

BERKELEY COUNTY AIRPORT

RUNWAY 23 OBSTRUCTION REMOVAL & AVIGATION EASEMENTS PROJECT

PUBLIC MEETING
MAY 29, 2013



BERKELEY COUNTY ENGINEERING DEPARTMENT

1003 Highway 52 Post Office Box 6122

Moncks Corner, SC 29461-6120

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Baker

T.H.C.

Improving Your Community

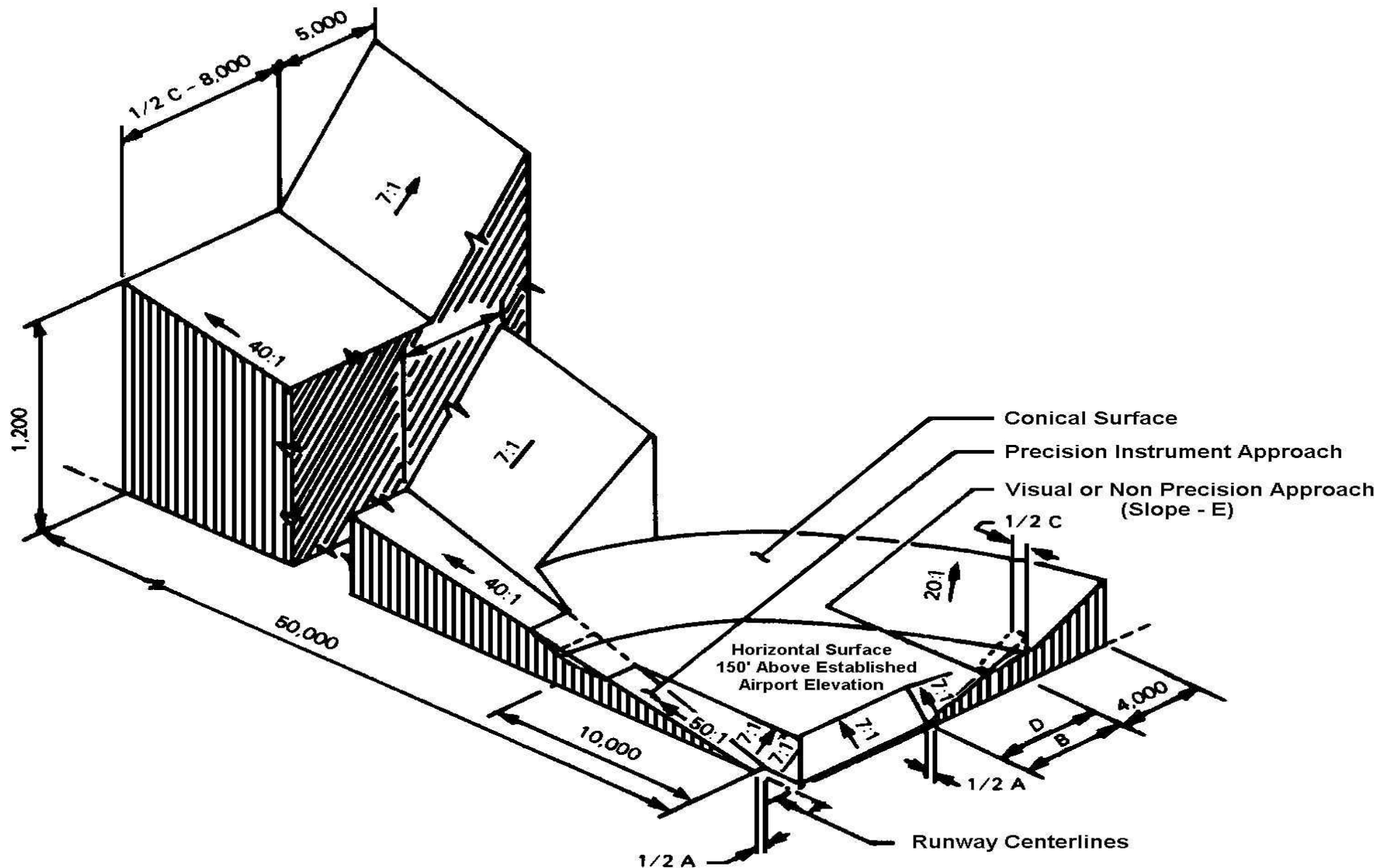
