



APPENDIX A GLOSSARY

APPENDIX A

GLOSSARY

A

Above Ground Level (AGL)	Elevation above the surface of the ground.
Advisory Circular (AC)	A series of external FAA publications consisting of all non-regulatory material of a policy, guidance, and informational nature.
Aircraft	A device that is used or intended to be used for flight in the air.
Aircraft Operation	A landing or takeoff by an aircraft.
Aircraft Owners and Pilots Association (AOPA)	A not-for-profit individual membership association serving the interests and needs of general aviation pilots and aircraft owners.
Aircraft Rescue and Fire Fighting (ARFF)	A facility designed to house emergency vehicles, extinguishing agents, and personnel responsible for minimizing the effects of an aircraft accident or incident.
Airport Advisory Area	The area within 10 statute miles of an airport where a flight service station is located, but where there is no control tower in operation.
Airport Authority	Similar to a port authority but with the single purpose of setting policy and management direction for airports within its jurisdiction.
Airport Beacon	A visual navigation aid displaying alternating lights used to identify the type of airport.
Airport Elevation	The highest point of an airport's usable runways measured in MSL.
Airport Improvement Program (AIP)	A program created under the Airport and Airway Improvement Act of 1982 to provide continued funding for airport planning and development.
Airport Layout Plan (ALP)	A plan for an airport showing boundaries and proposed additions to all areas owned or controlled by the sponsor for airport purposes, the location and nature of existing and proposed airport facilities and structures, and the location on the airport of existing and proposed non-aviation areas and improvements thereto.
Airport Master Plan (AMP)	A plan of the ultimate development of a specific airport. It presents the research and logic from which the plan was evolved and displays the plan in a graphic and written format.
Airport Movement Area Safety System (AMASS)	Enhances the function of the ground mapping radar by providing automated alerts and warnings of potential runway incursions and other hazards.
Airport Obstruction Chart (AOC)	A 1:12,000 scale graphic depicting Federal Aviation Regulations Part 77 surfaces, a representation of objects that penetrate these surfaces, runway, taxiway, and ramp areas,

navigational aids, prominent airport buildings, plus a selection of roads and other planimetric detail in the airport vicinity.

Airport Reference Point (ARP)	The latitude and longitude of the approximate center of the airport.
Airport Sponsor	A public agency or tax-supported organization, such as an airport authority, that is authorized to own and operate the airport, to obtain property interests, to obtain funds, and to be legally, financially, and otherwise able to meet all applicable requirements of current laws and regulations.
Airport Surveillance Radar (ASR)	Approach and departure control radar used to detect and display an aircraft's position in the terminal area. Provides a 360-degree radar picture of the airspace surrounding the airport.
Air Route Traffic Control Center (ARTCC)	A facility established to provide air traffic control service to aircraft operating on an IFR flight plan within controlled airspace and principally during the enroute phase of flight.
Airspace	Space in the air above the surface of the earth or a particular portion of such space, usually defined by the boundaries of an area on the surface projected upward.
Air Taxi Aircraft	An aircraft operated by the holder of an Air Taxi Operating Certificate, which authorizes the carriage of passengers, mail, or cargo for revenue in accordance with FAR Parts 135 and 121.
Air Traffic Control (ATC)	A service operated by appropriate authority to promote the safe, orderly, and expeditious flow of air traffic.
Air Traffic Control System Command Center (ATCSCC)	A facility responsible for the operation of four distinct but integrated functions: central flow control, central altitude reservations, airport reservation position, and the air traffic service contingency command post.
Air Traffic Control Tower (ATCT)	A central operations facility in the terminal air traffic control system, consisting of a tower cab structure including an associated IFR room if radar equipped, using air/ground communications and/or radar, visual signaling, and other devices to provide safe and expeditious movement of terminal air traffic.
Air Transport Association (ATA)	An organization for the principal U.S. airlines that supports and assists its members by promoting the air transport industry and the safety, cost effectiveness, and technological advancement of its operations; advocating common industry positions before state and local governments; conducting designated industry-wide programs; and assuring governmental and public understanding of all aspects of air transport.
Alert Area	Special use airspace that may contain a high volume of pilot training activities or an unusual type of aerial activity.
Altitude	Height expressed in units of distance above a reference plane, usually above mean sea level or above ground level.
Approach Lighting System (ALS)	An airport lighting facility that provides visual guidance to landing aircraft by radiating light beams in a directional pattern

	by which the pilot aligns the aircraft with the extended centerline of the runway on the final approach and landing.
Approach Surface	An imaginary surface longitudinally centered on the extended centerline of the runway, beginning at the end of the primary surface and rising outward and upward to a specified height above the established airport elevation.
Apron	A defined area, on a land airport, intended to accommodate aircraft for purposes of loading or unloading passengers or cargo, refueling, parking, or maintenance.
Area Navigation (RNAV)	Application of the navigation process providing the capability to establish and maintain a flight path on any arbitrary chosen course that remains within the coverage area of navigation sources being used.
Automated Terminal Information Service (ATIS)	The continuous broadcast of recorded non-control information in selected terminal areas. Its purpose is to improve controller effectiveness and to relieve frequency congestion by automating the repetitive transmission of essential but routine information.
Automatic Dependent Surveillance -Broadcast (ADS-B)	A satellite-based technology that broadcasts aircraft identification, position, and speed with once-per-second updates. A national ADS-B program office has been established.
Automated Weather Observing System (AWOS)	Gathers weather data from unmanned sensors, automatically formulates weather reports, and distributes them to airport control towers.
Automatic Direction Finder (ADF)	An aircraft radio navigation system which senses and indicates the direction to an L/MF non-directional radio beacon (NDB) or commercial broadcast station.
Avigation Easement	A grant or property interest in land over which a right of unobstructed flight in the airspace is established.
B	
Based Aircraft	The total number of active general aviation aircraft that use or may be expected to use an airport as a home base.
Basic Utility (BU) Airport	An airport that accommodates most single-engine and many of the small twin-engine aircraft.
Bearing	The horizontal direction to or from any point, usually measured clockwise from true north (true bearing), magnetic north (magnetic bearing), or some other reference point, through 360 degrees.
Blast Fence	A barrier that is used to divert or dissipate jet or propeller blast.
Blast Pad	A specially prepared surface placed adjacent to the ends of runways to eliminate the erosive effect of the high wind forces produced by airplanes at the beginning of their takeoff rolls.
Building Restriction Line	A line shown on the airport layout plan beyond which airport buildings must not be positioned in order to limit their proximity to aircraft movement areas.

