
Summary

The information provided throughout this document allows the consultant to develop certain findings about the next steps in the project.

To establish the basis upon which findings can be articulated, it is necessary to first assess the purpose and need for improvements of any kind in the I-73 study area. Those subjects are covered next.

Purpose and Need

The purpose and need for a project can be viewed from many perspectives. Here, the purpose is to provide an improved transportation link between the Jackson, Michigan and Toledo, Ohio areas to strengthen the National Highway System and the flow of people and goods over that system.

For transportation projects, need is traditionally understood in terms of: 1) system linkage; 2) transportation demand and available capacity; 3) federal, state, and/or local authority that drives a project; 4) social demands and/or economic development; and, 5) safety and roadway deficiencies. Environmental issues are also a key factor.

The U.S. Congress found in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) that the construction of the Interstate Highway System had greatly enhanced economic growth in the United States, but that many regions of the U.S. were not adequately served by interstate or comparable highways. Congress also found that the development of transportation corridors is the most efficient and effective way of integrating regions by improving efficiency and safety of travel and further promoting commerce and economic development. With these findings, Congress designated certain highway corridors as having national significance. It was the purpose of Congress in ISTEA to include these corridors on the National Highway System, to prepare long-range plans and feasibility studies for them, to allow the states to give priority to funding the construction of these corridors, and to provide increased funding for segments of these corridors identified for construction. The U.S. Congress was responding to both national and regional needs in defining what has been labeled the I-73/I-74 Corridor in ISTEA. That corridor includes a connection between the Jackson and Toledo areas (refer to Figure 1-3).

The Michigan Department of Transportation (MDOT) has long supported the need for a central Michigan freeway passing through Jackson. A "Location Study Report for US 127" dated May 1970 identified freeway construction from south of Jackson to a new east-west freeway resulting from the reconstruction of U.S.

223. Right-of-way was acquired south of Jackson to U.S. 12 for a widened road (200' of right-of-way exists). That proposed road was part of the long-range network of high performance facilities envisioned in that era. But, years of limited financial resources for roadway development and redirection of the state's transportation priorities from constructing new roads to maintaining existing ones meant that such a road leading from Jackson to Toledo was not developed.

In 1989 renewed support for improvements surfaced when over 14,000 signatures were collected on petitions submitted to Michigan State Representative Philip Hoffman. These petitions reflected concern about traffic safety on U.S. 127 between M-50 and U.S. 223. Three long-term options were noted for improvements south to U.S. 223: a freeway; a four-lane, divided highway; and, a five-lane roadway. Then, in the fall of 1995 a number of governmental units endorsed construction of I-73/I-74 to connect Michigan to South Carolina.¹

The *Michigan Long-Range Plan*, completed in 1994, documented a need in southeast Michigan for an improved corridor. The *Plan* indicates, "it is evident from the 2015 congestion projections under the do-nothing scenario that the greatest traffic pressure is south on US-127 and then southeast on US-223 through Adrian to US-23."²

A survey of Lenawee County citizens conducted in 1999 by the Lenawee County Planning Commission found that 48 percent of those surveyed support an interstate highway in Lenawee County and 62 percent support US-223 as a four-lane highway in Lenawee County.³

The earlier documentation of need noted above is supported by more recent analysis cited below.

System Linkage

A number of routes now connect the Jackson and Toledo areas. A freeway connection exists via I-94 and U.S. 23. A "diagonal" connection exists via linkage of U.S. 127 and U.S. 223 or M-50. The increasing traffic over the "diagonal" connector is evident by the extent to which traffic volumes decline on U.S. 127 past the junction with U.S. 223. The U.S. 223 routing, serving Adrian and Blissfield, offers a competitive travel time to the I-94/U.S. 23 connection between the Jackson and Toledo areas and the distance is shorter. (Travel runs between U.S. 127 at I-94, and U.S. 223 at U.S. 23, found a one-way trip over I-94 and U.S. 23 takes approximately one hour and a trip over U.S. 127 and U.S. 223 takes an extra two minutes, on average.) Because commercial truck operations are concerned with both travel time and distance, the US 223 route is attractive for many truck trips.

