displacements, Alternates 5A and 5B would require 3 residential displacements, and Alternate 2 would not displace any residences or businesses (see Table 3).
<table>
<thead>
<tr>
<th>TABLE 3 - DRAFT EVALUATION MATRIX</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMACOG Expressway Needs Study: Phase 2A</td>
</tr>
</tbody>
</table>

### Expressway Improvement Alternatives*

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Alternates</th>
<th>Alternates 2</th>
<th>Alternates 3</th>
<th>Alternates 4</th>
<th>Alternates 5</th>
<th>Alternates 6</th>
<th>Alternates 7</th>
<th>Alternates 8</th>
<th>Alternates 9</th>
<th>Alternates 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Congestion</td>
<td>Both options improve interchange capacity, traffic flow and level of service (LOS). Option B further reduces congestion levels along I-75.</td>
<td>Potential to reduce traffic flow and LOS near interchange. May improve traffic congestion at existing I-475 access points.</td>
<td>Improves interchange capacity, traffic flow and LOS.</td>
<td>All options would improve traffic congestion and LOS at Central Avenue and Airport Highway.</td>
<td>Improves traffic flow and LOS at Dussel Drive/I-475 interchange and along Dussel Drive and Salisbury Road.</td>
<td>Improves traffic capacity, traffic flow and LOS along I-475 mainline.</td>
<td>Improves I-475 capacity, traffic flow and LOS during peak periods.</td>
<td>Improves I-475 capacity, traffic flow and LOS during peak periods.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accidents</td>
<td>Both options improve two high accident locations. May improve one existing high accident location.</td>
<td>Potential to improve one high accident location.</td>
<td>Will improve one high accident location.</td>
<td>No effect.</td>
<td>Potential to improve one high accident location (Dussel Drive).</td>
<td>Both options will improve one high accident location.</td>
<td>Will improve three high accident locations along I-475.</td>
<td>Improve two high accident locations along I-475.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Compatibility</td>
<td>Both options compatible with expressway system. Option B more compatible with I-75 mainline (I-475 to 1-280). Potential ramp closures at Jackman, Jepp and Willys Parkways.</td>
<td>Generally compatible with expressway system. New access point close to I-475/US-23 system interchange.</td>
<td>Compatible with system and I-475 mainline.</td>
<td>All three options improve access to interstate system. Dorr Street location provides better spacing between Central Avenue and Airport Highway.</td>
<td>Improves access to interstate system. Compatible with expressway.</td>
<td>Option A improves access to interstate system (I-75). Option B compatible with function and operation of existing system.</td>
<td>Compatible with existing system, but with significant impact to natural and built environment.</td>
<td>Compatible with I-475. Improvements to be made in median.</td>
<td>Would require widened Maumee River Bridge.</td>
<td></td>
</tr>
</tbody>
</table>

*Alternate 1 (Cor. 2): I-475 / US Route 23 Interchange Upgrade
*Alternate 2 (Cor. 2): New Sylvania / West Toledo Interchange
*Alternate 3 (Cor. 2): New Douglas Avenue Interchange Ramps
*Alternate 4 (Cor. 1): I-475 / I-280 ("Jeep Split") Interchange Upgrade
*Alternate 5 (Cor. 1): New US-20A / Salisbury Rd. / Dussel Dr. Interchange
*Alternate 6 (Cor. 1): I-475 / US Route 23 Interchange Upgrade
*Alternate 7 (Cor. 1): I-475 / I-75 (Perrysburg) Interchange Upgrade
*Alternate 8 (Cor. 1): I-475 Widening (US-23 to Monroe Street)
*Alternate 9 (Cor. 1): I-475 Widening (Monroe Street to I-75 Perrysburg)
*Alternate 10 (Cor. 1): I-475 Widening (Monroe Street to I-75 Perrysburg)
<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Alternate 1 Options A &amp; B</th>
<th>Alternate 2</th>
<th>Alternate 3</th>
<th>Alternate 4</th>
<th>Alternate 5 Options A, B &amp; C</th>
<th>Alternate 6</th>
<th>Alternate 7 Options A &amp; B</th>
<th>Alternate 8</th>
<th>Alternate 9</th>
<th>Alternate 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Growth/ Economic Development</td>
<td>Both options will accommodate projected regional growth. Potential for better access to development opportunities near Jeep Plant for Option B.</td>
<td>Enhances access to economic centers in Sylvania Township.</td>
<td>Will provide additional access to existing development areas in North Toledo, Toledo University and Toledo Hospital.</td>
<td>Will provide new access to regional growth areas in Springfield and Sylvania Townships.</td>
<td>Will provide significant benefit to economic development areas and new access route to Toledo Airport.</td>
<td>Will help to accommodate projected regional growth areas. Option B will provide new access to existing US-25 interchange.</td>
<td>Will help to accommodate projected regional population and employment growth and need for additional access to system.</td>
<td>Improvement will accommodate projected regional growth in Springfield, Sylvania Townships and Perrysburg area.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 3 - DRAFT EVALUATION MATRIX

**TMACOG Expressway Needs Study: Phase 2A**

#### Expressway Improvement Alternatives*

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Alternate 1 Options A &amp; B</th>
<th>Alternate 2</th>
<th>Alternate 3</th>
<th>Alternate 4 Options A, B &amp; C</th>
<th>Alternate 5 Options A, B &amp; C</th>
<th>Alternate 6</th>
<th>Alternate 7 Options A &amp; B</th>
<th>Alternate 8</th>
<th>Alternate 9</th>
<th>Alternate 10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENVIRONMENTAL</strong></td>
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<tr>
<td>Environmental Resources</td>
<td>Potential wetland, floodplain and water quality impacts to Ottawa River; Option B has potential for greater impacts. Potential impacts to Willys and Jermain Parks.</td>
<td>Potential wetland impacts; potential impact to Camp Miakonda, and Wildwood Metropark properties. Potential water quality/floodplain impacts to Ottawa River.</td>
<td>No effects anticipated.</td>
<td>Potential wetland/water quality impact near improved system interchange.</td>
<td>Potential wetland/water quality impacts due to new interchange construction; especially for Option C.</td>
<td>Potential wetland/water quality impacts; farmland converted to road ROW. Potential ROW needed from woodland.</td>
<td>Option A would impact wetlands and require farmland conversion to interchange ROW. No effects anticipated for Option B.</td>
<td>Wetland and water quality impacts to Ottawa River. Potential impacts to Wildwood Metropark.</td>
<td>No effects anticipated; improvement constructed in I-475 median.</td>
<td>Potential water quality impacts at Maumee River.</td>
</tr>
<tr>
<td>Hazardous Materials</td>
<td>For Option A, potential for contamination is low. For Option B, potential for contamination discovery is moderate to high. (Area contains past industrial uses and landfill).</td>
<td>Risk of discovery is low.</td>
<td>Risk of discovery is low.</td>
<td>Risk of contaminant discovery is low for all options.</td>
<td>No effects anticipated.</td>
<td>No effects anticipated.</td>
<td>No effects anticipated.</td>
<td>No effects anticipated.</td>
<td>No effects anticipated.</td>
<td></td>
</tr>
<tr>
<td><strong>FINANCIAL</strong></td>
<td></td>
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</tbody>
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*Alternate 1 (Cor. 2): I-475 / I-75 (“Jeep Split”) Interchange Upgrade
*Alternate 2 (Cor. 2): New Sylvania / West Toledo Interchange
*Alternate 3 (Cor. 2): New Douglas Avenue Interchange Ramps
*Alternate 4 (Cor. 1): I-475 / US Route 23 Interchange Upgrade
*Alternate 5 (Cor. 1): New Interchange at Dore, Bancroft or Hill Avenue
*Alternate 6 (Cor. 1): New US-20A / Salisbury Rd. / Dussel Dr. Interchange
*Alternate 7 (Cor. 1): I-475 / I-75 (Perrysburg) Interchange Upgrade
*Alternate 8 (Cor. 2): I-475 Widening (US-23 to Monroe Street)
*Alternate 9 (Cor. 1): I-475 Widening (Monroe Street to Dussel Drive)
*Alternate 10 (Cor. 1): I-475 Widening (Monroe Street to I-75 Perrysburg)
5.6.5 Socio-Economic Considerations.

