

Cherry Capital Airport



AIRPORT UPDATE

MAINTAINING- IMPROVING LAND USE &
OBSTRUCTIONS

Northwestern Regional Airport Commission

Since 1971

NRAC as directed by the Leelanau and Grand Traverse Counties

- ▶ Pursuant to Ch. 7 of the Michigan Aeronautics Code section 134
 - ▶ Acquire, establish, construct, enlarge, improve, maintain, equip, operate, regulate the Cherry Capital Airport and other aeronautical facilities and property incidental to its' operation per Public Act 327 of the Michigan Aeronautics Code
 - ▶ It is expressly understood that the NRAC shall comply with all laws and regulations, municipal, state, and federal

Public Act 327

- ▶ Directs governmental control to the NRAC to:
 - ▶ Act on behalf of the political subdivisions (Grand Traverse County and Leelanau County)acting jointly by which the NRAC is appointed all the powers of each such political subdivisions granted by this act

Goals



- ▶ Northwestern Regional Airport Commission Goals

- ▶ Safe
- ▶ Secure
- ▶ Self Sufficient



TVC – 2018/2019

- ▶ 2018
- ▶ 96,189 Aircraft Operations
- ▶ 500,416 Total Passengers
- ▶ 2.2 Million Pounds of Cargo

- ▶ 2019
- ▶ Total Passenger Up 12.5%
 - ▶ June Up 24.8%
- ▶ Airline Operations Up 10.7%
- ▶ 216,571 Pounds of Cargo in June Up 5.1%



Airport Finance

- ▶ Operating Budget - \$6.4 million
- ▶ Supported by 114 tenants, landing fees, aircraft and vehicle parking fees, rental fees, land rent, and concessionaire fees –those that use the airport support the airport
- ▶ NO LOCAL TAX DOLLARS
- ▶ Cherry Capital Airport is completely self sufficient



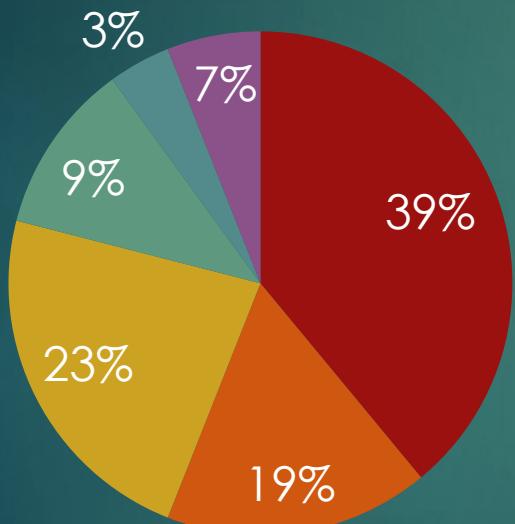
Airport Finance



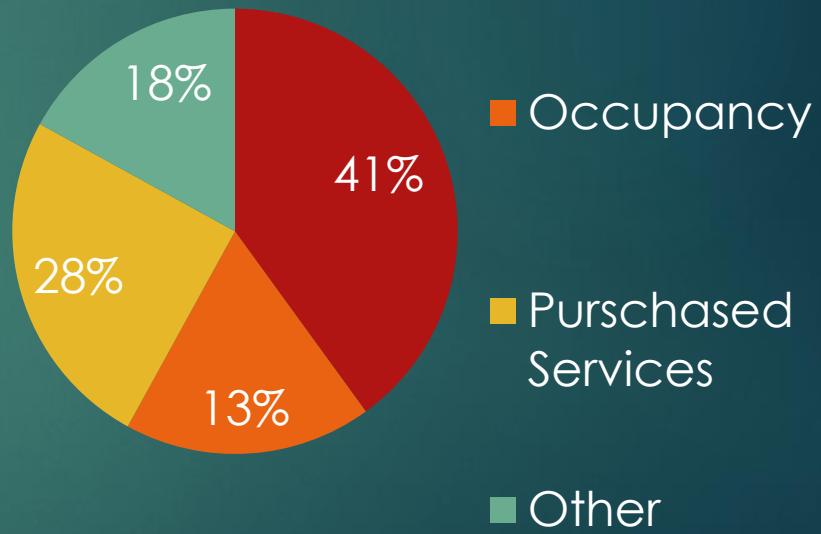
- ▶ Capital Budget \$2.0 million per year
 - ▶ Funding
 - ▶ Airport Improvement Program (AIP) money is made up from the tax on an airline ticket
 - ▶ Passenger Facility Charges - \$4.50 per passenger
 - ▶ Funding is from the users of the airport system, no local tax dollars are used to support Cherry Capital Airport



