

Appendix G

Prioritization/Programming Process (MDOT)

GENERAL

In 1999, MDOT began publishing a **5 Year Road and Bridge Program**. This five year program was developed to document statewide expenditures by MDOT, using revenue from the state gas tax increase and additional federal aid coming to Michigan from TEA-21. It was also used to help provide the public and other agencies in Michigan with information on MDOT trunk line projects planned over the next several years, and to improve interagency project coordination. In 1998, transportation planners were assigned to the MDOT Regions to improve interagency coordination in the five year program development process; Grand Rapids was one of the first Regions included. This was part of an overall objective to move more project development and planning responsibilities to the Region and newly created Transportation Service Center (TSC) offices.

Managing and preserving the existing state trunk line system has always been the primary focus of the MDOT road and bridge program. Governor Granholm's "Preserve First" program, and the State Transportation Commission statewide pavement and bridge condition goals, provides direction for the use of federal revenue from TEA 21 and revenue from the state gas tax. These condition goals are used by the Regions and TSCs for development of the five year program.

The general categories of trunk line work include the following:

- Routine and Heavy Maintenance
- Capital Preventive Maintenance
- Road and Bridge Rehabilitation and Reconstruction
- Capacity Improvements
- New Road Construction
- Major Project Research/Studies

GRAND REGION PROJECT DEVELOPMENT PROCESS

Road and Bridge Rehabilitation/Reconstruction, and Capital Preventive Maintenance (CPM) is the primary responsibility of the Region and TSC offices. The MPO coordination process at the MDOT region level usually focuses on Road and Bridge Rehabilitation / Reconstruction needs; major Capacity Improvements, New Roads, and Studies also include MPO coordination, with both MDOT central office and region involvement. The newly created MDOT Region Planners began seeking MPO involvement earlier in the project development process for the road and bridge preservation program, prior to publishing the first 5 Year Road and Bridge Program.

Routine (snow plowing, pot-hole filling, etc.) and Heavy (skip-matching, etc.)

maintenance in the Grand Region is carried primarily by cities and county road commissions under contract, and is outside of the MPO planning process. MDOT staff also performs various maintenance and repair activities on trunk line bridges and related facilities. **Over two-thirds** of MDOT's state and federal revenue is spent on the *System Preservation* activities. **New Roads, Capacity Improvements, and Studies** are developed based on statewide priorities, needs, and funding availability. Generally, **less than 20%** of MDOT's 5 year program is allocated to new roads and capacity improvements.

Region Project Development Process Sequence:

1. Before the MDOT 5 year program is developed, Region planning and project development staff identifies trunk line corridors needing pavement and/or bridge rehabilitation or repair. Trunk line needs in the eight county Grand Region are provided to the MPO staff and committees. MPO comments, priorities, and needs related to state owned facilities are discussed through the MPO committees.
2. Based on MPO comments, other public and agency comments, system needs, and MDOT pavement and bridge goals, proposed annual projects and 5 year strategy are developed within the estimated resources available to the Grand Region. Each MDOT region is allocated funds for roadway and bridge preservation projects, based on statewide system condition needs and funding levels, which may change from year to year. The 5 year program is updated and extended annually based on projected revenues and needs statewide.
3. In general, pavement condition needs are based on pavement **distress, ride quality**, and estimated **remaining service life**.

Distress - is an index of pavement distress (cracks, and joints, etc.) measured in 0.1 mile segments. It starts at zero and increases as pavement condition worsens. Pavement reconstruction and/or rehabilitation is considered for pavements with an index of 50 or above. Below 50, generally CPM is considered, as needed, to preserve pavement life.

Remaining Service Life (RSL) - is calculated based on the distress index. It is another factor used to evaluate whether pavement rehabilitation or reconstruction is needed, and when it should be scheduled.

Ride Quality - is an index of user perception of pavement ride quality, reported in 0.1 mile increments. The scale starts at zero and increases as ride quality decreases. Generally, pavement with an index of 70 or above is considered for reconstruction or rehabilitation. This index is used in conjunction with the Distress index and RSL factors to develop the five year program.

The PASER rating system - is also being used to inventory roadway conditions

for both state and local roads on a common statewide basis as required by Asset Management legislation passed in 2002. PASER ratings are currently developed on a system level basis to evaluate and compare all federal-aid eligible roads and highways.

