

SCALE  
1"=2000'



AT THE NOVEMBER 15, 2006 MICHIGAN AERONAUTICS COMMISSION MEETING, LAND USE GUIDELINES WERE APPROVED TO BE USED IN AIRPORT APPROACH PLANS FOR ALL LICENSED PUBLIC USE AIRPORTS. THIS DOCUMENT SUPERSEDES 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 517-335-9943.

*Rob Arant*  
DATE

ROB ARANT  
ON BEHALF OF THE MICHIGAN  
AERONAUTICS COMMISSION

| NO. | DATE | REVISIONS                                      | BY | CHK |
|-----|------|--|----|-----|
| 1   | 0507 | Revised Runway 15/33, Added Current Data, Note | NB | LS  |
| 1   | 0705 | Changed Background Map                         | NB | LS  |

**LAND USE ZONING**  
FOR  
**Romeo, State Airport**

PREPARED BY THE  
MICHIGAN DEPARTMENT OF TRANSPORTATION  
AIRPORTS DIVISION  
LANSING, MICHIGAN

|  |     |       |
|--|-----|-------|
| DRAWN  | NAB | 03/01 |
| AIRPORT APPROACH PLAN<br>ORIGINALLY APPROVED BY THE<br>MICHIGAN AERONAUTICS<br>COMMISSION ON THE DATE:<br>04/23/01 |     |       |
| <b>ZONING</b>  |     |       |

ACCIDENT SAFETY ZONES, LAND USE GUIDELINES AND PLANNING STRATEGIES FOR NEW DEVELOPMENT

| Accident Safety Zone         | Land Use Characteristics                 | Land Use Guidelines  | Land Use Planning Strategies<br>*All aviation uses are acceptable  |
|------------------------------|--|--|--|
| Zone 1<br>(See Special Note) | Population Density                       | Avoid land uses which concentrate people indoors or outdoors.  | 1. 0-5 people/acre.<br>2. Airport sponsor should purchase property if possible.<br>3. Zone land uses, which by their nature, will be relatively unoccupied by people (i.e. mini-storage, small parking lots).  |
|                              | Residential vs. Non-Residential Land Use | Prohibit all residential land uses. All non-residential land uses permitted outright subject to the Population Density and Special Function Land Use guidelines. | 1. Create a height hazard overlay ordinance around the airport.<br>2. Airport sponsor should purchase property if possible.<br>3. Airport sponsor should obtain aviation and obstruction easements.<br>4. During the site development process, shift all structures away from the runway centerlines if possible.<br>5. Landscaping requirements shall establish only low growing vegetation.<br>6. Prohibit high overhead outdoor lighting.<br>7. Require downward shading of lighting to reduce glare.<br>8. Evaluate all possible permitted conditional uses to assure compatible land use. |
|                              | Special Function Land Use                | Prohibit all Special Function Land Uses.   | 1. Prohibit overhead utilities and all noise sensitive land uses.<br>2. Zone land for uses other than for schools, play fields, hospitals, nursing homes, daycare facilities and churches.<br>3. Limit storage of large quantities of hazardous or flammable material.<br>4. Ensure permitted uses will not create large areas of standing water, or generate smoke/steam, etc.  |

Special Note: Since the dimensions of Zone 1 are similar to the dimensions of the Runway Protection Zone (RPZ), those airports receiving federal grant dollars from the FAA's Airport Improvement Program, should strongly consider prohibiting the RPZ or otherwise acquire rights to the property for the RPZ.

COMPATIBLE LAND USE MATRIX

| Accident Safety Zone | Land Use Characteristics                 | Land Use Guidelines  | Land Use Planning Strategies<br>*All aviation uses are acceptable   |
|----------------------|--|--|---|
| Zone 2               | Population Density                       | Avoid land uses which concentrate people indoors or outdoors.  | 1. 0-5 people/acre.<br>2. Zone land uses, which by their nature, will be relatively unoccupied by people (i.e. mini-storage, small parking lots).   |
|                      | Residential vs. Non-Residential Land Use | Prohibit all residential land uses. All non-residential land uses permitted outright subject to the Population Density and Special Function Land Use guidelines. | 1. Create a height hazard overlay ordinance around the airport.<br>2. Obtain aviation and obstruction easements.<br>3. During site development process, shift all structures away from the runway centerlines if possible.<br>4. Prohibit mobile home parks.<br>5. Landscaping requirements shall establish only low growing vegetation.<br>6. Prohibit high overhead outdoor lighting.<br>7. Require downward shading of lighting to reduce glare.<br>8. Evaluate all possible permitted conditional uses to assure compatible land use. |
|                      | Special Function Land Use                | Prohibit all Special Function Land Uses.   | 1. Prohibit overhead utilities and all noise sensitive land uses.<br>2. Zone land for uses other than for schools, play fields, hospitals, nursing homes, daycare facilities and churches.<br>3. Limit storage of large quantities of hazardous or flammable material.<br>4. Ensure permitted uses will not create large areas of standing water, or generate smoke/steam, etc.   |