Operating Revenues



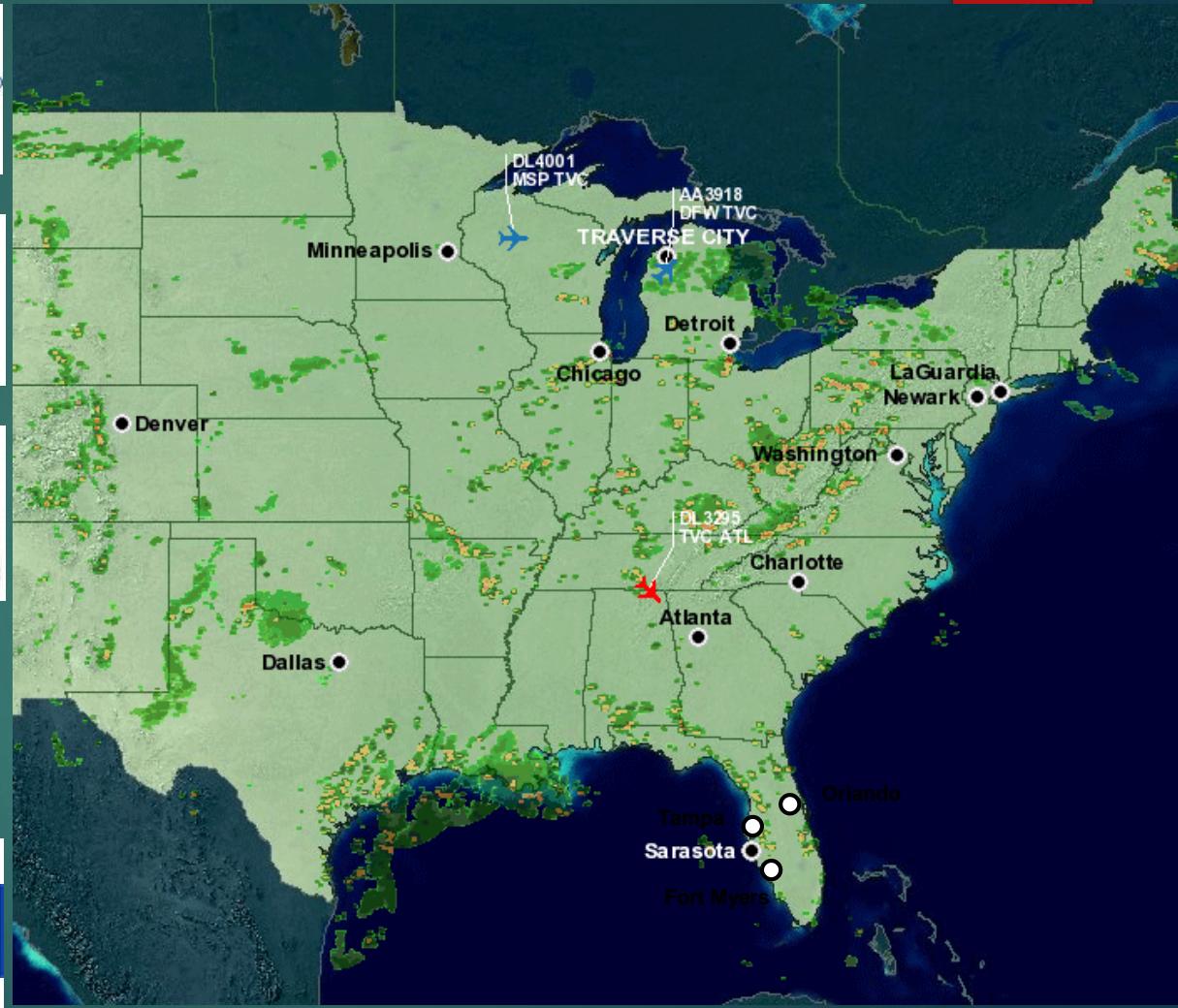
Operating Expenses



Airport Economic Impact

- ▶ Michigan Department of Transportation – Office of Aeronautics – Community Benefits Assessment 2017
 - ▶ Determined that TVC annual economic Impact is **\$991,364,000** ranking TVC 3rd in the state behind DTW and GRR
 - ▶ Average visitor spending per person is **\$752.00** ranking TVC number 1 in the state
 - ▶ Local jobs **2,199**
- ▶ U.S. Senator Gary Peters, has expressed support for several TVC (Cherry Capital Airport) programs and projects. He sits on the Commerce, Science and Transportation committee and is also Ranking Member on the US Senate Homeland Security and Governmental Affairs committee. From the Airport Improvement Program to Small Community Air Service Development Program, he has worked with the FAA and DOT to provide quality service to Northern Michigan here at TVC. Many of the regulatory guidelines that TVC operated under are federal in nature, which is why TVC is glad to work with Senator Peters to meet a wide verity of operational objectives. In the past Senator Peters has said that TVC has the expertise and community support required to successfully implement plans.

Airline Service – 5 Airlines, 14 Cities



Compatible Land Use

- ▶ Land use on and in the vicinity of Airports (natural and human made) must be reserved for compatible uses to provide for the health, safety, and general welfare of the public
 - ▶ This is accomplished through Federal Aviation Regulations, Part 77 and 139, Michigan Aeronautics Code, Michigan Zoning Enabling Act
 - ▶ Local zoning also recognizes these hazards and regulates them
 - ▶ East Bay Township
 - ▶ Garfield Township
 - ▶ City of Traverse City
 - ▶ Acme Township
 - ▶ Peninsula Township
 - ▶ Elmwood Township



Federal Regulations and Standards

- ▶ **Federal Aviation Regulation Part 139 – Certification of Airports**