C

Category I (CAT-I)	An ILS that provides acceptable guidance information from the coverage limits of the ILS to the point at which the localizer course line intersects the glide path at a height of 100 feet above the horizontal plane containing the runway threshold. Supports landing minima as low as 200 feet HAT and 1,800 feet RVR.
Category II (CAT-II)	An ILS that provides acceptable guidance information from the coverage limits of the ILS to the point at which the localizer course line intersects the glide path at a height of 50 feet above the horizontal plane containing the runway threshold. Supports landing minima as low as 100 feet HAT and 1,200 feet RVR.
Category III (CAT-III)	An ILS that provides acceptable guidance information from the coverage limits of the ILS with no decision height specified above the horizontal plane containing the runway threshold.
Capital Improvement Plan (CIP)	The primary planning tool used by the Federal Aviation Administration for systematically identifying, prioritizing, and assigning funds to critical airport development and associated capital needs for the National Airspace System. Also serves as the basis for distribution of grant funds under the Airport Improvement Program.
Ceiling	The height above the earth's surface of the lowest layer of clouds which is reported as broken or overcast or the vertical visibility into an obscuration.
Common Traffic Advisory Frequency (CTAF)	A frequency designed for the purpose of carrying out airport advisory practices while operating to or from an uncontrolled airport. The CTAF may be a UNICOM, MULTICOM, FSS, or tower frequency and it is identified in appropriate aeronautical publications.
Conical Service	A surface extending from the periphery of the horizontal surface outward and upward at a slope of 20 to 1 for the horizontal distances and to the elevations above the airport elevation as prescribed in FAR Part 77.
Controlled Airport	An airport that has an operating control tower.
Controlled Airspace	Airspace designed as a continental control area, control area, control zone, terminal control area, or transition area, within which some or all aircraft may be subject to air traffic control.
Crosswind	A wind which is not parallel to a runway or the path of an aircraft.
Crosswind Component	A wind component which is at a right angle to the runway or the flight path of an aircraft.

D

Decibel (dB)	A unit of noise level representing a relative quantity. This reference value is a sound pressure of 20 micronewtons per square meter.
Decision Height (DH)	With respect to the operating of aircraft means the height at

which a decision must be made, during the ILS or PAR instrument approach, to either continue the approach or to execute a missed approach.

Department of Transportation (DOT)

Established in 1966 to promote coordination of existing federal programs and to act as a focal point for future research and development efforts in transportation.

Discretionary Funds

Grants that go to projects that address goals established by Congress, such as enhancing capacity, safety, and security or mitigating noise at all types of airports

Displaced Threshold

When the landing area begins at a point on the runway other than the designated beginning of the runway.

Distance Measuring Equipment (DME)

Equipment (airborne and ground) to measure, in nautical miles, the slant range distance of an aircraft from the navigational aid.

E

Emergency Locating Transmitter (ELT)

A battery-operated radio transmitter attached to the aircraft structure that transmits on 121.5 MHz and 243.0 MHz. It aids in locating downed aircraft.

Environmental Assessment (EA)

A concise public document for which a Federal agency is responsible that serves to briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement of a finding of no significant impact.

Environmental Impact Statement (EIS)

A federal document that reflects the FAA's final evaluation of the environmental impact of a proposed action.

Essential Air Service (EAS)

Guarantees air carrier service to selected small cities and provides subsidies if needed so as to prevent these cities from losing service.

F

Federal Aviation Administration (FAA)

Created by the act that established the DOT. Assumed all of the responsibilities of the former Federal Aviation Agency.

Federal Aviation Regulations (FAR)

The codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government for aviation.

Federal Inspection Services (FIS)

Conducts customs and immigration services including passport inspection, inspection of baggage, and collection of duties on certain imported items, and sometimes inspection for agricultural materials, illegal drugs, or other restricted items.

Final Approach Fix (FAF)

Designated point at which the final approach segment begins for a non-precision approach.

Finding of No Significant Impact (FONSI)

A federal document prepared by a Federal agency that briefly presents the reasons why an action will not have a significant effect on the human environment and for which an environmental impact statement will not be prepared.

Fixed Base Operator (FBO)	A business located at an airport that provides a variety of services to pilots, which may include aircraft rental, training, fueling, maintenance, parking, and the sale of pilot supplies.
Flight Level (FL)	Designations for altitudes within controlled airspace Class A.
Flight Service Station (FSS)	A central operations facility in the national flight advisory system utilizing data interchange facilities for the collection and dissemination of NOTAM, weather, and administrative data and providing preflight and inflight advisory service and other services to pilots via air/ground communication facilities.
G	
General Aviation (GA)	That portion of civil aviation that encompasses all facets of aviation except air carriers holding a certificate of convenience and necessity and large aircraft commercial operators.
General Utility (GU) Airports	Accommodates all general aviation aircraft.
Global Positioning System (GPS)	A satellite-based navigation system that will enhance user preferred routing, reduce separation standards, and increase access to airports under instrument meteorological conditions through more precision approaches.
H	
Height Above Touchdown (HAT)	A designated height measured from the touchdown zone elevation or the threshold elevation of the runway served by the instrument approach.
High Intensity Runway Lights (HIRL)	The highest classification for the intensity of the lights bordering the sides of the runway.
Horizontal Surface	A specified portion of a horizontal plane located 150 feet above the established airport elevation which established the height above which an object is determined to be an obstruction to air navigation.
I	
Initial Approach Fix (IAP)	The designated point at which the initial approach segment begins for an instrument approach.
Instrument Approach Procedures (IAP)	A procedure that allows an aircraft to descend safely by reference to instruments from the enroute altitude to a point near the runway at the pilot's discretion from which a landing can be made visually.
Instrument Flight Rules (IFR)	FAR rules that govern the procedures of conducting flight in weather conditions below VFR weather minimums. The term IFR is also used to define weather conditions and the type of flight plan under which an aircraft is operating.
Instrument Landing System (ILS)	A system that provides, in the aircraft, the lateral, longitudinal, and vertical guidance necessary for a landing.
Instrument Meteorological Conditions (IMC)	Meteorological conditions expressed in terms of visibility and ceiling less than the minimum specified for visual meteorological conditions.

