- Produces corridor specific strategies that: Can include capital, operational, and management investment procedures; and bridge the gap between policy and strategy and lead to implementation.

Both the EAG and public believe MDOT must develop and support a multi-modal transportation system that provides a balance between urban/rural, passenger/freight, residents/tourists, technology/agriculture, transit/highway, community decision-making/need and to maximize the use of non-motorized transportation opportunities. Corridor-focused analyses can lead to strategies that achieve this balance.

Chapter 2. Process to Identify Corridors and Activity Centers

Selection and agreement on the MDOT Corridors of Highest Significance involved a data rich, analytical process that included considerable review and discussion by a *MI Transportation Plan* corridor subcommittee comprised of individuals from throughout the department. This chapter defines the term corridors of significance; explains the key concepts used to identify the corridors; and summarizes the decision-making process and conclusions followed to agree on the corridors. **Appendix B** details the research conducted, technical approach, and analytical process used to identify the final Corridors of Highest Significance.

2.1 Definitions

This section defines *MI Transportation Plan* Corridors of Highest Significance. Corridors serving sub-state regional economic areas are also defined but are not profiled in this report.

2.1.1 Activity Centers

MI Transportation Plan's activity centers, as shown in **Figure 1**, are defined as:

> *Geographic locations with concentrations of people, jobs, educational and health service facilities, tourist attractions, or other similar economic-based facilities or services. International border crossings are included within some activity centers.*

MDOT identified these multi-modal corridors and activity centers based on quantitative criteria and an analytical process as explained later in this chapter and **Appendix B**. Details on criteria and thresholds used to identify activity centers are presented in **Table 1**.

2.1.2 Corridors of Highest Significance

MI Transportation Plan's Corridors of Highest Significance, as shown in **Figure 2**, are defined as:

> *An integrated, multi-modal system of transportation infrastructure along geographic corridors that provide a high level of support for the international, national, and state economies. These corridors connect activity centers within and outside Michigan and serve the movements of people, services, and goods vital to the economic prosperity of the state.*

MI Transportation Plan's Corridors of Highest Significance are not ranked but are defined based on the type of travel they carry. MDOT's Corridors of Highest Significance include facilities that also serve sub-state regional travel and economies.

2.1.3 Regionally and Locally Significant Corridors

Michigan's economy includes local and regional economic activity centers throughout the state. In identifying the Corridors of Highest Significance, it became clear that certain corridors support regional economies and are vital components of the transportation network and the state's economic health. These corridors, identified as Regionally and Locally Significant Corridors, are presented in **Figure 3.** They are not profiled in this report. The corridors are discussed based on their economic region in the *Economic Regions Corridor Summary* and are defined as:

> *An integrated, multi-modal system of transportation infrastructure along geographic corridors that provide a high level of support for a specific sub-state region of Michigan's economy. These corridors connect to and augment the Corridors of Highest Significance and serve the movements of people and goods within or between activity centers.*

The Corridors of Highest Significance, as shown on **Figures 2** and **3**, are a subset of all the travel corridors and transportation facilities in Michigan.

2.2 Corridor Subcommittee, Peer State Reviews, and MDOT Regions Listening Session

As part of the development of *MI Transportation Plan* a corridors subcommittee was established. This subcommittee included MDOT representatives from the Bureau of Highways (Regions and Development), the Bureau of Transportation Planning, the Bureau of Aeronautics and the Passenger Transportation Division. The subcommittee members' role was to review, comment, provide information unique to their region or modal expertise, and contribute ideas for the development of this *Corridors and International Borders Report* and the *Economic Regions Corridor Summary* addendum and executive summary.

An initial subcommittee meeting was held on February 9, 2006, to review and compare corridor selection criteria and approaches used by MDOT in their previous long-range plan, *Mobility is Security,* to other peer state corridor-based plans. Matrices of the peer states and their approaches are provided in **Appendix B**. At this meeting, MDOT also discussed how they used, found beneficial, and what they would like to change about the corridors based on the previous statewide plan, *Mobility is Security*. A summary of MDOT staff comments is also presented in **Appendix B**.