Regional Growth/Economic Development - No changes in population and employment characteristics are anticipated as a result of implementing the proposed expressway improvement alternatives in the two MIS corridors. The intent of any improvements would be to better serve truckers, commuters, and the general public by providing a safer, more efficient transportation system. For all of the proposed transportation improvements, some benefits with regard to economic growth could be realized. Additional or new access to and from the expressway system (for example, Alternates 3, 5, 6, 7A, 8, 9, and 10) could encourage new businesses, services, or housing to continue current economic development trends. Alternate 5 would provide new access to regional growth areas in Springfield and Sylvania townships. Alternate 6 would provide significant benefits to economic development areas around the US 20A/Salisbury Road/Dussel Drive interchange location. Moreover, local economies should experience increases in tax revenues and property values as a result of proposed expressway improvement construction. Any residential or commercial displacements could result in an economic impact if the displaced businesses or property owners would have difficulty in relocating. This is not anticipated for any major expressway improvement alternative. Any business or residence that would be displaced would require relocation under the federal Uniform Relocation Assistance Act.

Community Impacts -. Communities and townships should experience some community benefits with the construction of the proposed improvements, especially upgraded or new interchanges (Alternates 1A, 3, 4, 5, 6, and 7A). These improvements would provide more accessibility to community services and downtown Toledo and could encourage some economic and community development. For Alternates For Alternates 1B, 3, 4, 5C, and Alternate 8, businesses and residences would be displaced as already mentioned. These displacements can constitute disruptive community impacts. Changes in access to businesses or residential neighborhoods may also occur as well. Alternates 1A and 1B may create potential changes in access to Jermain and Willys parks, a nearby senior center, and other community services.

Noise. Vehicular traffic can be a continual source of noise on a region’s roadways. Vehicles, especially trucks, produce noise in four ways: internal combustion engine operations (diesel engines for heavy trucks), rubber tires on pavement, and braking and warning noises such as car horns. In the more densely populated residential areas, noise receptors may experience an intermittent increase in noise levels once the transportation improvements were completed. This may be true for Alternates 1A, 3, 4, and Alternate 8. Alternate 1B could have significant noise impacts on nearby residences. For Alternate 6, since much of the land abutting the proposed improvement is commercial and industrial, anticipated noise impacts would be minimal. No noise impacts would be anticipated for Alternates 7, 9, and 10. Increased noise levels may be experienced on nearby arterial roadways if Alternate 2 were constructed. Construction noise for any of the improvement alternatives could occur. However, construction noise is usually of short durations and is generally perceived as a "nuisance" by nearby residents.
Environmental Justice/Title VI issues - Executive Order # 12898 was implemented to ensure that low-income households, minority households and minority business enterprises do not receive a disproportionate share of adverse environmental impacts for projects that receive federal funds. An environmental justice screening was accomplished to ensure that low-income persons or minority populations are not discriminated against during project decision-making, that they are not denied the benefits of the proposed project, and that they are not burdened with a disproportionate share of the impacts. Title VI of the Civil Rights Act of 1964 requires that federal programs and expenditures are not discriminatory and that the benefits of federal investments are shared across all populations.

No environmental justice impacts are expected for Alternates 2, 3, 4, 5A and 5B, 6, 7, 8, 9 and 10.

However, there are potential environmental justice/Title VI issues associated with Alternates 1A and 1B and Alternate 5C. For Alternate 1A, changes in local access to the expressway system would occur that may affect lower income and minority populations. For Alternate 1B, a number of these small businesses, property owners, and small-scale residences may need to be displaced which could cause significant neighborhood disruption. These commercial and residential properties may be owned by either lower income or minority populations. For Alternate 5C, 30 residences would be displaced in a lower income and minority neighborhood. Therefore, if these improvement alternatives were to be constructed these populations may be burdened with a disproportionate share of the impacts. Further analysis of these issues would be required during project development.

5.6.6 Environmental Considerations

Water Quality/Wetlands/Floodplains. The proposed locations for the Expressway Improvement Alternatives were field inspected to identify any water quality issues, wetland and/or floodplain impacts. For Alternates 3, 7B, and 9, no water quality, wetland or floodplain impacts are anticipated. For Alternates 1A, 1B, and 8, the possible bridge crossings could possibly affect water quality in the Ottawa River (short-term impact during construction). Alternates 2 and 8 may also potentially impact wetlands and floodplain associated with the Ottawa River. Since Alternate 10 would require construction of a new bridge across the Maumee River, the placement of bridge abutments in or near the Maumee River may occur. As a result, a Corps 404 Permit and Section 401 Water Quality certification may be required if this improvement alternative went to project development. This may also be true for Alternates 1A, 1B, and Alternate 8.

Biological Resources. With most of the Expressway Improvement Alternatives, some trees and other vegetation would need to be removed for construction. However, no high quality or critical wildlife habitat exists. Moreover, no biological (including threatened and endangered species (T&E)) impacts are anticipated for any improvement alternatives. The banks of the Ottawa River provides habitat to some bird and animal species, especially in the area of Wildwood Metropark. Additional analysis would be required to determine for certain the presence of T&E species either in the wooded areas of the Metropark or along or in the Ottawa River.
**Historic/Cultural Resources.** Federal guidelines regarding historic resources (Section 106 of the National Historic Preservation Act) and cultural resources (Archaeological and Historic Data Preservation Act) were considered during field investigations to identify any potential impacts to these important resources. No impacts to cultural resources or historic sites, either included in or eligible for inclusion in, the National Register of Historic Places are anticipated with any of the Expressway Improvement Alternatives. A Phase I archaeological survey to determine the presence of cultural resources would be recommended for any alternative recommended for preliminary project development.