 - ▶ In a manner authorized by the Administrator, each certificate holder must ensure that each object in each area within its authority that has been determined by the FAA to be an obstruction is removed, marked, or lighted, unless determined to be unnecessary by an FAA aeronautical study. FAA Advisory Circulars contain methods and procedures for the lighting of obstructions that are acceptable to the Administrator.
- ▶ **Protecting for Federal Aviation Regulation Part 77**
 - ▶ The size of each Part 77 imaginary surface is based on the category of each runway.
 - ▶ Categories are based on the type of runway – utility or non-utility and type of runway approach – visual, non-precision or precision instrument.
 - ▶ This information must be shown on your Airport Layout Plan (ALP) and kept current.
 - ▶ The FAA 5010 Airport Master Report (lines 50-58) identify obstruction data related to Part 77 Approach Surface.
- ▶ **Application of Table 3-2 in FAA's AC 150/5300-13A "Design AC".**
 - ▶ Table 3-2 Approach/departure standards table (aka "TSS").
 - ▶ Per a specific runway type (nine categories in table) based on visual or instrument approach, type of aircraft, and visibility minimums.
 - ▶ More recently updated ALPs are showing the application of TSS. TSS cannot be applied to a runway unless shown on an approved ALP.

OBSTRUCTION IDENTIFICATION SURFACES FEDERAL AVIATION REGULATIONS PART 77							
DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON - PRECISION INSTRUMENT RUNWAY		PRECISION INSTRUMENT RUNWAY PIR	
		A	B	A	B	C	D
A	WIDTH OF <u>PRIMARY</u> <u>SURFACE</u> AND APPROACH SURFACE WIDTH AT INNER END	250	500	500	500	1,000	1,000
B	RADIUS OF <u>HORIZONTAL</u> <u>SURFACE</u>	5,000	5,000	5,000	10,000	10,000	10,000
		VISUAL APPROACH		NON - PRECISION INSTRUMENT APPROACH		PRECISION INSTRUMENT APPROACH	
		A	B	A	B	C	D
		1,250	1,500	2,000	3,500	4,000	16,000
C	APPROACH SURFACE WIDTH AT END	5,000	5,000	5,000	10,000	10,000	*
D	APPROACH SURFACE LENGTH	20:1	20:1	20:1	34:1	34:1	*
E	APPROACH SLOPE	20:1	20:1	20:1	34:1	34:1	*