In February 2006, subcommittee members agreed that the Corridors of Highest Significance should be multi-modal. They decided that several approaches should be applied to identify and validate the Corridors of Highest Significance for *MI Transportation Plan.* They concluded that one approach should include replicating the corridor identifying style used in the previous Long Range Plan, *Mobility is Security,* with updated data. The subcommittee also discussed and

agreed to keep the criteria used for the previous plan in this analysis. They agreed another evaluation process should be designed to consider "Activity Centers".

2.3 Analytical Approaches

Several variations of the two aforementioned analytical approaches using updated data and applying GIS and transportation modeling techniques were developed. In conducting these analyses, a number of strengths and weaknesses or pros and cons of each methodology became evident. Preliminary findings were presented to the subcommittee on May 5, 2006. The subcommittee agreed to proceed with the Activity Center approach for the selection of corridors to be used in *MI Transportation Plan*.

2.3.1 Replicating Previous Approach

MDOT's previous plan, *Mobility is Security 2000-2025* applied 18 corridor criteria categories with three possible corridor classifications. While the criteria covered all modes, most criteria were applied to highway corridors. The *Mobility is Security 2000-2025* approach was replicated using the latest and best data available for each category. Basically, this approach resulted in the same corridors being identified.

2.3.2 Activity Center Approach

The Activity Center approach involved two steps: identifying where activity is concentrated and connecting these centers via various modes. To identify these concentrations, activities were bundled to create centers. **Table 1** presents the criteria, thresholds, and data sources used to identify activity centers. Some activities considered included urban area populations inside and outside Michigan, commercial and retail centers, industrial and business centers, tourism attractions, education and research facilities, passenger facilities, medical facilities and freight and intermodal facilities. By their definition, International Border Crossings are included as and within activity centers.

A total of 50 activity centers were identified within Michigan plus six outside of Michigan. In some cases, small population centers were defined as activity centers because of the type of activities occurring at the location, and the bundling of activities. Each center was then connected to every other center using what were called "desire lines." Using this two-step process, a matrix was then created from the centers and the "desire lines" connected as corridors; this identified the number of connections -- not traffic volume. **Appendix B** explains this process in detail.

Based on a comparison of the processes, the resulting corridors, and discussion of pros and cons of each approach, the MDOT corridor subcommittee recommended using the Activity Center approach to identify the Corridors of Highest Significance. However, during the May 5, 2006 meeting, the subcommittee asked for the addition of several "activities" as well as several suggestions to refine the Activity Center approach. These changes were incorporated and a final set of activity centers and corridors were presented to the subcommittee at a meeting on August 30, 2006.

Table 1: Activity Center Criteria and Data

Activity Center Criteria	*Measure*	*Threshold*
Urban		
Urban Areas/Urban Clusters in Michigan	Population by TAZ*	Greater than 5,000 Persons
Nearest Urban Center outside Michigan	Population	Greater than 200,000 Persons (Transportation Management Area (TMA))
Commercial		
General Economic Activity	Total Employment	Greater than 2,500 Employees
Retail Activity	Retail Employment	Greater than 1,000 Employees
Tourism		
Hotel Capacity	Hotel Units	100 or More Units
Annual Lodging Use Tax Revenue	Tour Tax	Annual Tax Value $50,000 or more
Gaming	Gaming Centers	Major Gaming Centers were identified as a characteristic of an Activity Center
State Park	State Park Location	None
Number of Visitors	Person Trips	Annual Personal Trip Total Greater or Equal 1,000,000
Length of Stay	Person Days	Annual Personal Trip Total Greater or Equal 3,000,000
Education/Technology Center		
Postsecondary Education Centers	Type of Postsecondary	Community Colleges and Universities
Smart Zones	Technology Centers	All Smart Zones
Life Sciences Facilities		
Hospital	Local Employment	Greater than 500 Employees
Correctional Facilities		
Prisons	Prison Facility Locations	All Prison Facilities were identified as a characteristic of an Activity Center
Passenger Facilities		
Air Passenger	Passenger Enplanements	All Airports with Passenger Enplanements
Amtrak	Passenger Stations	All Active Passenger Stations
Intercity Bus Station	Passenger Stations	All Active Intercity Passenger Bus Stations
Car Pool	Number of Lots	All Parking Lots
Freight Facilities		
Air Cargo Ports	Cargo Deplanements	All Airports with Cargo Deplanements
Marine Ports	Cargo Tonnage	All Cargo Ports Receiving or Shipping Tons of Goods
International Border Crossing		
Passenger and Freight	Passenger and Freight	All International Border Crossings with Passenger and Freight Activities