**Parks/Open Space** – For most of the Expressway Improvement Alternatives, there are no impacts to parks, open space or Section 4(f) resources. Section 4(f) resources (federally protected under the U.S. Department of Transportation Act of 1966) include parklands, wildlife refuges, conservation areas, wild and scenic rivers, and historic structures and districts. However, Alternate 8 could impact Wildwood Metropark and Alternate 1, Options A and B, would impact Willys and Jermain parks. Alternate 2 may also potentially impact Wildwood Metropark. The Metropark is located just south of I-475 between Corey Road and Sylvania-Holland Road. Jermain and Willys parks are located north/northwest of the “Jeep Split”. If these parks were to be affected, Section 4(f) requires a rigorous examination of all prudent and feasible alternatives to the use of Section 4(f) lands. In addition, all measures to minimize harm to the park and surrounding neighborhood would need to be considered. Additional analysis during preliminary project development would be required to determine the specific impacts to these park resources as these improvement projects are moved forward.

**Hazardous Substances.** Potentially contaminated sites in the MIS corridors can be a concern because federal hazardous materials laws (e.g., RCRA, CERCLA, Superfund) assign liability in part to property owners, especially if previous owners, who may have historically been responsible for the contamination, are unknown. Moreover, the discovery of potential contaminant sources on property needed for new roadways or interchange improvements could significantly constrain an alternative's implementation. For one alternative, Alternate 1B between I-75/I-475 and I-75/I-280, there are a number of industrial and commercial properties that either abut or are close to existing I-75. Industrial land uses or old landfills commonly have the potential for surface and underground contamination, particularly at sites that were used for industry before the current environmental regulations went into effect.

Due to the high cost of remedial action, contamination clean up, and potential for litigation, hazardous wastes could pose a fatal flaw to a particular expressway alternative. Moreover, since contamination can migrate underground via groundwater, properties that are not adjacent to the roadway or interchange right-of-way but are nearby also need to be considered during literature reviews and site inspections.

The MIS study team conducted state and national database searches, field investigations and a visual survey of properties surrounding the proposed expressway improvement alternatives to identify any potential hazardous wastes or contamination constraints. Based upon our studies, no project fatal flaws are expected. Moreover, for all improvement alternatives, except 1B, the risk of encountering contamination is anticipated to be low. Only on Alternate 8 is the risk low to moderate. However, for
Alternate 1B the potential for contaminant discovery exists. A Phase I site assessment should be conducted for the improvement alternative if it were moved forward for preliminary project development. If a Phase I site assessment indicates strong potential for contamination, a Phase II site assessment, which would involve subsurface soil testing from suspect properties to determine the extent of contamination (if any), would be warranted (Alternate 1B only).

**Short-term Construction Impacts.** Short-term construction impacts would occur for each of the expressway improvement alternatives that would ultimately be constructed. Construction activities for each transportation improvement location would generally be done as follows: site preparation and clearing, utility relocation (if necessary) and grading, ramp and roadway construction, bridge/structures construction and pavement surfacing. Excavations will be confined to the immediate area around the proposed improvements. They tend to be shallow excavations wherever possible to minimize impacts and utility relocations.

Construction materials most likely would be delivered by truck. Construction contractors are required to conform to the provisions of standard engineering and construction practices (such as stormwater runoff control) to control various effects associated with construction. Construction activity would be visible only at the specific project improvement locations. Sometimes street and business access may be altered temporarily during construction. However, there should be no problem maintaining access to residential, commercial and industrial sites for any of the expressway improvement alternatives. In addition, common construction issues such as air quality and noise could be easily mitigated using standard construction practices.

**5.6.7 Financial Considerations.**

The financial feasibility of each of the Expressway Improvement Alternatives was also considered. Transportation benefits for the amount of capital investment were also qualitatively assessed. Table 3 lists the preliminary cost estimates for each improvement alternative. Detailed costs estimates and assumptions are available for review in Appendix I. Local, state and federal funding participation is noted in Table 3 and was considered during the evaluation process.

As shown in Appendix I, Preliminary Cost Estimates for the Expressway Improvement Alternatives, the cost estimates include the costs of specific roadway interchange and ramp improvements. The estimates also include additional assumptions as to tie-in points, number of structures reconstructed, ROW acquisition, local street modifications, cost of relocations, as well as engineering and construction fees.
6.1 INTRODUCTION

The purpose of this section is to present the draft evaluation and scoring results and improvement recommendations for the TMACOG Expressway Needs Study - Phase 2A: Major Investment Study. This section describes the background to the alternatives' evaluation and comparisons, the evaluation and scoring framework, and other considerations that led to the consultant team's draft recommendations for expressway improvements. These draft recommendations were presented at the Transportation Summit on October 18, 2000. They were also extensively considered by the MIS Scoping Committee during two workshop meetings in November and were subject to further review, discussions and comment by transportation decision-makers, local officials and the public at the Transportation Council meetings in November and December 2000, and January 2001.

6.2 BACKGROUND TO EXPRESSWAY ALTERNATIVES EVALUATION

As stated in Section 5, ten Expressway Improvement Alternatives and 3 other improvement alternatives focusing on travel demand, system management, and transit improvement strategies were developed. These alternatives were developed as a result of the expressway design, safety, traffic capacity, and other transportation needs that were identified during Phase I of the Expressway Needs Study. Significant input was received from the MIS Scoping Committee and area stakeholders with regard to possible solutions to meet identified transportation needs. This input was instrumental in developing specific improvement alternatives throughout the two MIS corridors.

The ten expressway improvement alternatives (in no priority order) are: Alternate 1: I-475/I-75 ("Jeep Split") Interchange Upgrade; Alternate 2: New Sylvania/West Toledo Interchange; Alternate 3: New Douglas Avenue Interchange ramps; Alternate 4: I-475/US Route 23 Interchange Upgrade; Alternate 5: New Interchange at Bancroft, Dorr, or Hill Avenue; Alternate 6: New US-20A/Salisbury Rd./Dussel Drive Interchange; Alternate 7: I-475/I-75 (Perrysburg) Interchange Upgrade; Alternate 8: I-475 Widening (US Route 23 to Monroe Street); Alternate 9: I-475 Widening (Monroe Street (near Alexis Rd.) to Dussel Drive); and Alternate 10: I-475 Widening (Monroe Street (near Alexis Rd.) to I-75 in Perrysburg). For Alternates 1, 5 and 7, multiple options were developed. The three other improvement alternatives are the Travel Demand Management Alternative (e.g., van pools, pedestrian/bike paths, employer trip reduction programs); the Transportation System Management Alternative (e.g., HOV lanes, traffic control measures, ITS strategies); and a Public Transit Service Alternative (e.g., enhanced bus service, new rail transit).