¹ Adrian City Commission, Adrian Township Board of Trustees, Village of Britton Council, Cambridge Township Board of Trustees, Village of Cement City Council, Deerfield City Council, Hudson City Council, Tecumseh City Council, Lenawee County Board of Commissioners.

² Pg. 15, *Michigan Sub-State Area Long Range Plans, Final Report Summary* (The Corradino Group, December 1994).

³ Survey mailed to 5,000 households in Lenawee County by the Lenawee County Planning Commission in July 1999, with a 13.3 percent return rate.

The National Highway System linkage over U.S. 127 and U.S. 223 as it now exists is not considered as providing quality roadway service. U.S. 127 does not directly connect to the Ohio Turnpike (I-80/90). The proposed project would address the inadequate linkage in the National Highway System in this region.

Transportation Demand and Capacity

Future travel demand has been simulated using MDOT's statewide travel model. The computer model is based on projections of data, such as population, income, and employment⁴, to forecast how much people will drive and where they want to go in the year 2020. A series of simulations of various alternative routings finds that travel demand in 2020 will result in a poor level of travel service on a number of the two-lane roads serving the area (Figure S-1 shows No Build conditions). U.S. 127 south of Jackson, M-50 east of U.S. 127, and much of the length of U.S. 223, between U.S. 127 and U.S. 23, are expected to experience travel demand requiring more than a two-lane facility.

In particular, year 2020 traffic volumes under No-Build conditions along U.S. 223 east and west of Adrian are projected to be 17,000 vehicles per day or more. Two-lane roads in urban settings can carry such volumes, where travel demand is spread evenly throughout the day and night and where vehicles are not pressing to pass. However, in rural areas, where longer distance travel prevails, autos want to pass trucks. As traffic volumes increase, fewer and fewer sufficient gaps are presented for safe passing. The result is lower roadway capacity as traffic flow is controlled by the slowest moving vehicles. Under these conditions four-lane roads of some type are preferred.

When No-Build conditions are compared to a build alternative that provides a proposed high-type roadway (i.e., boulevard or freeway), simulations show that travelers divert from other, less attractive travel paths to the new proposed road. The greater the increase in projected traffic over No-Build conditions, the more effectively the new link satisfies future travel demand. U.S. 223 in the Adrian area would be the most heavily used mid-corridor segment of the new route, according to these simulations of future travel. It is projected to carry 25,000 to 30,000 vehicles daily, an increase of 40 to 75 percent over what would be carried in 2020 if existing roads were not improved (Figure S-2). This means an improved highway through this area would provide better transportation service than the existing roadway network. And, in doing so, it would control traffic growth on a number of two-lane roads, leaving mostly local traffic and preserving the function of those facilities.

Federal, State, and/or Local Governmental Mandate

The federal legislative mandate for the project has been noted in the introduction to this section. Funding has been provided through the Transportation Equity Act for the 21st Century (TEA21) for a feasibility study and preparation of, if needed subsequently, an environmental impact statement. If the environmental work were undertaken, it would likely extend another two to three years beyond the conclusion of the feasibility study. Funding has not been authorized by Congress for work beyond the environmental phase.

⁴ More specifically, for trip productions, the model uses number of households, household income, persons per household, and urban or rural zone location. For trip attractions it uses employment data by type.