Itinerant Operation	Operation by an aircraft other than local operations. J K
Knots (Kts)	A unit of speed equivalent to 1.15 statute miles per hour. L
Large Aircraft	Aircraft of more than 12,500 pounds maximum certificated takeoff weight.
Lateral Precision Performance with Vertical Guidance (LPV)	The Wide Area Augmentation System (WAAS) offers an opportunity for airports to gain an instrument landing system (ILS) like approach capability without the purchase or installation of any ground-based navigation equipment at the airport. The WAAS-enabled vertically-guided approach procedures provide approach minimums as low as 200 feet at qualifying airports.
Local Operation	Operations performed by aircraft that (1) operate in the local traffic pattern or within sight of the airport; (2) are known to be departing for, or arriving from, flight in local practice areas within a 20-mile radius of the airport; or (3) execute simulated instrument approaches or low passes at the airport.
Longitude	Measurement east or west of the Prime Meridian in degrees, minutes, and seconds. Lines of longitude are also called meridians. The Prime Meridian is zero degrees longitude and runs through Greenwich, England.
Long Range Navigation System (LORAN)	A navigational system by which lines of position are determined by measuring the difference in the time of reception of synchronized pulse signals from fixed transmitters.
Low Intensity Runway Lights (LIRL)	The lowest classification for the intensity of the lights bordering the sides of the runway. M
Mean Sea Level (MSL)	The average height of the surface of the sea for all stages of tide.
Medium Intensity Runway Lights (MIRL)	The middle classification for the intensity of the lights bordering the sides of the runway.
Microwave Landing System (MLS)	An instrument approach and landing system operating in the microwave frequencies that provides guidance in azimuth, elevation, and distance measurement.
Military Operations Area (MOA)	Special use airspace of defined vertical and lateral limits established to help VFR traffic identify locations where military activities are conducted.
Military Training Route (MTR)	Route depicted on an aeronautical chart for the conduct of military flight training at speeds above 250 knots.

N

National Airspace System (NAS)	A network of navigational aids and a number of air traffic control facilities designed to operate in conjunction with the various defined classes of airspace.
National Plan of Integrated Airport Systems (NPIAS)	A national airport system plan published and revised every two years by the Secretary of Transportation for the development of public-use airports in the United States.
National Transportation Safety Board (NTSB)	Created by the act that established the DOT to determine the cause of transportation accidents and review on appeal the suspension or revocation of any certificates or licenses issued by the Secretary of Transportation.
Nautical Mile (Nm)	A unit of length equivalent to 1.15 statute miles.
Navigational Aid (NAVAID)	Any facility used as, available for use as, or designed for use as an aid to air navigation, including landing area, lights, any apparatus or equipment for disseminating weather information, for signaling, for radio direction-finding, or for radio or other electronic communication, and any other structure or mechanism having similar purpose for guiding and controlling flight in the air or the landing or takeoff of aircraft
Non-Directional Beacon (NDB)	Ground-based navigational aid
Non-Precision Approach (NPA)	Provides an aircraft with horizontal course guidance to a runway surface.
Notice to Airmen (NOTAM)	A notice containing information concerning the establishment, condition, or change in any component of, or hazard in, the National Airspace System, the timely knowledge of which is essential to personnel concerned with flight operations.

O

Obstruction Light	A light, or one of a group of lights, usually red or white, mounted on a surface structure or natural terrain to warn pilots of the presence of a flight hazard.
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P

Pilot Controlled Lighting	Runway lighting systems which are controlled by keying the aircraft's microphone on a specific frequency.
Precision Approach (PA)	A standards instrument approach procedure in which an electronic glideslope is provided.
Precision Approach Path Indicator (PAPI)	A visual-approach slope aid system consisting of four lights on either side of the approach runway that gives precise indication to the pilot of the approach path of the aircraft.
Precision Approach Radar (PAR)	A radar facility in the terminal air traffic control system used to detect and display, with a high degree of accuracy, azimuth, range, and elevation of an aircraft on the final approach to a runway.
Primary Surface	A rectangular surface longitudinally centered about a runway.

Prohibited Area	Airspace of defined dimensions identified by an area on the surface of the earth within which the flight of aircraft is prohibited.
	Q
	R
Radial	A navigational signal generated by a VOR or VORTAC, measured as a magnetic bearing from the station.
Restricted Area	Designated special use airspace within which aircraft flight, while not prohibited, is subject to restrictions.
Runway (RWY)	A defined rectangular area on a land airport prepared for the landing and taking off of aircraft along its length.
Runway Alignment Indicator Light (RAIL)	A series of five or more sequenced flashing light installed on the extended centerline of the runway. The maximum spacing between lights is 200 feet, extending out from 1,600 feet to 3,000 feet from the runway threshold.
Runway End Identifier Lights (REIL)	An airport lighting facility in the terminal area navigation system consisting of one flashing white high-intensity strobe light installed at each approach end corner of a runway and directed toward the approach zone, which enable the pilot to identify the threshold of a usable runway.
Runway Gradient	The amount of change in elevation over the length of the runway.
Runway Visibility Zone (RVZ)	An area formed by imaginary lines connecting two intersecting runways' visibility points.
Runway Visual Range (RVR)	An instrumentally derived value that represents the horizontal distance a pilot can see down the runway from the approach end.
	S
Sectional Chart	Most commonly used chart for VFR flight. Each chart covers six degrees to eight degrees of longitude and approximately four degrees of latitude and is given the name of a primary city within its coverage. The scale of a sectional chart is 1:500,000.
Segmented Circle	A set of visual indicators that provide traffic pattern information at airports without operating control towers.
Single Wheel Gear (SWG)	
Special Use Airspace	Defined airspace areas where aircraft operations may be limited.
Small Aircraft	Aircraft of 12,500 pounds or less maximum certificated takeoff weight.
Standard Instrument Departure Procedures (SIDS)	A procedure used after takeoff to provide a transition between the airport and the enroute structure.

Standard Terminal Arrival Route (STAR)	A procedure for departing the enroute structure and navigating to a destination.
Stopway	An area beyond the takeoff runway which is designed to support an airplane during an aborted takeoff without causing structural damage to the airplane. It cannot be used for takeoff, landing, or taxiing.

T

Taxilane	The portion of the aircraft parking area used for access between taxiways and aircraft parking positions.
Taxiway	A defined path established for the taxiing of aircraft from one part of an airport to another.
Terminal Area Forecast (TAF)	The official forecast of aviation activity, both aircraft and enplanements, at FAA facilities. This includes FAA-towered airports, federally contracted towered airports, non-federal towered airports, and many non-towered airports.
Terminal Instrument Procedures Standards (TERPS)	Procedures used for conducting independent instrument approaches to converging runways under instrument meteorological conditions.

Terminal Radar Approach Control (TRACON)	An air navigation system facility responsible for monitoring the enroute and terminal segment of air traffic in the airspace surrounding airports with moderate to high-density traffic
Threshold	The designated beginning of the runway that is available and suitable for the landing of airplanes.
Threshold Crossing Height (TCH)	The height of the straight-line extension of the visual or electronic glideslope above the runway threshold.
Touchdown	The point at which an aircraft first makes contact with the landing surface.
Touchdown Zone (TDZ)	The area of a runway near the approach end where aircraft normally alight.
Traffic Pattern	The traffic flow that is prescribed for aircraft landing and taking off from an airport. The usual components are the departure, crosswind, downwind, and base legs; and the final approach.

U

Uncontrolled Airport	A nontower airport where control of VFR traffic is not exercised.
Uncontrolled Airspace	Airspace within which aircraft are not subject to air traffic control.
Universal Communication (UNICOM)	A non-government communications facility which may provide airport information at certain airports.