- A - UTILITY RUNWAYS
- B - RUNWAYS LARGER THAN UTILITY
- C - VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
- D - VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
- * - PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN
ADDITIONAL 40,000 FEET

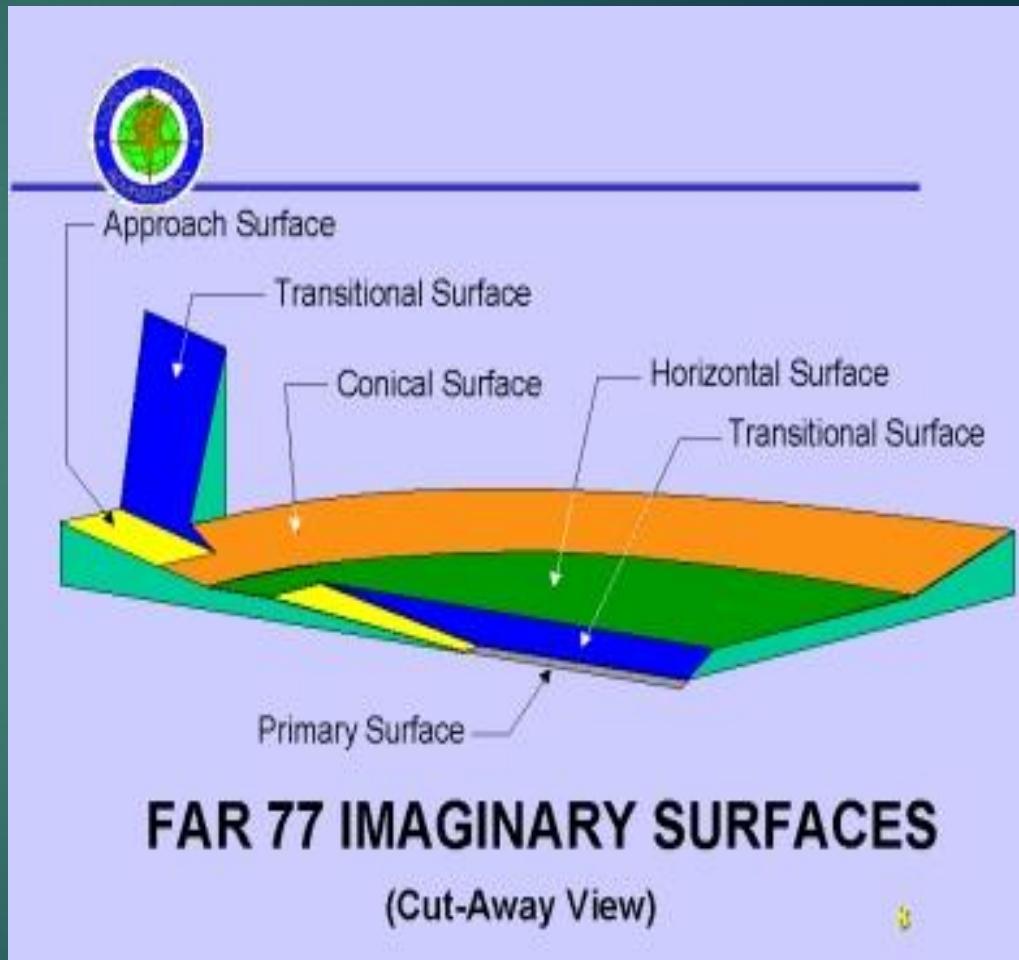


Table 3-2. Approach and Departure Standards Table^{1,2}

Runway Type	DIMENSIONAL STANDARDS* Feet (Meters)					Slope	
	A	B	C	D	E		
1	Approach end of runways expected to serve small airplanes with approach speeds less than 50 knots. (Visual runways only, day/night).	0 (0)	120 (37)	300 (91)	500 (152)	2,500 (762)	15:1
2	Approach end of runways expected to serve small airplanes with approach speeds of 50 knots or more. (Visual runways only, day/night).	0 (0)	250 (76)	700 (213)	2,250 (686)	2,750 (838)	20:1
3	Approach end of runway expected to serve large airplanes. (Visual runways only, day/night).	0 (0)	400 (122)	1,000 (305)	1,500 (457)	8,500 (2591)	20:1
4	Approach end of runways expected to accommodate instrument approaches having visibility greater than or equal to 3/4 statute mile. ³	200 (61)	400 (122)	3,400 (1158)	10,000 ⁴ (3048)	0 (0)	20:1
5	Approach end of runways expected to accommodate instrument approaches having visibility minimums less than 3/4 statute mile.	200 (61)	800 (244)	3,400 (1158)	10,000 ⁴ (3048)	0 (0)	34:1
6 ⁵	Approach end of runways expected to accommodate instrument approaches with vertical guidance.	0 (0)	Runway width 200 (61)	1520 (463)	10,000 ⁴ (3048)	0 (0)	30:1
7	Departure runway ends used for any instrument operations.	0 ⁶ (0)	See Figure 3-4.			40:1	

* The letters are keyed to those shown in Figure 3-2 of AC 150/5300-13A.

General Notes:

1. This table presents the dimensional standards applicable to varying runway types based on normal conditions (e.g. standard 3-degree glidepath angle). Meeting the requirements of this table will protect the use of the runway in both visual and instrument meteorological conditions near the airport while ensuring maximum runway utility. Final published visibility minimums are determined, in part, by applying the criteria described in FAA Order 8260.3.