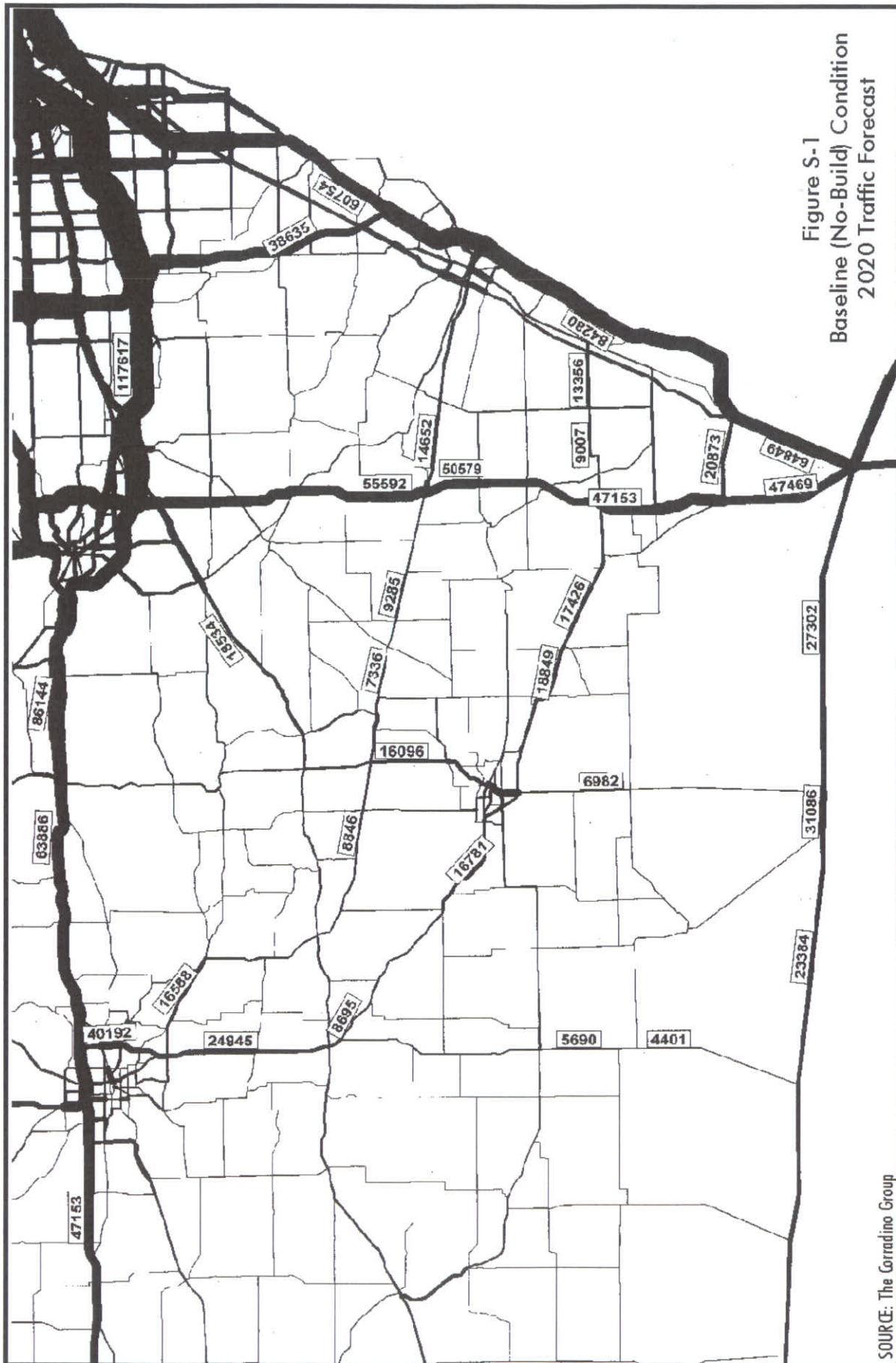
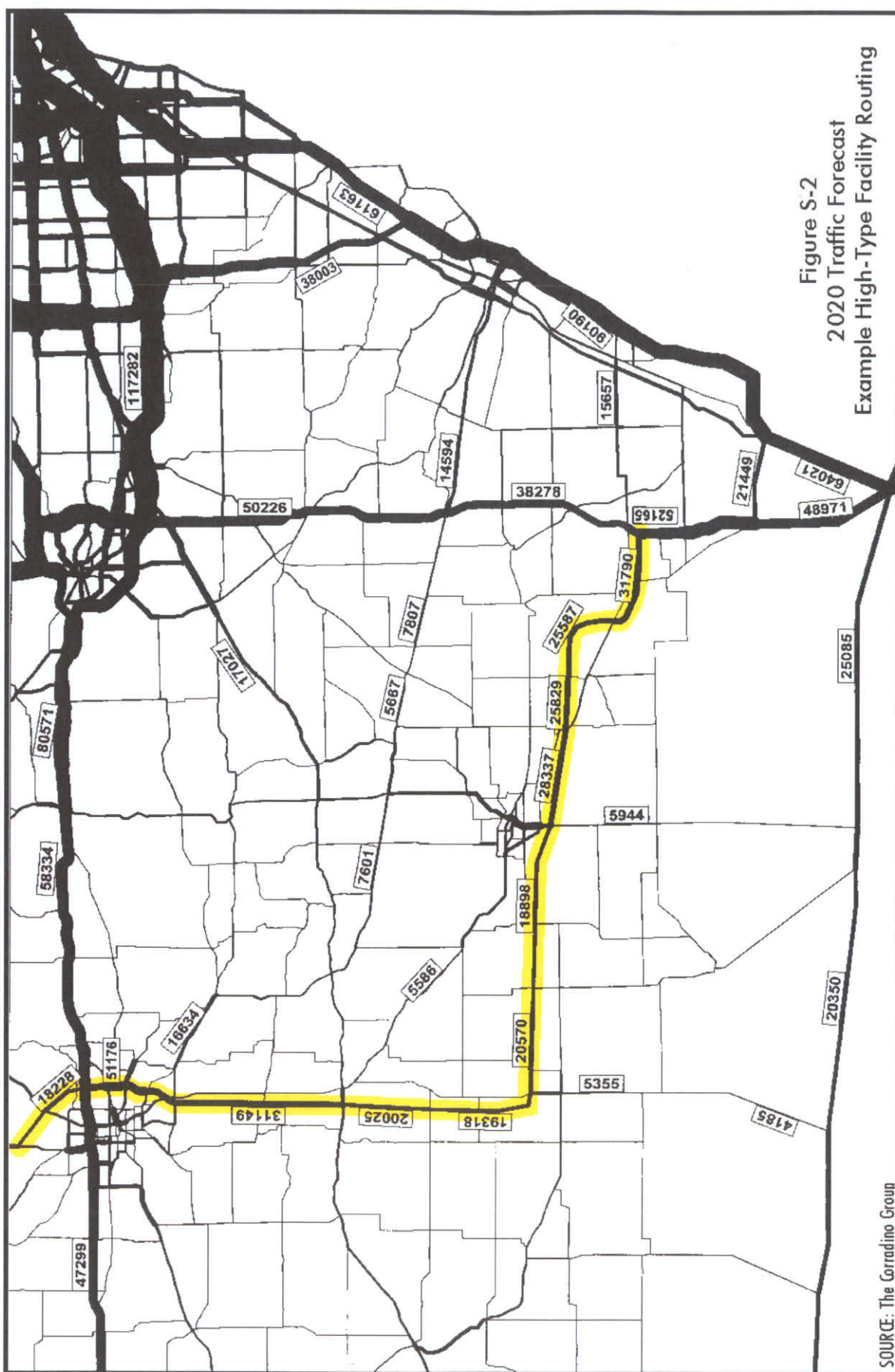