V

Very High Frequency Omnidirectional Ranging (VOR)	Ground based navigational system consisting of very high frequency omnidirectional range stations that provide course guidance.
Victor Airway	An airway system based on the use of VOR facilities.
Visual Approach Slope Indicator (VASI)	An airport lighting facility in the terminal area navigation system used primarily under VFR conditions. It provides vertical visual guidance to aircraft during approach and landing by radiating a direction pattern of high intensity red and white focused light beams that indicate to the pilot that the aircraft is on path, above path, or below path.
Visual Flight Rules (VFR)	Rules that govern the procedures for conducting flight under visual conditions.
Visual Meteorological Conditions (VMC)	Meteorological conditions expressed in terms of visibility and ceiling equal to or better than specified minima.
VORTAC	Combined VOR and TACAN

W

Warning Area	Airspace of defined dimensions, extending from three nautical miles outward from the coast of the United States, which contains activity that may be hazardous to nonparticipating aircraft.
Wide-Area Augmentation System (WAAS)	An augmentation of GPS that includes integrity broadcasts, differential corrections, and additional ranging signals; its primary objective is to provide accuracy, integrity, availability, and continuity required to support all phases of flight.
World Aeronautical Chart (WAC)	Similar to a sectional chart, but with a scale of 1:1,000,000 provides less detail and is best suited for flight planning.

X

Y

Z



APPENDIX B

FAA Terminal Area Forecast

APO TERMINAL AREA FORECAST DETAIL REPORT

Forecast Issued December 2009

OSC

Fiscal Year	AIRCRAFT OPERATIONS												Total Tracon Ops	Based Aircraft	
	Enplanements			Itinerant Operations				Local Operations							
	Air Carrier	Commuter	Total	Air Carrier	Air Taxi & Commuter	GA	Military	Total	Civil	Military	Total	Total Ops			
REGION:AGL STATE:MI LOCID:OSC															
CITY:OSCODA AIRPORT:OSCODA-WURTSMITH															
1990	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
1992	75	0	75	0	0	0	0	0	0	0	0	0	0	-	0
1993	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
1994	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
1995	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
1996	0	0	0	0	0	500	0	500	500	0	500	1,000	0	-	2
1997	37	0	37	0	0	520	0	520	1,100	0	1,100	1,620	0	-	30
1998	0	0	0	0	0	520	0	520	1,100	0	1,100	1,620	0	-	30
1999	0	0	0	0	0	3,500	0	3,500	5,000	0	5,000	8,500	0	-	52
2000	0	0	0	0	0	3,500	0	3,500	5,000	0	5,000	8,500	0	-	52
2001	0	0	0	0	0	2,400	0	2,400	3,590	0	3,590	5,990	0	-	52
2002	0	0	0	0	0	5,500	0	5,500	3,660	0	3,660	9,160	0	-	52
2003	0	0	0	0	0	2,400	0	2,400	3,590	0	3,590	5,990	0	-	52
2004	0	0	0	0	0	2,400	0	2,400	3,590	0	3,590	5,990	0	-	53
2005	0	0	0	0	0	4,999	0	4,999	3,333	0	3,333	8,332	0	-	53
2006	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	0	-	12
2007	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	0	-	12
2008	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	0	-	28
2009*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	0	-	28
2010*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	0	-	28
2011*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	0	-	28
2012*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	0	-	28

2013*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28
2014*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28
2015*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28
2016*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28
2017*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28
2018*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28
2019*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28

APO TERMINAL AREA FORECAST DETAIL REPORT

Forecast Issued December 2009

OSC

Fiscal Year	AIRCRAFT OPERATIONS													
	Enplanements			Itinerant Operations					Local Operations			Total Ops	Total Tracon Ops	Based Aircraft
	Air Carrier	Commuter	Total	Air Carrier	Air Taxi & Commuter	GA	Military	Total	Civil	Military	Total			
2020*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28
2021*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28
2022*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28
2023*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28
2024*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28
2025*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28
2026*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28
2027*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28
2028*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28
2029*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28
2030*	0	0	0	0	0	3,543	0	3,543	5,314	0	5,314	8,857	-	28



APPENDIX C
Airport Capital Improvement Program
(ACIP)