Trying To Avoid This



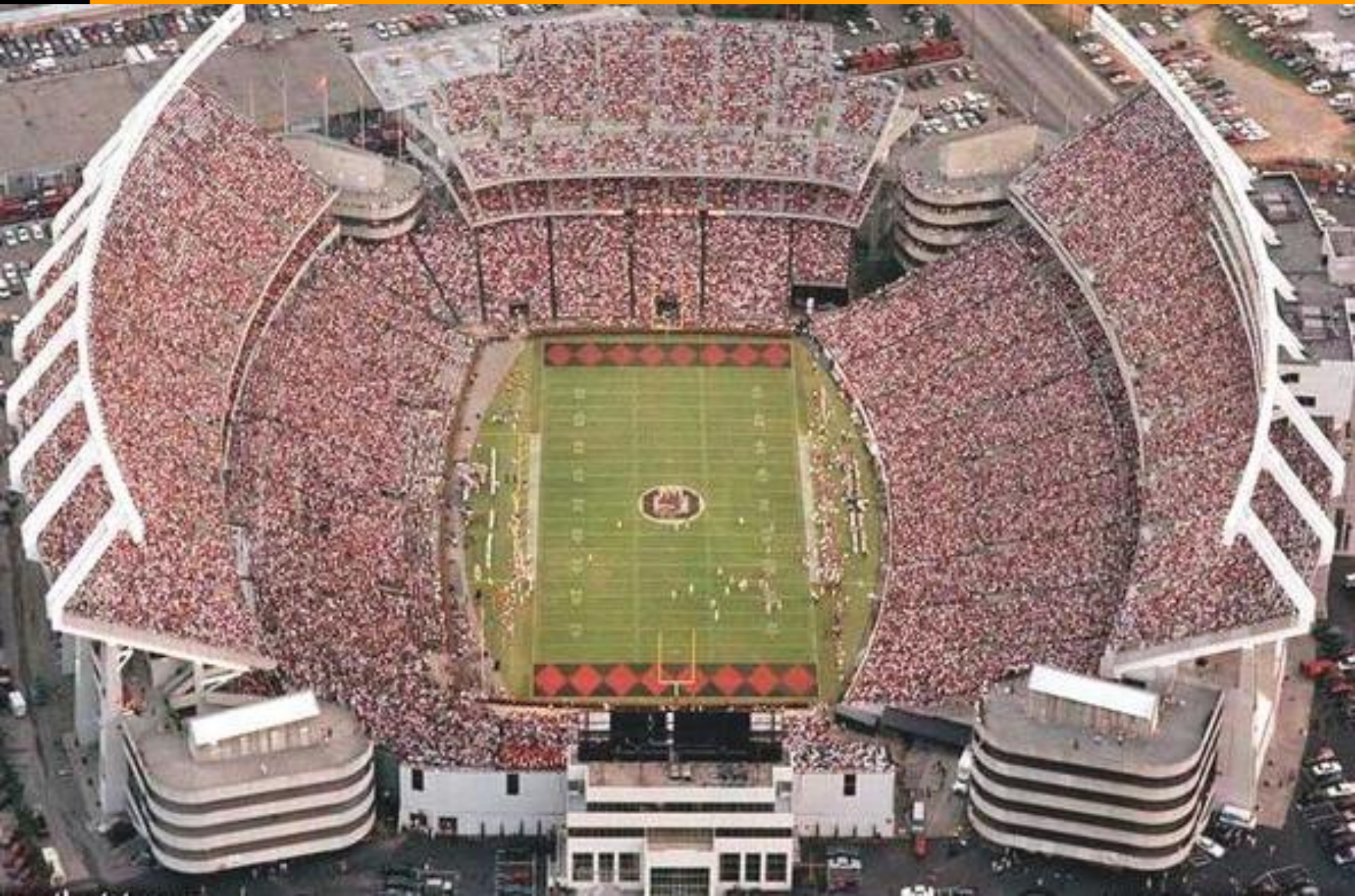
Runway 23 Approach Clearance Project

- ➔ Obstruction Clearance Project
- ➔ Trees encroaching into protected airspace
- ➔ Safety issue
- ➔ Required by FAA – Grant Assurances
- ➔ Obtain Avigation Easements
- ➔ Removal of existing and future obstructions

What Is Airspace?