For the initial alternative evaluation, five evaluation categories were defined by the MIS Scoping Committee and the consultant team: (1) transportation, (2) land use, (3) socio-economic, (4) environmental, and (5) financial. For each of these evaluation categories, specific evaluation criteria and measures were developed. For transportation, the evaluation criteria are design deficiencies, level of congestion, accidents, safety, and system compatibility. For land use, the
criteria are consistency with local plans and Regional Transportation Plan - Update 2000 and right-of-way (ROW) acquisitions/displacements. For socio-economic, the criteria are regional growth/economic development and community impacts, including noise and environmental justice. For environmental, the criteria are environmental resources and hazardous materials. For financial, the criteria is financial feasibility. These evaluation criteria and the associated measures were then applied to each of the expressway improvement alternatives. Table 3 - Draft Evaluation Matrix presents the initial evaluation results for the expressway improvement alternatives. These results were presented at three public meetings held within the MIS corridors in late September 2000.

6.3 EVALUATION AND SCORING FRAMEWORK

The final step of the alternatives evaluation process was to compare alternatives, identifying various benefits, impacts and trade-offs; then to rank the alternatives within each MIS corridor with regard to priority using a defined scoring framework. For Phase 1 of the TMACOG Expressway Needs Study, corridors were prioritized by using numerical values assigned to different system design deficiencies or problems. The severity of the problems led to higher scores and higher priorities assigned to specific transportation corridors. For Phase 2A, the scoring framework is based upon how a particular alternative provides a solution to an identified need in relation to each of the evaluation criteria.

For each of the evaluation criteria, numerical values were assigned. For transportation, each of the five evaluation criteria was assigned a maximum possible score of 20 points, for a total of 100 possible points. For the remaining four evaluation categories and their criteria, a possible score of 25 points was assigned to each category for a total of 100 possible points. The overall total possible score any alternative could receive would be 200 points. More emphasis and weighting were given to the transportation evaluation criteria because they address defined needs that were identified during Phase 1 and during Phase 2A discussions with the MIS Scoping Committee and area stakeholders. The initial Purpose and Need Statement that was developed for Phase 2A also supports the importance of the transportation criteria. This approach also ensures that a particular expressway improvement alternative does not receive an unusually low rating for community impact or environmental concerns. Even though these considerations are important and have been an integral part of the evaluation process, more detailed information will be needed in the project development phase to determine the extent of the community and environmental impacts for a specific project. The following table, Table 4, summarizes the scoring framework:


## Table 4

**Scoring Framework for Draft Improvement Recommendations**

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Measure</th>
<th>Possible Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transportation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design Deficiencies</td>
<td>Design features that do not meet current geometric standards</td>
<td>20</td>
</tr>
<tr>
<td>Level of Congestion</td>
<td>Level of Service (LOS) at intersection, interchange, or mainline locations</td>
<td>20</td>
</tr>
<tr>
<td>Accidents</td>
<td>Number/locations of high accident areas</td>
<td>20</td>
</tr>
<tr>
<td>Safety</td>
<td>Number of traffic movement conflict points (e.g., interchange on-ramps, excessive weave or poor sight distance locations) and potential /traffic conflict points</td>
<td>20</td>
</tr>
<tr>
<td>System Compatibility</td>
<td>Compatibility in function and use regarding design and operation of expressway system</td>
<td>20</td>
</tr>
<tr>
<td><strong>Land Use</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consistency with Local</td>
<td>Identified in local plans/RTP</td>
<td>15</td>
</tr>
<tr>
<td>Plans/RTP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROW acquisitions/Displacements</td>
<td>Properties with ROW taken or residences/businesses displaced</td>
<td>10</td>
</tr>
<tr>
<td><strong>Socio-Economic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Growth/</td>
<td>Ability to enhance access to major employment Economic Development areas, residential Populations trade areas or existing and planned development</td>
<td>15</td>
</tr>
<tr>
<td>Community Impacts/</td>
<td>Impacts to community cohesion and access to Services or noise; proximity to lower income, minority, and special populations; equity distribution of investments vs. impacts/costs</td>
<td>10</td>
</tr>
<tr>
<td><strong>Environmental</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Resources</td>
<td>ROW acquisition, displacement, or impact on wetlands, streams, parks, or historic, archaeological or other cultural resources</td>
<td>15</td>
</tr>
<tr>
<td>Hazardous Materials</td>
<td>Number/location of known LUST’s or hazardous waste sites</td>
<td>10</td>
</tr>
<tr>
<td><strong>Financial</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Feasibility</td>
<td>Available funding resources for investments; qualitative assessment of benefits vs. costs relationships</td>
<td>25</td>
</tr>
</tbody>
</table>

**Total Possible Score:** 200
For the land use category, more scoring emphasis (15 possible points compared to 10 points) is placed on the consistency with local plans/RTP evaluation criteria. Since this criteria reflects an ongoing and long-standing local and regional transportation planning process that includes all appropriate jurisdictions. The RTP was recently updated (June 2000). For the socio-economic category, the regional growth criterion is weighted slightly higher than community impacts (15 possible points compared to 10 points) since it addresses needs identified during Phases 1 and 2A. The initial Purpose and Need Statement also supports the importance of transportation infrastructure responding to existing and planned growth.

Since multiple environmental resources (e.g., wetlands, streams, floodplains, parks, threatened and endangered species) are considered for this criteria under the environmental category, more scoring emphasis (15 possible points compared to 10 points) is placed on environmental resources than hazardous materials. Every alternative, including those alternates that potentially have significant environmental impacts, scored at least one-half of the possible points for the environmental resources criterion. For the financial category, a total of 25 points was possible. A qualitative benefits vs. costs comparison was considered for the alternatives in the scoring. General cost estimates are given in Table 1 and more detailed cost estimates and assumptions are presented in the attached matrix.

6.4 DRAFT ALTERNATIVES EVALUATION RESULTS

The draft results of the alternatives' evaluation and scoring are included in Table 5- Draft Alternatives Comparison Matrix and Scoring Sheet. Alternatives 4-10 are located in MIS Corridor 1 and Alternatives 1, 2 and 3 are located in MIS Corridor 2. For the first MIS corridor, Alternate 4 (I-475/US-23 Interchange Upgrade) received the highest score based upon the evaluation criteria. The next highest scores for the first MIS corridor were Alternate 6 (new US 20A/Salisbury Rd./Dussel Drive Interchange) and Alternate 9 (I-475 Widening (from Monroe Street (near Alexis Rd.) to US-24)). Multiple options were evaluated for Alternates 5 and 7 in the first MIS corridor. For Alternate 5, Option B (Dorr Street) received the highest score. For Alternate 7, Option A received a slightly higher score than Option B. Moreover, Alternate 9 received a higher score than Alternate 10.

Alternate 4 has the highest potential to improve all current design deficiencies within the existing I-475/US-23 system interchange. It also has a high potential to improve traffic capacity and level of service in the interchange and along the mainline. It would eliminate the excessive weave movement from I-475 westbound to the Central Avenue exit and would improve at least one high accident location. Alternate 4 would require some right-of-way and 8 residential displacements. However, the potential community and environmental impacts are minor with respect to the scale of the project. In addition, this alternate achieves moderate to high benefits for the financial investments that would be made.