COMPATIBLE LAND USE MATRIX

| Accident Safety Zone | Land Use Characteristics                 | Land Use Guidelines   | Land Use Planning Strategies<br>*All aviation uses are acceptable   |
|----------------------|--|---|---|
| Zone 3               | Population Density                       | Avoid land uses which concentrate people indoors or outdoors.   | 1. < 25 people/acre.<br>2. Zone land uses, which by their nature, will be relatively unoccupied by people (i.e. mini-storage, small parking lots).  |
|                      | Residential vs. Non-Residential Land Use | Limit residential development to Low Density housing standards. All non-residential land uses permitted outright subject to the Special Function Land Use guidelines. | 1. Create a height hazard overlay ordinance around the airport.<br>2. Obtain aviation and obstruction easements.<br>3. During site development process, shift all structures away from the runway centerlines if possible.<br>4. Prohibit mobile home parks.<br>5. Landscaping requirements shall establish only low growing vegetation.<br>6. Prohibit high overhead outdoor lighting.<br>7. Require downward shading of lighting to reduce glare.<br>8. Evaluate all possible permitted conditional uses to assure compatible land use. |
|                      | Special Function Land Use                | Prohibit all Special Function Land Uses.  | 1. Prohibit overhead utilities and all noise sensitive land uses.<br>2. Zone land for uses other than for schools, play fields, hospitals, nursing homes, daycare facilities and churches.<br>3. Limit storage of large quantities of hazardous or flammable material.<br>4. Ensure permitted uses will not create large areas of standing water, or generate smoke/steam, etc.   |

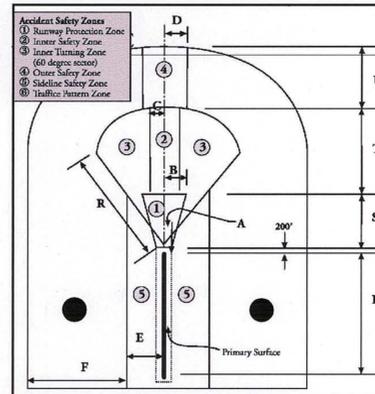
COMPATIBLE LAND USE MATRIX

| Accident Safety Zone | Land Use Characteristics                 | Land Use Guidelines   | Land Use Planning Strategies<br>*All aviation uses are acceptable   |
|----------------------|--|---|---|
| Zone 4               | Population Density                       | Limit population concentrations.  | 1. < 40 people/acre in buildings, < 75 persons/acre outside buildings.  |
|                      | Residential vs. Non-Residential Land Use | Limit residential development to Low Density housing standards. All non-residential land uses permitted outright subject to the Special Function Land Use guidelines. | 1. Create a height hazard overlay ordinance around the airport.<br>2. Obtain aviation easements.<br>3. Clustered development to maintain density as long as open space remains unbuild. Place clustered development away from extended runway centerline.<br>4. Prohibit mobile home parks.<br>5. Require downward shading of lighting to reduce glare.<br>6. Evaluate all possible permitted conditional uses to assure compatible land use.   |
|                      | Special Function Land Use                | Prohibit all Special Function Land Uses.  | 1. Evaluate noise sensitive land uses in light of aircraft noise contour lines (if available) when establishing new zoning.<br>2. Prohibit high overhead utilities and all noise sensitive land uses.<br>3. Zone land for uses other than for schools, play fields, hospitals, nursing homes, daycare facilities and churches.<br>4. Limit storage of large quantities of hazardous or flammable material.<br>5. Ensure permitted uses will not create large areas of standing water, or generate smoke/steam, etc. |