Airspace Is Like A Football Stadium



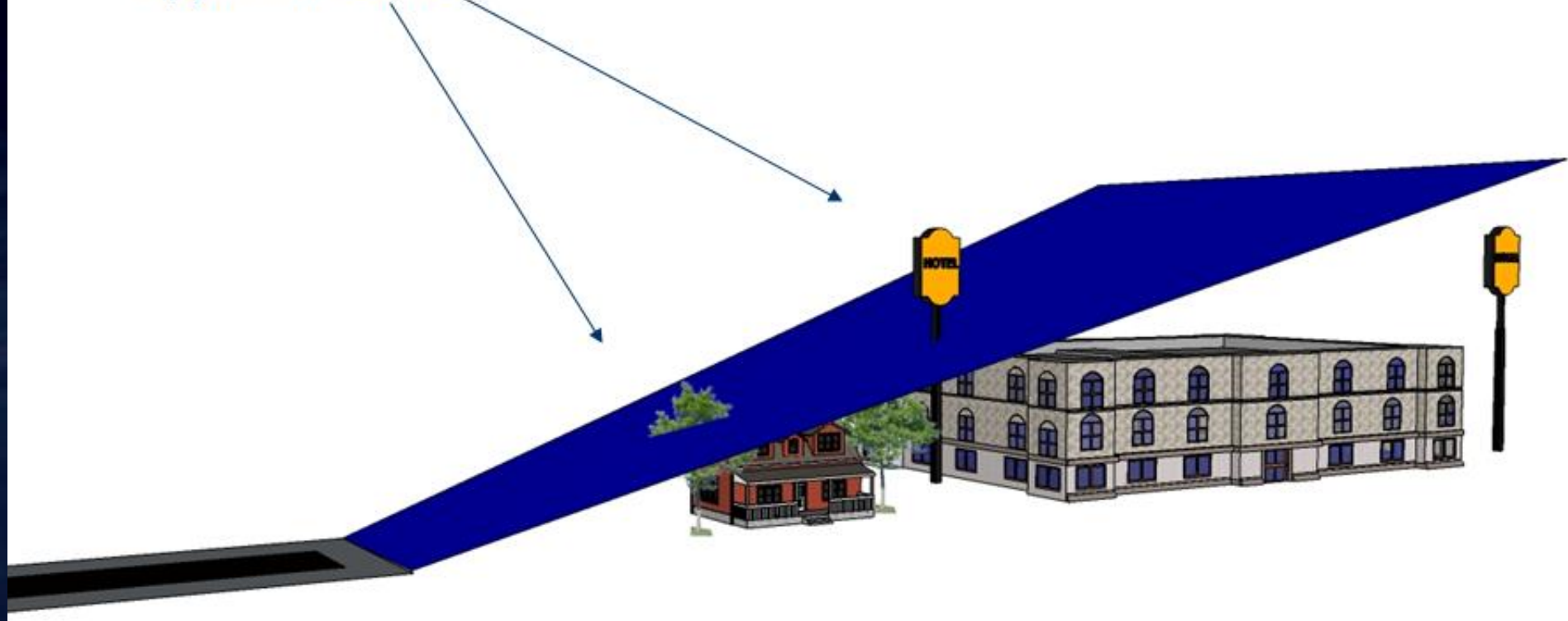
Protected Airspace Defined By Imaginary Surfaces

- ➔ Primary = aligned longitudinally with each runway and extends 200 feet from each runway end.
- ➔ Approach – longitudinally centered with the runway and extends beyond the primary surface.
- ➔ Horizontal = horizontal plane 150 feet above the established airport elevation. Constructed by swinging arcs around the end of the primary surface.
- ➔ Conical – 20:1 slope surface extending beyond the horizontal surface.
- ➔ Transitional = constructed to join approach and horizontal or approach and transitional surfaces.