2. For planning purposes, objects must remain clear of the surfaces provided in this table. The FAA Flight Procedures Team must mitigate existing obstacles that penetrate instrument procedures that cannot be removed, relocated, or lowered. A modification of standards is not issued for the surfaces described in this table, in accordance with FAA Order 5300.1.
3. Marking and lighting of obstacle penetrations to this surface or the use of a Visual Guidance Slope Indicator (VGSI), may avoid displacing the threshold. Contact the Flight Procedures Team if existing obstacles penetrate this surface.
4. 10,000 feet (3048 m) represents a nominal value for planning purposes. For runways with only straight-in approaches, the length is dependent on the TERPS visual descent point or DA point. For runways with both circling and straight-in approaches, the length is the greater of 10,000 feet or the TERPS visual descent point/DA point.
5. The criteria in Row 6 is required in addition to the applicable approach surface established within the table. Applicable to ILS, GLS, LPV, LNAV/VNAV, and RNP lines of minima.
6. Dimension A is measured relative to the TODA (to include clearway).

Federal grant assurances directly related to approaches.....

- ▶ Airport sponsors accepting federal AIP funding must agree to certain obligations and conditions associated with receiving the funds. These assurances require the grant recipients to maintain and operate their airports safely & efficiently and in accordance with specified conditions.
- ▶ Effective operation & maintenance of airport (#19)
- ▶ Hazard removal - Protection of approaches to airport (#20)
- ▶ Ensure compatible land use and zoning (#21)
- ▶ Adherence to the approved Airport Layout Plan (#29)