Alternate 6 has very high potential to improve all current design deficiencies at the existing interchange at Dussel Drive/Salisbury Road and I-475. It would also improve traffic capacity, reduce traffic congestion along Dussel Drive and improve one high accident location. With the new interchange at US-20A, Alternate 6 improves access to
<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Expressway Improvement Alternatives*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Deficiencies</td>
<td>20 Points</td>
</tr>
<tr>
<td>Level of Congestion</td>
<td>20 Points</td>
</tr>
<tr>
<td>Accidents</td>
<td>20 Points</td>
</tr>
<tr>
<td>System Compatibility</td>
<td>20 Points</td>
</tr>
<tr>
<td>Subtotal</td>
<td>91 Points</td>
</tr>
</tbody>
</table>

*Alternate 1 (Cor. 2): I-475/US-23 ("Spill Spur") Interchange Upgrade
*Alternate 5 (Cor. 1): I-475/US Route 23 Interchange Upgrade
*Alternate 7 (Cor. 1): I-475/US-23 (Perrysburg) Interchange Upgrade
*Alternate 10 (Cor. 1): I-475 Widening

*Alternate 2 (Cor. 2): New Sylvania / West Toledo Interchange
*Alternate 6 (Cor. 1): New Interchange at Bancroft, Dorr or Hill Avenue
*Alternate 8 (Cor. 1): I-475 Widening (East of US-23 to Monroe Street)

*Alternate 3 (Cor. 2): New Douglas Avenue Interchange Ramps
*Alternate 4 (Cor. 1): New Connection at Bancroft, Dorr or Hill Avenue
*Alternate 9 (Cor. 1): I-475 Widening (Monroe Street to Dussel Drive)
### TABLE 5 - DRAFT ALTERNATIVES COMPARISON MATRIX AND SCORING SHEET

**TMACOG Expressway Needs Study: Phase 2A**

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Possible Points</th>
<th>Expressway Improvement Alternatives*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LAND USE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SCOIO-ECONOMICAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Socio-Economic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Community Impacts, Including Noise and Environmental Justice (E.J.)</strong></td>
<td>10</td>
<td>Option A: 7 Points Option B: 5 Points Option A: 7 Points Option B: 5 Points Potential increase in traffic noise. Potential increase in traffic noise. Possible increased traffic and traffic noise on arterials. Possible increased traffic and traffic noise on arterials.</td>
</tr>
<tr>
<td><strong>Regional Growth/ Economic Development</strong></td>
<td>15</td>
<td>Option A: 14 Points Option B: 14 Points Option A: 14 Points Option B: 14 Points Options A &amp; B provide better access to regional growth areas. Provides more capacity to accommodate west side regional growth. Options A &amp; B provide better access to regional growth areas. Provides more capacity to accommodate west side regional growth.</td>
</tr>
<tr>
<td><strong>Consistency with Local Plans/ Regional Transportation Plan (RTP)</strong></td>
<td>15</td>
<td>Option A included in RTP. Consistent with local plans. Not included in RTP. Included in RTP. Included in RTP with no cross street named. Included in RTP. Included in RTP.</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td>Option A: 136 Points Option B: 134 Points</td>
</tr>
<tr>
<td><strong>Possible Score</strong></td>
<td></td>
<td>100 Points 112 Points 133 Points 133 Points 120 Points 114 Points 124 Points 140 Points 144 Points</td>
</tr>
</tbody>
</table>

*Alternate 1 (Cor. 2): I-475 / I-75 ("Jeep Split") Interchange Upgrade
*Alternate 2 (Cor. 2): New Sylvania / West Toledo Interchange
*Alternate 3 (Cor. 2): New Douglas Avenue Interchange Ramps
*Alternate 4 (Cor. 1): I-475 / US Route 23 Interchange Upgrade
*Alternate 5 (Cor. 1): New interchange at Bancroft, Dorr or Hill Avenue
*Alternate 6 (Cor. 1): New US-20A / Sylvania Rd. / Dussel Dr. Interchange
*Alternate 7 (Cor. 1): I-475 / I-75 (Perrysburg) Interchange Upgrade
*Alternate 8 (Cor. 1): I-475 Widening (East of US-23 to Monrow Street)
*Alternate 9 (Cor. 1): I-475 Widening (Monrow Street to Dussel Drive)
*Alternate 10 (Cor. 1): I-475 Widening Monrow Street to I-75 Perrysburg
### TABLE 5 - DRAFT ALTERNATIVES COMPARISON MATRIX AND SCORING SHEET

**TMACOG Expressway Needs Study: Phase 2A**

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Resources</td>
<td>Option A: 10 Points</td>
<td>12 Points</td>
<td>13 Points</td>
<td>Option B: 5 Points</td>
<td>12 Points</td>
<td>14 Points</td>
<td>Option A: 12 Points</td>
<td>14 Points</td>
<td>13 Points</td>
<td>14 Points</td>
</tr>
<tr>
<td></td>
<td>Option B would have greater impacts to wetlands, and Ottawa River floodplains and water quality. Similar impact to parkland for both options.</td>
<td>Potential wetland impacts and minor impacts to Wildwood Metropark.</td>
<td>Potential effects to historic homes.</td>
<td>Minor potential wetland impact for scale of improvement.</td>
<td>More wetland impacts anticipated for Option C than other options</td>
<td>Relatively minor impacts.</td>
<td>Option A would have higher wetland impacts and farmland conversion impacts.</td>
<td>Potentially significant water quality impacts to Ottawa River, wetlands, and parkland impacts.</td>
<td>Minor potential for wetland impacts.</td>
<td>Potential water quality impacts at Maumee River.</td>
</tr>
<tr>
<td>Hazardous Materials</td>
<td>Option A: 8 Points</td>
<td>9 Points</td>
<td>10 Points</td>
<td>Option B: 4 Points</td>
<td>9 Points</td>
<td>9 Points</td>
<td>Option A: 9 Points</td>
<td>9 Points</td>
<td>9 Points</td>
<td>8 Points</td>
</tr>
<tr>
<td>Financial Feasibility</td>
<td>Option A: 22 Points</td>
<td>20 Points</td>
<td>20 Points</td>
<td>Option B: 22 Points</td>
<td>20 Points</td>
<td>20 Points</td>
<td>Option A: 22 Points</td>
<td>20 Points</td>
<td>20 Points</td>
<td>15 Points</td>
</tr>
<tr>
<td></td>
<td>Option B has significantly higher investment for improvement benefits.</td>
<td>State and local funding resources required. High benefit for investment.</td>
<td>State and local funding sources required. Moderate to high benefit for investment.</td>
<td>State and local funding resources required. Moderate to high benefit for investment.</td>
<td>State and local funding resources required. Moderate to high benefit for investment.</td>
<td>High benefit for investment.</td>
<td>Significantly high investment for improvement benefits.</td>
<td>Moderate benefit for improvement.</td>
<td>Higher investment required than Alternate 9 (Maumee River crossing).</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Option A: 168 Points</td>
<td>153 Points</td>
<td>143 Points</td>
<td>Option A: 156 Points</td>
<td>177 Points</td>
<td>176 Points</td>
<td>Option A: 164 Points</td>
<td>159 Points</td>
<td>155 Points</td>
<td>176 Points</td>
</tr>
</tbody>
</table>