Figure S-1
Baseline (No-Build) Condition
2020 Traffic Forecast

SOURCE: The Corradino Group

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SOURCE: The Corradino Group

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Social Demands and/or Economic Development

The population of the study area (Hillsdale, Jackson, Lenawee, and Monroe counties) is expected to grow by approximately 11 percent from the year 2000 to 2020. The resultant growth in jobs is projected to almost double the growth in population (21%). And, the growth in vehicle travel (trips per day) is forecast to exceed by 300 percent the growth in population. These factors indicate the need to study ways to improve highway capacity in the region.

Growth in the study area is perhaps best typified by the recent opening of the L&W plant on U.S. 223 just east of Blissfield. This operation serves the Jeep plant in Toledo. It is importing jobs. And, it is likely to import new residents to the study area as well. It is this type development that supports the population, job and traffic forecasts cited above.

Community leaders, especially in Lenawee County, have made known their concerns to MDOT for years that poor access limits development in the area. Accessibility is a primary factor in the decision-making of businesses seeking to expand or relocate. The presence of high quality accessibility is no guarantee that an area will grow, but poor accessibility is a constraint to growth.

Safety and Roadway Deficiencies

Safety is always an important issue and has been an issue in this corridor. Public meetings were held in the fall of 1999 to discuss safety conditions along U.S. 223 between U.S. 127 and Adrian, especially speeding trucks. Both US 223 and M-50 have speed restrictions through towns. Horizontal and vertical curve sections also limit overall travel speed.