MICHIGAN STATE BLOCK GRANT PROGRAM												
TEN-YEAR AIRPORT CAPITAL IMPROVEMENT PROGRAM (CIP) FY-2010* to FY-2020												
*ACIP includes current development year (2010 already programmed - minor changes acceptable)												
Airport Name: Oscoda-Wurtsmith Airport							Date prepared: July 24, 2009					
Associated City: Oscoda, Michigan							Prepared By: R W Armstrong					
Sponsor: Oscoda-Wurtsmith Airport authority							Sponsor email address & phone: oscairport@charter.net (989) 738-1111					
Airport Identifier: OSC							FINAL ACIP due to MDOT AERO: no later than 12/01/09					
Development Year	Project Description	Shown on ALP? (Yes or No)	ACIP Code**	NPIAS Priority Rating**	Federal Entitlements	Federal Apportionment	Federal Discretionary	State	Local	Total	Remarks/Item Justification - Provide as much detail as possible.	
EDA	rehab losco Apron (Phase I) EDA Funding	Yes	RE/AP/IM	56						2,500,000	Will increase safety by eliminating a constant source of FOD	1
2010	twy A safety area & misc. rwy shoulder repair (phase I)	Yes	SA/TW/CO	90				36,200	36,200	1,448,000	Will increase safety by eliminating a constant source of FOD	2
2010	snow removal equipment (plow truck & motor grader)	NA	ST/EQ/SN	44				13,500	13,500	540,000	Existing equipment is old, expensive to maintain, and difficult to find parts for	3
2010	SRE storage building modification	Yes	ST/BD/SN	36				12,500	12,500	500,000	Upgrade building to fit new equipment and improve access for the older equipment	4
2010	crack sealing - runway	Yes	OT/RW/IM	27				1,875	1,875	75,000	Part of a routine crack sealing program intended to prolong pavement life	5
2011	rehabilitate losco Apron (phase II)	Yes	RE/AP/IM	56				71,400	71,400	2,856,000	Will increase safety by eliminating a constant source of FOD	6
2011	snow removal equipment (broom & loader)	NA	ST/EQ/SN	44				10,825	10,825	433,000	Existing equipment is old, expensive to maintain, and difficult to find parts for	7
2011	twy A safety area (phase II)	Yes	SA/TW/CO	90				24,400	24,400	976,000	Will increase safety by eliminating a constant source of FOD	8
2012	rehabilitate losco Apron (Phase III)	Yes	RE/AP/IM	56				75,000	75,000	3,000,000	Will increase safety by eliminating a constant source of FOD	9
2012	EA for N-S crosswind rwy & twy	Yes	EN/RW/CO	70				2,000	2,000	80,000	Needed prior to beginning the design for N-S runway	10
2012	twy A safety area (phase III)	Yes	SA/TW/CO	90				34,725	34,725	1,389,000	Will increase safety by eliminating a constant source of FOD	11
2012	crack sealing	Yes	OT/RW/IM	27				1,875	1,875	75,000	Part of a routine crack sealing program intended to prolong pavement life	12
2012	guidance sign update / upgrade	No	PL/TW/SG	64				1,450	1,450	58,000	Clarify the proper route for pilots to take to the GA area	13
2013	rehabilitate losco Apron (Phase IV)	Yes	RE/AP/IM	56				70,100	70,100	2,804,000	Will increase safety by eliminating a constant source of FOD	14
2013	rehabilitate taxiway E	Yes	RE/TW/IM	62				89,500	89,500	3,580,000	Will increase safety by eliminating a constant source of FOD	15
2013	twy A safety area (phase IV)	Yes	SA/TW/CO	90				11,625	11,625	465,000	Will increase safety by eliminating a constant source of FOD	16
2013	paint marking	Yes	OT/RW/IM	27				1,875	1,875	75,000	Part of a routine paint marking program	17
2014	twy A safety area (phase V)	Yes	SA/TW/CO	90				33,175	33,175	1,327,000	Will increase safety by eliminating a constant source of FOD	18
2014	design - N-S crosswind rwy & twy	Yes	OT/RW/CO	30				6,250	6,250	250,000	Provide a crosswind runway for smaller aircraft that isn't presently available	19
2014	rehab remainder of GA hangar pavement	Yes	RE/TW/IM	62				23,900	23,900	956,000	Will increase safety by eliminating a constant source of FOD	20
2014	snow removal equipment (2 plow trucks)	NA	ST/EQ/SN	44				16,175	16,175	647,000	Existing equipment is old, expensive to maintain, and difficult to find parts for	21
2014	crack sealing	Yes	OT/RW/IM	27				1,875	1,875	75,000	Part of a routine crack sealing program intended to prolong pavement life	22
2014	improve runway 6/24 extended RSA	Yes	SA/RW/SF	89				21,200	21,200	848,000	Will improve the RSA for 6/24 to meet federal standards	23
2015	twy A safety area (phase VI)	Yes	SA/TW/CO	90				14,425	14,425	577,000	Will increase safety by eliminating a constant source of FOD	24
2015	construct - N-S crosswind rwy & twy	Yes	OT/RW/CO	30				96,625	96,625	3,865,000	Provide a crosswind runway for smaller aircraft that isn't presently available	25
2016	construct 10 unit T hangar	Yes	OT/BD/CO	23				10,500	10,500	420,000	Currently all T-hangar space is rented and has a need for additional space	26
2016	paint marking	Yes	OT/RW/IM	27				1,875	1,875	75,000	Part of a routine paint marking program	27
2016	crack sealing	Yes	OT/RW/IM	27				1,875	1,875	75,000	Part of a routine crack sealing program intended to prolong pavement life	28
2017	relocate west portion of twy E	Yes	RE/TW/IM	62				48,775	48,775	1,951,000	Will relocate taxiway E to meet federal standards for B-747 traffic	29
2017	snow removal equipment (plow truck)	NA	ST/EQ/SN	44				8,375	8,375	335,000	Existing equipment is old, expensive to maintain, and difficult to find parts for	30
2017	design runway 6/24 rehabilitation	Yes	RE/RW/IM	66				12,375	12,375	495,000	Programmed year prior to construction due to budget constraints	31
2018	design - rehab twy A	Yes	RE/TW/IM	62				8,975	8,975	359,000	Programmed year prior to construction due to budget constraints	32
2018	crack sealing	Yes	OT/RW/IM	27				1,875	1,875	75,000	Part of a routine crack sealing program intended to prolong pavement life	33
2018	runway 6/24 rehabilitation	Yes	RE/RW/IM	66				170,450	170,450	6,818,000	Will increase safety by eliminating an expected source of FOD	34
2019	taxiway rehab (A, B, C)	Yes	RE/TW/IM	62				73,700	73,700	2,948,000	Will increase safety by eliminating an expected source of FOD	35
2019	paint marking	Yes	OT/RW/IM	27				1,875	1,875	75,000	Part of a routine paint marking program	36
2020	rehab twy D and construct hold apron	Yes	RE/TW/CO	66				10,650	10,650	426,000	Improve safety by providing a hold apron and by eliminating an expected source of FOD	37
2020	rehab GA apron	Yes	RE/AP/IM	56				14,475	14,475	579,000	Will increase safety by eliminating an expected source of FOD	38

**In accordance with FAA Order 5100.39A, Appendix 6 - Fields need to be completed

Fed Share	State Share	Local Share	Total
39,453,500	1,038,250	1,038,250	41,530,000



APPENDIX D

Instrument Approach Procedures

RNAV (GPS) RWY 6

OSCODA-WURTSMITH (OSC)