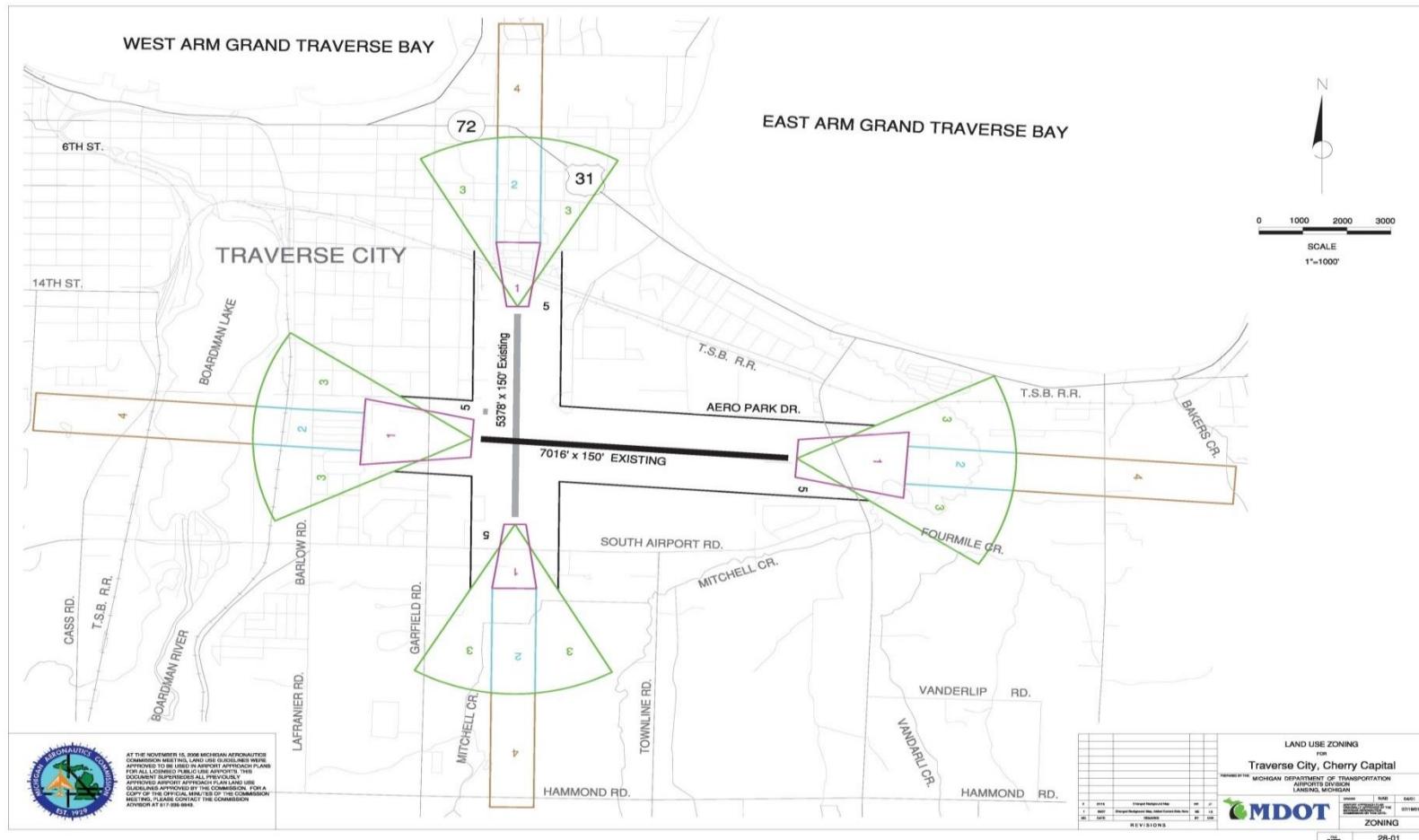
FAA Airport Inspection

- ▶ When an FAA Airport Inspector does an inspection at your airport, they provide you with an inspection report and an updated FAA 5010 Airport Master Record.
- ▶ They will provide comments about any deficiencies with meeting FAA standards.
- ▶ They are reporting Part 77 Obstruction Data on the Airport Master Record 5010 (lines 50-58) among other data updates. It's important for sponsors to review their inspection report and the 5010 in coordination with their current ALP.
- ▶ It's important to follow through in a timely manner with taking action on those obstructions identified that affect Part 77 Surfaces.

ALP Obstruction Tables & Approach Sheets

- ▶ The sponsor is required by grant assurances to maintain a current Airport Layout Plan (ALP).
- ▶ ALPs show runway surface obstruction tables. These tables show a proposed disposition (such as remove, lower, relocate, trim, DONH, etc.) for identified obstructions to Part 77 and TSS, if applied.
- ▶ The sponsor is responsible for evaluating their obstruction tables and taking timely action to follow through with the proposed disposition. A review of these tables will be done annually at the MAP meeting.
- ▶ If a Part 77 obstruction cannot be resolved or mitigated with the application of TSS, the sponsor may need to have further evaluation done through a FAA Aeronautical Study.
- ▶ Any identified obstruction to the TSS should be mitigated as soon as possible.
- ▶ The sponsor's ALP should be updated as these obstructions are resolved.