Speed Restrictions

From northwest to southeast a traveler beginning at U.S. 127 south of the I-94 freeway section in Jackson, would encounter the following:

- Eight no-passing zones on U.S. 127 between M-50 and U.S. 223.
- Four speed zones in that section of U.S. 127.
- Twenty-four no-passing zones on U.S. 223 between U.S. 127 and the Adrian Bypass.
- A no-passing zone on the Adrian Bypass/U.S. 223.
- A speed zone in Palmyra on U.S. 223.
- Six no-passing zones on U.S. 223 between Adrian and Blissfield.
- Speed zones on U.S. 223 through Blissfield.
- Two no-passing zones on U.S. 223 between Blissfield and U.S. 23.

This means more than 40 no-passing zones are present between Jackson and U.S. 23 besides speed zones in Devils Lake, Adrian, Palmyra and Blissfield.

Accident History

The accident rates on U.S. 127, U.S. 223, and M-50 (expressed as the number of accidents per 100 million vehicle miles of travel) can be compared to county and statewide averages for two-lane rural roads (that are part of Michigan trunk line system) to understand the relative safety of the existing roads (Table S-1). As can be seen, key sections of U.S. 127 (between U.S. 223 and U.S. 12), U.S. 223 (between M-34 and M-52) and M-50 (from M-52 to U.S. 127) have accident histories above the average of the MDOT District and the state as a whole. And, in the context of a new high-type road, i.e., rural freeway or boulevard, the data on Table S-2 show that rural freeways in Michigan have the lowest crash rates, and divided "non-freeways" (like boulevards) are second lowest. Rural two-lane facilities have an accident history close to the MDOT's District Average and five-lane roads (non-boulevard) have the highest accident exposure. To the extent that crash patterns are evident on the above-mentioned roads, MDOT continues to monitor these conditions and make improvements such as turn-lane additions, minor widenings, flareouts at intersections, and the like. **In no case do the data of Table S-1 or Table S-2 indicate an unsafe roadway system.**

Table S-1
Accident Rates in Study Area
(Number of Accidents per 100 million Vehicle Miles Traveled)

Location	1994	1995	1996	1997	1998	5-Year Avg.
Hillsdale Co.	488	458	452	448	NA	462
Jackson Co.	310	318	321	296	NA	311
Lenawee Co.	447	442	402	391	NA	420
Monroe Co.	183	196	192	182	NA	188
MDOT Dist. Avg.	332	367	330	278	NA	319
Statewide Average	307	330	323	307	NA	317
<u>US 127</u>						
- M-50 to US 12	230	254	310	260	184	248
- US 12 to US 223	544	311	233	311	272	334
- US 223 to M-34	220	267	212	215	170	217
- M-34 to State line	169	202	142	182	135	166
<u>US 223</u>						
- US 127 to M-34	232	272	248	190	124	213
- M-34 to M-52	464	624	384	544	384	480
- M-52 to US 23	164	158	180	157	126	157
<u>M-50</u>						
- US 127 to US 12	388	347	364	380	295	355
- US 12 TO M-52	407	330	414	465	397	403

Note that the vehicle mile of travel basis was 1998 for all years presented.

Source: MDOT

Table S-2 Michigan Crash Rates by Roadway Class	
Roadway Type	Crashes Per 100 Million Miles
Rural Freeways	134
Rural Divided Non-Freeways	272
Rural Two-lane	311
Five-Lane Roadways	717*
Source: Transportation Research Board, Paper Number 97, 1997	
* Five-Lane Roadway data is from Traffic and Safety Division of MDOT	

Public Involvement

The public was invited to participate in this process. At the writing of this report, thousands of comments have been received. And almost 5,000 attendees have participated in the six rounds of public meetings. Throughout the study, the community has been asked for their input on factors that are most important in examining transportation improvements for the area. That input reflects that displacing people, absorbing farmland, and impacting wetlands were of utmost concern. These data were used in the evaluation of alternatives.