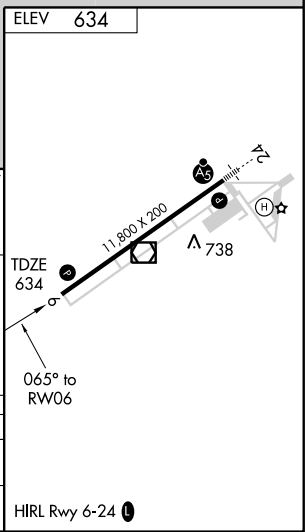
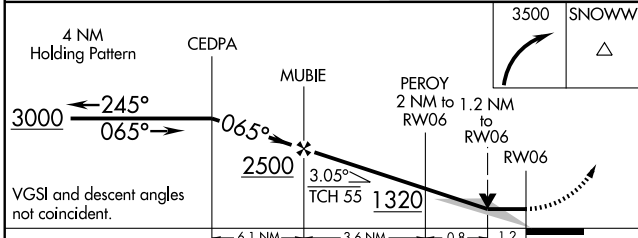
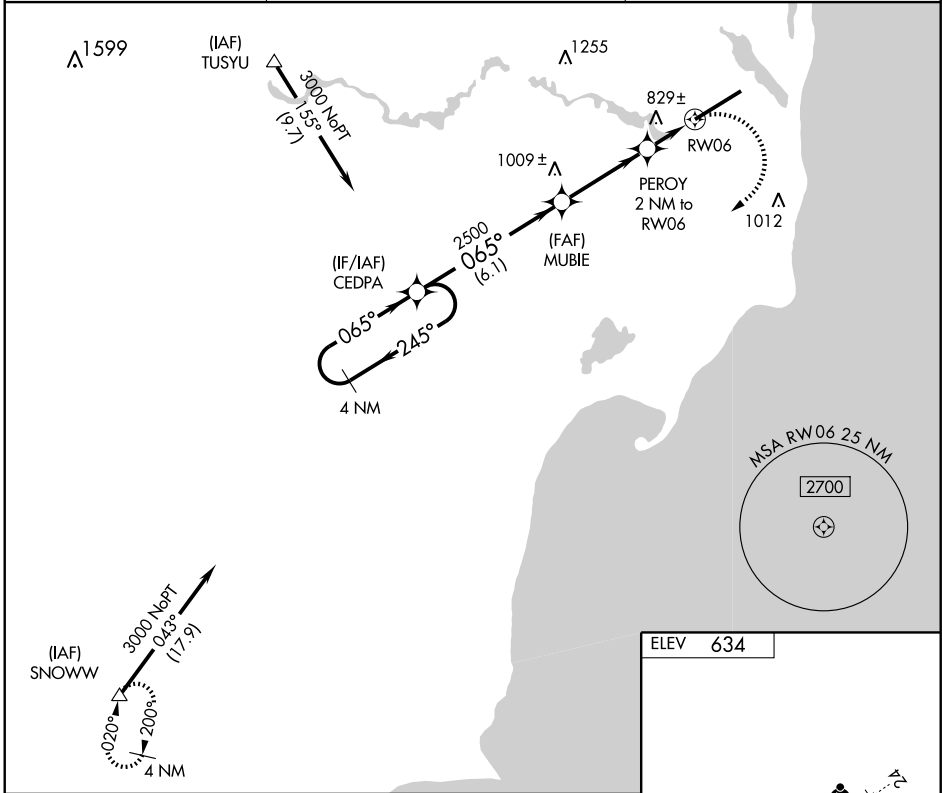
APP CRS	Rwy Idg	11,800
065°	TDZE	634
	Apt Elev	634

▼ Circling NA southeast of Rwy 6-24. DME/DME RNP-0.3 NA. VDP NA when using Alpena altimeter setting. When local altimeter setting not received, use Alpena altimeter setting and increase all MDAs 100 feet, increase visibility for LNAV Cats C and D and Circling Cat C ¼ mile.

▲

MISSED APPROACH: Climbing right turn to 3500 direct SNOWWW and hold.

AWOS-3 116.1	MINNEAPOLIS CENTER 118.525 251.15	UNICOM 123.0 (CTAF) ①
------------------------	---	--



CATEGORY	A	B	C	D
LNAV MDA	1080-1	446 (500-1)	1080-1¼ 446 (500-1¼)	1080-1½ 446 (500-1½)
CIRCLING	1140-1	506 (600-1)	1140-1½ 506 (600-1½)	1200-2 566 (600-2)

EC-1, 08 APR 2010 to 06 MAY 2010

EC-1, 08 APR 2010 to 06 MAY 2010

OSCODA, MICHIGAN

AL-32 (FAA)

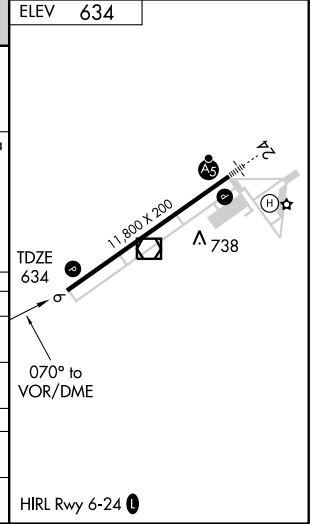
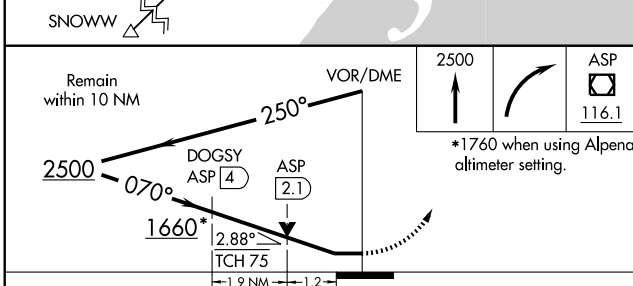
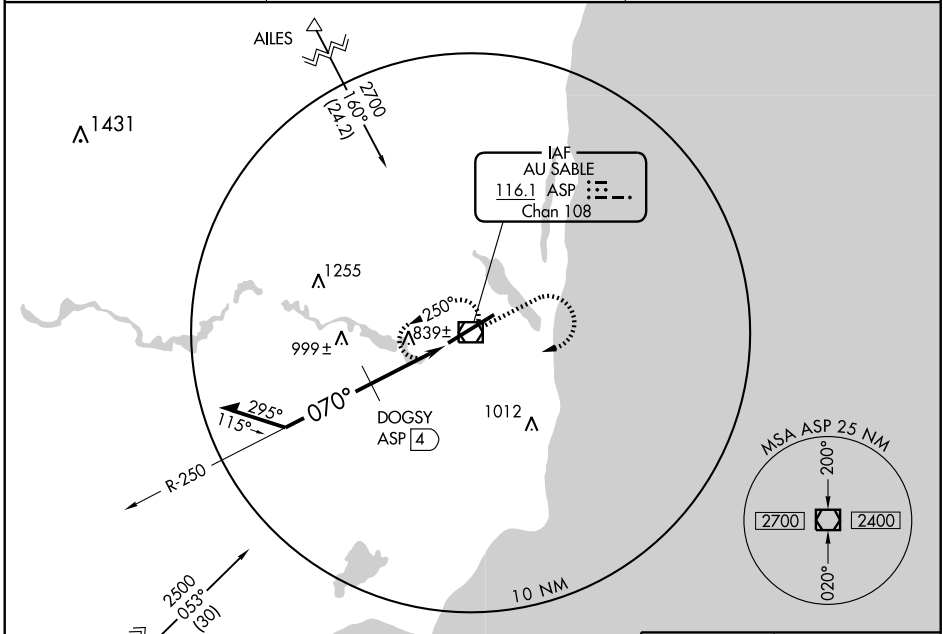
VOR/DME ASP 116.1 Chan 108	APP CRS 070°	Rwy Idg 11,800 TDZE 634 Apt Elev 634
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VOR RWY 6

OSCODA-WURTSMITH (OSC)

NA Circling NA southeast of Rwy 6 and 24. VDP NA when using Alpena altimeter setting. When local altimeter setting not received, use Alpena altimeter setting and increase all MDAs 100 feet and DOGSY Fix minimums visibility S-6/Circling Cat C ¼ mile, S-6 Cat D ¼ mile.

MISSED APPROACH: Climb to 2500 then right turn direct ASP VOR/DME and hold.