Reference: FEDERAL AVIATION REGULATIONS (FAR) PART 77

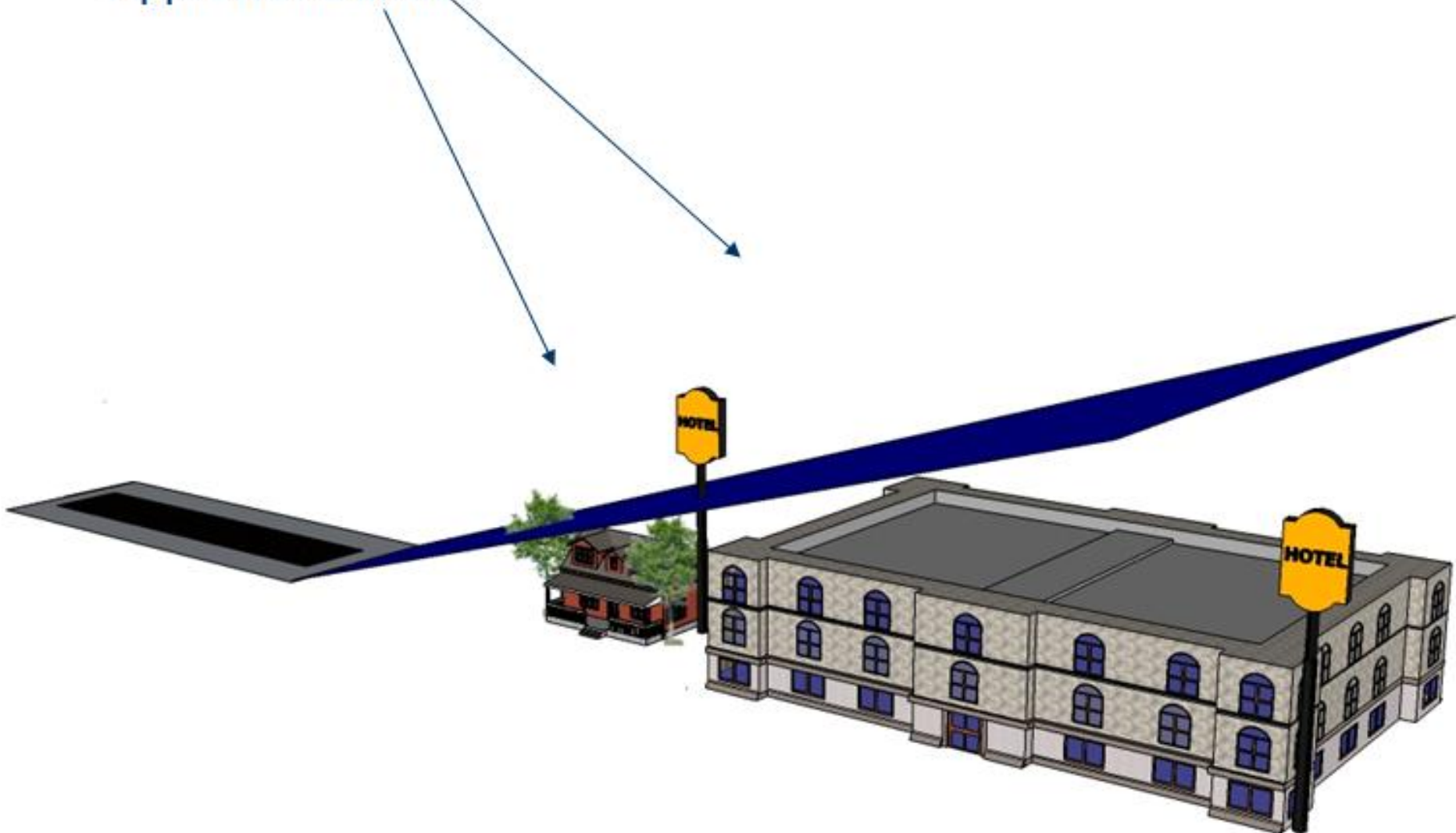
Airspace Must Be Kept Clear

Obstructions to
Approach Surface

