

Square Lake interchange, the lane addition will have to transition from inside to outside (northbound) (outside to inside southbound). Northbound I-75 was widened through the Square Lake area in 2001 as a separate project to provide more immediate congestion relief in that area. The proposed project would add yet another lane, northbound, through the interchange. North of Square Lake Road to beyond M-59 already has four through lanes and auxiliary lanes⁹ are planned with the M-59 interchange project. This I-75 add-a-lane project would coordinate to match the M-59 project.

The bridges in the south part of the corridor would be reconstructed because they pass over a roadway pavement that is being widened. North of Gardenia Avenue, I-75 passes over crossroads, therefore the bridges can be left intact, but widened. There would be a significant cost savings to preserving these bridges, wherever possible.

Five pedestrian overpasses exist in the depressed section. These would have to be replaced if I-75 is widened (see discussion in Section 4.2.3).

3.5.2 Interchange Reconstruction

To improve the performance of I-75, changes are proposed at several interchanges. Improvements at the north project limit, the M-59 interchange are in the design stage and are not part of the proposed federal action covered in this EIS. Design is near completion for construction/reconstruction of a complex interchange at Long Lake and Crooks Roads. That project is likewise independent, with separate environmental clearance. The design of both projects will be integrated with that of this I-75 EIS.

The proposed improvement includes modifications to the following interchanges:

- ✍ I-696
- ✍ 12 Mile Road
- ✍ 14 Mile Road

The general characteristics of each interchange are discussed below.

3.5.3 I-696 Interchange

The I-696 interchange with I-75 will be left largely intact. The eastbound I-696 to northbound I-75 ramp which is now a single lane, will flare to two lanes midway through the interchange. The widening would occur once the ramp is clear of constraining bridge piers that support upper levels of this complex interchange. The widening is designed to reduce backups that regularly occur as vehicles merge with northbound I-75 traffic. The ramp widening requires an additional taper north of the interchange to allow the second lane to merge and then, the lane to drop. The additional ramp lane will cause the end of the merge area to be moved north from its present position. Alternatively, the right-most lane in the new northbound I-75 configuration could become an auxiliary lane, which will end as the off-ramp to 11 Mile Road. The lane addition on the eastbound to northbound ramp, together with the lane addition on I-75, may necessitate the acquisition of right-of-way.

⁹An auxiliary lane is one that begins as an on ramp, but never fully merges with the mainline. Instead it continues as the rightmost lane of the freeway to the next exit, where it becomes an "exit only" lane. So it functions as a travel lane between two interchanges. The advantage is that it adds some mainline capacity and lengthens the decision-making distance and time for merges and diverges.

3.5.4 12 Mile Road Interchange

It is proposed that the 12 Mile Road interchange with I-75 be reconstructed as single-point urban interchanges (SPUI). This design brings all ramp ends together at a single point and provides for a three-phase signal operation at the intersection. The three phases control: 1) left turns from the ramp ends; 2) left turns to the entrance ramps; and, 3) the through movement of the cross road. The SPUI also provides protection to pedestrians/bicyclists as all movement across traffic lanes is controlled by signals. The SPUI proposed for 12 Mile Road is so compact that land now within the interchanges could be made available for other uses.

3.5.5 14 Mile Road Interchange

The 14 Mile Road interchange will be reconstructed with the same general layout, but expanded capacity. For traffic congestion to be improved in this area additional changes would need to be made to 14 Mile Road in the vicinity of the Oakland Mall. Discussions will be held with the Road Commission for Oakland County regarding such changes.

4. Preliminary Issues Analysis

The following list identifies the environmental and social impact categories that will be studied in the environmental impact statement process. Changes may occur as additional data are collected. All of the potential impacts listed below will be thoroughly studied and the results of these studies will be documented in the Draft and Final EISs.

Issues Within the Corridor:

- ✍ Relocations
- ✍ Noise
- ✍ Air
- ✍ Wetlands
- ✍ Drainage
- ✍ Indirect (Secondary) and Cumulative Impacts
- ✍ Traffic Management
- ✍ Safety
- ✍ Economic Effects on Local Communities / Tax Base Loss
- ✍ Community Cohesion / Special Groups / Environmental Justice
- ✍ Surface Water Quality Impacts
- ✍ Cultural Resources
- ✍ Threatened/Endangered Species
- ✍ Floodplains
- ✍ Hazardous Materials
- ✍ Utility Systems
- ✍ Section 4(f)/6(f) Lands

4.1 Relocations

Relocations will be limited. It is hoped that design will avoid relocation impacts from the widening of I-75 itself, as the new lanes would be constructed within existing MDOT right-of-way. However, service drives may be narrowed and some strips of right-of-way may be required. Further, the replace existing pedestrian bridges to Americans with Disabilities Act (ADA) standards will require longer ramps and will require right-of-way.