COMPATIBLE LAND USE MATRIX

| Accident Safety Zone | Land Use Characteristics                 | Land Use Guidelines  | Land Use Planning Strategies<br>*All aviation uses are acceptable   |
|----------------------|--|--|---|
| Zone 5               | Population Density                       | Avoid land uses which concentrate people indoors or outdoors.  | 1. 0-5 people/acre.<br>2. Zone land uses, which by their nature, will be relatively unoccupied by people (i.e. mini-storage, small parking lots).   |
|                      | Residential vs. Non-Residential Land Use | Prohibit all residential land uses. All non-residential land uses permitted outright subject to the Population Density and Special Function Land Use guidelines. | 1. Airport sponsor should purchase property if possible.<br>2. Create a height hazard overlay ordinance around the airport.<br>3. Obtain aviation and obstruction easements.<br>4. During site development process, shift all structures away from the runway centerlines if possible.<br>5. Landscaping requirements shall establish only low growing vegetation.<br>6. Prohibit high overhead outdoor lighting.<br>7. Require downward shading of lighting to reduce glare.<br>8. Evaluate all possible permitted conditional uses to assure compatible land use. |
|                      | Special Function Land Use                | Prohibit all Special Function Land Uses.   | 1. Prohibit overhead utilities and all noise sensitive land uses.<br>2. Zone land for uses other than for schools, play fields, hospitals, nursing homes, daycare facilities and churches.<br>3. Limit storage of large quantities of hazardous or flammable material.<br>4. Ensure permitted uses will not create large areas of standing water, or generate smoke/steam, etc.   |

APPENDIX A  
AIRCRAFT ACCIDENT SAFETY ZONE DIAGRAM



SAFETY ZONE DIMENSION (IN FEET)

| Dimension     | Runway Length Category (L) |                       |                      |
|---------------|----------------------------|-----------------------|----------------------|
|               | Runway less than 4,000     | Runway 4,000 to 5,999 | Runway 6,000 or more |
| A             | 125                        | 250                   | 300                  |
| B             | 225                        | 325                   | 375                  |
| C             | 275                        | 500                   | 500                  |
| D             | 225                        | 500                   | 500                  |
| E             | 500                        | 1,000                 | 1,200                |
| F             | 4,000                      | 5,000                 | 5,000                |
| R (25°Sector) | 2,500                      | 4,300                 | 5,000                |
| S             | 1,000                      | 1,700                 | 2,300                |
| T             | 1,500                      | 2,500                 | 2,500                |
| U             | 2,500                      | 3,000                 | 5,000                |

Note: Data Source: NTSB accident investigations 1984-1991. Illustration Source: Hedges and Short, Institute of Transportation Studies, University of California, Berkeley, 1992.



AT THE SEPTEMBER 16, 2009 MICHIGAN AERONAUTICS COMMISSION MEETING, THESE LAND USE GUIDELINES WERE AMENDED AND APPROVED TO BE USED IN AIRPORT APPROACH PLANS FOR ALL LICENSED PUBLIC USE AIRPORTS. 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 517-335-9568.

ANY AIRPORT SPONSOR OR DULY AUTHORIZED REPRESENTATIVE OF A ZONED LOCAL GOVERNMENTAL UNIT MAY REQUEST THAT THE MICHIGAN AERONAUTICS COMMISSION AMEND AN AIRPORT APPROACH PLAN. ALL SUCH REQUESTS MUST CLEARLY STATE THE 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.



| NO. | DATE     | REVISIONS                          | BY  | CHK. |
|-----|----------|------------------------------------|-----|------|
| E   | 11/23/09 | CHANGED SPECIAL NOTE.              | LPS | PH   |
| D   | 10/30/06 | ADDED MODIFICATION NOTE.           |     |      |
| D   | 10/30/06 | ZONE 3 MODIFICATION, TITLE CHANGE. | LPS | PH   |
| C   | 8/26/03  | SAFETY ZONE DIAGRAM                | NAB |      |
| B   | 4/16/02  | Delete Zone 6                      | NAB |      |
| A   | 3/31/02  | New guidelines / strategies        | NAB |      |
| MD  |          | REMARKS                            |     |      |