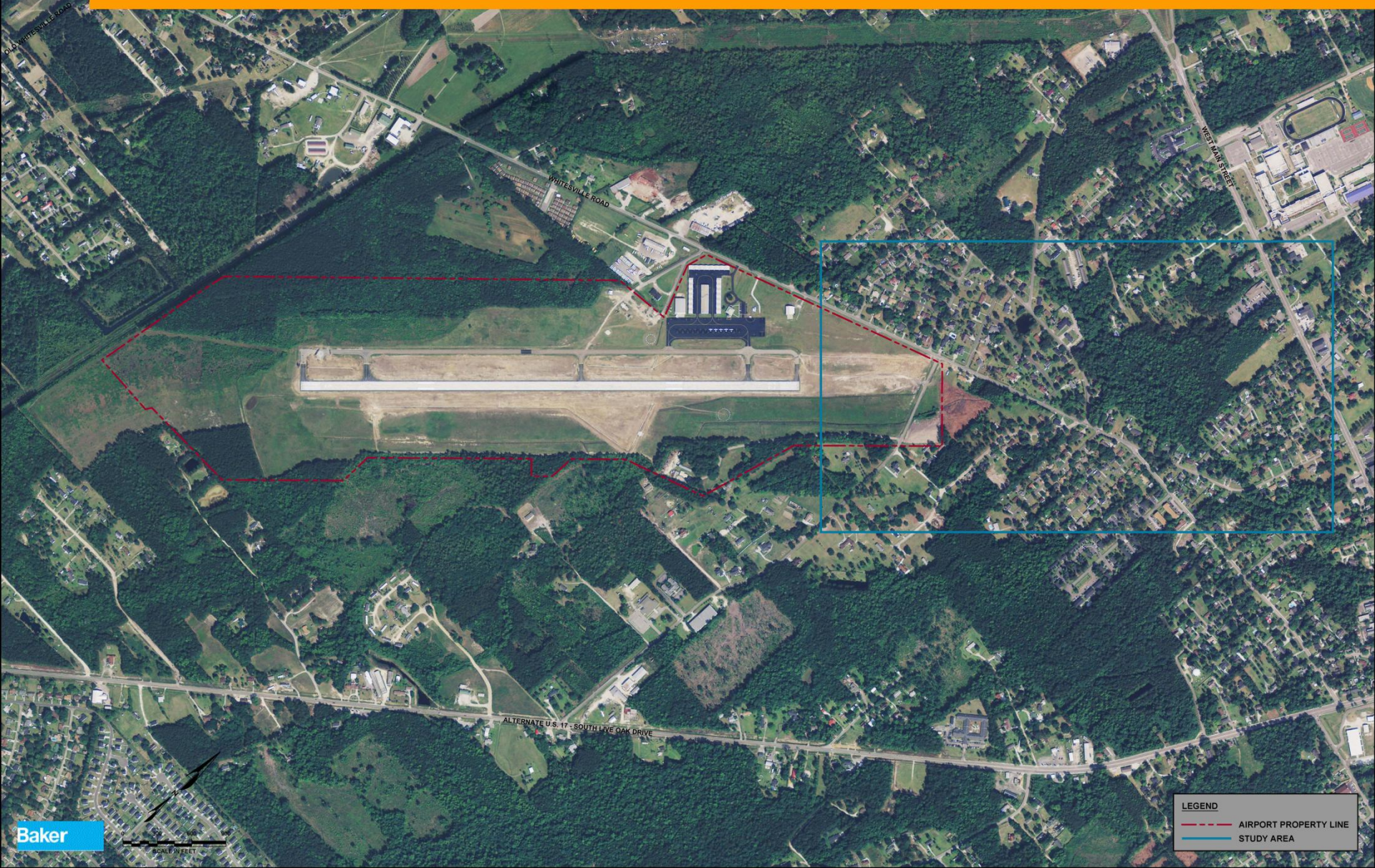


Airspace Must Be Kept Clear

Obstructions to
Approach Surface



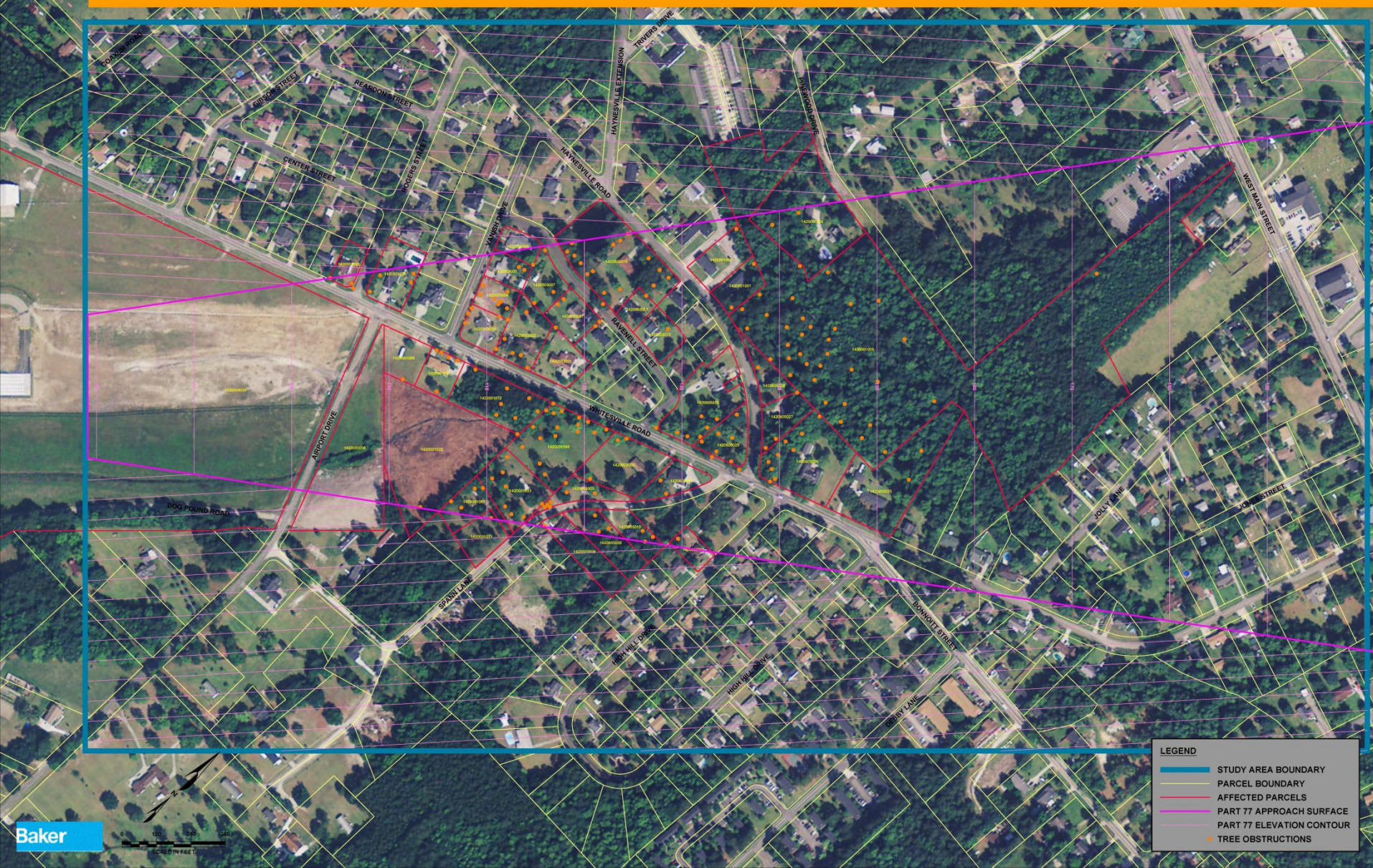
BERKELEY COUNTY AIRPORT Study Area



LEGEND

- AIRPORT PROPERTY LINE
- STUDY AREA

BERKELEY COUNTY AIRPORT Airspace Penetrations



What is an Avigation Easement?