Widening and lengthening the eastbound to northbound ramp at the I-696 interchange may require right-of-way acquisition. Additional engineering analysis is required to reach a conclusion.

If relocation is encountered, relocation assistance will be provided to all residential and business property owners and business operators in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Resources will be made available without discrimination to all owners who are relocated.

4.2 Noise

Measurements made in the south project area indicate existing noise levels in some areas adjacent to I-75 exceed the Federal Highway Administration's criteria for residential and other sensitive land uses. A complete noise analysis will be performed to determine the extent of this condition. Those areas where noise criteria are exceeded and where noise mitigation is determined to be reasonable and feasible will be identified for noise abatement. Public and agency comments on anticipated noise impacts will be considered. Where noise walls are recommended, input will be sought from emergency services regarding accommodation of access and fire hydrants.

4.3 Air Quality

Air quality conformity analysis will be determined and will follow appropriate procedures. MOBILE6.2 will be used to generate air quality emission factors and CAL3QHC will be used to examine critical intersections.

4.4 Wetlands

Wetlands are protected by state and federal law because of their important ecological role. If impacts to wetlands are unavoidable, there must be a finding that there is no practicable alternative to the impact. And, the impacts must be minimized, then mitigated. Mitigation usually involves replacing wetlands at a ratio of greater than one. Wetlands will be delineated in cooperation with resource agencies.

Wetlands are present in the corridor, largely where no ditch was constructed when the original road was built and drainage was adjacent to low-lying areas. The project crosses the River Rouge twice, and seven county drains. Because most wetlands are in ditches, which should not be affected by the project, wetland impacts are expected to be minor. A wetland mitigation plan will be developed.

4.5 Drainage

The addition of another lane in each direction on I-75 will impact the existing drainage within the median and roadway edges by altering the drainage patterns, the infiltration and storage areas, and discharge volumes. A drainage study will specifically address how the increased storm runoff from the expanded roadway pavement will be managed.

4.6 Indirect (Secondary) and Cumulative Impacts

Historic aerial photography will be used in conjunction with changes in population, employment and housing to profile the changes brought by the initial construction of I-75 in the 1960s and the rapid development that has occurred in Oakland County in recent decades. Official planning documents will be examined next. The travel model used to forecast project traffic will be used to determine the changes in traffic brought about with the proposed improvements. Taken together, these data sources will provide a mapping base to examine the following kinds of impacts for build

and no-build conditions:

- ✍ Mobility
 - ✍ Travel changes induced by widening I-75
 - ✍ Number of “high crash” locations affected
 - ✍ Right-of-way and construction costs possibly incurred
 - ✍ Pedestrian and bicyclists on affected links
- ✍ Land Use
 - ✍ Conversion of land uses
- ✍ Air Quality
 - ✍ Localized carbon monoxide air emissions
 - ✍ Regional air quality effects
- ✍ Cultural Resources
 - ✍ Change in historic/archaeological resources
 - ✍ Change in parklands
- ✍ Community
 - ✍ Number of residential units and business properties potentially affected
 - ✍ Residential properties with possible change in noise experience
 - ✍ Effects on community cohesion
 - ✍ Effects on emergency services
 - ✍ Potential environmental justice issues
 - ✍ Change in economic vitality
 - ✍ Change in aesthetics
- ✍ Noise
 - ✍ Residential properties with possible change in noise experience
- ✍ Water
 - ✍ Water quantity and quality as affected by changes in drainage
 - ✍ Quantity and quality of groundwater
 - ✍ Quantity and quality of wetlands affected
- ✍ Plants and Animals
 - ✍ Disturbance to listed species and wildlife movement

4.7 Traffic Management

Traffic maintenance during construction is anticipated to be an important issue with the build alternative. A traffic management plan will be part of the final design and will focus on minimizing traffic disruption in the construction area to the extent possible. It is anticipated that the construction plan will use partial-width construction, existing service drives and possibly detours to minimize disruption of traffic. There are no alternate parallel roadways to I-75 in the north section of the project that could be used efficiently during construction. Construction of the interchanges will offer the greatest challenge as the bridges over 12 and 14 Mile Roads will have to be replaced, together with the ramps. Development of the traffic management plan will also consider transit and the use of staggered work hours, shortened work weeks, and other techniques.