In summary, these condition factors are considered for road and bridge project development activities. Other issues considered include initial MPO comments, local project coordination, trunk line project coordination and continuity, geographic balance, distribution of MDOT TSC staff resources, and other local or public concerns like economic development activities, utility coordination, etc. In addition to surface condition factors, structural conditions are also evaluated when developing bridge projects. Bridge projects are often coordinated with major corridor pavement projects to minimize future inconvenience to the users of the system. Pavement and bridge conditions are also routinely monitored and updated by Region and TSC staff.

The Grand Region Project Development Team reviews these factors, balances Region needs and resources, and develops a draft five year program strategy for the Region. The proposed 5 year road and bridge program strategy for the Grand Region is also reviewed annually by MDOT central office staff for consistency with statewide goals.

4. A draft project list is developed for the region based on financial resources available. A “mix” of short, medium and long-term “fixes” is proposed, which is based on condition, effective use of available resources, and achieving the statewide roadway and bridge condition goals. Heavy maintenance is considered for some pavement and bridges to maintain and extend service life prior to scheduled major preservation fixes.
5. The draft 5 year road and bridge program is presented to the MPO for coordination with other local projects, and MPO TIP development activities. An annual proposed CPM list is developed and presented to the MPO for comments; CPM is a general program line item in the TIP. The objective of the CPM program is to preserve the condition of roadways and bridges during the life of major preservation fixes.
6. After receiving and considering MPO issues, MDOT goals, Grand Region needs, funding levels, and geographic balance, a final 5 year road and bridge preservation program, is developed for the Grand Region. If additional funding (such as Safety or CMAQ funds) is available, and based on region and/or MPO issues, some limited improvements (intersections, short sections of center left-turn lanes, freeway weave/merge lanes, etc.) can be made with road and bridge preservation projects. Like other agencies represented on the MPO, MDOT region projects within the MPO MAB are included in the MPO TIP, as required; others, outside of the MPO area, are included in the Statewide TIP.

The region program also becomes a component of the MDOT statewide 5 year program, which is approved by the State Transportation Commission. The MDOT 5 year program is updated annually, with another year added; the STIP and MPO TIP are updated every two years, and amended as needed. The MPO is involved annually in the region's project development process as described above.

7. Pre-construction public information meetings are held, with directly affected businesses and residents, for most major system preservation projects, to review construction schedules, detours, and related impacts.

Conceptual Major (Capacity Improvement or New Road) Project Development Process

Major projects, like M-6 or the I-96/Airport Area Access Study, follow a similar planning process; however, they are developed and prioritized on a statewide basis, identified from MDOT Region and MPO needs. Major projects are advanced based on resources available statewide, as balanced against statewide system preservation goals (such as freeway modernization). If financial resources are available, major improvement projects on the existing system are coordinated with pavement and bridge preservation projects identified by the Regions, as noted.

General Planning Process:

- Major system needs and issues are initially identified through a variety of sources, including but not limited to the MPO long-range Transportation Plan (LRP), MPO and MDOT statewide model output, MDOT Region operating condition issues, MPO and local agency staff, public comments, current or pending economic development issues, etc.
- In MPO areas, state and local major project needs are prioritized within anticipated revenue for the LRP. Major trunk line needs identified through the MPO planning process are communicated initially to MDOT through the Region/TSC planning and/or project development staff. Major project proposals are initially reviewed with other Region needs, and coordination with road and bridge preservation project schedules.
- Major trunk line project priorities, identified by the MPO and MDOT Region staff, are communicated to the MDOT Central Office for consideration with other statewide needs, system goals, priorities, and funding availability.
- After concurrence on priorities by the MPO, affected local agencies, and MDOT, studies are initiated based on the corridor or sub-area needs identified. Studies usually start as broad-based needs and issue assessments, or corridor access management studies to preserve trunk line capacity and improve operations. Once the specific need is refined, various alternatives are initially assessed for feasibility and effectiveness in addressing the issues. Depending on the outcome, an Environmental Assessment (EA) or Environmental Impact Statement (EIS) may be required; interchange justification reports (IJR) are also required for new or modified

interstate access. These studies can take several years, and will involve MDOT, local agencies, and MPO staff participation, as well as public hearings, and state and federal review agency concurrence.

- FHWA approval is required for EAs, EISs and IJR. In order to receive FHWA approval, the recommended alternative must be included in an air quality conforming and financially constrained MPO LRP. For major trunk line projects, MDOT funding commitments and schedules will be based on statewide and region needs, and funding availability. Local and/or MPO funding commitments may also be used to request advancement of major projects. Unfunded needs can be included in the MPO LRP as Illustrative Projects.
- Upon federal approval, and with MDOT, MPO, and local funding and schedule commitments, major projects are included in the MDOT 5 year program and MPO TIP