CATEGORY	A	B	C	D
S-6	1660-1¼ 1026 (1100-1¼)	1660-1½ 1026 (1100-1½)	1660-3	1026 (1100-3)
CIRCLING	1660-1¼ 1026 (1100-1¼)	1660-1½ 1026 (1100-1½)	1660-3	1026 (1100-3)
DOGSY FIX MINIMUMS				
S-6	1100-1	466 (500-1)	1100-1¼ 466 (500-1¼)	1100-1½ 466 (500-1½)
CIRCLING	1140-1	506 (600-1)	1140-1½ 506 (600-1½)	1200-2 566 (600-2)

OSCODA, MICHIGAN
Amdt 1 08157

44°27'N - 83°24'W

OSCODA-WURTSMITH (OSC)
VOR RWY 6

EC-1, 08 APR 2010 to 06 MAY 2010

EC-1, 08 APR 2010 to 06 MAY 2010



APPENDIX E
FAA Airport Design – Runway and
Taxiway Pavement Shoulders

Chapter 8. THE EFFECTS AND TREATMENT OF JET BLAST

800. INTRODUCTION. The forces of jet exhaust (jet blast) far exceed the forces of propwash from the most powerful propeller airplane. These high velocities are capable of causing bodily injury to personnel and damage to airport equipment or facilities. This chapter suggests means to minimize the effects of jet blast.

801. JET BLAST EFFECTS. Jet blast affects all operational areas of the airport. In terminal, maintenance, and cargo areas, personnel safety is the overriding consideration. Blast velocities greater than 30 m.p.h. (48 km/hr) can cause loose objects on the pavement to become missiles capable of causing injury to personnel who may be at a considerable distance behind the airplane. In other operational areas, sudden gusts averaging more than 20 m.p.h. (31 km/hr) are hazardous, and when striking moving vehicles or airplanes, are more dangerous than continuous velocities of the same magnitude. Velocities of this magnitude can occur over 2,000 feet (600 m) to the rear of certain airplanes when their engines are operating at takeoff thrust.

a. Jet Blast Pressures. Jet exhaust velocities are irregular and turbulent. The vibrations they induce over small areas should be considerations in designing a building or structure subjected to jet blast. Over areas of 10 to 15 square feet (3 to 5 m²), the velocities may be assumed to be periodic with peaks occurring 2 to 6 times per second. These peaks are not continuous laterally or vertically. The following equation computes the pressure produced on a surface perpendicular to the exhaust stream:

$$P = 0.00256 V^2, \text{ where:}$$

P = pressure in pounds per square foot; and
V = velocity in miles per hour.

$$P = 0.04733 V^2, \text{ where:}$$

P = pressure in pascals; and
V = velocity in kilometers per hour.

b. Blast Velocity Distances. The drag and uplift forces produced by jet engines are capable of moving large boulders. A jet engine operating at maximum thrust is capable of lifting a 2-foot (0.6 m) boulder 35 feet (10 m) behind the airplane completely off the ground. Fortunately, these forces which cause severe erosion decrease rapidly with distance so that beyond 1,200 feet (365 m) behind a jet airplane only sand and cohesionless soils are affected. Figures 8-1

through 8-5 illustrate the velocity versus distance plots for representative airplanes. The velocities shown represent maximum values, particularly for breakaway from a parked position. For site specific conditions, include manufacturers' jet blast data for the most demanding airplane in the analysis. The distances shown are measured from the rear of the airplane and the velocities are for takeoff, breakaway, and idle thrust power settings. Similar data for other airplanes, including lateral and vertical velocity contours, as well as site specific blast loads on structures, may be obtained from the engine manufacturers.

c. Heat Effects. High temperatures are also associated with jet exhaust; but the affected area is smaller than the area subject to hazardous jet blast velocities. Contours showing the level of heat at varying distances from jet engines are obtainable from airplane manufacturers.

802. BLAST FENCES. Properly designed blast fences can substantially reduce or eliminate the damaging effects of jet blast, as well as the related fumes and noise which accompany jet engine operation. Fences are permissible near apron areas to protect personnel, equipment, or facilities from the jet blast of airplanes moving into or out of parking positions. In addition, blast fences may be necessary near runway ends, run-up pads, etc., to shield off-airport, as well as, airport pedestrian or vehicular traffic.

a. Location. Generally, the closer the fence is to the source of blast, the better it performs, provided that the centerline of the exhaust stream falls below the top of the fence. To the extent practicable, blast fences should be located outside of the runway object free area.

b. Design. Figures 8-6 and 8-7 illustrate several types of blast fence design which are readily available from various manufacturers. Blast fences located inside the runway object free area should be as frangible as practicable.

c. Other Types of Blast Protection. Although blast fences are the most effective means of blast protection, other methods may achieve satisfactory results. Any surface, whether natural or manmade, located between the jet engine and the area to be protected will afford some measure of blast protection.

803. SHOULDERS AND BLAST PADS. Unprotected soils adjacent to runways and taxiways are susceptible to erosion. A dense, well-rooted turf cover can prevent erosion and support the occasional passage of aircraft, maintenance equipment, or emergency equipment under dry conditions. Paved shoulders are recommended for runways, taxiways, and aprons which will accommodate Group III and higher aircraft. Turf, aggregate-turf, soil cement, lime or bituminous stabilized soil are recommended adjacent to paved surfaces provided for Group I and II aircraft.

a. Shoulder and Blast Pad Dimensions. Paved shoulders should run the full length of the runway(s) and taxiway(s). Blast pads at runway ends should extend across the full width of the runway plus the shoulders. Table 3-1, 3-2, and 3-3 specify the standard blast pad dimensions and runway shoulder widths. Table 4-1 specifies the standard taxiway shoulder widths. Increases to these standard dimensions are permissible for unusual local conditions.

b. Pavement Strength. Shoulder and blast pad pavement needs to support the occasional passage of the most demanding airplane as well as the heaviest existing or future emergency or maintenance vehicle for the design life of the full strength pavement. These pavements may be constructed of bituminous or Portland Cement concrete materials. Specifications for materials and constructions standards for these pavements should be based on state highway requirements.

(1) For Airplane Design Groups III and IV, the minimum bituminous concrete surface thickness, constructed on an aggregate base, is 2 inches (51 mm) for shoulders and 3 inches (76 mm) for blast pads. These thicknesses should be increased by 1 inch (25 mm) for Airplane Design Groups V and VI. Aggregate base and subbase thicknesses should be determined using state highway design standards.

(2) The thickness of shoulders and blast pads constructed of Portland Cement concrete should be based on state highway standards. The minimum thickness of these pavements, as recommended in AC 150/5320-6, is 5 inches (127 mm).