The construction plan will include provisions to shorten the duration of construction through liquidated damages for delays, 24-hour work scheduling, and early completion incentives.

4.8 Safety

A crash analysis will indicate the effects of the project on the number of fatal and non-fatal crashes.

4.9 Economic Effects on Local Communities

The interview with Madison Heights indicated that the local share of the construction cost for I-75 will be an issue for that community.

4.10 Community Cohesion/Special Groups/Environmental Justice

The effects of the reconstructed road on local communities will be analyzed. Interviews have already been conducted with all contiguous communities and the concerns of these communities will be addressed in the Draft EIS.

The proposed improvements to the bridges over I-75 will include pedestrian and bicycle travel ways, which is an improvement over existing conditions. The existing pedestrian overpasses will likely be rebuilt in the same locations, but a dialogue will be established with local communities, community groups and school administrators to determine if the crossing locations are optimal. Bringing pedestrian bridges to ADA standards will assist the handicapped but lengthen the walk trip for students going to school unless more direct means are also provided.

The proposed project is not expected to negatively affect any minority or low-income populations although additional analyses will need to be conducted.

4.11 Surface Water Impacts

There are no lakes, ponds, or other surface water bodies within the existing or proposed right-of-way of I-75. The drainage study will address storm water control, treatment, and discharge features that will manage storm water quantity and quality. Existing crossings of the Rouge River and county drains are via culverts or bridges that are continuous (no breaks in the median) and will not likely be altered or lengthened by the project. Therefore, disturbance of these crossings will be minimal.

Short-term water quality impacts may occur during construction of the project. A soil erosion and sedimentation control plan will be developed to minimize water quality impacts during construction. The plan will be prepared in accordance with applicable regulations.

4.12 Cultural Resources

The National Register of Historic Places is a list of resources that have significance based on a variety of criteria related to history and its interpretation. Resources may include objects, property, and structures. Both Section 106 of the National Historic Preservation Act and Section 4(f) of the Department of Transportation Act of 1966 protect such resources. Widening of I-75 is not anticipated to impact cultural resources because the work will be confined almost wholly to existing right-of-way. There are no known sites on or in the vicinity of the properties that might be acquired for the project.

An Area of Potential Effect (APE) has been submitted to the State Historic Preservation Office. A field inventory of potentially affected sites has been conducted. The inventory will identify sites that may be eligible for the National Register, but have not yet been listed. Sites of local historic significance adjacent to I-75 will also be plotted. The analysis of possible impacts to historic resources will take into account existing and proposed noise mitigation (walls) that may have an effect on the visual setting of any potentially eligible properties.

4.13 Threatened/Endangered Species

Threatened and endangered species are officially protected in Michigan by both federal and state Endangered Species Acts: Public Law 93-205 and Act 203 of the Public Acts of 1974, respectively. An endangered species (E) under the acts is defined as in danger of extinction throughout all or a significant portion of its range. A threatened species (T) under the acts is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Special concern (SC) species are not afforded legal protection under the acts but are of concern because of declining or relict populations within Michigan, or are species for which more information is needed.

The Michigan Natural Features Inventory (MNFI) is the most complete database available for all of Michigan's T/E/SC species. The proposed improvements are not expected to impact any threatened or endangered species because the project area is in already developed urban/suburban environment. The MNFI database will be searched and field studies will be conducted to confirm that there is no state or federally-listed T/E/SC species within the proposed project area.

The U.S. Fish and Wildlife survey has found in a letter dated March 21, 2003, that "there are no endangered, threatened, proposed, or candidate species, or critical habitat occurring within the proposed project areas."

4.14 Flood Hazard

No changes in floodplain boundaries, which are outside the project corridor, are expected. The results of the drainage study will define any floodplain impacts.

4.15 Hazardous Materials

Contamination is not anticipated to be a significant environmental issue for the proposed lane additions. A Project Area Contamination Survey (PCS) will be performed for the properties to be acquired. The PCS involves reviewing federal, state and local environmental sites lists and databases.

4.16 Utility Systems

Adjustments to utility systems will be a challenge due to the urban nature of the corridor, especially in the depressed section. This is especially true of the pump stations at the outside edges of the existing roadway. These stations pump stormwater from the depressed I-75 roadbed up and into the storm drainage system. However, these are largely engineering issues, not issues of an environmental nature. A review of mapped utilities and inquiries with local utility companies will be conducted to locate and accommodate major utilities, so that unplanned disruptions of service do not occur.

4.17 Section 4(f)/6(f) Lands

There is no known Section 4(f) or 6(f) land contiguous to I-75. Nearby resources and any effects on them will be identified, if such lands are identified.