*Alternate 1 (Cor. 2): I-475/I-75 ("Jeep Split") Interchange Upgrade
*Alternate 2 (Cor. 2): New Sylvania / West Toledo Interchange
*Alternate 3 (Cor. 2): New Douglas Avenue Interchange Ramps
*Alternate 4 (Cor. 1): I-475 US Route 23 Interchange Upgrade
*Alternate 5 (Cor. 1): New Interchange at Bxcorff, Dorr or W 8 Avenue
*Alternate 7 (Cor. 1): I-475/I-75 (Perrysburg) Interchange Upgrade
*Alternate 8 (Cor. 2): I-475 Widening (East of US 23 to Monroe Street)
*Alternate 9 (Cor. 1): I-475 Widening (Monroe Street to I-75 Perrysburg)
*Alternate 10 (Cor. 1): I-475 Widening
Alternate 9 would improve the traffic capacity of I-475/US-23 all along the west side of the Toledo area. This alternate would also facilitate the inclusion of new access points (new interchanges) such as Alternate 6 just mentioned. This alternate would reduce traffic congestion, improve level of service, and improve two high accident locations. Minimal environmental impacts are expected since the widening would be done in the existing road ROW. Alternate 9 would accommodate planned regional growth in Springfield and Sylvania Townships. Alternate 10 would be achieved at higher costs and potentially significant environmental impacts at a new Maumee River crossing.

Alternate 7, Option A scored slightly higher than Option B due to the greater regional growth and economic development benefits this option would experience. Both options would have some environmental impacts: Option A would have wetland impacts, two displacements, and farmland conversion and Option B could impact existing businesses at the existing I-475/State 25 interchange. Option A is more compatible with the existing system since Option B reconfigures an existing diamond interchange. For Alternate 5, Option B, Dorr Street, scored higher than Options A or C mainly because Option B is more compatible with the existing system, provides better access to Springfield and Sylvania townships, provides improved access to Toledo University, and has fewer potential community and environmental impacts.

The Expressway Improvement Alternative that received the highest score in the second MIS corridor is Alternate 1, Option A (I-475/I-75 Interchange Upgrade - "Jeep Split") (See Table 5). Alternate 1, Option A received a higher score than Option B. The next highest scores in the second MIS corridor resulting from the evaluation process were Alternate 3 (new Douglas Avenue Interchange Ramps) and Alternate 8 (I-475 Widening (US-23 to Monroe Street)).

Alternate 1, Option A has high potential to improve all existing design deficiencies in the I-475/I-75 ("Jeep Split") interchange. Alternate 1 would also improve traffic capacity, level of service and eliminate the weaving movement from I-475 eastbound to I-75 northbound. Alternate 1 would also improve two high accident locations. These proposed investments would be made with some environmental impacts to wetlands, water quality, and Ottawa River floodplains in addition to potential impacts to park land. However, Alternate 1,Option B would result in much higher costs for the benefits received and significantly higher displacements, community and environmental impacts for all types of resources. As a result, Option A scored higher than Option B for these evaluation criteria.

Alternate 3 would eliminate the current design deficiencies at the existing Douglas Avenue interchange, improve traffic capacity, and improve one high accident location. Alternate 3 also provides improved access to Toledo Hospital and established commercial centers. This alternate would experience some increase in traffic noise, and require new ROW and residential displacements.

Alternate 8 has high potential to fix the design deficiencies at the existing interchanges along the I-475 mainline and would have the highest potential to improve several high accident locations. This alternate, however, would have significant community and environmental impacts because substantial new ROW would be needed. Alternate 2 would provide a new access point to regional growth areas, reduce localized traffic congestion at Corey Road and Central Avenue, and has the potential to improve one high accident location. However, there are potential impacts to wetlands, the Ottawa River floodplains, and park and recreation lands. See Table 2 for specific scoring and notes regarding the comparison of the alternatives and options considered.
6.5 OTHER EVALUATION CONSIDERATIONS

Public Involvement: Public comments on the TDM, TSM, Transit, and Expressway Improvement Alternatives were received at three public meetings that were held in late September 2000. The public meetings were held in the neighborhoods that may be affected or would benefit by the proposed transportation improvements: North Toledo, Springfield Township and Sylvania Township. Written comment sheets were completed by some of the residents who attended the meetings. Input from the first meeting in North Toledo indicated preferences for Alternate 1 ("Jeep Split"), Alternate 3 (Douglas Avenue ramps), and Alternate 2 (new Sylvania Interchange). Input from the second meeting in Springfield Township indicated preferences for Alternate 5 (new Interchange at Bancroft, Dorr, or Hill), Alternate 3, and Alternate 6 (new US 20A/Salisbury Rd./Dussel Drive). Input from the third public meeting in Sylvania Township indicated preferences for Alternate 2, Alternate 5 and Alternate 4 (I-475/US-23 Interchange Upgrade). Although these preferences were one of many considerations, the draft evaluation results, which include the scoring and ranking of alternatives, is based upon the evaluation criteria and framework presented in this MIS report.

State and Local Planning: Another important consideration during the evaluation of expressway improvement alternatives is on-going state and local planning efforts. The Ohio Department of Transportation is currently studying the entire I-75 corridor from the Michigan state line to the Kentucky state line. This study includes the portion of I-75 through the Toledo metropolitan area which is also part of the two MIS corridors (I-75 from I-280 to the "Jeep Split" and I-75 at I-475 in Perrysburg. Findings from this study once completed may support or refine the Expressway Improvement Alternatives being recommended in this MIS. For example, more detailed information from ODOT's study may support the need for a new interchange on I-75 south of the I-475/I-75 Interchange in Perrysburg (Alternate 7, Option A), or may recommend a refinement of improvements being recommended in Alternate 7, Option B. Local planning in Sylvania Township, for example, is another consideration. Providing new access to Sylvania has been a focus of local planning efforts for many years. Even though Alternate 2 scored lower in the alternatives' evaluation, the local interest in realizing some type of improvement to solve this access problem has been considered. Local design studies have been completed for the new Sylvania Interchange and for the new US-20A/Salisbury Road/Dussel Drive Interchange.

Input from MIS Scoping Committee and Transportation Council: During November 2000, the draft recommendations included in this report section was reviewed, discussed and analyzed by the MIS Scoping Committee before Committee approval in late November. In addition, the Transportation Council will had an opportunity to provide their review and comments during their regular November and December meetings. This collaborative process by the region's transportation planners and decision-makers provided valuable input to confirm and refine the draft transportation improvement recommendations into a final Preferred Transportation Improvement Plan.