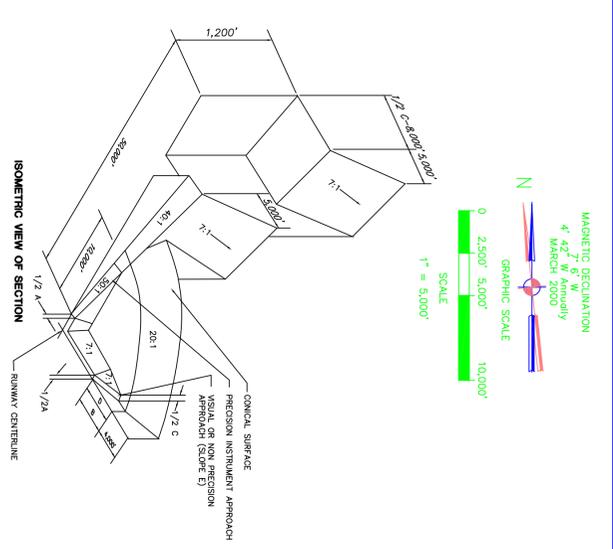
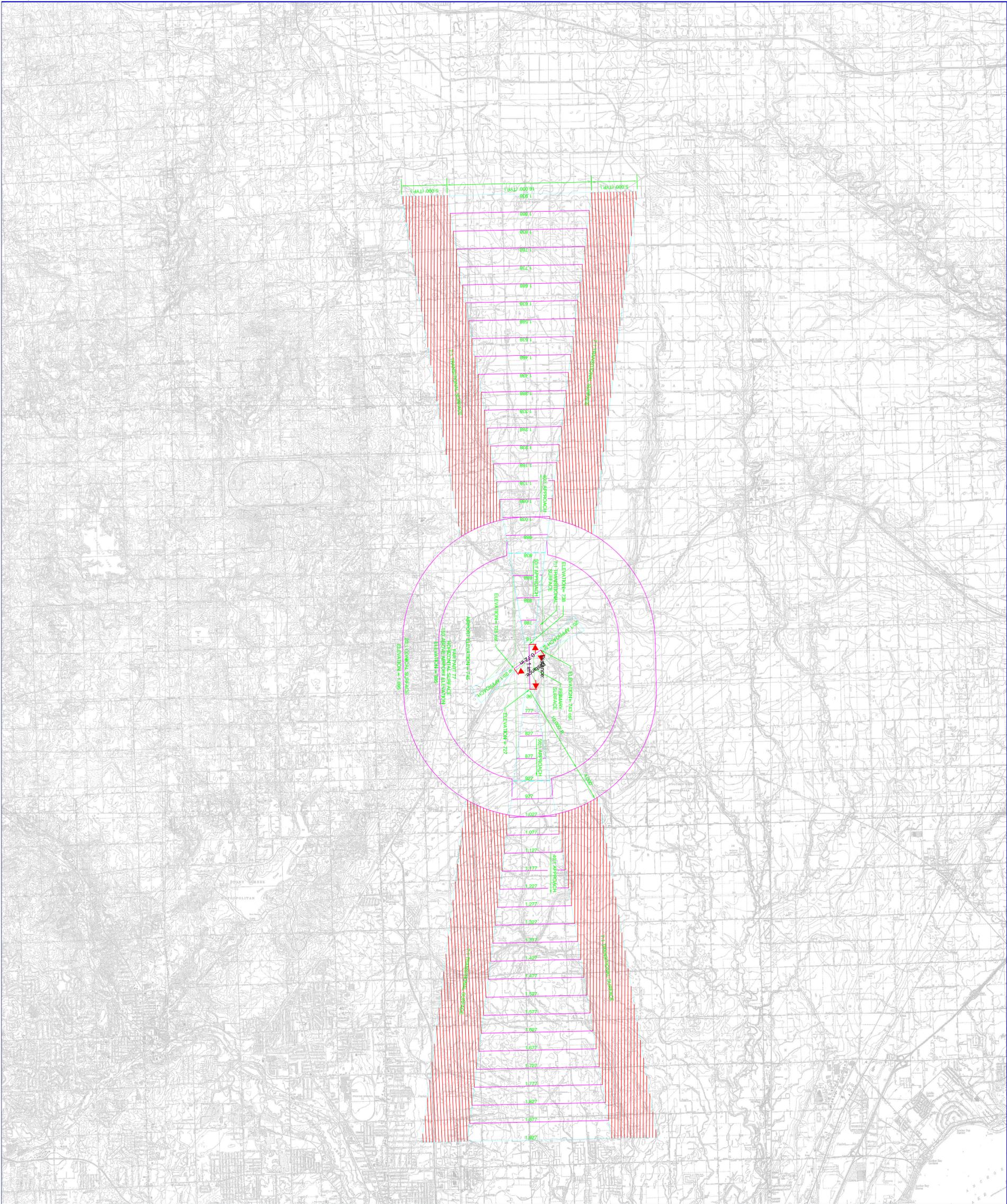
LAND USE GUIDELINES FOR STATE OF MICHIGAN AIRPORT APPROACH PLANS