It is also important to note that public input received includes resolutions from a number of groups:

- Bedford Township Board
- Erie Township Board
- La Salle Township Board
- Whiteford Township Board
- Monroe County Board of Commissioners
- Grand River Environmental Action Team
- Northwest (Jackson) School District
- Citizens (14) from Jackson, Michigan
- Michigan Audubon Society
- Rome Grange Executive Committee
- Madison Township Board
- Riga Township Board

The first four groups largely focus their interest on County Road 151 in Monroe County. They are opposed to it as a high-type roadway facility. On the other hand, the Monroe County Board of Commissioners, while citing the same link, resolved that it opposes designation "... in the I-73 Study of any path through or across any portion of the County of Monroe for the construction of a new interstate highway." The next three groups mostly concentrate on connections of U.S. 127 South to U.S. 127 North using property that is in a mostly natural state with much of it owned by the Michigan Department of Corrections. They are opposed to this connection and stress using I-94/U.S. 127 instead. The Michigan Audubon Society calls for the improvement and maintenance of existing surface transportation corridors and opposes new highways that will jeopardize and destroy wetlands and open land areas crucial to the sustainability of southern Michigan's wildlife and resources. Finally, the Rome Grange is against the use of the M-34/Beecher Road corridor because of the absorption of farmland expected with the proposed project.

It is worthy to note two groups organized to stop the development of a high-type roadway in the study area. CAUSE (Citizens Against Urban Sprawl Expressway/www.stopi73.com) is mainly focused on Segment A3a in Monroe County. SPRAWL (Society to Protect Rural Area, Wetland and Lakes/www.i73.org) is opposed to any high-type facility in Lenawee County. Both groups have stimulated hundreds of communications to support their position.

Finally, it is noted that public bodies like the Hudson City Council, Tecumseh City Council, and the Lenawee County Board of Commissioners declined when asked by SPRAWL to pass a resolution opposing the high-type road associated with the project. These bodies favored waiting for the completion of this feasibility study.

Findings

The information in this report leads the consultant to believe there are three basic routes by which to connect Jackson to Toledo by a high-type facility (i.e., rural freeway or boulevard) (Figure S-3):

- Route 1: Segments A16, B12, B16, B19a, B19b, C1, C2, C3 or C3a.
- Route 2: Segments A2a, A9, A10b, A11, A11a, B8, B9, B10a, B10b, B11, B12, B16, B19a, B19b, C1, C2, C3 or C3a.
- Route 3: Segments A2a, A9, A10b, B22a, B10b, B11, B12, B16, B19a, B19b, C1, C2, C3 or C3a.

If nothing were done in the study area, traffic in the year 2020 on U.S. 127 from I-94 to U.S. 12/U.S. 223 and on U.S. 223 from Rome Center to U.S. 23 and on M-50 from U.S. 127 to Napoleon is enough to require four thru lanes, with a fifth lane for turning vehicles (Figure S-4). And the impacts of widening these roads are similar to Routes 1, 2 and 3 in all areas except displacements, farmland impacts and effects on wetlands. For farmland and wetland impacts, the absolute potential takings (i.e., numbers of acres) and takings per mile are much more extensive for the build-new options. On the other hand, displacements associated with improving existing roads are greater than those for Route 1 (136 displacements versus 117) and are comparable on a per mile basis among all options. And, it should be noted that if Route 1 were built, widening would still be needed of M-50, from U.S. 127 to Napoleon, and U.S. 223, from Rome Road to U.S. 23. Almost all impacts of improving existing facilities are associated with these two sections of road.

So, these data lead the consultant to conclude there is a need to improve the roads in the study area. And, while the three routes considered for a new high-type facility, prior to refinements, are more extensive than widening major roads, they are considered by the consultant to be manageable. Further, while the economic consequences of any improvement are yet to be determined, the option to improve 41 miles of existing roads like U.S. 127, M-50 and U.S. 223 will be associated with traffic impacts during construction that will be worse than building the new routes. Such construction will be much more extensive in time (several construction seasons versus one) and scope (dozens of miles versus a few) than the current disruption associated with widening U.S. 223 from Palmyra to Blissfield. Businesses are particularly susceptible to the disruptive effect of roadway construction.

Therefore, three courses of action are available to MDOT:

1. Do nothing.
2. Proceed with the environmental analysis limiting the scope to the do-nothing option and widening existing roads shown on Figure S-4.