The Preferred Plan - a Package of Transportation Projects and Actions: Generally, for all Major Investment Studies, the goal at the end of the study is to recommend a Preferred Plan that best meets the transportation needs of the region. This is true for the TMACOG Expressway Needs Study- Phase 2A. It is common in the final MIS recommendations to present a package or set of multi-modal transportation improvements that includes specific major construction projects, transit enhancements, as well as non-major construction elements (such as bike/pedestrian paths, HOV lanes, ITS strategies). This transportation package is also
considered during the alternatives' evaluation process in the context of possible inter-
relationships of the alternatives.

6.6 FINAL EVALUATION RESULTS

The purpose of this report section is to present the final list of expressway transportation improvement projects resulting from the TMACOG Expressway Major Investment Study (MIS). This MIS is the result of the Expressway Needs Study – Phase 2A. The improvements are presented for each of two MIS corridors in priority order. They are the result of extensive discussions, review and evaluation by the MIS Scoping Committee (a.k.a. Planning Committee), the Transportation Council and by study consultants (Parsons Transportation) and staff over the past eleven months. Moreover, the list of transportation improvement projects address existing geometric deficiencies, low levels of service (LOS), high accident locations, and the need to provide better access to planned economic growth and development as noted throughout this report. In addition to the evaluation of the individual transportation improvements, a project strategy incorporating the individual improvements into discrete project packages listed in priority order is presented for each MIS Corridor.

**Ranking Results**: The MIS Scoping Committee held two meetings in November 2000 (November 7th and 21st) to actively discuss and evaluate the draft improvement recommendations presented at the Transportation Summit in October 2000 and the Transportation Council on November 1. The Scoping Committee then established a priority ranking for the improvement alternatives in each MIS Corridor based upon evaluation criteria scoring. These rankings were reviewed by the Transportation Council in December 2000 and approved in January 2001. As a result of the evaluation process, the Committees ranked the transportation improvements in the order presented in Table 6 on the following page.

As shown in Table 6, several of the individual rating results were revised from the draft recommendations during the review process completed by the Committees based on changes to scores. In the final evaluation results for the first MIS Corridor, Alternate 9 ranked slightly higher than Alternates 4, 6 and 10. This was a change from the draft results that showed Alternate 4 ranked highest. For the second MIS Corridor, even though the scoring for the final evaluation results had changed slightly, the ranking did not change from the draft recommendations that were presented in October 2000. Alternate 1, Option A ranked the highest in this corridor.
TABLE 6
RATING OF PROPOSED TRANSPORTATION IMPROVEMENTS
TMACOG Expressway MIS

<table>
<thead>
<tr>
<th>Expressway Improvement Alternative</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRST MIS CORRIDOR - I-475 and US 23 from the I-75/I-475</strong></td>
<td></td>
</tr>
<tr>
<td>System Interchange (in Perrysburg) to the Michigan state line</td>
<td></td>
</tr>
<tr>
<td>Alternate 9: I-475/US 23 Widening from Alexis Road to Dussel Drive (including the improvement of</td>
<td>179 points</td>
</tr>
<tr>
<td>I-475/US 23 System interchange – Alternate #4)</td>
<td></td>
</tr>
<tr>
<td>Alternate 4: I-475/US-23 System Interchange Upgrade (with only the mainline widening necessitated</td>
<td>177 points</td>
</tr>
<tr>
<td>by this improvement)</td>
<td></td>
</tr>
<tr>
<td>Alternate 6: New I-475 Interchange at US-20A/Salisbury Rd./Dussel Drive (with only the mainline</td>
<td>176 points</td>
</tr>
<tr>
<td>widening necessitated by this improvement)</td>
<td></td>
</tr>
<tr>
<td>Alternate 10: I-475/US 23 Widening from Alexis Road to I-75 (Perrysburg) (including the</td>
<td>176 points</td>
</tr>
<tr>
<td>improvement of the I-475/US 23 system interchange - #4 and the I-475 widening from Alexis Road to</td>
<td></td>
</tr>
<tr>
<td>Dussel Drive - #9)</td>
<td></td>
</tr>
<tr>
<td>Alternate 7, Option A: I-475/I-75 System Interchange (Perrysburg) Upgrade (including the</td>
<td>164 points</td>
</tr>
<tr>
<td>channelization and elimination of multilane weaves and adding Five Point Road interchange</td>
<td></td>
</tr>
<tr>
<td>to accommodate these moves to SR 25)</td>
<td></td>
</tr>
<tr>
<td>Alternate 5, Option B: New Dorr Street Interchange</td>
<td>151 points</td>
</tr>
<tr>
<td><strong>SECOND MIS CORRIDOR - I-475 and I-75 from I-475/US-23</strong></td>
<td></td>
</tr>
<tr>
<td>System Interchange to I-75/I-280 System Interchange</td>
<td></td>
</tr>
<tr>
<td>Alternate 1, Option A: I-475/I-75 (“Jeep Split”) System Interchange Upgrade (adding lanes on one</td>
<td>168 points</td>
</tr>
<tr>
<td>lane ramps, eliminating several left on/off ramps with only the mainline widening necessitated</td>
<td></td>
</tr>
<tr>
<td>by this improvement)</td>
<td></td>
</tr>
<tr>
<td>Alternate 3: New Douglas Road Interchange Ramps (for west “side”</td>
<td>156 points</td>
</tr>
<tr>
<td>of interchange including collector/distributor to Monroe Street)</td>
<td></td>
</tr>
<tr>
<td>Alternate 8: I-475 Widening from US-23 to Monroe Street</td>
<td>155 points</td>
</tr>
<tr>
<td>Alternate 2: New Sylvania/West Toledo Interchange</td>
<td>143 points</td>
</tr>
<tr>
<td><strong>FOR BOTH MIS CORRIDORS</strong></td>
<td></td>
</tr>
<tr>
<td>Continue Share-A-Ride and Guaranteed-Ride-Home programs and Van Pool services;</td>
<td></td>
</tr>
<tr>
<td>Maintain TARTA Park &amp; Ride facilities;</td>
<td></td>
</tr>
<tr>
<td>Implement proposed Bike Path Projects in respective MIS corridor;</td>
<td></td>
</tr>
<tr>
<td>Implement ITS and Incident Management programs on I-75 and I-475 in phases as recommended in the</td>
<td></td>
</tr>
<tr>
<td>ITS Deployment Study and 2025 RTP–Update 2000;</td>
<td></td>
</tr>
<tr>
<td>Maintain TARTA Bus Service;</td>
<td></td>
</tr>
<tr>
<td>Expand TARTA Bus Service in eastern and western Lucas County and northern Wood County.</td>
<td></td>
</tr>
</tbody>
</table>
6.7 FINAL RECOMMENDATIONS AND IMPLEMENTATION STRATEGY

As a final step in the evaluation process, the Committee then discussed the results in each of the two MIS corridors and then defined projects to implement the rated improvements. These specific projects were then also listed in order. These project recommendations consider the ranking of improvements (presented in Section 6.6) as well as logical construction sequencing and available development work. TMACOG recommends the implementation of these projects as shown in Table 7. Figure 16 presents this recommendation graphically.