MICHIGAN DEPARTMENT OF TRANSPORTATION AIRPORTS DIVISION LANSING, MICHIGAN

APPROVED

*Rick Amund* 11/23/09  
AIRPORTS DIVISION ADMINISTRATOR DATE

|         |     |      |
|---------|-----|------|
| DRAWN   | NAB | 8/03 |
| CHECKED |     |      |
| PLOTTED |     |      |



MAGNETIC DECLINATION  
 4° 27' 6" M  
 MARCH 2000  
 GRAPHIC SCALE  
 0 2,500' 5,000' 10,000'  
 SCALE  
 1" = 5,000'

| DIM | ITEM  | DIMENSIONAL STANDARDS (FEET) |                                 |                  |                             |
|-----|---|------------------------------|---------------------------------|------------------|-----------------------------|
|     |   | VISUAL RUNWAY                | NON-PRECISION INSTRUMENT RUNWAY | PRECISION RUNWAY | PRECISION INSTRUMENT RUNWAY |
| A   | WIDE END OF VISUAL OBSTACLE CLEARANCE SURFACE | 200                          | 300                             | 300              | 1,000                       |
| B   | WIDE END OF TRANSITION SURFACE                | 500                          | 500                             | 1,000            | 1,000                       |
| C   | APPROACH SURFACE WIDTH AT END                 | 1,500                        | 1,500                           | 1,500            | 1,500                       |
| D   | APPROACH SURFACE LENGTH                       | 1,000                        | 1,000                           | 1,000            | 1,000                       |
| E   | APPROACH SLOPE                                | 20:1                         | 20:1                            | 20:1             | 20:1                        |

A - UTILITY RUNWAYS  
 B - RUNWAYS WIDER THAN UTILITY  
 C - VISIBILITY MINIMUMS GREATER THAN 3/4 SMILE  
 D - PRECISION INSTRUMENT APPROACH SLOPE IS 50:1  
 E - PRECISION INSTRUMENT SURFACE FOR AN ADDITIONAL 4,000 FEET  
 FEET AND 40:1 APPROACH SURFACE FROM RWY NUMBER 10,000

Federal Aviation Regulations Part 77 and the Michigan Tall Structure Act, 205B1, 205B2, as amended, require that the obstruction clearance surface be depicted on navigable airspace if its height exceeds the following standards:

1. A height of five hundred (500) feet above ground level at the site of the object, anywhere in the state.
  2. A height that is two hundred (200) feet above ground level or above the established airport elevation, whichever is higher, within three (3) nautical miles of the established reference point of a public-use airport, excluding heliports, and the height increases in the proportion of one hundred (100) feet for each additional nautical mile of distance from the airport up to a maximum of five hundred (500) feet.
  3. A height within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area, as defined by federal laws and regulations, which would result in the vertical clearance between any point on the object and an established minimum instrument flight altitude within that area of segment to be less than the required obstacle clearance.
  4. A height within an en route obstacle clearance area, as defined by federal laws and regulations, including turn and termination areas of a federal airway or approved off-airway route, that would increase the minimum obstacle clearance altitude.
  5. The surface of a takeoff and landing area of a public-use airport or any imaginary surface as established by FAR Part 77. However, no part of the takeoff or landing area itself will be considered to be an obstruction.
- NOTE: FAR Part 77 imaginary surfaces are as shown on this sheet for the Romeo State Airport. These surfaces are depicted based upon ultimate airport development.

| NO. | DATE | REVISIONS | BY | APPR. |
|-----|------|-----------|----|-------|
| 1   |      |           |    |       |
| 2   |      |           |    |       |
| 3   |      |           |    |       |

**ROMEO STATE AIRPORT  
 ROMEO MICHIGAN**

**FAR PART 77  
 OBSTRUCTION PLAN**

|         |           |                |     |                |     |
|---------|-----------|----------------|-----|----------------|-----|
| JOB NO. | 997110.31 | DRAWN          | LLJ | CHECKED        | MLB |
| DATE:   | 10-04-00  | DESIGNED       | GBB | APPROVED       | MLB |
|         |           | SHEET 14 OF 14 |     | FILE NO. 50-11 |     |