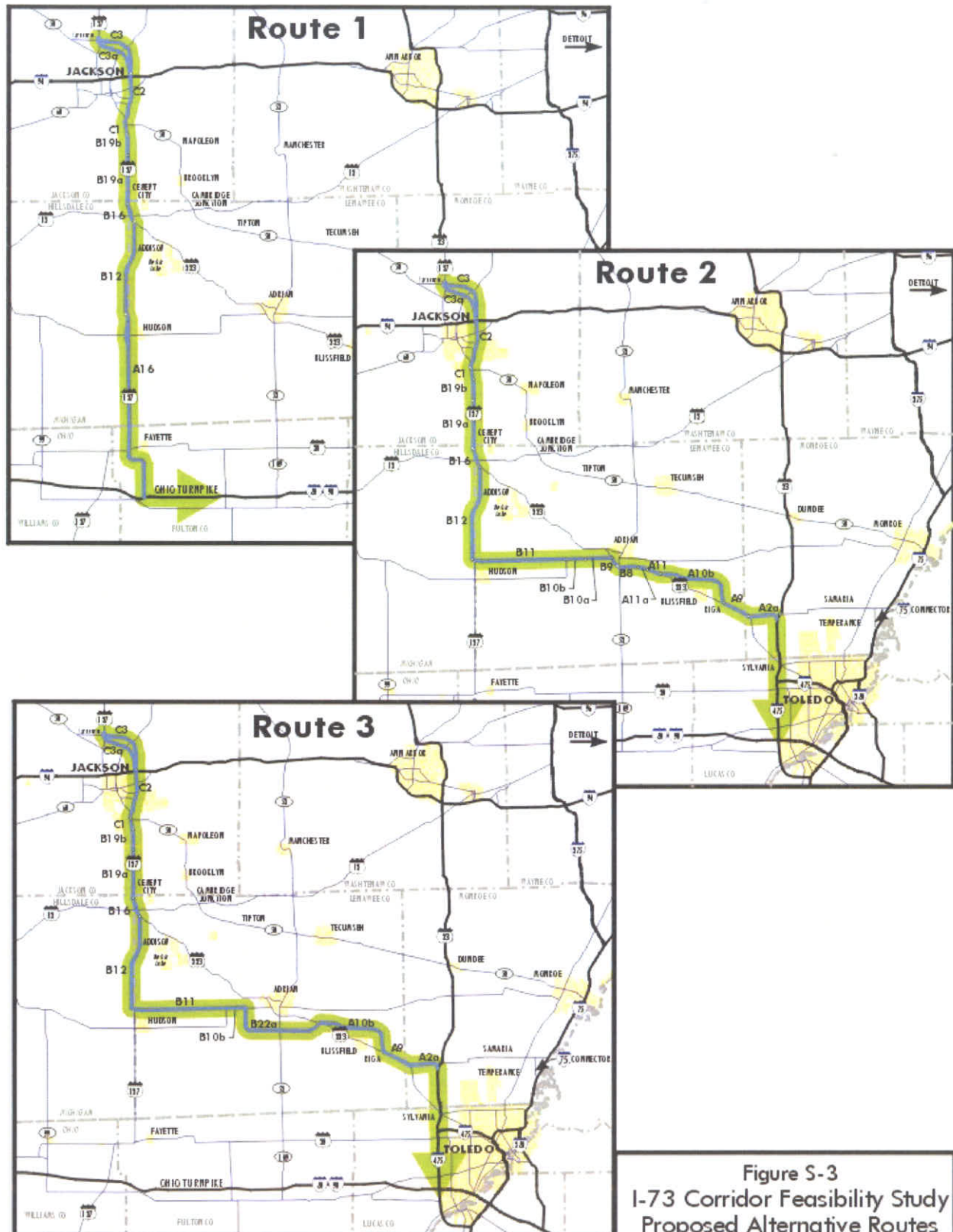
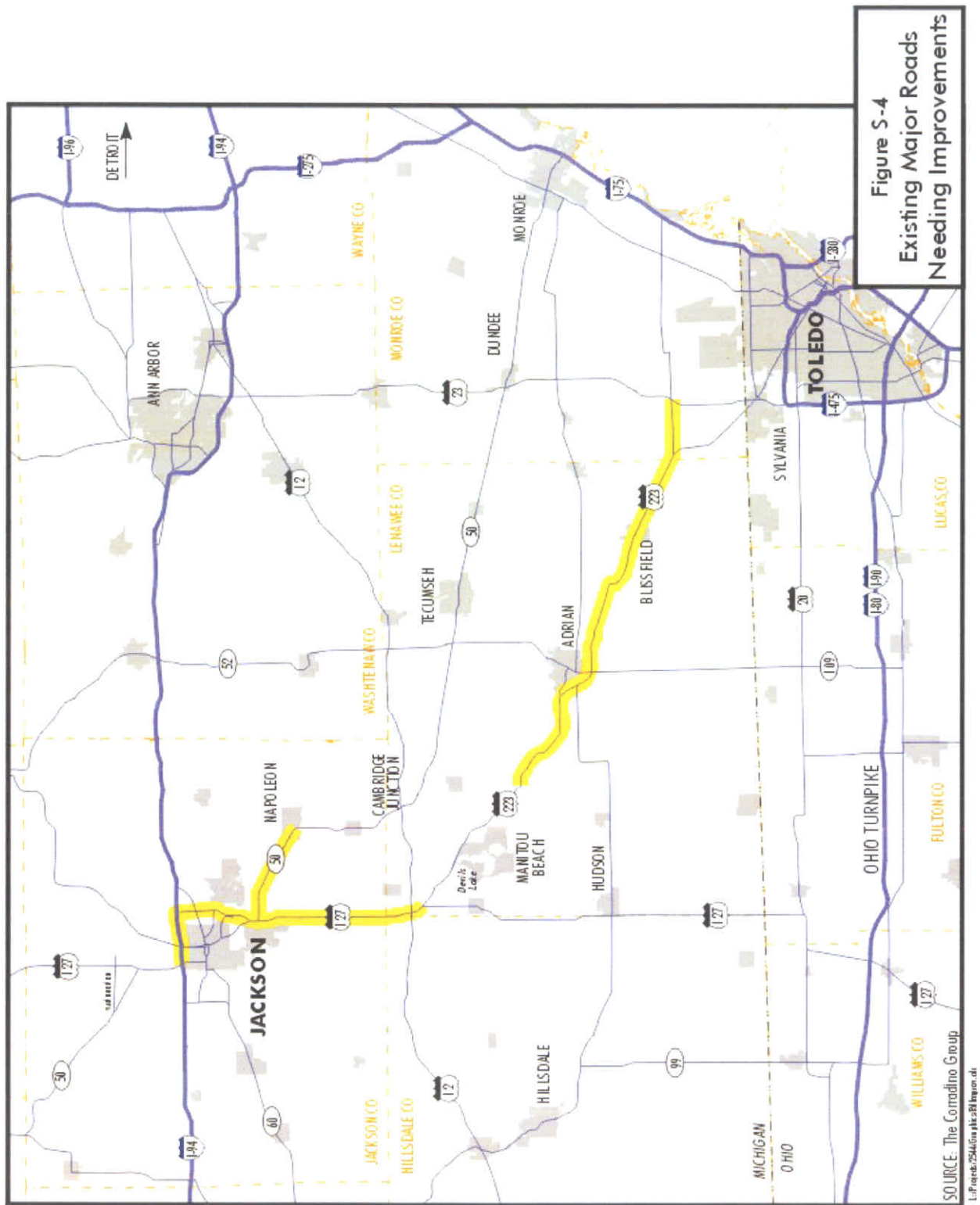


Figure S-3
I-73 Corridor Feasibility Study
Proposed Alternative Routes
as of May 22, 2000

SOURCE: The Corradino Group
I: Project 0544 Graphics 4-3.d



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3. Proceed with the environmental analysis to include the do-nothing option, widening existing roads plus new high-type roads defined by Routes 1, 2 and 3 shown on Figure S-3.

The consultant believes Step 3 should be taken. By doing so, the options of doing nothing or only widening existing roads will be preserved. It is now up to MDOT, with public input provided at the last round of meetings of this feasibility study, to determine the course to be followed.