For the first MIS Corridor, Alternates 9, 4, 6, and 10 ranked very high and each alternate scored within 3 points of each other alternate. In addition, Alternate 10 contains the proposed improvements called for in Alternate 9 and Alternate 4. Therefore, it was decided to capitalize on existing work and advance a project to complete the first phase of Alternate 6, the new I-475 Interchange at US-20A/Salisbury Rd./Dussel Drive (#1). The next project listed includes widening part of I-475 from Airport Highway to US 24 (#2). Then completion of alternate 6 (US 20A interchange) is listed (#3). Following this a large project is necessitated because of the interrelationship of the recommended improvements and their impact on each other and the mainline of I-475 and the logical sequencing of construction that is apparent. This large “Western I-475” project (#4) is an upgrade to the I-475/US-23 System Interchange (including the Central Avenue interchange) and widening of I-475 from Alexis to Airport Highway including the addition of a Dorr Street interchange. Following this is a project to widen I-475 from US 24 to I-75 in Perrysburg (#5) and then a project to upgrade the I-475/I-75 System Interchange in Perrysburg (including the channelization and elimination of multilane weaves and adding Five Point Road interchange to accommodate these moves to SR 25) (#6) (See Table 7 and Figure 16).

For the second MIS corridor, Alternate 1, Option A (I-475/I-75 ("Jeep Split-North Cove") Interchange Upgrade) ranked twelve points higher than the other projects. This is listed as the first project in this corridor (#1). In addition, since Alternate 3 and Alternate 8 scored within 1 point of each other and Alternate 3 may require some widening as part of the project the next project listed is I-475 widening from US-23 to Monroe Street (#2). Following that is a Douglas Avenue Interchange project (#3), Sylvania Avenue Interchange project (#4), and the widening of I-75 from the systems interchange (North Cove) to I-280 (See Table 7 and Figure 16).

Other non-highway construction recommended transportation improvements for the two MIS Corridors that resulted from the major investment study process are also listed for implementation. Table 8 presents the preliminary cost estimates of the proposed recommended transportation improvements for the Expressway Needs Study MIS.
TABLE 7
FINAL PROJECT STRATEGY
TMACOG Expressway MIS

FIRST MIS CORRIDOR
(I-475 and US 23 from the I-75/I-475 System Interchange (in Perrysburg) to the Michigan state line)

1. Complete Phase 1 of the US-20A/Salisbury Road/Dussel Drive interchange*
2. Widen I-475 from Airport Highway to US-24
3. Complete Phase 2 of the new US-20A/Salisbury Road/Dussel Drive interchange*
4. Complete the I-475/US-23 System Interchange and Central Avenue Interchange Upgrade including I-475 widening from Alexis Road to Airport Highway and Dorr Street Interchange.
5. Widen I-475 from US-24 to I-75 in Perrysburg
6. Complete the I-475/US-23 System Interchange Upgrade in Perrysburg Including Channelizing the Multi-lane Merges and a New Interchange at Five Point Road

SECOND MIS CORRIDOR
(I-475 and I-75 from I-475/US-23 System Interchange to I-75/I-280 System Interchange)

1. Complete the I-475/I-75 ("Jeep Split") System Interchange Upgrade and only mainline widening necessitated by this project.
2. Widen I-475 from US-23 to Monroe Street (east of Secor).
3. Douglas Road Interchange Ramps (for west “side” of interchange including collector/distributor street to Monroe Street) New Sylvania/West Toledo Interchange (west of Talmadge Road)
4. Widen I-75 from Systems Interchange (North Cove) to I-280

FOR BOTH MIS CORRIDORS

Continue Share-A-Ride and Guaranteed-Ride-Home programs and Van Pool services;
Maintain TARTA Park & Ride facilities;
Implement proposed Bike Path Projects in respective MIS corridor;
Implement ITS and Incident Management programs on I-75 and I-475 in phases as recommended in the ITS Deployment Study and 2025 RTP–Update 2000;
Maintain TARTA Bus Service;
Expand TARTA Bus Service in eastern and western Lucas County and northern Wood County.

*Asterisk denotes that specific project development activities are being undertaken by a local sponsor.
Figure 16
MIS Project Strategy
**TABLE 8**
FINAL DRAFT - PROJECT STRATEGY COST ESTIMATES
TMACOG Expressway Needs Study – Phase 2A
(Year 2000 $s)

**FIRST MIS CORRIDOR**
(I-475 and US 23 from the I-75/I-475 System Interchange (in Perrysburg) to the Michigan state line)

<table>
<thead>
<tr>
<th>Project</th>
<th>Potential Sponsor</th>
<th>Cost ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Complete Phase 1 of the US-20A/ Salisbury Road/Dussel Drive interchange* ODOT 25 RTP Project H16</td>
<td>Lucas Co./ ODOT</td>
<td>$24</td>
</tr>
<tr>
<td>2. Widen I-475 to six lanes (Airport Highway to US-24) 025 RTP Project H14</td>
<td>ODOT</td>
<td>$44</td>
</tr>
<tr>
<td>3. Complete Phase 2 of the new US-20A/ Salisbury Road/Dussel Drive interchange* 2025 RTP Project H16</td>
<td>Lucas Co./ ODOT</td>
<td>$37</td>
</tr>
<tr>
<td>4. Complete the I-475/US-23 System Interchange Upgrade includes I-475 widening from Alexis Rd. to Airport Highway Central Ave. Interchange upgrade, and new Dorr Street Interchange (2025 RTP Project H14)</td>
<td>ODOT</td>
<td>$143</td>
</tr>
<tr>
<td>5. Widen I-475 to six lanes from US-24 to I-75 (Perrysburg) (2025 RTP Project H38)</td>
<td>ODOT</td>
<td>$88</td>
</tr>
<tr>
<td>6. Complete the I-475/US-23 System Interchange Upgrade in Perrysburg including Channelizing the Multi-lane Merges and a New Interchange at Five Point Road</td>
<td></td>
<td>$45.5</td>
</tr>
</tbody>
</table>

**SECOND MIS CORRIDOR**
(I-475 and I-75 from I-475/US-23 System Interchange to I-75/I-280 System Interchange)

<table>
<thead>
<tr>
<th>Project</th>
<th>Sponsor</th>
<th>Cost ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Complete the I-475/I-75 (“Jeep Split”) system Interchange Upgrade (2025 RTP Project H7)</td>
<td>ODOT</td>
<td>$68</td>
</tr>
<tr>
<td>2. Widen I-475 from US-23 to Monroe</td>
<td></td>
<td>$105</td>
</tr>
</tbody>
</table>
Street (east of Secor).

3. Douglas Road Interchange Ramps (for west “side” of interchange including collector/distributor street to Monroe Street) $34.5

4. Complete new Sylvania Interchange $11

*Asterisk denotes that specific project development activities are being undertaken by a local sponsor.