

AIRPORT DEVELOPMENT STANDARDS

Airport development standards are needed to compare existing airport facilities to a standard development template. This enables the *MASP 2000* to identify airport development items necessary to respond to system deficiencies. In the System Description chapter, six *MASP 2000* Approach Category/Design Group combinations were identified. Each of these has its own development standard.

Tier 1 Airport Development Standards

In the Goals and Objectives chapter facility goals for each airport component were identified. These facility goals relate to the primary runway system, pavement condition, all-weather access, year-round access, basic pilot and aircraft services, zoning, and navigational aids. Each airport classification has a set of development standards for each of these facility elements. These development standards are identified in Table 44 for Tier 1 airports.

Tier 2 Airport Development Standards

Airport development standards are identical to Tier 1 standards except for the requirements for a current airport zoning plan and an active zoning board.

Tier 3 Airport Development Standards

Airport development standards are identical to Tier 2 standards except for the requirements for weather reporting, a weather briefing system, communications, snow removal, open through the spring, hangars, pilot shelter, and staffing.

Airport Development Item		Airport Classification					
		D-III	C-III	C-II	B-II	B-I	A-I
Primary Runway System	<i>Length (feet)</i>	6,000+	5,000+	5,000	4,300	3,500	2,500
	<i>Width (feet)</i>	150	100	100	75	75	100
	<i>Surface Type</i>	Paved	Paved	Paved	Paved	Paved	Turf
	<i>Lighting System</i>	HIRL	HIRL	MIRL	MIRL	MIRL	Marker
	<i>Taxi System</i>	Full Parallel			Full Par if 20,000+ Ops		None
	<i>Visual Approach Aid</i>	VASI/PAPI	VASI/PAPI	VASI/PAPI	VASI/PAPI	VASI/PAPI	None
Pavement Condition Indices	<i>Primary Runway</i>	70	60	60	60	60	n/a
	<i>Primary Taxi System</i>	60	55	55	50	50	n/a
	<i>Terminal Apron/Ramp</i>	55	55	55	50	50	n/a
All-Weather Access	<i>Weather Reporting</i>	Yes	Yes	Yes	Yes	Yes	Yes
	<i>Weather Briefing Sys</i>	Yes	Yes	Yes	Yes	Yes	Yes
	<i>Ground Asst Comm</i>	Yes	Yes	Yes	Yes	Yes	Yes
Year-Round Access	<i>Snow Removal</i>	Yes	Yes	Yes	Yes	Yes	Yes
	<i>Open Through Spring</i>	Yes	Yes	Yes	Yes	Yes	Yes
Basic Pilot and Aircraft Services	<i>Staffing</i>	Yes	Yes	Yes	Yes	Yes	Yes
	<i>Fuel</i>	Yes	Yes	Yes	Yes	Yes	No
	<i>Telephone</i>	Yes	Yes	Yes	Yes	Yes	No
	<i>Restrooms</i>	Yes	Yes	Yes	Yes	Yes	No
	<i>Pilot Shelter</i>	Yes	Yes	Yes	Yes	Yes	Yes
	<i>Aircraft Maintenance</i>	Yes	Yes	Yes	Yes	No	No
	<i>Aircraft Repair</i>	Yes	Yes	Yes	Yes	No	No
Zoning	<i>Active Board</i>	Yes	Yes	Yes	Yes	Yes	Preferred
	<i>Current Plan</i>	Yes	Yes	Yes	Yes	Yes	Preferred
Misc. Navigational Aids	<i>REIL</i>	Yes	Yes	Yes	Yes	Yes	No
	<i>Rotating Beacon</i>	Yes	Yes	Yes	Yes	Yes	No
	<i>Segmented Circle</i>	Yes	Yes	Yes	Yes	Yes	No
	<i>Lighted Wind Ind</i>	Yes	Yes	Yes	Yes	Yes	No
	<i>Instrument Approach</i>	Precision	Precision	Precision	Non-Prec	Visual	Visual
Surface Access	<i>Road Access</i>	Arterial	Arterial	Arterial	Collector	Collector	Local
	<i>Public Transportation</i>	Yes	Yes	Yes	No	No	No

Notes: At A-I airports an unlit wind indicator is acceptable.

Airport Development Standards Notes

Pavement Condition Indices. The Michigan Department of Transportation since 1987 has been conducting field inspections of pavements at airports throughout Michigan on a routine basis and reporting conditions of pavements using a Pavement Condition Index (PCI) methods initially developed by the US Air Force. The PCI values for pavements range from a high of 100 for new pavements without any defects to a low of 0 for completely failed pavements. Different threshold values for “good” and “poor” apply for different classifications of airports and for different components of an airport – runway, taxiway, and apron.