➔ An Avigation Easement is a conveyance of a specified property interest that creates a servitude on a particular area that restricts the use by the owner of the surface and assures the owner of the easement the right and privilege of a specific use contained in the easement document. (FAA AC 5100.17, 2-7.a)

Types of Avigation Easements

Easement Scope	Property Rights Acquired	Duration
Model Aviation and Hazard Easement	<ol style="list-style-type: none"> 1. Right of flight at any altitude above acquired surfaces. 2. Right to cause noise, vibration, fumes, dust, fuel particles. 3. Prevent erection or growth of all objects above acquired surfaces. 4. Right of entry to remove, mark, or light any structures or growth above acquired surfaces. 5. Prohibit creation of electrical interference or directed lighting or glare from the property. 6. Others as necessary. 	Until airport is abandoned
Limited Avigation Easement	<ol style="list-style-type: none"> 1. Right of flight at any altitude above acquired services. 2. Prevent erection or growth of all objects above acquired surfaces. 3. Right of entry to remove, mark, or light any structures or growth above acquired surfaces. 	Until airport is abandoned
Clearance Easement	<ol style="list-style-type: none"> 1. Prevent erection or growth of all objects above acquired surfaces. 2. Right of entry to remove, mark, or light any structures or growth above acquired surfaces. 	Until airport is abandoned

A conveyance of airspace over another property for use by the airport:

- ➔ For over flight of a property and to place restrictions on the use and development of the underlying “servient” parcel.
- ➔ Includes the right-of-flight of aircraft; **the right to remove all objects protruding into the airspace together with the right to prohibit future obstructions; and the right of ingress/egress on the land to exercise the rights acquired**
- ➔ Prevent incompatible development of land.
- ➔ Shall “run with the land” (survives a sale or title transfer) and any future owners use of the servient parcel is restricted as described in the avigation easement.
- ➔ Pre-existing liens and mortgages on a property shall be subordinated to the easement conveyed to the airport.
- ➔ Shall be recorded and enforceable under state law. (Airport project attorney will certify good title to FAA).

The Process of Acquiring Avigation Easements

- ➔ Title Reports for each identified property
- ➔ Invitations to identified property owners
- ➔ Public Meeting
- ➔ Introduction Letter stating process; right of entry
- ➔ Surveys for each parcel
- ➔ Meeting with the Agent, Appraiser, Review Appraiser and Property Owner
- ➔ Prepare Offer Letter with FMV
- ➔ Schedule and Present Offers to Property Owners

Fair Market Value Appraisal of Easements

“Before and After” Appraisal Method

$$\text{FMV Easement Acquired} = \text{Appraised Before Value} - \text{Appraised After Value}$$

Before Value = Appraised FMV of the property prior to easement conveyance or considering any project market value affects. Existing location near the airport is considered in the before value.

After Value = Appraised FMV of the Property subject to the Easement restrictions and subject to project effects. Easement restrictions of any project development is considered.

An Aviation Easement Study will be performed to determine a range of fees.

Valuation Cases are:

- Complex Appraisal Problem: Easement acquisition may affect the development potential of the land.
- Simple Appraisal Problem: Clearly no effect over the current or highest and best use the property (e.g. easement over agricultural land with no development potential).

Sample Survey Exhibit

RECORDED:
PLAT BOOK _____
PAGE _____

SURVEY NOTES:

1. THIS PROPERTY IS SUBJECT TO ALL RIGHTS OF WAYS AND EASEMENTS SHOWN OR NOT SHOWN, RECORDED OR UNRECORDED.
2. UTILITIES SHOWN ARE GROUND IDENTIFIABLE ITEMS. ADDITIONAL UTILITIES MAY EXIST ABOVE OR BELOW GROUND. THE SURVEYOR ACCEPTS NO RESPONSIBILITY FOR THE COMPLETENESS OF THIS DATA.