* TAZ = Traffic Analysis Zone, boundary set by statewide model, see **Appendix C** for details.

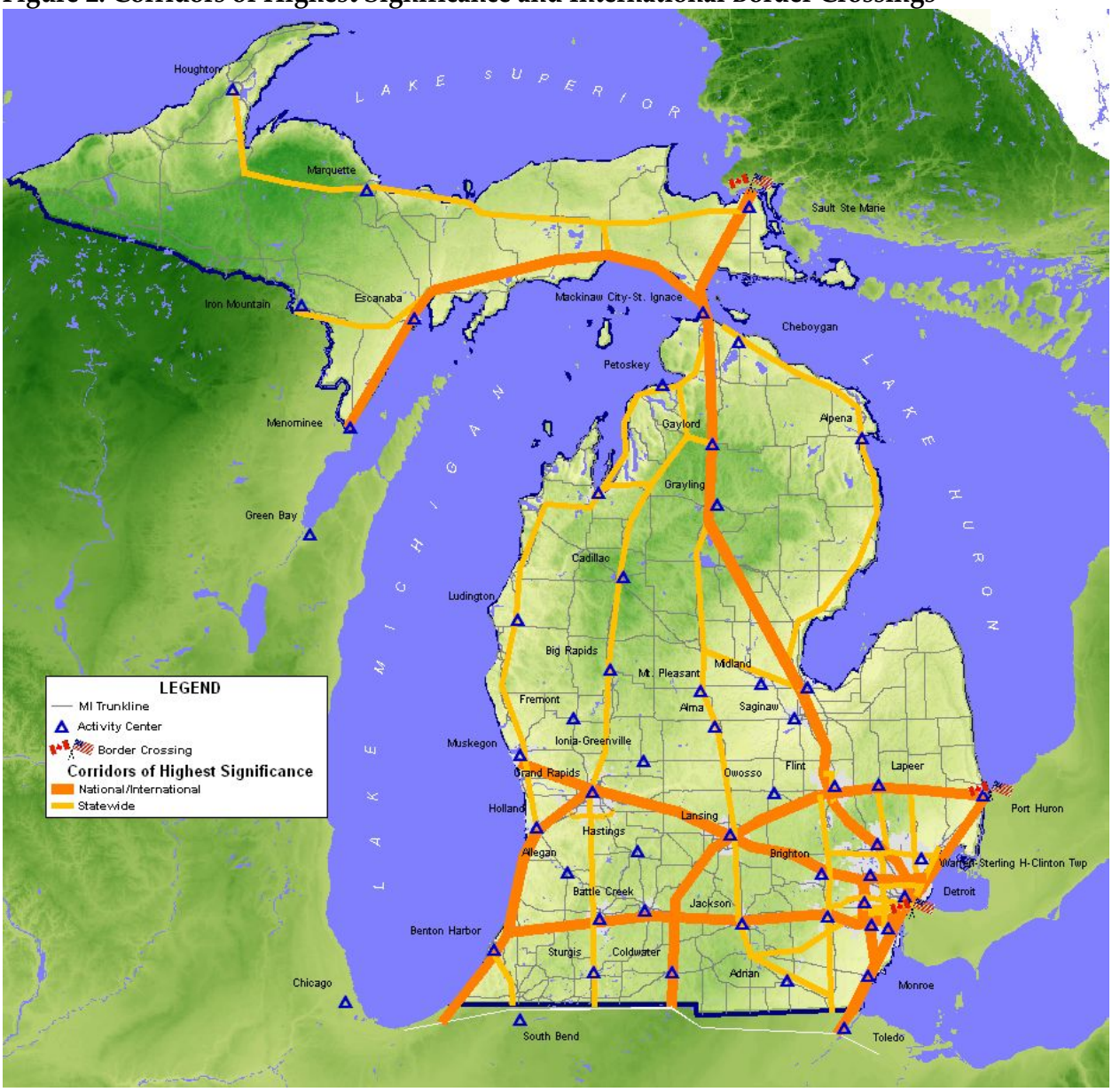
2.3.3 Resulting Activity Centers and Corridors