Appropriate Surface Access. Airports in the state airport system should have appropriate highway and public transportation access responsive to both the volume and type of vehicular traffic requiring airport access. Airport surface access should be provided by a functional class of roadway suited to vehicle types/densities operating at a given class of airport. At some classes of airport, public or private means of transit should also be an alternative. The following describes the different types of roads...

- Arterial roads carry long distance, through-travel movements. They also provide access to important traffic generators. Arterial roads include interstate and other freeways; state routes between large and small cities; and important surface streets in large and small cities.
- Collector roads provide more access to property than do arterial roads. Collectors also funnel traffic from residential or rural areas to arterial roads. These roads include county, farm-to-market roads; and various connecting streets in large and small cities.
- Local roads primarily provide access to property. These roads typically include residential streets; and lightly-traveled county roads.

Description of Existing Michigan Airport System Facilities

A description and assessment of the existing Michigan airport system provides a variety of inputs into development of the Michigan Airport System Plan. The primary purposes of this assessment are...

Establishment of baseline operational data useful in developing forecasts of based aircraft and operations.

Establishment of baseline airport facility data that will be useful in identifying current airport and system deficiencies.

Establishment of an evaluation mechanism for measuring how effectively MASP airports are responding to identified goals and objectives.

The key product of this assessment of the Michigan airport system is:

A current and dynamic inventory of airport features as they relate to MASP airport classification and airport development standards.

Data Bases

There are currently two active data bases within MDOT where aviation related data is maintained. The *Transportation Management System* (TMS) is the official department repository for a vast array of data on all modes including aviation. The TMS has historically been the data source for Michigan Airport System Planning efforts. Analysis tools for the *MASP 2000* utilize the TMS. The *Airport Information Management System* (AIMS) maintains aviation data and is an effective tool in communicating with the FAA and aviation agencies in other states. There is a continuing need to maintain both the TMS and AIMS in the future. Therefore, in support of the *MASP 2000* effort, a link between these two systems has been developed. This results in one official data set and eliminates the existence of two “official” independent versions the same data. Data items currently residing in both systems will now be maintained, by agreement, in either the TMS or AIMS with the linkage between systems permitting an ongoing update of the data in each system.

Airport Facility Data Elements

The following summarizes the data elements included in the system plan in support of airport facility objectives. Each of these items relates to a specific facility goal and/or performance measure. As such, they need to be included in the *MASP 2000* inventory and will be monitored on a continuing basis to permit an ongoing assessment of the system as it relates to goals and performance measures.

Complete and Adequate Primary Runway System - Includes primary runway length, width, surface type, lighting system, taxi system, safety areas, and runway visual approach aid including a Precision Approach Path Indicator (PAPI), Visual Approach Slope Indicator (VASI) or equivalent. This data is gathered by airport inspectors, maintained by AERO in the AIMS, and transferred to the TMS periodically.

Pavement Condition Indices - Includes the current condition of the primary runway, access/parallel taxiway, and terminal apron. This data is gathered through field inspections, processed by BTP, and current year PCI values entered into the TMS.

All Weather Access System - Includes federal and/or state weather reporting systems such as Automated Weather Observation Systems (AWOS) located at select airports throughout Michigan, weather briefing systems, and ground assist radio communications such as a Ground Communication Outlet (GCO). This data is maintained by AERO in the AIMS, and transferred to the TMS periodically.

Year Round Access - Includes an indicator of whether the airport has snow removal, and a primary runway surface unaffected by spring thaw conditions. This data is maintained by AERO in the AIMS, and transferred to the TMS periodically.

Basic Pilot and Aircraft Services - Includes basic pilot services such as airport staffing, telephones, restrooms and pilot/passenger shelters that should be available at select categories of airports. This category also includes basic aircraft services such as fuel, aircraft maintenance, aircraft repair services, and hangar/aircraft storage services that

should be available at select categories of airports. This data is maintained by AERO in the AIMS, and transferred to the TMS periodically.

Airport Zoning - Includes the presence of a current airport zoning plan, and an active airport zoning board at select categories of airports. This data is maintained by AERO in the AIMS, and transferred to the TMS periodically.

Instrument Approaches - Includes an indicator of whether the primary runway is served by a visual approach, non-precision approach, or precision approach. This data is maintained by AERO in the AIMS, and transferred to the TMS periodically.

Miscellaneous Navigational Aids - Includes an indicator of whether the primary runway or airport has Runway End Identifier Lights (REILS), a rotating beacon, segmented circle, a lighted wind indicator, and type of instrument approach including a precision approach (or GPS-3), non-precision approach (GPS-2), or none. This data is maintained by AERO in the AIMS, and transferred to the TMS periodically.