Michigan Approach Plan For TVC

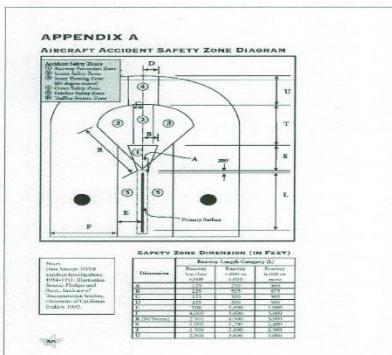


Michigan Approach Plan For TVC

- ▶ Land Use Characteristics
- ▶ Land Use Guidelines
- ▶ Land Use Planning Strategies

COMPATIBLE LAND USE MATRIX			
Adjacent Soil Zone	Land Use Characteristics	Land Use Guidelines	Land Use Planning Strategies *All actions are acceptable
Zone 2	Population Density Residential or Commercial Land Use	Avoid land uses which are incompatible with the natural environment, such as mining, oil refining, industrial plants, etc. Avoid land uses which are incompatible with the natural environment, such as mining, oil refining, industrial plants, etc. Develop Special Land Use guidelines	1. G-3 per capita 2. Land uses which are incompatible with the natural environment, such as mining, oil refining, industrial plants, etc. Create a height limit overlay ordinance which limits building height and building separation distances, etc. Develop a special land use ordinance which limits building height away from the water body, building footprint size, building height, etc. Develop height overlay ordinances which limit building height and building separation distances, etc. Develop all possible conditional use ordinances which limit building height, building footprint, building separation distance, etc. Develop environmental ordinances and/or environmental impact studies for schools, day care, hospitals, nursing homes, etc. Develop a conditional use ordinance which limits the amount of standing water, or groundwater, etc.
Special Function Land Use		Provide all Special Land Use guidelines	

COMPATIBLE LAND USE MATRIX			
Architecture Design Zone	Land Use Characteristics	Land Use Guidelines	Land Use Characteristics which are encouraged
Zone 1 Population Density	Acidic land uses which communicate with the natural environment.	Prohibit all acidic land uses. Land uses associated with acid rain should be prohibited. Chemical Industry and Hazardous Waste use are prohibited.	2-0-0 incompatible acidic land uses, which do not threaten the natural environment, e.g., agriculture, small metal mining
Residential or Non-Residential Land Use	Acidic land uses which communicate with the natural environment.	Prohibit all acidic land uses. Land uses associated with acid rain should be prohibited. Chemical Industry and Hazardous Waste use are prohibited.	2-0-0 incompatible acidic land uses, which do not threaten the natural environment, e.g., agriculture, small metal mining
Industrial Production Land Use	Prohibit all Special Production Land Use	Prohibit all Special Production Land Use	Prohibit all Special Production Land Use



AT THE SEPTEMBER 15, 2009 MICHIGAN AERONAUTICS COMMISSION MEETING, THESE LAND USE GUIDELINES WERE AMENDED AND APPROVED TO BE USED IN AIRPORT APPROACH PLANS FOR ALL AIRPORTS THAT USE APPROVED IN THIS DOCUMENT. AMENDS ALL PREVIOUSLY APPROVED AIRPORT APPROACH PLAN LAND USE GUIDELINES APPROVED BY THE COMMISSION. FOR A COPY OF THE OFFICIAL MINUTES OF THE COMMISSION MEETING, PLEASE CONTACT THE COMMISSION ADVISOR AT 517-338-9868.

ANY AIRPORT SPONSOR OR DULY AUTHORIZED
REPRESENTATIVE OF A ZONED LOCAL
GOVERNMENTAL UNIT MAY REQUEST THAT THE
MICHIGAN AERONAUTICS COMMISSION AMEND
AN AIRPORT APPROVAL PLAN. ALL SUCH
REQUESTS MUST INCLUDE THE PROPOSED CHANGE
FROM THE CURRENT PLAN, THE REASON FOR
THE REQUESTED CHANGE, AND ANY STANDARDS
USED TO JUSTIFY THE MODIFICATION. PLEASE
CONTACT THE AIRPORT'S DIVISION ZONING
SPECIALIST TO REQUEST ANY SUCH
AMENDMENTS.

The logo for the Michigan Department of Transportation (MDOT) Airports Division. It features a stylized green and blue graphic of the state of Michigan to the left of the acronym "MDOT" in a large, bold, blue sans-serif font. Below "MDOT", the text "MICHIGAN DEPARTMENT OF TRANSPORTATION" and "AIRPORTS DIVISION" are written in a smaller, all-caps, black sans-serif font.

LAND USE GUIDELINE
FOR
STATE OF MICHIGAN
AIRPORT APPROACH

Updated ALP Part 77 Obstruction Plan



Thank You