(3) Shoulders and blast pads may have stabilized subbase and base. The stabilized subbase and base thicknesses should be determined using the equivalency factors in AC 150/5320-6 for converting aggregate subbase and base to stabilized subbase and base.

c. Drainage. Surface drainage should be maintained or improved in the shoulder and blast pad areas. Where a paved shoulder or blast pad abuts the runway, the joint should be flush, however, the shoulder may retain a 5 percent transverse slope. A 1.5 inch (3.8 cm) step is the standard at the edge of paved shoulders and blast pads to enhance drainage and to prevent fine graded debris from accumulating on the pavement. Base and subbase courses shall be of sufficient depth to maintain the drainage properties of granular base or subbase courses under the runway, taxiway, or apron pavement. An alternative is to provide a subdrain system with sufficient manholes to permit observation and flushing of the system.

d. Marking and Lighting. AC 150/5340-1 provides guidance for marking shoulders and blast pads. New construction should provide for edge lights to be base mounted and for the installation of any cable under the shoulder or blast pad pavement to be in conduit. When adding shoulders or blast pads to existing runways or taxiways, the existing runway or taxiway edge lighting circuitry, if not suitable, should be updated/modified prior to shoulder or blast pad paving.



APPENDIX F FAA CHECKLIST

TO BE INSERTED



**APPENDIX G
FORMER AIR FORCE BASE
ENVIRONMENTAL PARCELS**

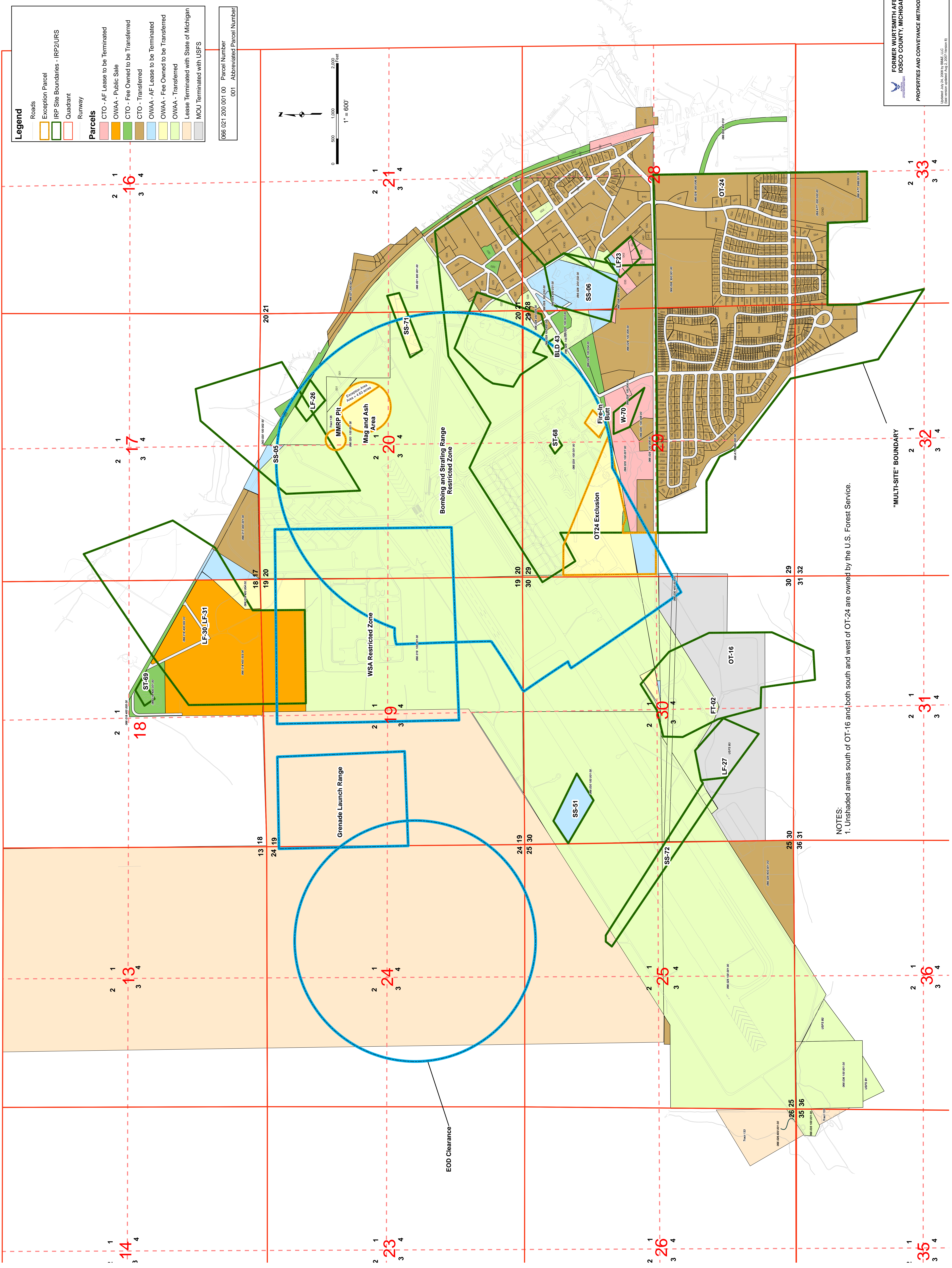
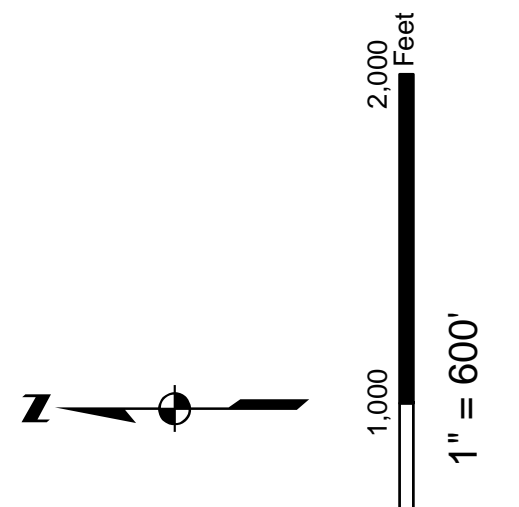
Legend

- Roads
- Exception Parcel
- IRP Site Boundaries - IRP2/URS
- Quadrant
- Runway

Parcels

- CTO - AF Lease to be Terminated
- OWAA - Public Sale
- CTO - Fee Owned to be Transferred
- CTO - Transferred
- OWAA - AF Lease to be Terminated
- OWAA - Fee Owned to be Transferred
- OWAA - Transferred
- Lease Terminated with State of Michigan
- MOU Terminated with USFS

066 021 200 001 00 Parcel Number
001 Abbreviated Parcel Number



NOTES:
1. Unshaded areas south of OT-16 and both south and west of OT-24 are owned by the U.S. Forest Service.