Several additional comments and refinements were requested at the August 30, 2006 subcommittee meeting. The final analysis resulted in 50 activity centers inside Michigan and six centers outside Michigan and 19 Corridors of Highest Significance. Each of the international border crossing locations is included within an activity center. **Figure 1** presents a map of the resulting activity centers. **Appendix C** includes maps and profiles of each activity center and the modal facilities within them. **Figure 2** presents the resulting corridors.

Figure 1: Activity Center and International Border Crossings

Source: Wilbur Smith Associates, May, 2006

Figure 2: Corridors of Highest Significance and International Border Crossings



Source: Wilbur Smith Associates, 2006

2.4 Corridor Nomenclature

MDOT considered several options on how to prioritize or stratify the *MI Transportation Plan* corridors into categories. One option evaluated was a magnitude/tiered approach based on the previous *Mobility is Security Plan* in which corridors were labeled as high, medium, or low significance. A second magnitude/tiered option evaluated was based on primary travel carried plus its value and volume (international, national, state, regional, local significance), while still another system took into account future factors such as emerging corridors. Using functional

categories, such as agriculture, automotive technology, life science, etc., for naming corridors was also evaluated.

Ultimately consensus was reached that the:

- Corridors will be referred to as Corridors of Highest Significance;
- Only sub-categorization will be that they are significant for either statewide travel or national/international travel;
- Corridors will be designated, named, or labeled based on the primary travel origin/destination they serve – international, national, statewide, regional, and local.

Some of the reasoning behind these decisions includes:

- MDOT recognizes that all corridors serve important and varied purposes.
- Some naming of corridors has already taken place by other governmental agencies and public interest groups. For example, Life Sciences Corridors, University/Smart Zones, Technology Corridors, etc. have been defined by the Michigan Economic Development Commission (MEDC) and other Michigan governmental agencies. MDOT wants to compliment, provide consistency, and avoid confusion with other naming initiatives.
- The Emerging Corridors category was dropped for several reasons. First, based on the Activity Center approach and review of the travel growth, the corridors identified as having highest significance are those where growth is expected to continue. Also, this plan is updated every five years, and analysis is conducted on trends every year. These processes would identify any new or emerging corridors.

Chapter 3. Corridors of Highest Significance

This chapter discusses *MI Transportation Plan's* Corridors of Highest Significance. These multi-modal corridors include those identified as having international/national, and statewide significance. Michigan's International Border Crossings are included in activity centers. This chapter also describes the significance of the designation as a Corridor of Highest Significance. Corridors serving sub-state regional economic areas are also identified in this chapter but are not profiled. Details on conditions and issues at International Border Crossings are presented in **Chapter 5**.

Figure 2 presents a map of *MI Transportation Plan* National/International Corridors of Highest Significance and International Border Crossings. **Figure 3** presents a map that includes regionally and locally significant corridors. **Figure 4** includes a map with identifying letters included to facilitate locating the corridors on the statewide map.

MDOT's Corridors of Highest Significance include: