CHAPTER 6 - AIRPORT SYSTEM DESIGN

6.01 General

This chapter discusses the development program for Cuyahoga County Airport from today through year 2025. This airport system design is based upon the Airport's existing facilities, the recommended facility requirements and airport development alternatives discussed in Chapters 4 and 5, and a list of capital improvement projects planned to satisfy aviation demand to the year 2025.

6.02 Facility Requirements

As previously stated, planning standards contained in FAA AC 150/5300-13, *Airport Design*, were used as guidance in planning development at the Airport. The Airport Master Plan Update report defines Cuyahoga County Airport's role as a reliever airport with an Airport Reference Code (ARC) of D-II. The facility is expected to accommodate aircraft having approach speeds less than 166 knots for Aircraft Approach Categories A, B, C, and D, and wingspans up to, but not including, 79 feet for Airplane Design Groups I and II.

The set of drawings prepared for the Airport Master Plan Update is included at the end of this chapter. The Airport Layout Plan (ALP) depicted on Sheet 3 of 12, was developed as a result of these facility requirements, discussions with Department of Development officials, Airport management, and members of the Airport Advisory Committees, and by incorporating comments made by the Federal Aviation Administration during their reviews. The plan incorporates all of the major elements of the preferred alternative as determined and presented in Chapter 5. It includes construction of a 1,000-foot long extension of Runway 6-24 and associated parallel taxiway to the northeast; tunneling of Bishop Road in its existing alignment for vehicle traffic; closure of 100 feet of runway pavement at the Runway 6 end and removal of the 500-foot stopway; and relocation of Taxiway A to meet standards. New corporate hangar development, improvements to the Airport administrative and maintenance building and development of a new general aviation area with T-hangars on the south side of the airfield are proposed landside projects.

Rehabilitation of airport facilities (runway and taxiways, apron, and lighting) is planned with appropriate phasing according to age and usage. Section 6.03 details the proposed development phasing for the 20-year planning period.

6.03 Airport Layout Plan

The Airport Layout Plan, Sheet 3 of 12 in the set of Airport Layout Plan drawings, illustrates the overall development for Cuyahoga County Airport. The ALP presents the various airport improvement projects in three phases that are discussed below.

PHASE 1 DEVELOPMENT

Phase 1, or the short-term development for today through 2010 at Cuyahoga County Airport is concentrated on satisfying existing needs and correcting existing problems. These projects are considered to be the highest priorities in the development plan, and are supported by findings reached during previous portions of this study. The Phase 1 recommendations are:

1-1 Purchase and Install Automated Weather Observation System (AWOS) and Upgrade Runway Sensor System
- This project consists of the purchase and installation of an AWOS and upgrading the runway pavement conditions monitoring system to ensure accurate information is provided to pilots.

1-2 Airport Administrative and Maintenance Expansion
- This project consists of design and construction for expansion of the Airport maintenance and ARFF facilities and associated auto parking.

1-3 Airport Perimeter Fencing
- This project consists of perimeter fencing for the Mayfair parcel, west of Richmond Road.

1-4 Electrical Improvements (Transformer and Field Lighting Loop)
- This project consists of design and construction for rehabilitating the original 1970 wiring for transformers and field lighting.

1-5 Rehabilitate Taxiways A, A1, A2, A3, A5, A6, A7 and A8
- The project consists of design and construction for the repair of deteriorated taxiway pavement to prevent damage to aircraft.

1-6 Aircraft Run-Up Enclosure (Design and Construct)
- This project consists of the purchase and installation of an enclosure for aircraft engine run-ups to reduce noise pollution for businesses and residents within the surrounding communities.

PHASE 2 DEVELOPMENT

The intermediate-range development, Phase 2, encompasses the period 2011-2015 and includes airfield and landside improvements. The Phase 2 recommendations are:

2-1 Curtiss Wright Parkway Conceptual Realignment Route
- The project consists of design and construction for the realignment of the north end of Curtiss Wright Parkway to intersect with White Road.

2-2 Runway and Parallel Taxiway Extension (Design and Construct)
- This project consists of design and construction for rehabilitation of existing runway pavement and a 1,000-foot runway and parallel taxiway extension at the Runway 24 end, realigning White Road, and tunneling ¼ mile of Bishop Road.

2-3 Land/Easement Acquisition for Runway 6-24 Improvements
- The project consists of easements and land acquisitions to assure safety and compatible use within the future runway protection zone.

2-4 Relocate Taxiway A (Design and Construct)
- This project consists of design and construction for relocating the parallel taxiway with a 400-foot centerline-to-centerline separation from the runway, to meet FAA design standards.

2-5 Design and Construct Two 10-Bay T-Hangars
- This project consists of design and construction of two 10-bay T-hangars on the southeast side of the airfield.

2-6 Design and Construct Based Aircraft Apron
- This project consists of design and construction of 29,720 square yards of tie-down apron for based aircraft in the area adjacent to the T-hangars.

2-7 Demolition of County T-Hangars
- This project consists of demolishing the existing County T-hangars to provide an area for FBO expansion.

PHASE 3 DEVELOPMENT

The long-range development, Phase 3, covers the period from 2016-2025. In this phase, additional airside and landside facilities are planned to complete the needs defined in this plan. The Phase 3 recommendations are:

3-1 Design and Construct Corporate Hangars (3)

- This project consists of design and construction of additional private corporate hangars consistent with existing corporate hangar development at the Airport.

3-2 Design and Construct Corporate Apron Expansion

- This project consists of design and construction of a 16,550-square-yard expansion of the corporate apron to the northeast of the existing apron.

6.04 Obstruction Plans and Profiles

The obstruction plans, profiles, and recommended action for the Airport are presented on Sheet 5, Airport Airspace Drawing; Sheets 6 and 7, Inner Approach Plans and Profiles for Runway 6-24; and Sheet 8, Obstruction Data Sheet. These drawings provide detailed obstruction information and depict the imaginary surfaces on and around Cuyahoga County Airport, through which no object should penetrate. The dimensions and criteria used in determining these obstructions on or near the surfaces for the airport are those outlined in Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*.

As defined by FAR Part 77, the **primary surface** of a runway is defined as an area longitudinally centered on the runway for a width dependent on the type of runway, and extending 200 feet beyond each end of the landing threshold. At Cuyahoga County Airport, Runway 6-24 is defined as a transport runway with a precision instrument approach to the Runway 24 end with visibility minimums as low as ½ statute mile. The Runway 6 end has a nonprecision instrument approach with visibility minimums as low as one mile. Runway 6-24 has a primary surface width of 1,000 feet.

As shown on Sheet 8, there are six obstructions to Runway 6-24's primary surface which include three trees, an FAA anemometer, County weather station, and the glideslope antenna. Specific obstruction information, including corrective actions recommended, can be found on Sheet 8.

Approach surfaces are longitudinally centered on the extended runway centerline and extend outward and upward from each end of the primary surface. The slope and

configuration of each runway approach surface also vary as a function of runway type and availability of instrument approaches.

As previously noted, the existing Runway 6-24 has a precision approach to the Runway 24 end. Therefore, Runway 24 has an approach surface with an inner width of 1,000 feet that extends outward and upward for a distance of 50,000 feet to an outer width of 16,000 feet. The slope is 50 to 1 for the inner length of 10,000 feet and 40 to 1 for the outer length of 40,000 feet. One utility pole and numerous trees penetrate the 50:1 approach surface to Runway 24. Specific obstruction information, including corrective actions recommended, can be found on Sheet 8.

Runway 6 has a nonprecision instrument approach and visibility minimums as low as one mile. Thus, the inner width of the approach surface is 1,000 feet (the width of the primary surface); the approach surface length is 10,000 feet; and the width of the approach surface at the outer end is 3,500 feet. The approach slope for Runway 6 is 34 to 1. There are numerous obstructions to the 34:1 approach surface to Runway 6, including trees and four utility poles. Specific obstruction information, including corrective actions recommended, can be found on Sheet 8.

The **transitional surfaces** extend outward and upward from the primary and approach surfaces to the horizontal surface at right angles to the runway centerline at a slope of 7 to 1. There are numerous tree obstructions to the Airport's transitional surfaces. Other obstructions include two utility poles and the top of a building. Specific obstruction information and corrective actions are shown on Sheet 8.

The **horizontal surface** is a horizontal plane 150 feet above the established airport elevation, which in the case of Cuyahoga County Airport is 879 feet above mean sea level (MSL). Thus, the horizontal surface is at an elevation of 1,029 feet above mean sea level. The perimeter of the horizontal surface is delineated by arcs with a radius of 10,000 feet from the center point of each of the runway ends. Adjacent arcs are connected by lines that are tangent to these arcs. Obstructions to the horizontal surface include 63 trees. Specific obstruction information and corrective actions are shown on Sheet 8.

The **conical surface** extends outward and upward from the edge of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet. Thus the elevation of the conical surface at the outermost edge is 1,229 feet MSL. At Cuyahoga County Airport, there are no known obstructions to the conical surface.

RUNWAY PROTECTION ZONES (RPZ)

Runway protection zones are also shown on Sheets 2 and 3 of the ALP drawing set. As defined by FAA AC 150/5300-13, *Airport Design*, the function of the RPZ is to

enhance the protection of people and property on the ground by clearing RPZ areas (and maintaining them clear of incompatible objects and activities). This is accomplished by obtaining property interest within the RPZ area giving the airport owner the ability to ensure the protection of people and property within these areas. The RPZ is trapezoidal in shape and centered on the extended runway centerline. The dimensions of the RPZ are determined by the type of aircraft that the facility expects to serve, and by the approach visibility minimums for each runway end. The RPZ begins 200 feet from each runway end. For Runway 6, with approach visibility minimums of 1 to 1 ½ miles, the RPZ length is 1,700 feet, the inner width is 500 feet, and the outer width of the RPZ is 1,010 feet. For Runway 24, with ½ mile approach visibility minimums, the RPZ length is 2,500 feet, the inner width is 1,000 feet, and the outer width of the RPZ is 1,750 feet.

The Airport currently owns or has controlling interests in the form of an easement for most of the land in the existing Runway Protection Zones. However, for the future Runway 24 extension of 1,000 feet, additional land and/or easement acquisitions should be undertaken so that the Airport has the ability to ensure the protection of people and property within these areas and to control future objects and obstructions within the areas northeast of the airfield.

THRESHOLD SITING ANALYSIS

Runway threshold siting requirements are outlined in FAA Advisory Circular 150/5300-13, *Airport Design*, Appendix 2. This document identifies specific dimensions and slopes for all runway ends based on the type of aircraft operations and instrumentation associated with that runway. In most cases, the threshold is located at the beginning of full-strength runway pavement. However, displacement of the threshold may be required when it is not possible to remove or relocate an obstruction in the airspace required for landing an aircraft or to address some environmental concerns (e.g., noise abatement). Design standards for lengths of runway object free areas and runway safety areas may dictate displacing the runway threshold in some cases.

Based upon proposed future operations and facilities at the Airport, the threshold siting surface for Runway 6 starts at 200 feet out from the threshold and slopes upward at a slope of 20 to 1. The threshold siting surface for Runway 24 starts at 200 feet out from the threshold and slopes upward at a slope of 34 to 1.These surfaces are depicted on Sheets 6 and 7 of 12, the Inner Approach Plans and Profiles for Runway 6-24. A utility pole penetrates the proposed threshold siting surface for Runway 24. It is recommended that the pole be fitted with an obstruction light or the utilities be buried. The remaining penetrations of the threshold siting surfaces are individual trees or groups of trees and the recommendation is that they be removed, as detailed on Sheet 8 of 12, Obstruction Data Sheet.

OBSTRUCTION SUMMARY

An object is considered an obstruction if it penetrates an FAR Part 77 surface. If the top of a bush or tree is within 10 feet of an FAR Part 77 surface, it may also be considered an obstruction (based on anticipated growth). In addition, FAA design standards recommend clearing the entire Runway Protection Zone of all incompatible objects and activities. As previously discussed, the airspace surrounding Cuyahoga County Airport has a number of trees which penetrate the FAR Part 77 surfaces and are considered to be obstructions. Obstruction removal is recommended in the design and phasing of projects for the Airport to maintain surfaces clear of obstructions. To assist the Airport in controlling future obstructions and maintaining clear FAR Part 77 surfaces, it is recommended that the Airport Airspace Drawing, Inner Approach Plans and Profiles, and the Obstruction Data Sheet be incorporated into the zoning ordinances of the municipalities surrounding the Airport.

6.05 Compatible Land Use

The approach and departure paths to most airports may receive a higher level of perceived noise exposure due to aircraft overflights. Therefore, the following land use compatibility measures should be considered for residential areas and other noise-sensitive land uses to be sited within 1,000 feet of the approach and departure flight paths.

COMPREHENSIVE PLANNING AND ZONING

Cuyahoga County, as Sponsor, and the surrounding communities, including the cities of Richmond Heights, Highland Heights, and Willoughby Hills, are encouraged to establish an Airport Approach District which will serve to inform nearby residents of potential impacts and discourage residential development in the runway approach areas. An effective working relationship between the Airport and the surrounding communities is most important for accomplishing compatible land use planning and ensuring support for achieving airport-oriented land use measures. As an example, in certain cases (such as the erection of water towers, communications, antennae, etc.) structures may be proposed that would penetrate the approach or navigational airway surfaces associated with runways at the airport. Determinations of the height of structures by airport and community representatives on a case-by-case basis may be necessary to ensure that consideration is given to the placement of potential hazards near the Airport. This process should include information available to airport personnel transmitted through active involvement in community affairs.

ENCOURAGE AND MAINTAIN COMPATIBLE LAND USES

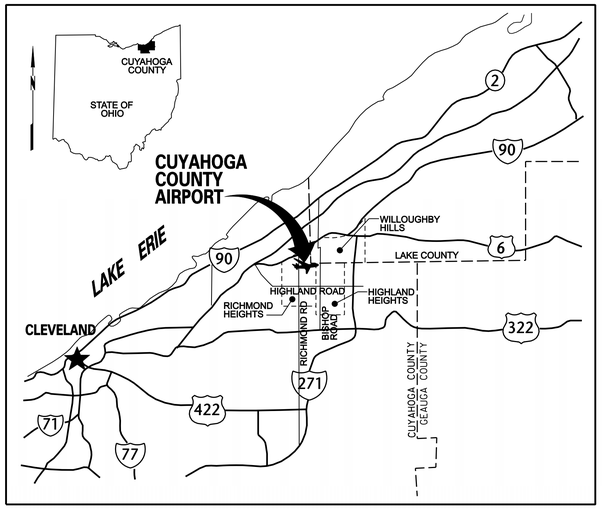
Recognizing that low-density residential development may not, and most likely should not, be eliminated from all areas near the Airport that may be affected by some level of aircraft sound, a policy of encouraging compatible development is recommended. This includes continuing to promote open land and industrial/commercial development in available vacant areas near the Airport. In addition, the Airport should make it a goal to own all of the land within the runway protection zones (RPZs) and additional adjoining land as feasible.

CAPITAL IMPROVEMENTS PROGRAM

The County and Airport representatives should also remain cognizant of community planning and various community capital improvements and encourage those that will directly or indirectly increase compatible land use in the airport vicinity. For example: The extension of sewer or water lines into new areas, often done initially to serve industrial or institutional development, frequently encourages residential development that also utilizes this community infrastructure. Thus, the extension of services to potentially airport-sensitive land uses near the Airport should be reviewed.

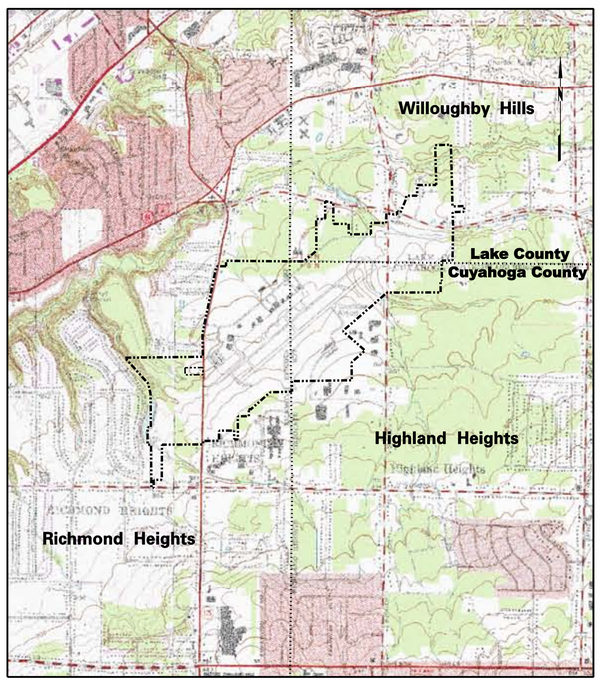
The use of these basic approaches, within the time frame of this Airport Master Plan Update, should reduce or eliminate the likelihood of problems over potential airport related land use issues.

AIRPORT MASTER PLAN UPDATE



LOCATION MAP

NOT TO SCALE



VICINITY MAP

NOT TO SCALE

CUYAHOGA COUNTY AIRPORT

CUYAHOGA COUNTY, OHIO

SHEET NO.	TITLE
1.	TITLE SHEET
2.	EXISTING AIRPORT LAYOUT
3.	AIRPORT LAYOUT PLAN
4.	TERMINAL AREA DRAWING
5.	AIRPORT AIRSPACE
6.	RUNWAY 6 INNER APPROACH PLAN AND PROFILE
7.	RUNWAY 24 INNER APPROACH PLAN AND PROFILE
8.	OBSTRUCTION DATA
9.	LAND USE PLAN
10.	AIRPORT PROPERTY MAP (SHEET 1 OF 3)
11.	AIRPORT PROPERTY MAP (SHEET 2 OF 3)
12.	AIRPORT PROPERTY MAP DATA (SHEET 3 OF 3)

On behalf of C&S Engineers, Inc., this Airport Layout Plan (ALP) was prepared for Cuyahoga County Airport according to the applicable Advisory Circulars, the current version of the Great Lakes Region ALP Checklist, and accurately depicts the proposed use of airspace at the time of submittal. The ALP conforms with FAA design standards, except as noted.

DECEMBER 2006

REVISION BLOCK

BY	DATE	CHANGE

C&S COMPANIES — ENGINEERS, DESIGN BUILD, TECHNICAL RESOURCES, OPERATIONS

C&S ENGINEERS DESIGN BUILD TECHNICAL RESOURCES OPERATIONS

SUBMITTED BY: _____

DATE: _____

CUYAHOGA COUNTY

APPROVED BY: _____

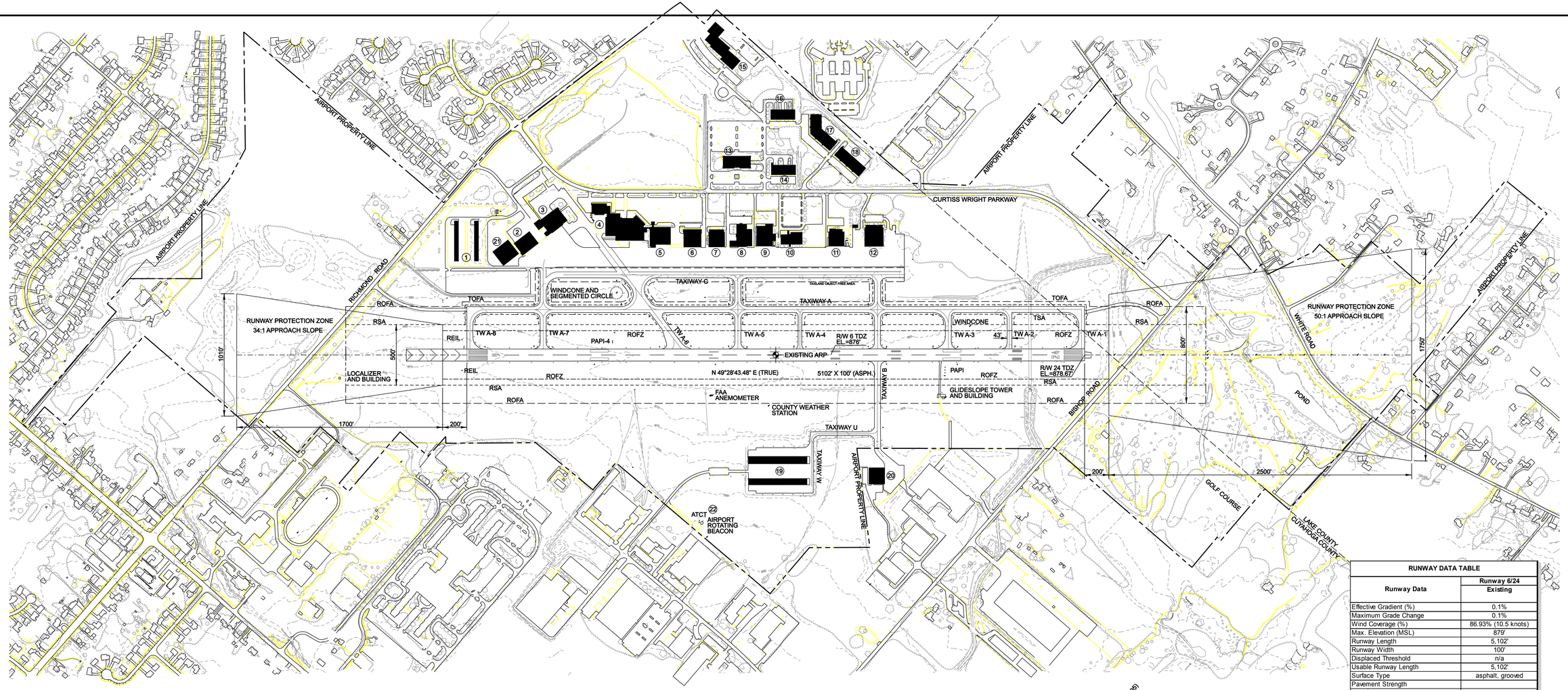
DATE: _____

FEDERAL AVIATION ADMINISTRATION

APPROVED BY: _____ MANAGER, DETROIT AIRPORTS DISTRICT OFFICE

DATE: _____

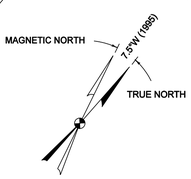
FAA AIP NO. 3-39-0021-13-03
3-39-0021-14-04



PLAN

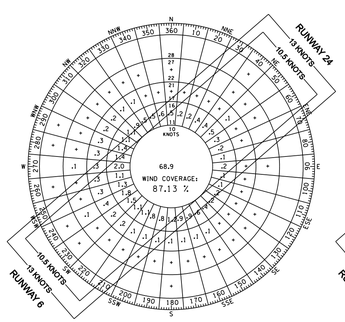
SCALE: 1"=400'

400' 400 0 400 800FT.

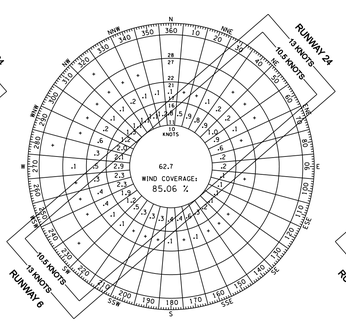


RUNWAY DATA TABLE	
Runway Data	Runway 6/24 Existing
Effective Gradient (%)	0.1%
Maximum Grade Change	0.1%
Wind Coverage (%)	86.93% (10.5 knots)
Max. Elevation (MSL)	879'
Runway Length	5,102'
Runway Width	100'
Displaced Threshold	n/a
Usable Runway Length	5,102'
Surface Type	asphalt, grooved
Pavement Strength	
Single Wheel	43,000 lbs.
Dual Wheel	55,000 lbs.
Dual Tandem	100,000 lbs.
Approach Surface Slope	34:1 / 50:1
Approach Minimums	1-1½ mile / ½ mile
Visual Approach Aids	PAPI-4L, REIL / PAPI-4L, MALSR
Instrument Approach Aids	LOC BC / ILS/DME, NDB or GPS
Runway Lighting	HIRL
Runway Marking	NPI / PIR
Airport Reference Code (ARC)	D-II
Critical Aircraft	Gulfstream IV
Runway Object Free Area (ROFA)	
Length Beyond Runway	1,000'
Width	800'
Runway Safety Area (RSA)	
Length Beyond Runway	1,000'
Width	500'
Object Free Zone (OFZ) Width	400'
FAR Part 77 Category	NPI / PIR
Runway End Coordinates (NAD 83)	
Latitude	6: 41° 33' 38.073"
Longitude	6: 81° 29' 36.392"
Latitude	24: 41° 34' 10.818"
Longitude	24: 81° 28' 45.372"
Runway End Elevations (MSL)	872.48' / 878.67'
Displaced Threshold Elevation (MSL)	n/a
TDZ Elevation (MSL)	876' / 878.67'
Line of Sight Violations	n/a

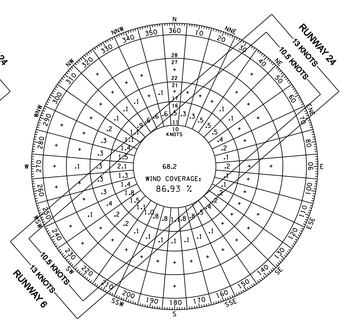
FACILITIES TABLE	
#	Existing Facility Name
1	County T-Hangars
2	Corporate Wings Hangar
3	Corporate Wings Hangar
4	Flight Options Hangar
5	Flight Options Hangar
6	Corporate Wings Hangar
7	Progressive Insurance Hangar
8	County/Admin/Maintenance/ARFF Building
9	Eaton Corporation Hangar
10	Destination Building
11	National City Bank Hangar
12	Five Star Aviation Hangar
13	Horizon Building
14	Curtiss Wright Center - II
15	Associates Estates
16	Curtiss Wright Center - I
17	Curtiss Wright Center - III
18	Curtiss Wright Center - IV
19	Zomar T-Hangars
20	Swagelok Hangar
21	Corporate Wings Hangar
22	Air Traffic Control Tower



VFR WIND ROSE



IFR WIND ROSE



ALL WEATHER

PERCENT WIND COVERAGE						
	12 MPH (10.5 Knot)			15 MPH (13 Knot)		
Runway	VFR	IFR	All Weather	VFR	IFR	All Weather
6	55.41%	56.91%	55.63%	58.40%	60.76%	58.73%
24	74.36%	65.62%	73.36%	79.88%	71.48%	78.90%
6-24	87.13%	85.06%	86.93%	93.40%	92.26%	93.29%

Source: National Climatic Data Center, Asheville, North Carolina
Observations taken at: Cleveland Hopkins International Airport, Cleveland, Ohio
Period Covered: 1994-2003

LEGEND	
Existing	Description
	Runway Centerline
RSA	Runway Safety Area (RSA)
ROFA	Runway Object Free Area (ROFA)
ROFZ	Runway Obstacle Free Zone (ROFZ)
	Runway Protection Zone (RPZ)
TOFA	Taxiway Object Free Area (TOFA)
TSA	Taxiway Safety Area (TSA)
	Existing Pavement
ARP	Airport Reference Point
	Existing Buildings
EAPL	Airport Property Line
	Other Property Lines
	Fence
	Tree Line
	Wetlands
300	Ground Elevation Contours
	Proposed Land Acquisition
	Proposed Easement Acquisition

AIRPORT DATA TABLE	
Airport Data	Existing
Airport Elevation (MSL)	879'
Airport Reference Point (NAD 83)	
Latitude	41° 33' 54.446" N
Longitude	81° 29' 10.884" W
Mean Max Temperature of Hottest Month	81.4° F
Airport Terminal Area NAVAIDS	ATCT, lighted windsock, segmented circle, beacon
Magnetic Variation	7.5° W
Date of Magnetic Variation	1995
NPIAS Service Level	RL
State Service Level	TC
Wind Coverage Crosswind Component @10.5 knots & 13 knots	
VFR	87.13%; 93.40%
IFR	85.06%; 92.26%
All Weather	86.93%; 93.29%
Airport Reference Code	D-II
Design Aircraft	Gulfstream IV
Taxiway Lighting	MITL
Taxiway Marking	Standard

REVISIONS

BY	DATE	CHANGE

FIGURE 2-5

CUYAHOGA COUNTY AIRPORT

CITY OF CLEVELAND — CUYAHOGA COUNTY, OHIO

EXISTING AIRPORT LAYOUT

DESIGNED: JCT | DRAWN: JCT | SHEET 2 OF 12
CHECKED: KCK | DATE: DECEMBER 2006
PROJECT FILE NO.: A27.001.001 | CADD FILE NO.: Cuyahoga EAL

C&S COMPANIES — ENGINEERS DESIGN BUILD TECHNICAL RESOURCES OPERATIONS

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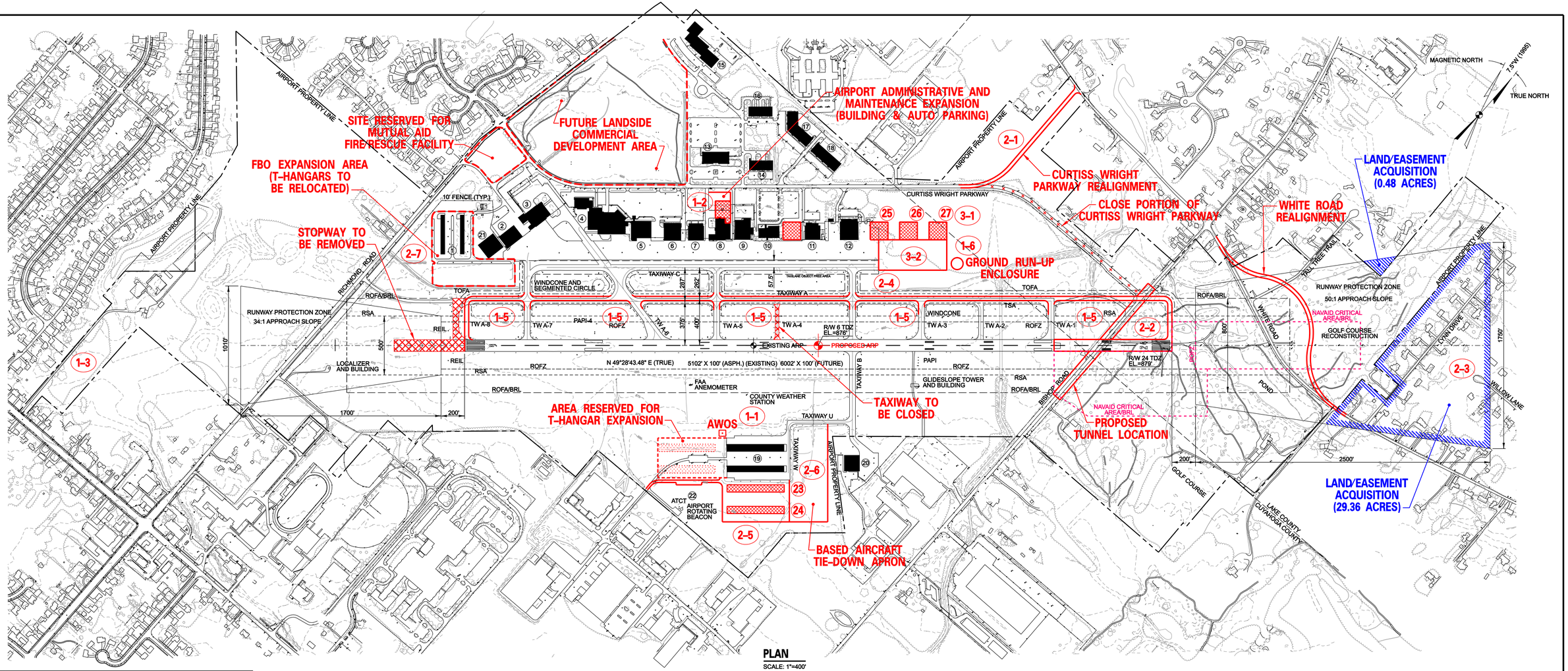

PLAN

SCALE: 1"=400'

400 0 400 800FT.
400'

NOTE: THE FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED. DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT OWNER IS REQUIRED TO RESUBMIT FOR APPROVAL, THE FINAL LOCATIONS, HEIGHTS, AND EXTERIOR FINISH OF STRUCTURES. FAA CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS, OR ADVERSE EFFECT ON CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENT AREAS, WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY, OR UTILITY OF THE AIRPORT.

RUNWAY DATA TABLE

Runway Data	Runway 6/24 Existing	Runway 6/24 Proposed
Effective Gradient (%)	0.1%	0.1%
Wind Coverage (%)	86.93% (10.5 knots)	86.93% (10.5 knots)
Max. Elevation (MSL)	879'	879'
Runway Length	5,102'	6,002'
Runway Width	100'	100'
Surface Type	asphalt, grooved	asphalt, grooved
Pavement Strength		
Single Wheel	43,000 lbs.	n/a
Dual Wheel	55,000 lbs.	100,000 lbs.
Dual Tandem	100,000 lbs.	n/a
Approach Type	NPI / PIR	NPI / PIR
Approach Surface Slope	34:1 / 50:1	34:1 / 50:1
Approach Minimums	1-1½ mile / ½ mile	1-1½ mile / ½ mile
Visual Approach Aids	PAPI-4L, REIL / PAPI-4L, MALSR	PAPI-4L, REIL / PAPI-4L, MALSR
Instrument Approach Aids	LOC BC / ILS/DME, NDB or GPS	LOC BC / ILS/DME, NDB or GPS
Runway Lighting	HIRL	HIRL
Runway Marking	NPI / PIR	NPI / PIR
Airport Reference Code (ARC)	D-II	D-II
Critical Aircraft	Gulfstream IV	Gulfstream IV
Runway Object Free Area (ROFA)		
Length Beyond Runway	1,000'	1,000'
Width	800'	800'
Runway Safety Area (RSA)		
Length Beyond Runway	1,000'	1,000'
Width	500'	500'
Runway Obstacle Free Zone (ROFZ)		
Length Beyond Runway	200'	200'
Width	400'	400'
Precision Obstacle Free Zone (POFZ)		
Length Beyond Runway	200'	200'
Width	800'	800'
Runway Protection Zone Dimensions		
Runway 6	500' x 1,010' x 1,700'	500' x 1,010' x 1,700'
Runway 24	1,000' x 1,750' x 2,500'	1,000' x 1,750' x 2,500'
Runway End Coordinates (NAD 83)		
Latitude	6: 41° 33' 38.073" N	6: 41° 33' 38.715" N
Longitude	6: 81° 29' 36.392" W	6: 81° 29' 35.392" W
Latitude	24: 41° 34' 10.818" N	24: 41° 34' 17.238" N
Longitude	24: 81° 28' 45.372" W	24: 81° 28' 35.367" W
Runway End Elevations (MSL)	872.48' / 878.67'	872.5' / 879'
TDZ Elevation (MSL)	876' / 878.67'	876' / 879'

AIRPORT DATA TABLE

Airport Data	Existing	Proposed
Airport Elevation (MSL)	879'	879'
Airport Reference Point (NAD 83)		
Latitude	41° 33' 54.446" N	41° 33' 57.978" N
Longitude	81° 29' 10.884" W	81° 29' 05.382" W
Mean Max Temperature of Hottest Month	81.4° F	81.4° F
Airport Terminal Area NAVAIDS	ATCT, lighted windsock, segmented circle, beacon	ATCT, lighted windsock, segmented circle, beacon, AWOS
Magnetic Variation	7.5° W	7.5° W
Date of Magnetic Variation	1995	1995
NPIAS Service Level	RL	RL
State Service Level	TC	TC
Wind Coverage Crosswind Component @10.5 knots & 13 knots		
VFR	87.13%; 93.40%	87.13%; 93.40%
IFR	85.06%; 92.26%	85.06%; 92.26%
All Weather	86.93%; 93.29%	86.93%; 93.29%
Airport Reference Code	D-II	D-II
Aircraft Approach Category	D	D
Airplane Design Group	II	II
Design Aircraft	Gulfstream IV	Gulfstream IV
Tail Height	24.4'	24.4'
Taxiway Lighting	MITL	MITL
Taxiway Marking	Standard	Standard

FACILITIES TABLE

Existing #	Existing Facility Name	Existing Top Elevation	Proposed #	Proposed Facility Name	Proposed Top Elevation
1	County T-Hangars	898' MSL	1	County T-Hangars (to be relocated)	
2	Corporate Wings Hangar	895' MSL*	2	Corporate Wings Hangar	895' MSL*
3	Corporate Wings Hangar	895' MSL*	3	Corporate Wings Hangar	895' MSL*
4	Flight Options Hangar	890' MSL*	4	Flight Options Hangar	890' MSL*
5	Flight Options Hangar	895' MSL*	5	Flight Options Hangar	895' MSL*
6	Corporate Wings Hangar	895' MSL*	6	Corporate Wings Hangar	895' MSL*
7	Progressive Insurance Hangar	900' MSL	7	Progressive Insurance Hangar	900' MSL
8	County/Admin/Maintenance/ARFF Building	884' MSL	8	County/Admin/Maintenance/ARFF Building	884' MSL
9	Eaton Corporation Hangar	895' MSL*	9	Eaton Corporation Hangar	895' MSL*
10	Destination Building	900' MSL*	10	Destination Building	900' MSL*
11	National City Bank Hangar	895' MSL*	11	National City Bank Hangar	895' MSL*
12	Five Star Aviation Hangar	903' MSL*	12	Five Star Aviation Hangar	903' MSL*
13	Horizon Building	898' MSL*	13	Horizon Building	898' MSL*
14	Curtiss Wright Center - II	868' MSL*	14	Curtiss Wright Center - II	868' MSL*
15	Associates Estates	860' MSL*	15	Associates Estates	860' MSL*
16	Curtiss Wright Center - I	865' MSL*	16	Curtiss Wright Center - I	865' MSL*
17	Curtiss Wright Center - III	868' MSL*	17	Curtiss Wright Center - III	868' MSL*
18	Curtiss Wright Center - IV	872' MSL*	18	Curtiss Wright Center - IV	872' MSL*
19	Zomar T-Hangars	900' MSL*	19	Zomar T-Hangars	900' MSL*
20	Swagelok Hangar	920' MSL*	20	Swagelok Hangar	920' MSL*
21	Corporate Wings Hangar	895' MSL*	21	Corporate Wings Hangar	895' MSL*
22	Air Traffic Control Tower	968' MSL	22	Air Traffic Control Tower	968' MSL
			23	T-Hangars	910' MSL*
			24	T-Hangars	910' MSL*
			25	Corporate Hangar	905' MSL*
			26	Corporate Hangar	905' MSL*
			27	Corporate Hangar	905' MSL*

* building top elevation estimated

DEVELOPMENT PROJECT PHASING

Phase 1 (2006-2010)

1-1 Purchase and Install Automated Weather Observation System (AWOS) and Upgrade Runway Sensor System
1-2 Airport Administrative and Maintenance Expansion (Building and Auto Parking)
1-3 Airport Perimeter Fencing
1-4 Electrical Improvements (Transformer and Field Lighting Loop)
1-5 Rehabilitate Taxiways A, A1, A2, A3, A5, A6, A7 and A8
1-6 Aircraft Run-Up Enclosure (Design and Construct)

Phase 2 (2011-2015)

2-1 Curtiss Wright Parkway Conceptual Realignment Route
2-2 Runway and Parallel Taxiway Extension (Design and Construct)
2-3 Land/Easement Acquisition for Runway 6-24 Improvements
2-4 Relocate Taxiway A (Design and Construct)
2-5 Design and Construct Two 10-Bay T-Hangars
2-6 Design and Construct Based Aircraft Apron
2-7 Demolition of County T-Hangars

Phase 3 (2016-2025)

3-1 Design and Construct Corporate Hangars (3)
3-2 Design and Construct Corporate Apron Expansion

LEGEND

Existing	Description	Proposed
	Runway Centerline	
RSA	Runway Safety Area (RSA)	RSA
ROFA	Runway Object Free Area (ROFA)	ROFA
ROFZ	Runway Obstacle Free Zone (ROFZ)	ROFZ
	Runway Protection Zone (RPZ)	
TOFA	Taxiway Object Free Area (TOFA)	TOFA
TSA	Taxiway Safety Area	TSA
BRL	Building Restriction Line (BRL)	BRL
	Airport Pavement	
ARP	Airport Reference Point	ARP
	Airport Buildings	
	Other Buildings	
EAPL	Airport Property Line	FAPL
	Other Property Lines	
	Railroad	
	Fence	
	Roads	
	Tree Line	
	Wetlands	
300	Ground Elevation Contours	300
	Proposed Land Acquisition	
	Avigation Easement Acquisition	

REVISIONS

BY	DATE	CHANGE

CUYAHOGA COUNTY AIRPORT

CITY OF CLEVELAND — CUYAHOGA COUNTY, OHIO

AIRPORT LAYOUT PLAN

DESIGNED: JCT | DRAWN: JCT | SHEET 3 OF 12
CHECKED: KCK | DATE: DECEMBER 2006
PROJECT FILE NO.: A27.001.001 | CADD FILE NO.: Cuyahoga ALP

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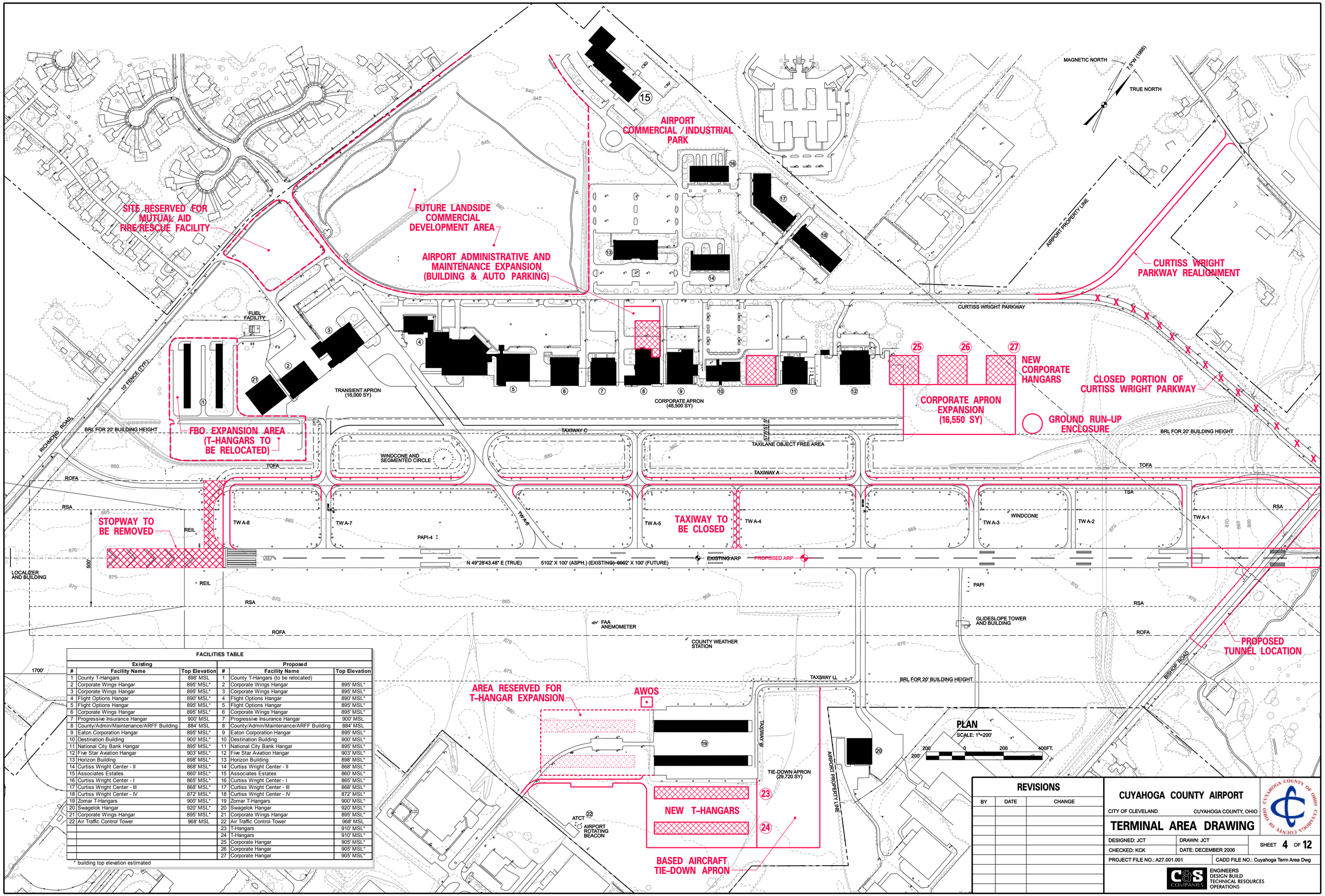

FACILITIES TABLE

Existing #	Existing Facility Name	Existing Top Elevation	Proposed #	Proposed Facility Name	Proposed Top Elevation
1	County T-Hangars	898' MSL	1	County T-Hangars (to be relocated)	
2	Corporate Wings Hangar	895' MSL*	2	Corporate Wings Hangar	895' MSL*
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4	Flight Options Hangar	890' MSL*	4	Flight Options Hangar	890' MSL*
5	Flight Options Hangar	895' MSL*	5	Flight Options Hangar	895' MSL*
6	Corporate Wings Hangar	895' MSL*	6	Corporate Wings Hangar	895' MSL*
7	Progressive Insurance Hangar	900' MSL	7	Progressive Insurance Hangar	900' MSL
8	County/Admin/Maintenance/ARFF Building	884' MSL	8	County/Admin/Maintenance/ARFF Building	884' MSL
9	Eaton Corporation Hangar	895' MSL*	9	Eaton Corporation Hangar	895' MSL*
10	Destination Building	900' MSL*	10	Destination Building	900' MSL*
11	National City Bank Hangar	895' MSL*	11	National City Bank Hangar	895' MSL*
12	Five Star Aviation Hangar	903' MSL*	12	Five Star Aviation Hangar	903' MSL*
13	Horizon Building	898' MSL*	13	Horizon Building	898' MSL*
14	Curtiss Wright Center - II	868' MSL*	14	Curtiss Wright Center - II	868' MSL*
15	Associates Estates	860' MSL*	15	Associates Estates	860' MSL*
16	Curtiss Wright Center - I	865' MSL*	16	Curtiss Wright Center - I	865' MSL*
17	Curtiss Wright Center - III	868' MSL*	17	Curtiss Wright Center - III	868' MSL*
18	Curtiss Wright Center - IV	872' MSL*	18	Curtiss Wright Center - IV	872' MSL*
19	Zomar T-Hangars	900' MSL*	19	Zomar T-Hangars	900' MSL*
20	Swagelok Hangar	920' MSL*	20	Swagelok Hangar	920' MSL*
21	Corporate Wings Hangar	895' MSL*	21	Corporate Wings Hangar	895' MSL*
22	Air Traffic Control Tower	968' MSL	22	Air Traffic Control Tower	968' MSL
			23	T-Hangars	910' MSL*
			24	T-Hangars	910' MSL*
			25	Corporate Hangar	905' MSL*
			26	Corporate Hangar	905' MSL*
			27	Corporate Hangar	905' MSL*

* building top elevation estimated

REVISIONS

BY	DATE	CHANGE

CUYAHOGA COUNTY AIRPORT

CITY OF CLEVELAND — CUYAHOGA COUNTY, OHIO

TERMINAL AREA DRAWING

DESIGNED: JCT	DRAWN: JCT	SHEET 4 OF 12
CHECKED: KCK	DATE: DECEMBER 2006	
PROJECT FILE NO.: A27.001.001	CADD FILE NO.: Cuyahoga Term Area Dwg	

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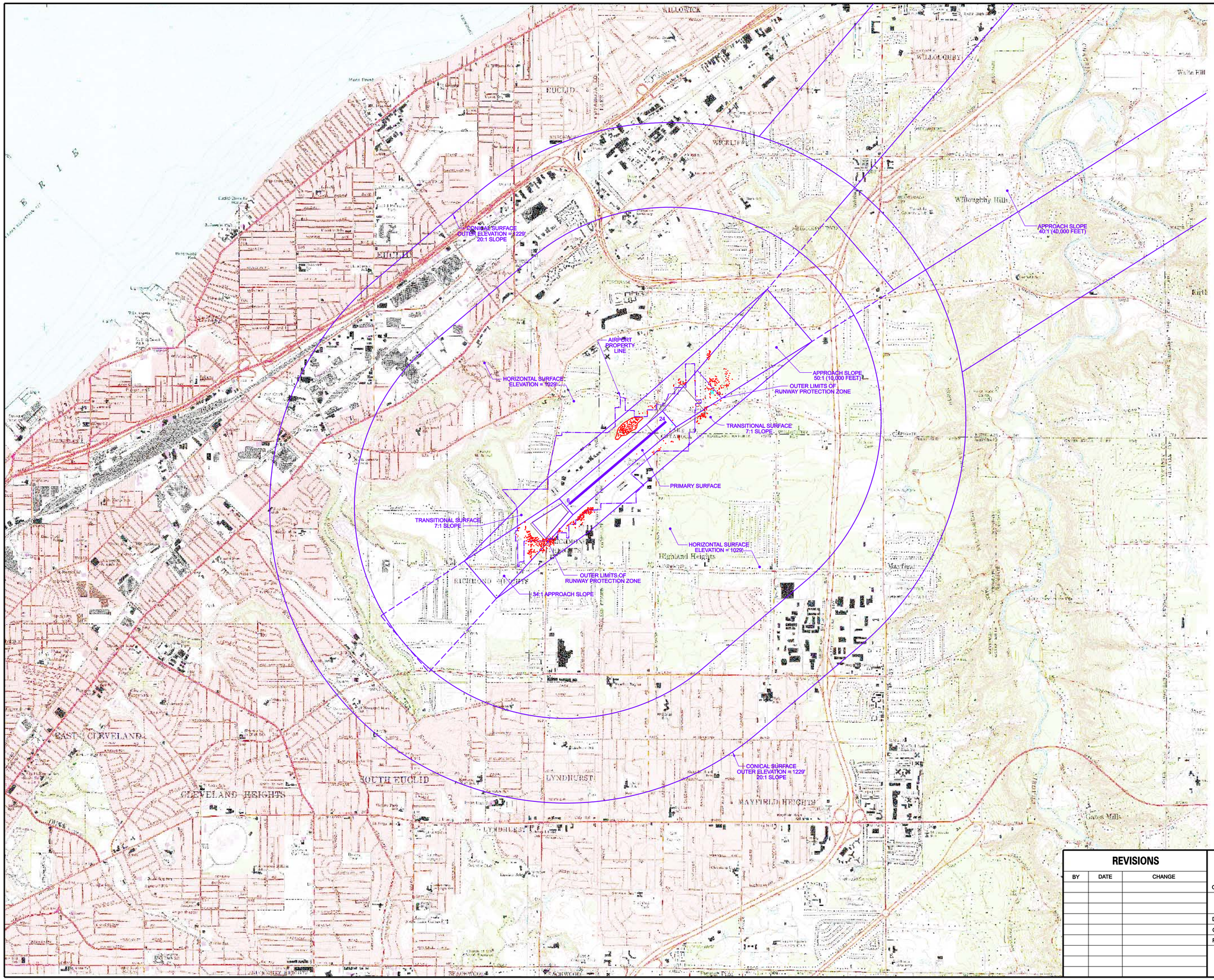

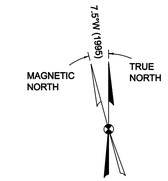

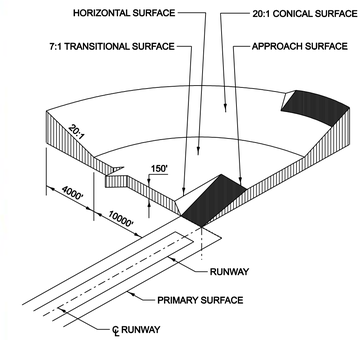

FAR PART 77 SURFACES

GENERAL NOTES

1. ALL ELEVATIONS SHOWN IN FEET ABOVE MEAN SEA LEVEL.
2. ESTABLISHED AIRPORT ELEVATION IS 879 FEET.
3. ALL CLOSE-IN OBSTRUCTIONS (TREES/BUSHES) SHOULD BE REMOVED OR TOPPED.
4. ALL MAN-MADE OBSTRUCTIONS IN HORIZONTAL AND CONICAL SURFACES SHOULD BE MARKED AND LIGHTED.
5. MAPPING FOR THE OBSTRUCTION EVALUATION WAS PREPARED FROM A COMBINATION OF GROUND SURVEY CONTROLLED AERIAL PHOTOGRAPHY WITH DIGITAL ORTHOPHOTOGRAPHS TAKEN AT CUYAHOGA COUNTY AIRPORT. ANALYTICAL AERIAL TRIANGULATION AND PART 77 SURFACE OBSTRUCTIONS WERE DETERMINED BY AERIAL PHOTOGRAMMETRY OBTAINED BY COLUMBUS ENGINEERING CONSULTANTS, INC., IN OCTOBER 2003.
6. OBSTRUCTION NUMBERING IS CONSISTENT WITH OBSTRUCTION STUDY PREPARED FOR CUYAHOGA COUNTY AIRPORT, DECEMBER 2003 BY C&S ENGINEERS, INC..
7. REFER TO OBSTRUCTION DATA TABLE ON SHEET 8 OF 12 FOR DESCRIPTION, SURFACE ELEVATION , PENETRATION, AND PROPOSED ACTION FOR EACH OBSTRUCTION.

PLAN

SCALE: 1"=2000'

2000' 2000 0 2000 4000FT.

REVISIONS		
BY	DATE	CHANGE

CUYAHOGA COUNTY AIRPORT

CITY OF CLEVELAND — CUYAHOGA COUNTY, OHIO

AIRPORT AIRSPACE

DESIGNED: JCT	DRAWN: JCT	SHEET 5 OF 12
CHECKED: KCK	DATE: DECEMBER 2006	
PROJECT FILE NO.: A27.001.001	CADD FILE NO.: Cuyahoga Airport Airspace	

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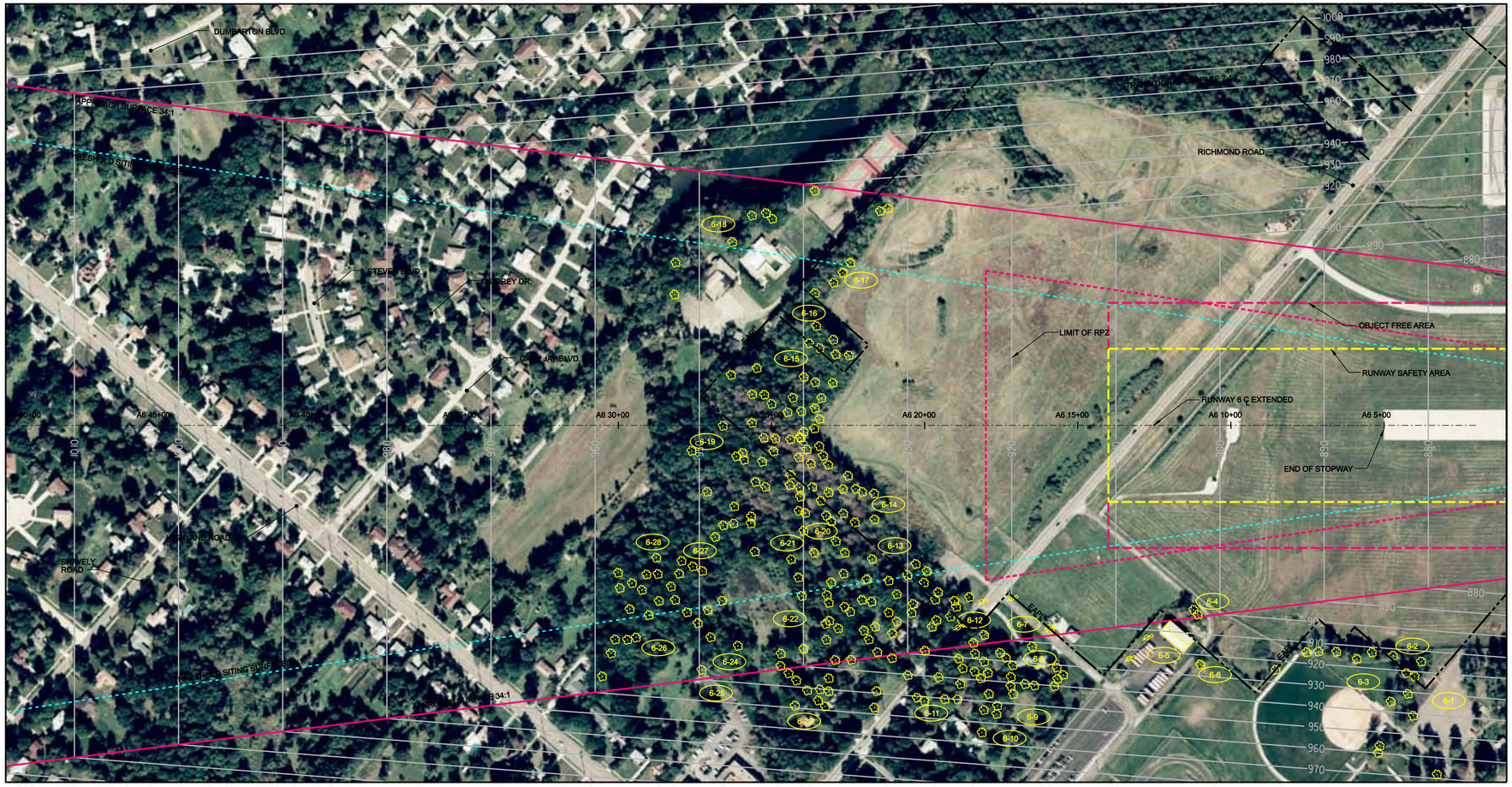
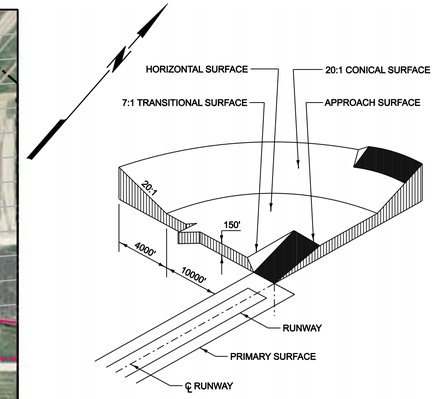




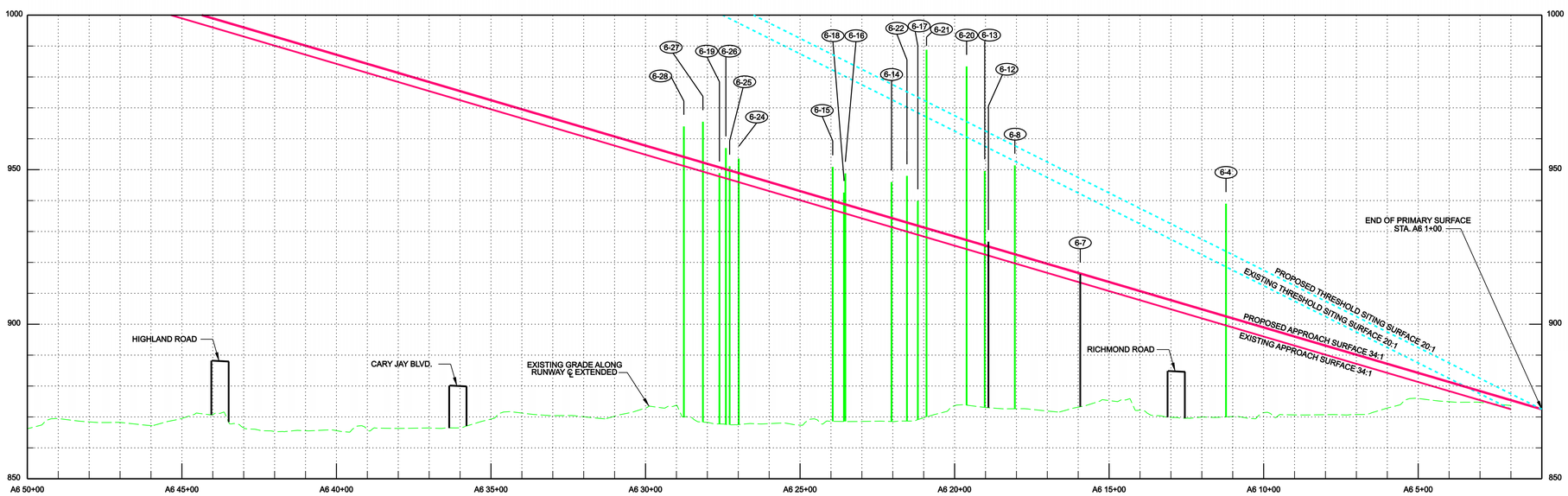
FAR PART 77 SURFACES

NOTES:

1. REFER TO OBSTRUCTION DATA TABLE ON SHEET 8 OF 12 FOR DESCRIPTION, SURFACE ELEVATION, PENETRATION, AND PROPOSED ACTION FOR EACH OBSTRUCTION.
2. NUMBERING OF OBSTRUCTIONS IS CONSISTENT WITH 2003 OBSTRUCTION STUDY PREPARED BY C&S ENGINEERS, INC.

LEGEND

- A6 50+00 — RUNWAY ℄ WITH STATION
- EAPL — EXISTING AIRPORT PROPERTY LINE
- PARCEL WITH OBSTRUCTION
- FAR PART 77 APPROACH SURFACE
- THRESHOLD SITING SURFACE
- EXISTING GRADE
- 1040 — FAR PART 77 SURFACE CONTOUR WITH ELEVATION
- INDIVIDUAL TREE OBSTRUCTION
- POWERPOLE OBSTRUCTION
- 6-21 — OBSTRUCTION LABEL LEFT OF DASH IS RUNWAY END NUMBER OR RUNWAY DESIGNATION. RIGHT OF DASH IS THE OBSTRUCTION NUMBER.



REVISIONS

BY	DATE	CHANGE

200 0 200 400FT. HORIZONTAL
20 0 20 40FT. VERTICAL

CUYAHOGA COUNTY AIRPORT

CITY OF CLEVELAND — CUYAHOGA COUNTY, OHIO

RUNWAY 6 INNER APPROACH PLAN AND PROFILE

DESIGNED: JCT	DRAWN: JCT	SHEET 6 OF 12
CHECKED: KCK	DATE: DECEMBER 2006	
PROJECT FILE NO.: A27.001.001	CADD FILE NO.: Cuyahoga Inner App.dgn	

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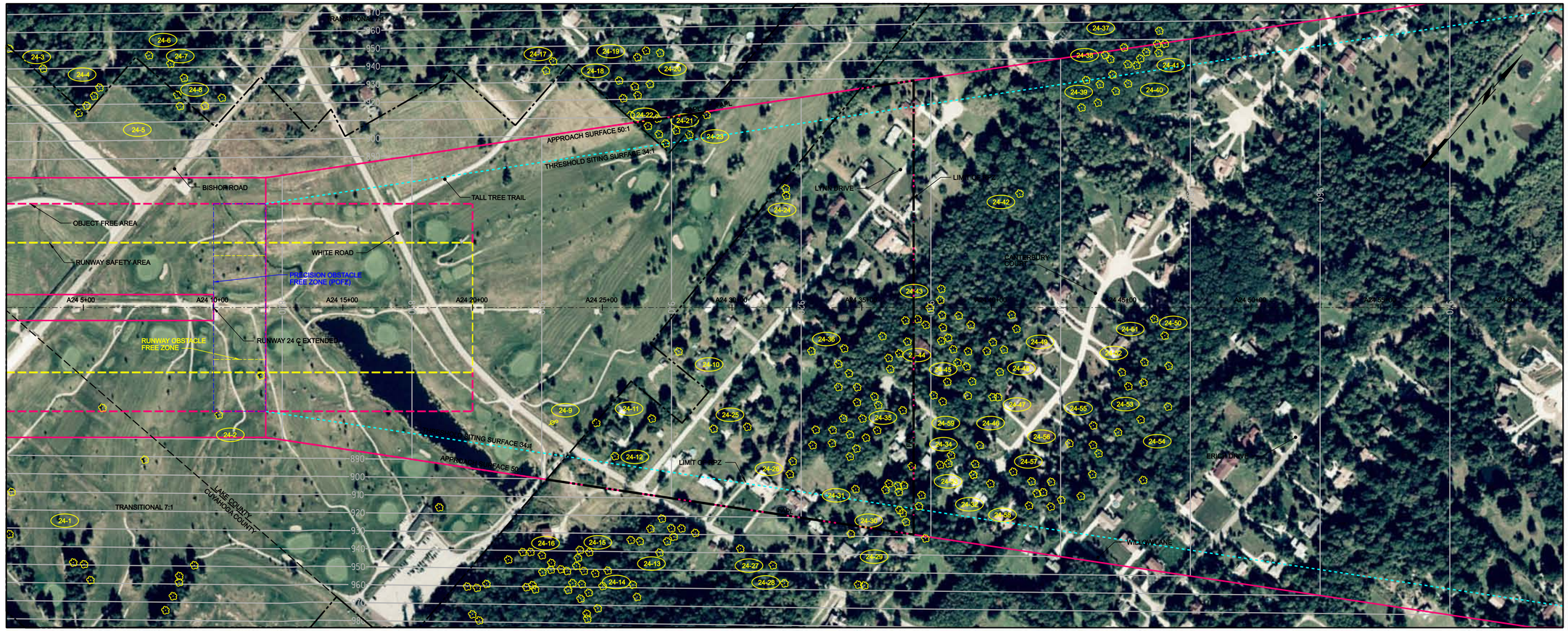

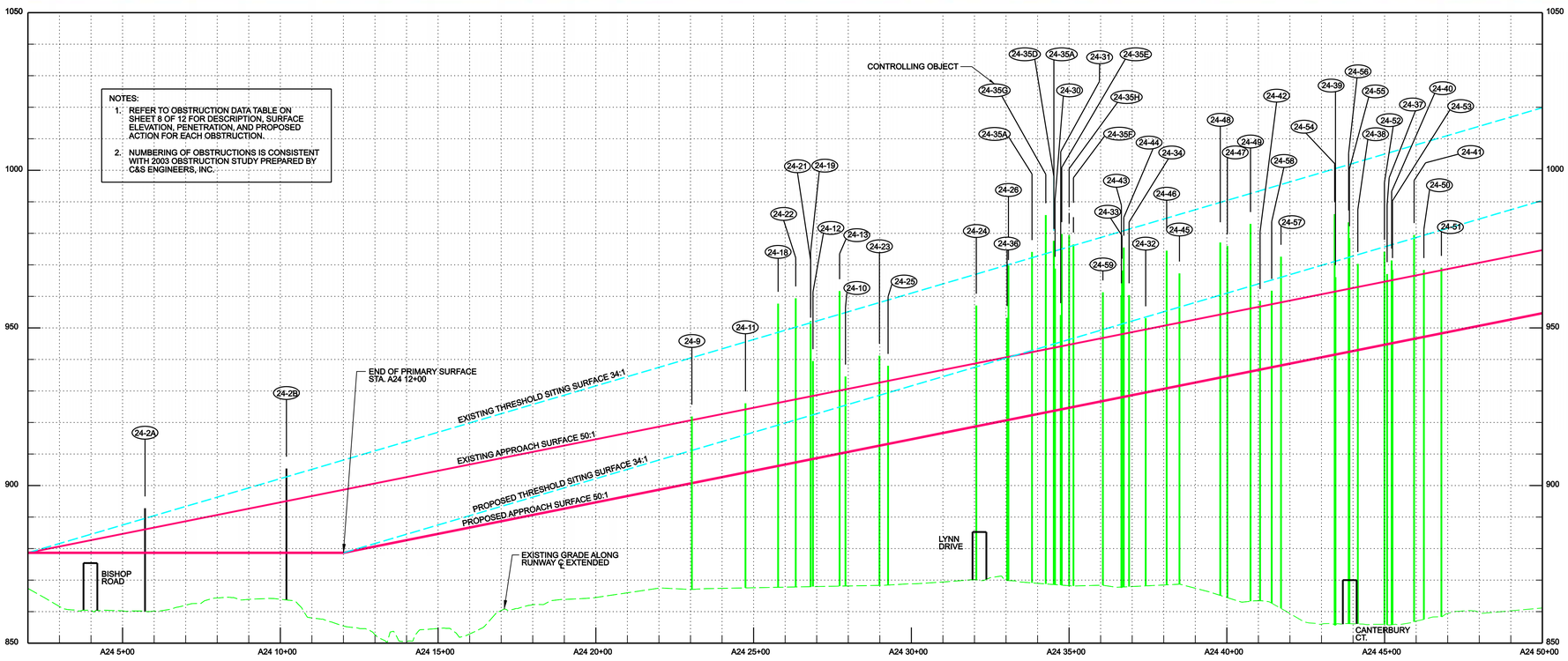

LEGEND

- A6 50+00 — RUNWAY ℄ WITH STATION
- EAPL — EXISTING AIRPORT PROPERTY LINE
- FAPL — FUTURE AIRPORT PROPERTY LINE (FEE/EASEMENT)
- PARCEL WITH OBSTRUCTION
- FAR PART 77 APPROACH SURFACE
- THRESHOLD SITING SURFACE
- EXISTING GRADE
- 1040 — FAR PART 77 SURFACE CONTOUR WITH ELEVATION
- INDIVIDUAL TREE OBSTRUCTION
- POWERPOLE OBSTRUCTION
- 6-21 — OBSTRUCTION LABEL LEFT OF DASH IS RUNWAY END NUMBER OR RUNWAY DESIGNATION, RIGHT OF DASH IS THE OBSTRUCTION NUMBER.

REVISIONS

BY	DATE	CHANGE

200 0 200 400FT. HORIZONTAL
20 0 20 40FT. VERTICAL

CUYAHOGA COUNTY AIRPORT

CITY OF CLEVELAND — CUYAHOGA COUNTY, OHIO

RUNWAY 24 INNER APPROACH PLAN AND PROFILE

DESIGNED: JCT	DRAWN: JCT	SHEET 7 OF 12
CHECKED: KCK	DATE: DECEMBER 2006	
PROJECT FILE NO.: A27.001.001	CADD FILE NO.: Cuyahoga Inner App.dgn	

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Runway 6 Approach (A), Transitional (T) and Horizontal (H) Surfaces
FAR Part 77 34:1 Approach Slope from 200' beyond Runway 6 End

Obstruction Number	Surface Elevation	Penetration Surface	Surface Penetrated	Obstruction Description	Recommended Actions
6-1					
A	966.9	10.2	T	Tree	See Note 1
B	958.9	16.8	T	Tree	See Note 1
C	955.4	21.8	T	Tree	See Note 1
D	939.9	30.4	T	Tree	See Note 1
E	925.6	38.9	T	Tree	See Note 1
F	917.9	48.7	T	Tree	See Note 1
6-2					
A	921.1	37.4	T	Tree	Remove
B	913.9	1.6	T	Tree	Remove
C	912.2	21.4	T	Tree	Remove
6-3					
A	934.0	34.1	T	Tree	See Note 1
B	929.8	44.5	T	Tree	See Note 1
C	920.0	41.0	T	Tree	See Note 1
D	911.4	25.4	T	Tree	See Note 1
E	915.1	27.7	T	Tree	See Note 1
F	912.4	31.5	T	Tree	See Note 1
G	912.9	27.4	T	Tree	See Note 1
H	913.7	15.6	T	Tree	See Note 1
I	923.2	9.0	T	Tree	See Note 1
6-4					
A	899.8	21.4	T	Tree	Remove
B	902.5	36.4	A	Tree	Remove
6-5					
A	912.6	3.5	T	Utility Pole	Lower
B	923.1	1.6	T	Utility Pole	Lower
C	903.2	---	T	Building Top	Light
6-6	923.5	6.4	T	Tree	See Note 1
6-7					
A	916.4	-0.2	A	Utility Pole	Lower
B	920.0	-2.2	A	Utility Pole	Lower
6-8					
A	916.3	2.1	A	Tree	See Note 1
B	921.0	27.0	T	Tree	See Note 1
C	922.6	28.7	A	Tree	See Note 1
D	925.3	25.8	T	Tree	See Note 1
E	927.4	18.2	T	Tree	See Note 1
F	930.7	15.1	T	Tree	See Note 1
G	939.5	4.2	T	Tree	See Note 1
H	939.1	8.3	T	Tree	See Note 1
I	935.5	5.8	T	Tree	See Note 1
J	933.4	2.4	T	Tree	See Note 1
K	930.1	7.4	T	Tree	See Note 1
6-9					
A	921.5	36.3	T	Tree	See Note 1
B	926.5	37.9	T	Tree	See Note 1
C	929.4	39.8	T	Tree	See Note 1
D	933.9	38.3	T	Tree	See Note 1
E	930.0	30.0	T	Tree	See Note 1
F	935.0	24.3	T	Tree	See Note 1
G	938.0	10.0	T	Tree	See Note 1
H	935.2	12.1	T	Tree	See Note 1
I	945.2	28.5	T	Tree	See Note 1
J	936.3	5.7	T	Tree	See Note 1
K	940.6	14.6	T	Tree	See Note 1
L	939.1	6.8	T	Tree	See Note 1
M	944.4	17.5	T	Tree	See Note 1
N	950.4	17.8	T	Tree	See Note 1
6-10					
A	939.1	26.2	T	Tree	See Note 1
B	941.4	28.4	T	Tree	See Note 1
C	949.3	20.2	T	Tree	See Note 1
D	948.9	19.4	T	Tree	See Note 1
E	952.9	11.3	T	Tree	See Note 1
F	954.4	19.9	T	Tree	See Note 1
G	963.7	0.9	T	Tree	See Note 1
6-11					
A	949.6	2.2	T	Tree	See Note 1
B	950.7	9.2	T	Tree	See Note 1
6-12					
A	925.1	1.6	A	Utility Pole	Light
B	922.8	2.6	A	Utility Pole	Light
6-13					
A	924.1	7.8	A	Tree	Remove
B	925.3	16.4	A	Tree	Remove
C	925.5	24.1	A	Tree	Remove
D	927.1	18.3	A	Tree	Remove
E	928.4	10.0	A	Tree	Remove
F	928.1	1.5	A	Tree	Remove
G	929.2	5.6	A	Tree	Remove
H	933.2	-0.6	A	Tree	Remove
I	935.1	23.9	A	Tree	Remove
J	936.2	17.6	A	Tree	Remove
K	936.2	1.4	A	Tree	Remove
L	937.6	-1.2	A	Tree	Remove
M	939.1	2.1	A	Tree	Remove
N	939.3	7.6	A	Tree	Remove
O	940.5	5.4	A	Tree	Remove
P	942.9	7.0	A	Tree	Remove
Q	942.7	-0.3	A	Tree	Remove
R	943.8	0.6	A	Tree	Remove
S	944.9	2.0	A	Tree	Remove
6-14					
A	933.2	8.4	A	Tree	Remove
B	934.4	11.7	A	Tree	Remove
C	935.0	3.7	A	Tree	Remove
D	935.7	3.5	A	Tree	Remove
E	937.6	3.4	A	Tree	Remove
F	938.1	5.5	A	Tree	Remove
G	938.5	4.3	A	Tree	Remove
H	939.7	6.5	A	Tree	Remove
I	940.2	4.4	A	Tree	Remove
J	940.4	6.1	A	Tree	Remove
K	940.0	5.2	A	Tree	Remove
L	941.3	3.4	A	Tree	Remove
M	941.5	3.3	A	Tree	Remove
N	943.1	2.1	A	Tree	Remove
O	943.7	-0.5	A	Tree	Remove
P	944.9	0.3	A	Tree	Remove
Q	946.9	-1.4	A	Tree	Remove
6-15					
A	938.9	5.7	A	Tree	Remove
B	938.4	0.8	A	Tree	Remove
C	940.2	10.5	A	Tree	Remove
D	941.0	-1.5	A	Tree	Remove
E	938.9	5.8	A	Tree	Remove
F	938.3	-0.3	A	Tree	Remove
G	937.2	0.0	A	Tree	Remove
H	938.9	6.7	A	Tree	Remove
I	940.0	10.9	A	Tree	Remove
J	944.5	7.7	A	Tree	Remove
K	939.4	2.4	A	Tree	Remove
6-16					
A	935.6	-1.5	A	Tree	See Note 2
B	936.9	0.3	A	Tree	See Note 2
C	937.1	1.3	A	Tree	See Note 2
D	938.4	-0.4	A	Tree	See Note 2
E	938.8	10.1	A	Tree	See Note 2

Runway 6 Approach (A), Transitional (T) and Horizontal (H) Surfaces
FAR Part 77 34:1 Approach Slope from 200' beyond Runway 6 End

Obstruction Number	Surface Elevation	Penetration Surface	Surface Penetrated	Obstruction Description	Recommended Actions
6-17					
A	938.9	2.3	A	Tree	Remove
B	937.1	5.2	A	Tree	Remove
C	936.2	0.3	A	Tree	Remove
D	935.5	-1.1	A	Tree	Remove
E	932.6	4.8	A	Tree	Remove
F	931.9	8.1	A	Tree	Remove
6-18					
A	938.9	3.7	A	Tree	See Note 2
B	943.0	-0.2	A	Tree	See Note 2
C	944.9	-2.6	A	Tree	See Note 2
D	946.8	-2.6	A	Tree	See Note 2
E	952.3	-2.1	A	Tree	See Note 2
F	952.4	-0.7	A	Tree	See Note 2
G	943.6	-2.5	A	Tree	See Note 2
6-19					
A	947.7	-2.4	A	Tree	See Note 1
B	950.7	-1.8	A	Tree	See Note 1
6-20					
A	925.9	51.9	A	Tree	See Note 1
B	927.2	56.1	A	Tree	See Note 1
C	927.7	58.1	A	Tree	See Note 1
D	927.3	23.0	A	Tree	See Note 1
E	929.5	36.8	A	Tree	See Note 1
F	929.6	37.5	A	Tree	See Note 1
G	931.0	42.6	A	Tree	See Note 1
H	930.0	7.0	A	Tree	See Note 1
I	931.8	7.6	A	Tree	See Note 1
J	933.9	4.8	A	Tree	See Note 1
K	933.4	13.3	A	Tree	See Note 1
L	936.0	6.6	A	Tree	See Note 1
M	936.9	12.2	A	Tree	See Note 1
N	940.0	13.1	A	Tree	See Note 1
O	937.3	15.0	A	Tree	See Note 1
P	937.8	3.4	A	Tree	See Note 1
Q	938.3	6.8	A	Tree	See Note 1
R	939.8	16.8	A	Tree	See Note 1
S	940.4	14.2	A	Tree	See Note 1
T	940.3	5.0	A	Tree	See Note 1
U	940.4	7.4	A	Tree	See Note 1
V	941.3	17.6	A	Tree	See Note 1
W	941.2	4.9	A	Tree	See Note 1
X	943.7	0.8	A	Tree	See Note 1
Y	944.6	-1.2	A	Tree	See Note 1
Z	944.0	0.5	A	Tree	See Note 1
AA	945.7	4.6	A	Tree	See Note 1
BB	945.8	10.3	A	Tree	See Note 1
CC	946.4	9.0	A	Tree	See Note 1
6-21					
A	927.0	31.5	T	Tree	See Note 1
B	931.7	14.1	T	Tree	See Note 1
C	931.5	22.8	A	Tree	See Note 1
D	931.0	57.8	A	Tree	See Note 1
E	931.8	14.0	A	Tree	See Note 1
F	933.7	14.6	A	Tree	See Note 1
G	934.2	15.0	A	Tree	See Note 1
H	933.1	20.1	A	Tree	See Note 1
I	935.5	9.7	A	Tree	See Note 1
J	936.0	10.5	A	Tree	See Note 1
K	934.4	2.4	A	Tree	See Note 1
L	937.6	4.2	A	Tree	See Note 1
M	937.7	27.3	A	Tree	See Note 1
N	937.3	14.9	A	Tree	See Note 1
O	936.1	4.6	A	Tree	See Note 1
P	940.5	2.7	A	Tree	See Note 1
Q	939.0	5.6	A	Tree	See Note 1
R	941.2	1.5	A	Tree	See Note 1
S	945.1	-0.8	A	Tree	See Note 1
T	945.0	-1.9	A	Tree	See Note 1
U	946.7	-0.7	A	Tree	See Note 1
V	946.6	-1.4	A	Tree	See Note 1
W	949.2	-1.8	A	Tree	See Note 1
X	933.5	9.1	A	Tree	See Note 1
Y	939.3	13.2	T	Tree	See Note 1
6-22					
A	932.9	15.1	A	Tree	See Note 1
B	934.0	5.1	T	Tree	See Note 1
C	934.7	6.2	T	Tree	See Note 1
D	936.7	-0.9	A	Tree	See Note 1
E	937.5	6.1	A	Tree	See Note 1
F	937.9	1.6	A	Tree	See Note 1
G	937.8	-1.2	A	Tree	See Note 1
H	940.0	11.8	A	Tree	See Note 1
I	939.5	15.4	T	Tree	See Note 1
J	942.2	3.2	A	Tree	See Note 1
K	940.1	-0.7	A	Tree	See Note 1
L	944.7	13.3	A	Tree	See Note 1
M	947.8	-1.1	A	Tree	See Note 1
N	942.7	7.5	T	Tree	See Note 1
O	945.8	6.7	T	Tree	See Note 1
P	949.2	5.7	T	Tree	See Note 1
Q	943.6	11.9	T	Tree	See Note 1
R	949.8	1.8	T	Tree	See Note 1
S	947.9	12.7	T	Tree	See Note 1
T	955.8	16.1	T	Tree	See Note 1
6-23					
A	950.1	13.9	T	Tree	See Note 1
B	954.5	5.6	T	Tree	See Note 1
C	957.1	2.7	T	Tree	See Note 1
D	957.8	1.8	T	Tree	See Note 1
6-24					
A	946.3	3.3	A	Tree	See Note 1
B	948.9	4.6	A	Tree	See Note 1
6-25	949.8	1.3	A	Tree	See Note 1
6-26					
A	949.2	-0.1	A	Tree	See Note 1
B	950.1	6.8	A	Tree	See Note 1
C	951.2	-0.5	A	Tree	See Note 1
6-27					
A	959.3	10.4	A	Tree	See Note 1
B	958.5	9.2	A	Tree	See Note 1
C	958.1	6.8	A	Tree	See Note 1
D	956.9	11.3	A	Tree	See Note 1
E	956.1	7.0	A	Tree	See Note 1
F	954.8	1.2	A	Tree	See Note 1
G	956.7	3.1	A	Tree	See Note 1
H	955.5	5.6	A	Tree	See Note 1
I	953.9	2.7	A	Tree	See Note 1
J	952.3	13.2	A	Tree	See Note 1
K	952.7	3.1	A	Tree	See Note 1
L	954.0	7.9	A	Tree	See Note 1
M	951.9	4.1	A	Tree	See Note 1
N	951.7	1.4	A	Tree	See Note 1
O	950.6	-0.4	A	Tree	See Note 1
P	949.7	1.2	A	Tree	See Note 1
Q	948.5	2.1	A	Tree	See Note 1
R	947.7	-2.3	A	Tree	See Note 1

Runway 6 Approach (A), Transitional (T) and Horizontal (H) Surfaces
FAR Part 77 34:1 Approach Slope from 200' beyond Runway 6 End

Obstruction Number	Surface Elevation	Penetration Surface	Surface Penetrated	Obstruction Description	Recommended Actions
6-28					
A	957.6	3.5	A	Tree	See Note 1
B	957.8	-0.2	A	Tree	See Note 1
C	956.5	6.2	A	Tree	See Note 1
D	955.1	7.0	A	Tree	See Note 1
E	954.1	9.8	A	Tree	See Note 1
6-29					
A	1029.0	7.7	H	Tree	See Note 1
B	1029.0	1.7	H	Tree	See Note 1
6-30					
A	1029.0	7.3	H	Tree	See Note 1
B	1029.0	11.6	H	Tree	See Note 1
6-31					
A	1029.0	4.6	H	Tree	See Note 1
B	1029.0	8.1	H	Tree	See Note 1
C	1029.0	4.7	H	Tree	See Note 1
D	1029.0	5.9	H	Tree	See Note 1
E	1029.0	10.6	H	Tree	See Note 1
F	1029.0	5.5	H	Tree	See Note 1
6-32					
A	1029.0	7.7	H	Tree	See Note 1
B	1029.0	8.8	H	Tree	See Note 1
C	1029.0	3.3	H	Tree	See Note 1
D	1029.0	5.5	H	Tree	See Note 1
E	1029.0	7.1	H	Tree	See Note 1
F	1029.0	7.5	H	Tree	See Note 1
G	1029.0	0.7	H	Tree	See Note 1
6-33	1029.0	11.0	H	Tree	See Note 1
6-34					
A	1029.0	8.6	H	Tree	See Note 1
B	1029.0	5.6	H	Tree	See Note 1
C	1029.0	7.7	H	Tree	See Note 1
D	1029.0	10.2	H	Tree	See Note 1
E	1029.0	4.6	H	Tree	See Note 1
F	1029.0	12.4	H	Tree	See Note 1
G	1029.0	10.7	H	Tree	See Note 1
6-35					
A	1029.0	12.0	H	Tree	See Note 1
B	1029.0	9.4	H	Tree	See Note 1
C	1029.0	9.6	H	Tree	See Note 1
D	1029.0	19.8	H	Tree	See Note 1
6-36					
A	1029.0	33.3	H	Tree	See Note 1
B	1029.0	25.1	H	Tree	See Note 1
C	1029.0	21.7	H	Tree	See Note 1
D	1029.0	21.7	H	Tree	See Note 1
E	1029.0	22.8	H	Tree	See Note 1
F	1029.0	13.4	H	Tree	See Note 1
G	1029.0	10.2	H	Tree	See Note 1
H	1029.0	14.1	H	Tree	See Note 1
I	1029.0	14.1	H	Tree	See Note 1
J	1029.0	14.3	H	Tree	See Note 1
K	1029.0	22.0	H	Tree	See Note 1
L	1029.0	15.1	H	Tree	See Note 1
M	1029.0	25.1	H	Tree	See Note 1
N	1029.0	28.8	H	Tree	See Note 1
O	1029.0	29.1	H	Tree	See Note 1
6-37					
A	1029.0	14.2	H	Tree	See Note 1
B	1029.0	15.9	H	Tree	See Note 1
C	1029.0	21.9	H	Tree	See Note 1
D	1029.0	14.7	H	Tree	See Note 1
E	1029.0	15.9	H	Tree	See Note 1
F	1029.0	16.7	H	Tree	See Note 1
G	1029.0	21.1	H	Tree	See Note 1
H	1029.0	21.2	H	Tree	See Note 1
I	1029.0	19.8	H	Tree	See Note 1
J	1029.0	18.3	H	Tree	See Note 1
K	1029.0	15.3	H	Tree	See Note 1
L	1029.0	20.1	H	Tree	See Note 1
M	1029.0	16.8	H	Tree	See Note 1
N	1029.0	15.8	H	Tree	See Note 1
O	1029.0	14.5	H	Tree	See Note 1
P	1029.0	8.2	H	Tree	See Note 1
Q	1029.0	14.7	H	Tree	See Note 1
R	1029.0	13.7	H	Tree	See Note 1
S	1029.0	2.0	H	Tree	See Note 1

RUNWAY 6

GENERAL NOTES

1. ALL ELEVATIONS SHOWN IN FEET ABOVE MEAN SEA LEVEL.
2. ESTABLISHED AIRPORT ELEVATION IS 879 FEET.
3. ALL CLOSE-IN OBSTRUCTIONS (TREES/BUSHES) SHOULD BE REMOVED OR TOPPED.
4. ALL MAN-MADE OBSTRUCTIONS IN HORIZONTAL AND CONICAL SURFACES SHOULD BE MARKED AND LIGHTED.
5. MAPPING FOR THE OBSTRUCTION EVALUATION WAS PREPARED FROM A COMBINATION OF GROUND SURVEY CONTROLLED AERIAL PHOTOGRAPHY WITH DIGITAL ORTHOPHOTOGRAPHS TAKEN AT CUYAHOGA COUNTY AIRPORT. ANALYTICAL AERIAL TRIANGULATION AND PART 77 SURFACE OBSTRUCTIONS WERE DETERMINED BY AERIAL PHOTOGRAMMETRY OBTAINED BY COLUMBUS ENGINEERING CONSULTANTS, INC., IN OCTOBER 2003.
6. OBSTRUCTION NUMBERING IS CONSISTENT WITH OBSTRUCTION STUDY PREPARED FOR CUYAHOGA COUNTY AIRPORT, DECEMBER 2003 BY C&S ENGINEERS, INC..
7. REFER TO OBSTRUCTION DATA TABLE ON SHEET 8 OF 12 FOR DESCRIPTION, SURFACE ELEVATION , PENETRATION, AND PROPOSED ACTION FOR EACH OBSTRUCTION.

Runway 24 Approach (A) and Transitional (T) Surfaces
FAR Part 77 50:1 Approach Slope from 200' beyond Runway 24 End

Obstruction Number	Surface Elevation	Penetration Surface	Surface Penetrated	Obstruction Description	Recommended Actions
24-1					
A	890.3	5.3	T	Tree	Remove
B	908.8	2.9	T	Tree	Remove
C	932.0	4.5	T	Tree	Remove
D	947.9	9.0	T	Tree	Remove
E	948.8	0.4	T	Tree	Remove
F	957.6	0.8	T	Tree	Remove
G	973.8	0.7	T	Tree	Remove
H	966.0	5.6	T	Tree	Remove
I	958.2	1.4	T	Tree	Remove
J	954.7	1.4	T	Tree	Remove
K	948.6	3.4	T	Tree	Remove
L	914.9	1.8	T	Tree	Remove
24-3	938.9	7.6	T	Tree	See Note 1
24-4					
A	918.3	18.5	T	Tree	See Note 1
B	923.6	0.7	T	Tree	See Note 1
C	928.2	6.5	T	Tree	See Note 1
24-5					
A	949.8	2.7	T	Tree	Remove
B	914.3	16.5	T	Tree	Remove
C	923.7	6.9	T	Tree	Remove
D	917.4	6.4	T	Tree	Remove
24-6	945.8	0.02	T	Tree	See Note 1
24-7	941.1	0.4	T	Tree	See Note 1
24-8					
A	933.1	10.3	T	Tree	See Note 1
B	917.4	1.2	T	Tree	See Note 1
C	921.8	5.7	T	Tree	See Note 1
24-9	900.8	21.0	A	Utility Pole	Light/Bury Utilities
24-10	910.6	24.1	A	Tree	See Note 1
24-11	904.2	21.9	A	Tree	See Note 1
24-12					
A	908.5	31.0	A	Tree	See Note 1
B	905.6	26.1	A	Tree	See Note 1
24-13					
A	931.9	5.3	T	Tree	See Note 1
B	908.4	27.0	A	Tree	See Note 1
C	909.3	29.5	A	Tree	See Note 1
D	910.0	28.1	A	Tree	See Note 1
E	910.8	28.5	A	Tree	See Note 1
F	911.8	36.8	A	Tree	See Note 1
G	910.2	51.5	A	Tree	See Note 1
H	932.4	13.2	T	Tree	See Note 1
I	938.7	18.5	T	Tree	See Note 1
J	932.5	5.8	T	Tree	See Note 1
K	963.5	5.4	T	Tree	See Note 1
L	975.9	2.3	T	Tree	See Note 1
M	970.1	2.2	T	Tree	See Note 1
N	961.4	10.3	T	Tree	See Note 1
O	964.8	3.4	T	Tree	See Note 1
P	973.1	4.1	T	Tree	See Note 1
24-14					
A	957.6	2.2	T	Tree	Buy/Remove
B	950.6	5.2	T	Tree	Buy/Remove
C	949.1	3.5	T	Tree	Buy/Remove
D	956.7	1.0	T	Tree	Buy/Remove
24-15					
A	939.0	7.6	T	Tree	Remove
B	937.7	9.7	T	Tree	Remove
C	942.1	9.4	T	Tree	Remove
D	946.7	17.1	T	Tree	Remove
E	949.4	11.7	T	Tree	Remove
F	956.8	7.8	T	Tree	Remove
G	949.5	10.5	T	Tree	Remove
H	948.6	14.0	T	Tree	Remove
I	948.9	9.8	T	Tree	Remove
J	956.2	4.9	T	Tree	Remove
K	960.1	1.3	T	Tree	Remove
L	959.9	8.4	T	Tree	Remove
24-16					
A	958.8	1.0	T	Tree	See Note 1
B	977.5	6.6	T	Tree	See Note 1
C	974.2	2.5	T	Tree	See Note 1
D	958.8	5.7	T	Tree	See Note 1
E	959.4	9.0	T	Tree	See Note 1
F	957.2	12.9	T	Tree	See Note 1
G	943.5	20.5	T	Tree	See Note 1
H	939.3	6.8	T	Tree	See Note 1
I	939.2	15.1	T	Tree	See Note 1
J	945.1	16.6	T	Tree	See Note 1
K	940.9	16.2	T	Tree	See Note 1
L	950.3	7.4	T	Tree	See Note 1
M	957.6	4.9	T	Tree	See Note 1
24-17					
A	934.8	7.2	T	Tree	See Note 1
B	939.9	4.2	T	Tree	See Note 1
24-18					
A	928.9	6.1	T	Tree	See Note 1
B	906.3	51.5	A	Tree	See Note 1
24-19	907.2	45.0	A	Tree	See Note 1
24-20					
A	944.0	0.3	T	Tree	See Note 1
B	941.7	10.0	T	Tree	See Note 1
C	945.4	0.1	T	Tree	See Note 1
24-21	908.3	41.2	A	Tree	See Note 1
24-22					
A	907.4	52.0	A	Tree	See Note 1
B	906.9	42.6	A	Tree	See Note 1
C	908.2	37.4	A	Tree	See Note 1
D	908.9	32.6	A	Tree	See Note 1
E	910.4	24.0	A	Tree	See Note 1
F	909.0	40.5	A	Tree	See Note 1
G	909.6	27.3	A	Tree	See Note 1
24-23					
A	911.4	23.5	A	Tree	See Note 1
B	912.7	28.5	A	Tree	See Note 1
24-24					
A	918.8	38.2	A	Tree	See Note 1
B	918.8	32.1	A	Tree	See Note 1
24-25					
A	913.3	24.7	A	Tree	See Note 1
B	915.9	20.2	A	Tree	See Note 1

Runway 24 Approach (A) and Transitional (T) Surfaces
FAR Part 77 50:1 Approach Slope from 200' beyond Runway 24 End

Obstruction Number	Surface Elevation	Penetration Surface	Surface Penetrated	Obstruction Description	Recommended Actions
24-26					
A	919.1	28.6	A	Tree	See Note 1
B	919.4	21.0	A	Tree	See Note 1
C	920.9	48.9	A	Tree	See Note 1
D	921.1	30.3	A	Tree	See Note 1
E	922.9	23.5	A	Tree	See Note 1
F	924.3	24.2	A	Tree	See Note 1
G	923.7	24.4	A	Tree	See Note 1
H	922.9	24.5	A	Tree	See Note 1
24-27	936.0	11.9	T	Tree	See Note 1
24-28					
A	945.0	3.0	T	Tree	See Note 1
B	955.0	1.2	T	Tree	See Note 1
24-29					
A	955.7	13.8	T	Tree	See Note 1
B	955.2	12.9	T	Tree	See Note 1
24-30	923.8	45.0	A	Tree	See Note 1
24-31	924.2	29.9	A	Tree	See Note 1
24-32					
A	929.6	23.5	A	Tree	See Note 1
B	934.6	21.9	A	Tree	See Note 1
24-33					
A	928.1	40.1	A	Tree	See Note 1
B	927.8	35.4	A	Tree	See Note 1
C	929.1	25.3	A	Tree	See Note 1
D	929.3	34.5	A	Tree	See Note 1
E	931.4	32.9	A	Tree	See Note 1
F	931.6	25.4	A	Tree	See Note 1
G	933.4	20.5	A	Tree	See Note 1
H	933.3	22.1	A	Tree	See Note 1
I	933.3	22.3	A	Tree	See Note 1
24-34					
A	926.5	25.4	A	Tree	See Note 1
B	926.8	30.2	A	Tree	See Note 1
C	927.5	31.3	A	Tree	See Note 1
D	927.5	25.9	A	Tree	See Note 1
E	927.9	28.6	A	Tree	See Note 1
F	928.5	31.9	A	Tree	See Note 1
G	930.7	20.8	A	Tree	See Note 1
H	927.6	29.6	A	Tree	See Note 1
24-35					
A	922.4	51.7	A	Tree	See Note 1
B	923.8	57.0	A	Tree	See Note 1
C	922.4	48.8	A	Tree	See Note 1
D	923.8	53.8	A	Tree	See Note 1
E	924.3	55.6	A	Tree	See Note 1
F	925.0	51.5	A	Tree	See Note 1
G	923.3	62.5	A	Tree	See Note 1
H	924.7	54.7	A	Tree	See Note 1
I	925.9	23.7	A	Tree	See Note 1
J	924.3	46.7	A	Tree	See Note 1
K	925.7	49.4	A	Tree	See Note 1
L	926.0	40.6	A	Tree	See Note 1
M	927.8	26.5	A	Tree	See Note 1
24-36					
A	920.8	32.4	A	Tree	See Note 1
B	923.3	25.1	A	Tree	See Note 1
24-37	944.9	22.2	A	Tree	See Note 1
24-38					
A	943.4	23.5	A	Tree	See Note 1
B	943.8	23.4	A	Tree	See Note 1
C	944.0	22.9	A	Tree	See Note 1
D	943.0	27.3	A	Tree	See Note 1
24-39					
A	942.0	22.4	A	Tree	See Note 1
B	941.6	24.5	A	Tree	See Note 1
24-40					
A	942.9	21.4	A	Tree	See Note 1
B	944.3	25.4	A	Tree	See Note 1
C	945.2	24.2	A	Tree	See Note 1
D	945.2	26.2	A	Tree	See Note 1
E	945.9	21.5	A	Tree	See Note 1
24-41					
A	946.1	23.6	A	Tree	See Note 1
B	946.6	32.9	A	Tree	See Note 1
C	947.6	22.1	A	Tree	See Note 1
D	948.0	20.7	A	Tree	See Note 1
E	947.5	21.0	A	Tree	See Note 1
F	947.6	23.5	A	Tree	See Note 1
24-42	936.8	21.7	A	Tree	See Note 1
24-43					
A	926.3	25.3	A	Tree	See Note 1
B	928.0	32.4	A	Tree	See Note 1
C	929.0	24.6	A	Tree	See Note 1
D	929.9	31.1	A	Tree	See Note 1
E	930.8	27.0	A	Tree	See Note 1
24-44					
A	926.7	26.3	A	Tree	See Note 1
B	927.6	32.0	A	Tree	See Note 1
C	928.2	47.3	A	Tree	See Note 1
D	929.6	34.5	A	Tree	See Note 1
E	930.9	33.9	A	Tree	See Note 1
F	930.9	31.6	A	Tree	See Note 1
G	931.3	33.3	A	Tree	See Note 1
H	930.8	31.3	A	Tree	See Note 1
24-45					
A	930.2	30.2	A	Tree	See Note 1
B	931.3	24.1	A	Tree	See Note 1
C	932.8	25.3	A	Tree	See Note 1
D	932.1	25.3	A	Tree	See Note 1
E	932.9	31.5	A	Tree	See Note 1
F	931.7	35.6	A	Tree	See Note 1
24-46					
A	930.9	43.6	A	Tree	See Note 1
B	932.9	37.7	A	Tree	See Note 1
24-47					
A	934.8	41.3	A	Tree	See Note 1
B	933.2	35.1	A	Tree	See Note 1
C	935.2	35.3	A	Tree	See Note 1
D	935.3	34.9	A	Tree	See Note 1
24-48					
A	935.6	30.2	A	Tree	See Note 1
B	934.3	42.8	A	Tree	See Note 1
C	934.8	31.2	A	Tree	See Note 1
D	933.1	34.6	A	Tree	See Note 1
E	932.2	33.8	A	Tree	See Note 1
F	930.7	25.0	A	Tree	See Note 1
24-49					
A	936.6	37.1	A	Tree	See Note 1
B	936.2	46.8	A	Tree	See Note 1
24-50					
A	947.2	21.2	A	Tree	See Note 1
B	948.0	20.4	A	Tree	See Note 1

Runway 24 Approach (A) and Transitional (T) Surfaces
FAR Part 77 50:1 Approach Slope from 200' beyond Runway 24 End

Obstruction Number	Surface Elevation	Penetration Surface	Surface Penetrated	Obstruction Description	Recommended Actions
24-51	948.3	20.8	A	Tree	See Note 1
24-52					
A	946.5	21.1	A	Tree	See Note 1
B	944.7	29.5	A	Tree	See Note 1
C	946.4	23.3	A	Tree	See Note 1
24-53					
A	946.2	21.0	A	Tree	See Note 1
B	945.2	23.2	A	Tree	See Note 1
24-54					
A	941.6	44.5	A	Tree	See Note 1
B	946.4	21.4	A	Tree	See Note 1
C	948.3	23.4	A	Tree	See Note 1
24-55					
A	942.5	24.6	A	Tree	See Note 1
B	944.4	25.3	A	Tree	See Note 1
C	942.5	36.0	A	Tree	See Note 1
24-56					
A	940.7	37.7	A	Tree	See Note 1
B	942.4	41.1	A	Tree	See Note 1
C	942.9	34.8	A	Tree	See Note 1
24-57					
A	936.4	21.0	A	Tree	See Note 1
B	937.8	29.3	A	Tree	See Note 1
C	939.3	30.4	A	Tree	See Note 1
D	938.7	29.7	A	Tree	See Note 1
E	938.2	34.4	A	Tree	See Note 1
F	939.2	23.4	A	Tree	See Note 1
G	940.1	21.4	A	Tree	See Note 1
24-58	937.6	24.3	A	Tree	See Note 1
24-59					
A	926.9	34.4	A	Tree	See Note 1
B	933.8	24.9	A	Tree	See Note 1

RUNWAY 24

Runway 6-24 Primary (P) and Transitional (T) Surfaces
Transitional Surface 7:1 from edge of Primary Surface

Obstruction Number	Surface Elevation	Penetration Surface	Surface Penetrated	Obstruction Description	Recommended Actions
6/24-1					
A	926.8	40.7	T	Tree	See Note 1
B	925.1	44.2	T	Tree	See Note 1
C	917.4	55.3	T	Tree	See Note 1
D	910.8	53.1	T	Tree	See Note 1
E	912.0	49.5	T	Tree	See Note 1
6/24-2					
A	928.0	34.9	T	Tree	See Note 1
B	924.0	40.8	T	Tree	See Note 1
C	917.9	62.2	T	Tree	See Note 1
D	917.2	53.3	T	Tree	See Note 1
E	913.5	58.1	T	Tree	See Note 1
F	910.5	56.9	T	Tree	See Note 1
G	908.0	57.5	T	Tree	See Note 1
6/24-3					
A	966.0	13.3	T	Tree	See Note 1
B	960.9	24.2	T	Tree	See Note 1
C	959.4	15.3	T	Tree	See Note 1
D	941.3	16.9	T	Tree	See Note 1
E	941.9	40.4	T	Tree	See Note 1
F	936.1	36.6	T	Tree	See Note 1
G	938.8	32.9	T	Tree	See Note 1
H	933.0	42.2	T	Tree	See Note 1
I	937.0	43.2	T	Tree	See Note 1
J	931.1	42.6	T	Tree	See Note 1
K	926.7	44.9	T	Tree	See Note 1
L	923.2	64.0	T	Tree	See Note 1
M	918.5	57.5	T	Tree	See Note 1
N	917.9	55.7	T	Tree	See Note 1
O	909.9	62.2	T	Tree	See Note 1
P	912.3	69.2	T	Tree	See Note 1
Q	910.1	44.8	T	Tree	See Note 1
R	907.0	48.1	T	Tree	See Note 1
S	918.4	61.9	T	Tree	See Note 1
6/24-4					
A	950.3	25.4	T	Tree	See Note 1
B	937.9	30.7	T	Tree	See Note 1
C	934.2	30.6	T	Tree	See Note 1
D	927.3	50.8	T	Tree	See Note 1
E	917.7	69.9	T	Tree	See Note 1
F	921.7	51.9	T	Tree	See Note 1
G	925.1	42.2	T	Tree	See Note 1
H	930.4	6.1	T	Tree	See Note 1
I	924.2	47.3	T	Tree	See Note 1
J	920.4	38.6	T	Tree	See Note 1
K	917.2	41.1	T	Tree	See Note 1
L	914.0	60.1	T	Tree	See Note 1
M	909.9	68.1	T	Tree	See Note 1
N	908.2	48.9	T	Tree	See Note 1
O	909.1	57.0	T	Tree	See Note 1
P	910.9	46.6	T	Tree	See Note 1
Q	916.7	41.6	T	Tree	See Note 1
R	913.2	40.4	T	Tree	See Note 1
6/24-5					
A	948.4	0.1	T	Tree	See Note 1
B	938.2	45.1	T	Tree	See Note 1
C	934.5	47.9	T	Tree	See Note 1
D	945.2	9.2	T	Tree	See Note 1
E	948.4	34.6	T	Tree	See Note 1
F	948.2	33.0	T	Tree	See Note 1
G	941.5	38.0	T	Tree	See Note 1
H	939.9	39.0	T	Tree	See Note 1
I	938.5	49.7	T	Tree	See Note 1
J	933.6	49.7	T	Tree	See Note 1
K	928.1	59.8	T	Tree	See Note 1
L	926.1	60.6	T	Tree	See Note 1
M	931.7	49.8	T	Tree	See Note 1
N	939.0	46.7	T	Tree	See Note 1
O	930.1	51.6	T	Tree	See Note 1
P	926.4	45.0	T	Tree	See Note 1
Q	925.6	52.8	T	Tree	See Note 1
R	925.8	49.5	T	Tree	See Note 1
S	921.5	57.6	T	Tree	See Note 1
T	921.2	61.8	T	Tree	See Note 1
U	914.3	54.0	T	Tree	See Note 1
V	907.7	48.5	T	Tree	See Note 1
W	912.8	57.6	T	Tree	See Note 1
X	918.8	58.2	T	Tree	See Note 1
6/24-6					
A	960.5	0.1	T	Tree	See Note 1
B	936.0	48.6	T	Tree	See Note 1
C	935.1	22.9	T	Tree	See Note 1
D	929.5	23.9	T	Tree	See Note 1
6/24-7	871.1	25.7	P	FAA Anemometer	None
6/24-8	871.1	25.6	P	County Weather Station	None
6/24-9	874.7	17.8	P	GlideSlope Ant.	None
6/24-10					
A	934.5	20.4	T	Tree	See Note 1
B	926.0	3.9	T	Tree	See Note 1
C	919.0	16.3	T	Tree	See Note 1
D	917.5	1.5	T	Tree	See Note 1
6/24-11					
A	940.9	0.7	T	Tree	See Note 1
B	938.5	6.8	T	Tree	See Note 1
C	933.3	20.7	T	Tree	See Note 1
D	935.4	17.0	T	Tree	See Note 1
E	929.5	5.2	T	Tree	See Note 1
6/24-12	930.8	23.6	T	Tree	Remove

Runway 6-24 Primary (P) and Transitional (T) Surfaces
Transitional Surface 7:1 from edge of Primary Surface

Obstruction Number	Surface Elevation	Penetration Surface	Surface Penetrated	Obstruction Description	Recommended Actions
6/24-13	12.24 ac Trees - Actually trees shown below.				
A	919.1	1.1	T	Tree	Remove
B	929.1	5.2	T	Tree	Remove
C	929.0	5.3	T	Tree	Remove
D	926.6	4.9	T	Tree	Remove
E	936.6	1.0	T	Tree	Remove
F	941.8	6.0	T	Tree	Remove
G	958.4	0.8	T	Tree	Remove
H	950.6	11.4	T	Tree	Remove
I	945.7	14.4	T	Tree	Remove
J	939.5	12.4	T	Tree	Remove
K	927.6	32.7	T	Tree	Remove
L	918.9	31.6	T	Tree	Remove
M	914.5	24.8	T	Tree	Remove
N	922.4	25.6	T	Tree	Remove
O	928.8	31.0	T	Tree	Remove
P	938.6	30.3	T	Tree	Remove
Q	934.3	29.3	T	Tree	Remove
R	941.1	24.1	T	Tree	Remove
S	944.0	18.1	T	Tree	Remove
T	948.8	14.1	T	Tree	Remove
U	951.4	10.1	T	Tree	Remove
V	953.2	7.6	T	Tree	Remove
W	958.7	4.5	T	Tree	Remove
X	955.2	10.7	T	Tree	Remove
Y	954.0	6.0	T	Tree	Remove
Z	944.5	19.6	T	Tree	Remove
AA	948.7	14.0	T	Tree	Remove
BB	941.8	22.4	T	Tree	Remove
CC	937.9	24.2	T	Tree	Remove
DD	932.8	25.5	T	Tree	Remove
EE	931.5	32.8	T	Tree	Remove
FF	928.7	37.6	T	Tree	Remove
GG	922.8	21.6	T	Tree	Remove
HH	917.2	19.5	T	Tree	Remove
II	918.1	22.8	T	Tree	Remove
JJ	911.9	15.5	T	Tree	Remove
KK	905.2	19.3	T	Tree	Remove
LL	911.1	22.3	T	Tree	Remove
MM	905.2	27.1	T	Tree	Remove
NN	911.7	26.3	T	Tree	Remove
OO	921.4	41.6	T	Tree	Remove
PP	922.3	41.0	T	Tree	Remove
QQ	923.9	42.0	T	Tree	Remove
RR	924.2	26.6	T	Tree	Remove
SS	929.1	41.0	T	Tree	Remove
TT	932.8	31.9	T	Tree	Remove
UU	946.2	14.8	T	Tree	Remove
VV	956.3	5.0	T	Tree	Remove
WW	961.3	3.2	T	Tree	Remove
XX	963.5	4.2	T	Tree	Remove
YY	965.1	1.9	T	Tree	Remove
ZZ	951.9	9.1	T	Tree	Remove
AAA	958.9	8.0	T	Tree	Remove
BBB	955.7	5.2	T	Tree	Remove
CCC	949.7	5.9	T	Tree	Remove
DDD	945.1	18.3	T	Tree	Remove
EEE	934.5	24.6	T	Tree	Remove
FFF	910.9	30.0	T	Tree	Remove
GGG	902.3	22.0	T	Tree	Remove
HHH	904.8	33.8	T	Tree	Remove
III	906.1	32.6	T	Tree	Remove
JJJ	911.8	34.6	T	Tree	Remove
KKK	912.8	31.8	T	Tree	Remove
LLL	916.0	27.6	T	Tree	Remove
MMM	922.3	31.9	T	Tree	Remove
NNN	927.7	28.2	T	Tree	Remove
OOO	917.5	19.0	T	Tree	Remove
PPP	931.7	28.0	T	Tree	Remove
QQQ	938.0	24.4	T	Tree	Remove
RRR	940.3	17.2	T	Tree	Remove
SSS	960.5	2.0	T	Tree	Remove
TTT	955.9	5.5	T	Tree	Remove
UUU	947.1	0.8	T	Tree	Remove
VVV	940.8	14.9	T	Tree	Remove
WWW	939.0	14.3	T	Tree	Remove
XXX	932.9	22.9	T	Tree	Remove
YYY	923.5	20.5	T	Tree	Remove
ZZZ	921.0	38.1	T	Tree	Remove
A1	914.5	21.9	T	Tree	Remove
B1	897.0	10.1	T	Tree	Remove
C1	905.3	7.7	T	Tree	Remove
D1	908.7	11.0	T	Tree	Remove
E1	905.3	12.3	T	Tree	Remove
F1	919.8	32.0	T	Tree	Remove
G1	930.6	18.7	T	Tree	Remove
H1	934.9	23.4	T	Tree	Remove
I1	949.6	2.3	T	Tree	Remove
J1	954.1	2.8	T	Tree	Remove
K1	943.0	19.2	T	Tree	Remove
L1	940.3	9.1	T	Tree	Remove
M1	937.7	10.4	T	Tree	Remove
N1	934.6	14.3	T	Tree	Remove
O1	931.9	19.0	T	Tree	Remove
P1	929.4	6.6	T	Tree	Remove
Q1	926.7	8.4	T	Tree	Remove
R1	920.0	7.4	T	Tree	Remove
S1	922.1	10.1	T	Tree	Remove
T1	916.2	17.9	T	Tree	Remove
U1	922.5	9.1	T	Tree	Remove
V1	928.9	13.7	T	Tree	Remove
W1	920.0	15.8	T	Tree	Remove
X1	925.7	0.2	T	Tree	Remove
Y1	929.6	10.4	T	Tree	Remove
Z1	934.8	13.3	T	Tree	Remove
A2	936.2	16.4	T	Tree	Remove
B2	943.0	2.2	T	Tree	Remove
C2	954.9	-954.9	T	Tree	Remove
24-2					
A	879.0	13.8	P	Tree	Remove
B	879.0	26.4	P	Tree	Remove
C	879.0	25.7	P	Tree	Remove

RUNWAY 6–24

OBSTRUCTION TABLE NOTES

1. FOR TREES OFF AIRPORT PROPERTY, NOT WITHIN THRESHOLD SITING SURFACE, AIRPORT SHOULD PURSUE A VOLUNTARY EASEMENT TO REMOVE OR TRIM TREES. IN LIEU OF THIS, THEY MAY BE ABLE TO INSTALL OBSTRUCTION LIGHTS ON TOWERS IN THE AREA AS DIRECTED BY THE FAA.
2. THE COUNTY IS PURSUING THE PURCHASE OF THIS PARCEL. IF THE LAND IS PURCHASED, THE RECOMMENDED ACTION IS TO REMOVE THE TREES.

CUYAHOGA COUNTY AIRPORT

CITY OF CLEVELAND — CUYAHOGA COUNTY, OHIO

OBSTRUCTION DATA

CUYAHOGA COUNTY OF OHIO

DESIGNED: JCT	DRAWN: JCT	SHEET 8 OF 12
CHECKED: KCK	DATE: DECEMBER 2006	
PROJECT FILE NO.: A27.001.001	CADD FILE NO.: Cuyahoga Data Sheet	

C&S COMPANIES — ENGINEERS, DESIGN BUILD, TECHNICAL RESOURCES, OPERATIONS

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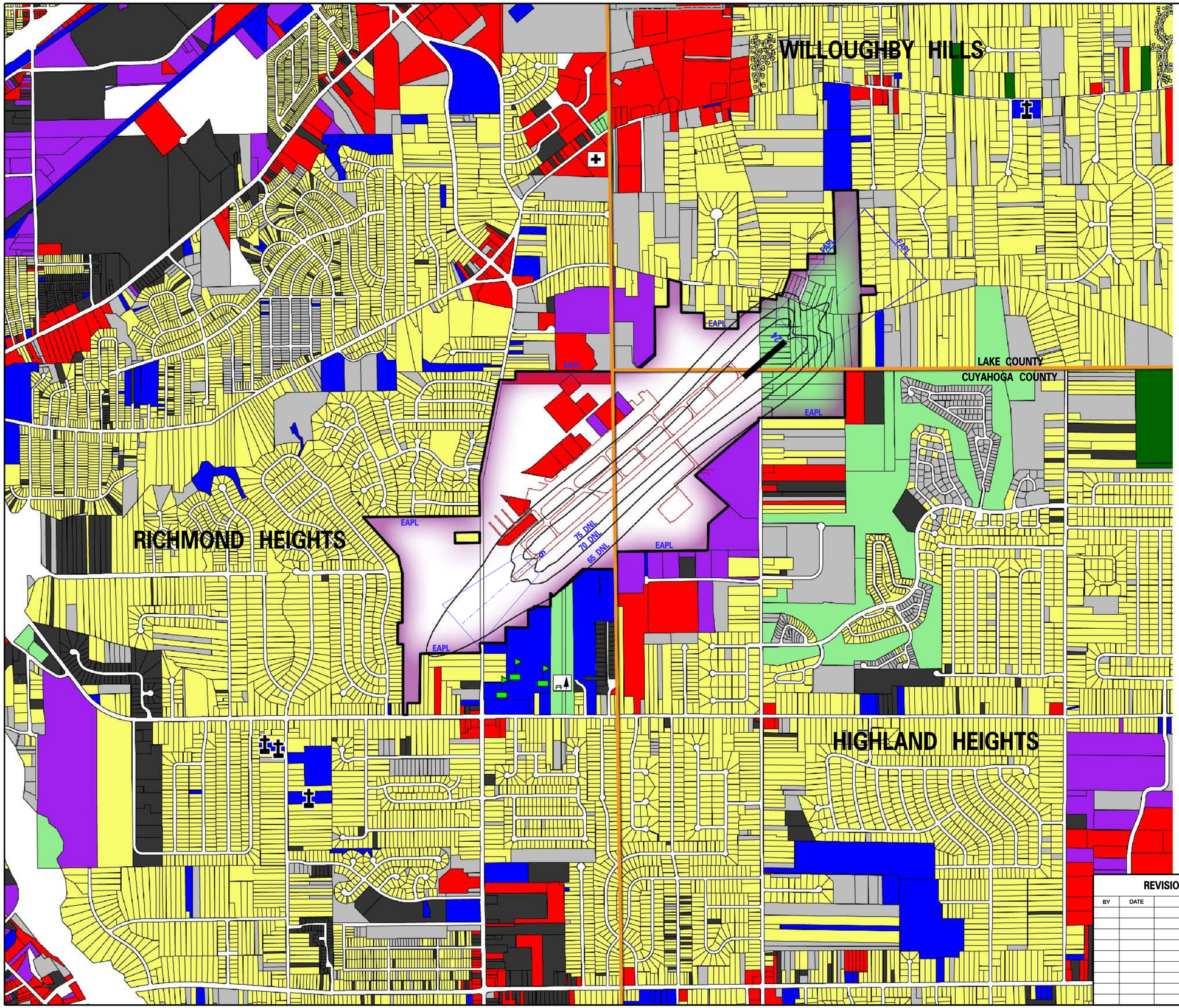

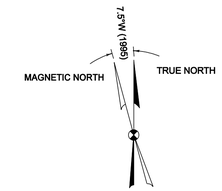

Land Use Legend

- Agricultural
- Industrial
- Commercial
- Residential
- Recreational
- Institutional
- Vacant
- Unknown
- School
- Place of Worship
- Hospital
- Park

SOURCES:
AERIAL PHOTOGRAPHY, COLUMBUS ENGINEERING CONSULTANTS, INC., OCTOBER 2003
TAX PARCEL DATA, CUYAHOGA COUNTY PLANNING COMMISSION, JANUARY 2005
TAX PARCEL DATA, LAKE COUNTY GIS, APRIL 2000
NOISE CONTOURS FOR YEAR 2025, CHARLES M. SALTER ASSOCIATES, INC., JULY 2006

PLAN
SCALE: 1"=800'

800 0 800 1600FT.
800'

REVISIONS		
BY	DATE	CHANGE

CUYAHOGA COUNTY AIRPORT

CITY OF CLEVELAND — CUYAHOGA COUNTY, OHIO

LAND USE PLAN

DESIGNED: JCT	DRAWN: JCT	SHEET 9 OF 12
CHECKED: KCK	DATE: DECEMBER 2006	
PROJECT FILE NO.: A27.001.001	CADD FILE NO.: Cuyahoga Land Use	

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ENGINEERS
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TECHNICAL RESOURCES
OPERATIONS

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NOTES:

1. GEOGRAPHIC COORDINATES REFERRED TO NORTH AMERCICAN DATUM OF 1983:

	LATITUDE	LONGITUDE
EXISTING ARP	41°33'54.446"N	81°29'10.884" W
FUTURE ARP	41°33'57.978"N	81°29'05.382" W
RW 6 END	41°33'38.073"N	81°29'36.392"W
FUTURE RW 6 END	41°33'38.715"N	81°29'35.392"W
RW 24 END	41°34'10.818"N	81°28'45.372"W
FUTURE RW 24 END	41°34'17.238"N	81°28'35.367"W

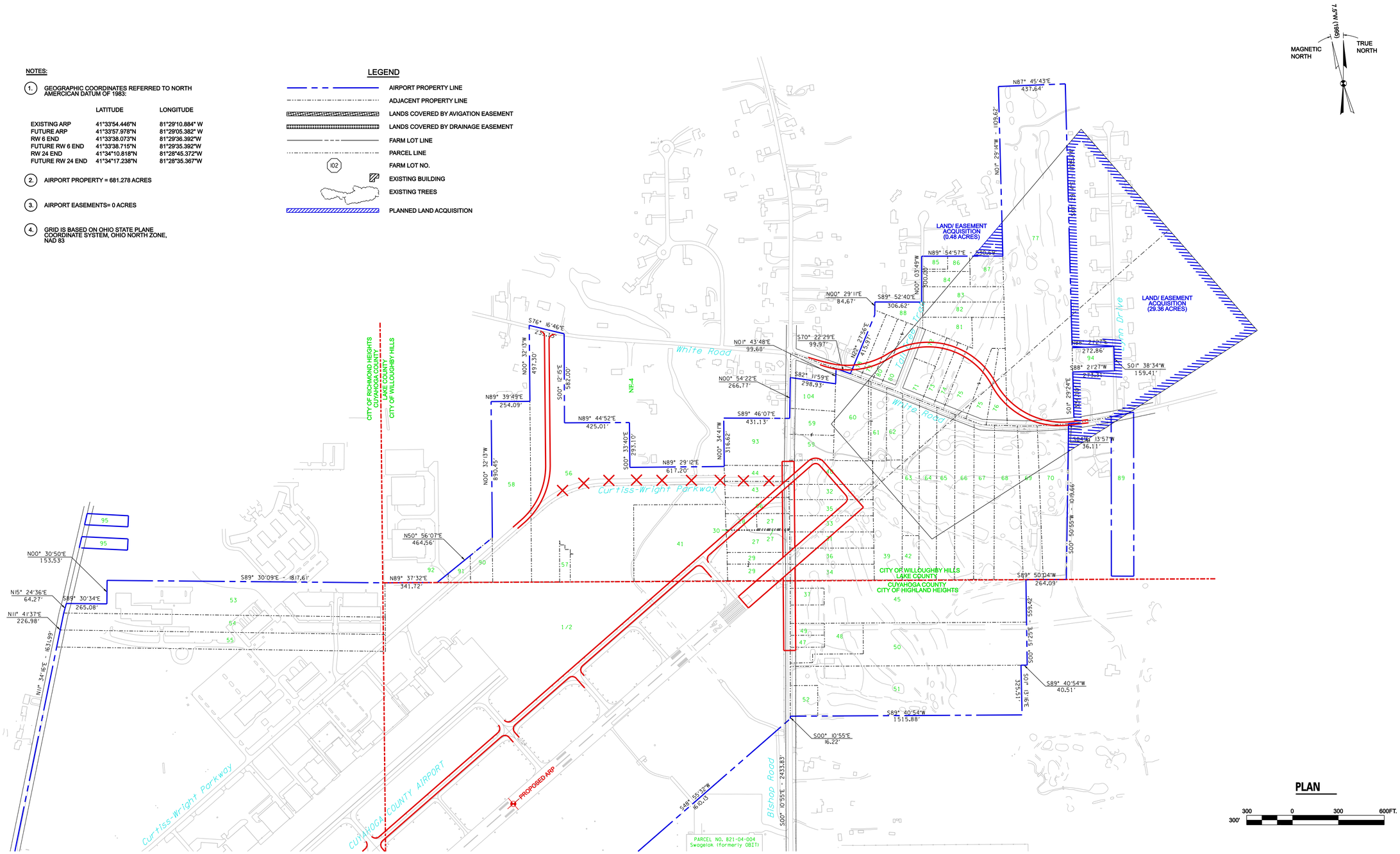
2. AIRPORT PROPERTY = 681.278 ACRES

3. AIRPORT EASEMENTS= 0 ACRES

4. GRID IS BASED ON OHIO STATE PLANE COORDINATE SYSTEM, OHIO NORTH ZONE, NAD 83

LEGEND

- AIRPORT PROPERTY LINE
- ADJACENT PROPERTY LINE
- LANDS COVERED BY AVIGATION EASEMENT
- LANDS COVERED BY DRAINAGE EASEMENT
- FARM LOT LINE
- PARCEL LINE
- I02 FARM LOT NO.
- EXISTING BUILDING
- EXISTING TREES
- PLANNED LAND ACQUISITION



MATCHLINE LINE - SEE SHEET 11 OF 12

PLAN

300 0 300 600FT.
300'

SOURCE: EXISTING PROPERTY MAP PREPARED BY COLUMBUS ENGINEERING CONSULTANTS, INC., APRIL 2005.

CUYAHOGA COUNTY AIRPORT

CITY OF CLEVELAND — CUYAHOGA COUNTY, OHIO

AIRPORT PROPERTY MAP

DESIGNED: JCT	DRAWN: JCT	SHEET 10 OF 12
CHECKED: KCK	DATE: DECEMBER 2006	
PROJECT FILE NO.: A27.001.001	CADD FILE NO.: Cuyahoga Property Map	

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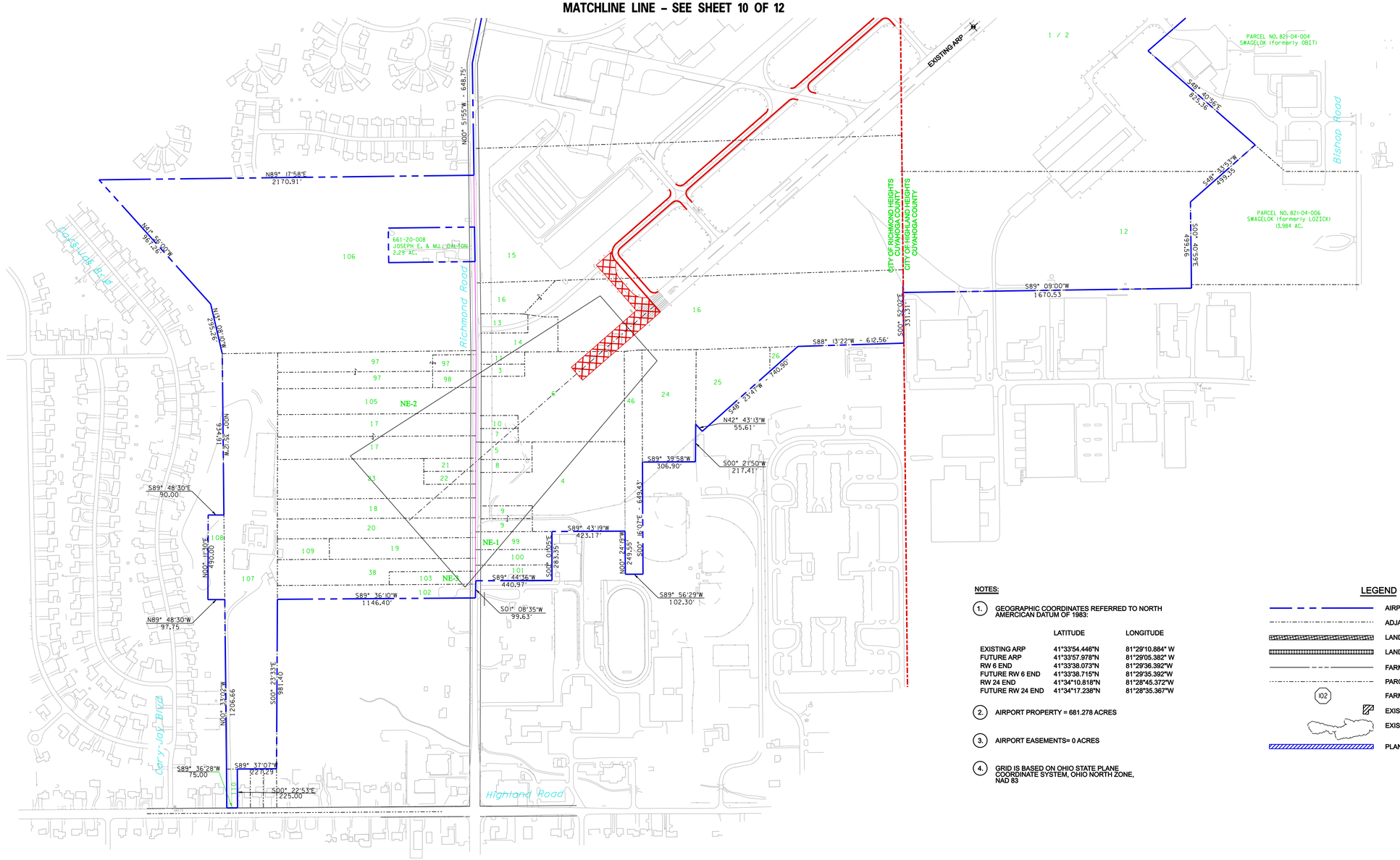
MATCHLINE LINE - SEE SHEET 10 OF 12



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2. AIRPORT PROPERTY = 681.278 ACRES

3. AIRPORT EASEMENTS= 0 ACRES

4. GRID IS BASED ON OHIO STATE PLANE COORDINATE SYSTEM, OHIO NORTH ZONE, NAD 83

LEGEND

- AIRPORT PROPERTY LINE
- ADJACENT PROPERTY LINE
- LANDS COVERED BY AVIGATION EASEMENT
- LANDS COVERED BY DRAINAGE EASEMENT
- FARM LOT LINE
- PARCEL LINE
- 102 FARM LOT NO.
- EXISTING BUILDING
- EXISTING TREES
- PLANNED LAND ACQUISITION

PLAN

300' 300 0 300 600FT.

SOURCE: EXISTING PROPERTY MAP PREPARED BY COLUMBUS ENGINEERING CONSULTANTS, INC., APRIL 2005.

CUYAHOGA COUNTY AIRPORT

CITY OF CLEVELAND — CUYAHOGA COUNTY, OHIO

AIRPORT PROPERTY MAP

DESIGNED: JCT	DRAWN: JCT	SHEET 11 OF 12
CHECKED: KCK	DATE: DECEMBER 2006	
PROJECT FILE NO.: A27.001.001	CADD FILE NO.: Cuyahoga Property Map	

C&S COMPANIES — ENGINEERS, DESIGN BUILD, TECHNICAL RESOURCES, OPERATIONS

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CUYAHOGA COUNTY AIRPORT
PROPERTY ACQUIRED BY TITLE IN FEE SIMPLE
INTEREST AS FOLLOWS

FEDERAL PROJECT	PARCEL	GRANTOR (S)	RECORD AREA	DATE ACQUIRED
FAAP-01	1	CURTISS-WRIGHT CORPORATION	(271.307)	6-20-49
FAAP-02	2	CURTISS-WRIGHT CORPORATION	271.186	8-22-51
FAAP-02	3	GRAFCHIK, MORRIS & EDITH	0.420	1-15-57
FAAP-02	4	WOLKOFF, ABE R. & EMMA	7.758	5-13-57
FAAP-02	5	WISE, RAYMOND J. & JEANETTE L.	0.689	6-11-57
FAAP-02	6	DVORE, ROSE & BEN	8.200	6-12-57
FAAP-02	7	RASKEY, EDWARD R. & JOAN MARIE	0.400	6-25-57
FAAP-02	8	PRINCIPE, ROGER J. & LENA	0.520	8-14-57
FAAP-02	9	CLARK, GRACE M.	1.034	8-15-57
FAAP-02	10	BAER, HILDA ELIZABETH & JOHN J.	0.380	8-15-57
FAAP-02	11	GEHRISCH, GEORGE F. & ALICE L.	0.420	8-1-57
FAAP-02	12	MECKLER, GEORGE	40.216	8-9-57
FAAP-02	13	KEYERLEBER, RUTH S.	0.700	9-20-57
FAAP-02	14	TOROK, BERTHA & STEPHAN	1.500	8-2-57
FAAP-02	15	LAVETTER, ELSIE K. & BEN	44.400	9-5-57 10-3-57
FAAP-02	16	CITY OF RICHMOND HEIGHTS	1.830	4-14-67
FAAP-02	16	CITY OF RICHMOND HEIGHTS	17.940	4-14-67
FAAP-02	17	WILTSHIRE, AGNES C. & ARTHUR J.	6.840	10-23-61
FAAP-02	18	JAGODNIK, ANTHONY & IRENE	3.020	10-16-61
FAAP-02	19	ROSCOE, WILLIAM E. & HELEN M.	2.334	10-24-61
FAAP-02	20	MOCNY, JOHN & KATHERINE M.	3.020	10-25-61
FAAP-02	21	PARATORE, SALLY N.	0.517	2-19-62
FAAP-02	22	PARATORE, LEO	0.517	2-19-62
FAAP-02	23	PARATORE, SAM & ROSE M.	5.025	8-22-62
FAAP-04	24	VOYTEK, JOHN & SUE	4.580	4-12-60
FAAP-04	25	GREGG, ANNA J. & JOSEPH	3.128	12-4-61
FAAP-04	26	NAYLOR, MARIE A.	0.370	5-29-62
FAAP-04	27	MCLEAN, ROBERTA B. & STUART	0.482	1-04-61
FAAP-04	27	MCLEAN, ROBERTA B. & STUART	0.959	1-04-61
FAAP-04	27	MCLEAN, ROBERTA B. & STUART	0.022	1-04-61
FAAP-04	28	HARRINGTON, SAMUEL A. & GRACE W.	0.518	3-22-61
FAAP-04	29	BROTT, ROYSON E. & MARIE A.	0.281	6-06-61
FAAP-04	29	BROTT, ROYSON E. & MARIE A.	1.000	6-06-61
FAAP-04	30	PHYPERS, DEAN W. & FLORENCE	0.024	9-16-61
FAAP-04	31	SMITH, MARGARET ET.AL.	1.346	9-12-61
FAAP-04	32	ALLMENDINGER, WALTER & HELEN	1.271	6-9-61
FAAP-04	33	WALKER, WILLIAM C.	1.345	4-26-61
FAAP-04	34	SABETTO, ANGELA	1.347	6-14-61
FAAP-04	35	SZEMENYEI, JOHN & ELEANOR	1.345	6-16-61
FAAP-04	36	HUBER, DUANE A. & JANET B.	1.346	4-26-61
FAAP-04	37	BABUDER, ALMA (FORMERLY LAMPE, ALMA)	0.568	5-24-63
COUNTY	38	MINNITI, FRANK & CARMELLA	3.100	8-22-62
FAAP-06	39	BIRCHER, IRA J. & HELEN H.	3.740	4-24-64
FAAP-06	40	DEMOJZES, WILLIAM & WANDA	2.000	9-13-62
FAAP-06	41	FINNEY, HOWARD	6.887	10-16-62
FAAP-06	42	FULTON, BENJAMIN & ALICE	0.727	7-19-63
FAAP-06	43	ZORICH, GEORGE M. & ANNA	1.000	5-25-65
FAAP-06	44	GHIRLA, JENNIE	1.000	8-3-66
FAAP-06	45	LAMPE, CHARLES E. & JENNIE	9.430	11-23-65
FAAP-07	46	RUDY, ALBERT, DONN HENRY, & BARBARA	3.042	1-28-63
FAAP-08	47	STERLE, JOHN & MARIE	0.349	4-19-68
FAAP-08	48	STERLE, EUGENE & JOANNE	1.534	4-19-68
FAAP-08	49	CESEN, AUGUST & ELSIE	0.403	6-10-68
AIP-04	50	PETRICH, JOE & MARY	7.585	5-13-68
AIP-04	51	QUIGGIN, RAYMOND & EDITH	10.480	12-12-68
AIP-03	52	FLAISMAN, ALAN E. & CAROL A.	0.987	4-8-68
- -	53	SCHMIDT, ELMER G. ET.AL.	9.820	7-28-67
- -	54	KOVATCH, ANNA	5.463	10-20-67
- -	55	HENFIELD, ROBERT & RENEE ET.AL.	5.463	2-10-67
- -	56	FINNEY, HOWARD & SUSAN L.	21.914	12-21-67
- -	57	DIDONATO, PHILIP & EMILY	0.332	4-12-72
AIP-03	58	VERMILION, FREAL R. & ESTHER N.	6.891	5-22-68
AIP-01	59	SABEL, GEORGE	2.272	4-29-70

CUYAHOGA COUNTY AIRPORT
PROPERTY ACQUIRED BY TITLE IN FEE SIMPLE
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FEDERAL PROJECT	PARCEL	GRANTOR (S)	RECORD AREA	DATE ACQUIRED
AIP-01	60	ARMONAS, JOHN A. & BARBARA	2.896 0.214	7-6-78 6-30-66
ADAP-01	61	MCCURDY, THOMAS M. & BENITA M.	0.172	9-27-78
ADAP-01	61	MCCURDY, THOMAS M. & BENITA M.	1.191	9-27-78
ADAP-01	62	TRIPODO, HUMBERT & JEANNE	1.021	12-11-74
ADAP-01	63	STARLIN, CECIL W. & ALICE C.	2.270	10-29-73
ADAP-01	64	OBLAK, ANTON J. & MILDRED F.	3.000	7-3-73
ADAP-01	65	MUELLER, MARIA	3.000	2-19-74
ADAP-01	66	GANO, JEROLD & ELEANORE E.	3.000	3-20-74
ADAP-01	67	STEVENSON, CLARK E. & SARAH M.	3.000	9-26-73
AIP-03	68	CHONGRIS, JAMES & BESSIE	3.934	9-4-73
AIP-01	69	MARINO, THOMAS J. & GERTRUDE	3.007	4-15-74
AIP-01	70	BODENGER, VIRGINIA MICHEL	4.134	4-23-80
AIP-01	71	JUDD, CLARENCE H. & HELEN M	0.844	6-21-73
AIP-01	72	PIRSIL, IDA M.	0.694	9-21-78
ADAP-01	73	WHITTAKER, ROBERT C. & MARIE E.	0.816	7-23-73
ADAP-01	74	BROWNING, ELOISE	0.714	7-17-73
ADAP-01	75	MAJKA LOUISE	2.638	9-7-73
ADAP-01	75	MAJKA, LOUISE	1.048	9-7-73
ADAP-01	76	TELLING, BERNARD & MABEL	1.066	1-2-74
- -	77	SVOBODA, JOHN & MILDRED ET.AL.	22.170	8-21-80
AIP-07-90	78	SERESTENY, JOHN & FRANCES	0.721	7-20-78
ADAP-06	79	BIZJAK, RONALD P. & PATRICIA A.	0.887	9-19-78
- -	80	HONER, WALTER A. ET.AL.	1.071	4-16-80
- -	80	HONER, WALTER A. ET.AL.	0.643	4-16-80
- -	81	BARLOW, GERALD F.	1.041	9-18-78
AIP-06-89	82	PENROD, LOUIS J. & PEARL	1.240	9-14-78
- -	83	KAPLAN, VINKO & ANGELA	1.231	11-29-78
- -	84	CHANDLER, THEODORE W. & MARGUERITE	0.731	9-13-78
ADAP-06	85	MESSNER, HERBERT L. & ELEANOR	0.341	7-20-78
ADAP-06	86	PERUZZI, LETITIA	0.382	9-7-78
AIP-06-89	87	KYTTA, MICHAEL V. & ARLENE M.	0.985	9-13-78
- -	88	JACK, DANIEL A.	0.813	1-5-81
AIP-06-89	89	VAN HORNE, NELSON B. & ESTHER	3.559	9-27-78
- -	90	FIELD, HARRY E. & WANDA L.	0.760	12-7-78 4-20-83
- -	91	URANKAR, ANTON & AGNES	0.400	12-7-78
- -	92	ROGEL, PAULINE	0.052	12-7-78
AIP-06-89	93	GARGIULO, DONALD J. & ELIZABETH	3.000	8-21-80
- -	94	RIETH, ROBERT B. & HELEN G.	1.000	3-21-74
- -	95	CLAPACS BUILDERS, INC	0.513	8-15-61
- -	95	CLAPACS BUILDERS, INC	0.466	8-15-61
- -	96	CONNER, GEORGE B. & ELIZABETH F.	1.000	6-11-68
AIP-03	97	SHERMAN, ROY W. & ETHEL GRACE	0.545	5-28-86
AIP-03	97	SHERMAN, ROY W. & ETHEL GRACE	2.480	5-28-86
AIP-03	97	SHERMAN, ROY W. & ETHEL GRACE	1.957	5-28-86
AIP-03	98	DAVIS, BEVERLY A.	0.545	9-19-86
AIP-03	99	TRETERA, RUDOLPH J. & RUTH L.	1.050	11-25-86
AIP-03	100	WANK, GLENN L. & MARILYN J.	0.910	3-2-87
AIP-03	101	LAMOVEC, VIKTOR & ANTONIA	0.910	9-18-86
AIP-03	102	SKERL, MARIE	2.107	1-21-87
AIP-03	103	MASSIELLO, ALEXANDER L. & ANN M.	0.861	12-26-86
- -	104	LAUGHERY, CAROL; GRANDIA, DICK	1.312	4-3-87
AIP-03	105	HOVANCSEK, JOHN E. ET.AL.	3.950	12-8-87
AIP-0891	106	EUCLID-CHAGRIN COMPANY, INC	38.760	3-29-91
- -	107	THE CRANE AND SHOVEL BUILDING COMPANY	17.220	2-21-52
- -	108	THE CRANE AND SHOVEL BUILDING COMPANY	0.826	2-21-52
- -	109	THE CRANE AND SHOVEL BUILDING COMPANY	0.826	6-02-58
- -	110	THE CRANE AND SHOVEL BUILDING COMPANY	0.387	6-16-70

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FEDERAL PROJECT	PARCEL	GRANTOR (S)	RECORD AREA	DATE ACQUIRED
		BOARD OF COUNTY COMMISSIONERS OF CUYAHOGA - NAVIGATION EASEMENTS		
FAAP-09	NE-1	York, Vida M. & W. Lloyd	1.05	5-01-79
FAAP-09	NE-2	Hovancsek, John E.	2.756	5-19-78
FAAP-09	NE-3	Massiello, Alexander L. & Ann M.	0.86	7-21-82
- -	NE-4	Fiorello, Carmen A. & R. Carmen, etal	0.555	4-14-78
- -	NE-5	Miner Properties	121 +/-	1-08-65

SOURCE: EXISTING PROPERTY MAP PREPARED BY
COLUMBUS ENGINEERING CONSULTANTS, INC., APRIL 2005.

CUYAHOGA COUNTY AIRPORT

CITY OF CLEVELAND — CUYAHOGA COUNTY, OHIO

AIRPORT PROPERTY MAP DATA

DESIGNED: JCT	DRAWN: JCT	SHEET 12 OF 12
CHECKED: KCK	DATE: DECEMBER 2006	
PROJECT FILE NO.: A27.001.001	CADD FILE NO.: Cuyahoga Property Map	

C&S COMPANIES — ENGINEERS, DESIGN BUILD, TECHNICAL RESOURCES, OPERATIONS

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