THE FIELD DATA UPON WHICH THIS MAP OR PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 22,034 FEET AND AN ANGULAR ERROR OF <09" PER ANGLE POINT, AND WAS ADJUSTED USING COMPASS RULE.

THIS SURVEY HAS BEEN CALCULATED FOR CLOSURE BY LATITUDES AND DEPARTURES AND IS FOUND TO BE ACCURATE WITHIN ONE FOOT IN 199,252 FEET.

EQUIPMENT USED: TOPCON GPT 3003W,
TRIMBLE SPS880 (GPS), EGPS VRN

FIELDWORK COMPLETED: 11/24/2009

AVIGATION EASEMENT PARCEL 071-3A-000-059 (ENTIRE PARCEL)

A PERPETUAL AND ASSIGNABLE EASEMENT FOR A CLEAR ZONE APPROACH AREA OVER THAT PORTION OF LAND LOT 71, OF THE 5TH DISTRICT, TROUP COUNTY, GEORGIA DESCRIBED AS FOLLOWS:

COMMENCING AT AN 1/2" REBAR, MARKING THE SOUTH RIGHT OF WAY OF WEST POINT ROAD (US 29/SR 14) AND THE EAST RIGHT OF WAY OF BRADFIELD DRIVE AND AT AN ELEVATION OF 764.97 ABOVE DATUM (NAVD 88), WHICH IS THE POINT OF BEGINNING; THENCE ALONG THE SOUTHERLY RIGHT OF WAY U.S. 29/S.R. 14 N 87°04'00" E A DISTANCE OF 21.21' TO A POINT HAVING AN ELEVATION OF 764.50 ABOVE DATUM; THENCE ALONG THE SOUTH RIGHT OF WAY OF WEST POINT ROAD WITH A CURVE TURNING TO THE LEFT, WITH A RADIUS OF 1121.00', WITH AN ARC LENGTH OF 69.67', WITH A CHORD BEARING OF N 84°36'05" E WITH A CHORD DISTANCE OF 69.66' TO A POINT HAVING AN ELEVATION OF 762.99 ABOVE DATUM; THENCE DEPARTING THE RIGHT OF WAY OF SAID ROAD S 01°18'12" W A DISTANCE OF 292.79' TO A POINT HAVING AN ELEVATION OF 757.94 ABOVE DATUM; THENCE N 88°41'48" W A DISTANCE OF 2.84' TO A POINT HAVING AN ELEVATION OF 758.01 ABOVE DATUM; THENCE N 88°41'48" W A DISTANCE OF 97.16' TO A POINT ABOVE THE RIGHT OF WAY OF BRADFIELD DRIVE HAVING AN ELEVATION OF 766.78 ABOVE DATUM; THENCE ALONG THE RIGHT OF WAY OF SAID ROAD N 03°15'28" E A DISTANCE OF 49.44' TO A POINT HAVING AN ELEVATION OF 761.14 ABOVE DATUM; CONTINUE ALONG SAID ROAD N 03°15'28" E A DISTANCE OF 233.82' TO A POINT HAVING AN ELEVATION OF 764.97 ABOVE DATUM, WHICH IS THE POINT OF BEGINNING, HAVING AN AREA OF 0.627 ACRES AT THE GROUND PLANE.

THE DESCRIPTION ABOVE IS FOR THE LOWER ELEVATION LIMITS FOR THE CLEAR ZONE FOR RUNWAY 13; LAGRANGE-CALLAWAY AIRPORT.

EASEMENT POINTS

POINT	AIRSPACE ELEVATION	GROUND ELEVATION	HGT. RESTRICTION
A	764.97	718.0	47.0
B	764.50	720.6	43.9
C	762.99	720.3	42.7
D	757.94	732.3	25.6
E	758.01	732.3	25.8
F	766.78	735.6	31.2
G	761.14	731.8	29.3

0' 50' 100' 150'

GRAPHIC SCALE

NOT A VALID OR RECORDABLE
PLAT OR MAP UNLESS SIGNED
ACROSS SEAL WITH ORIGINAL
SIGNATURE OF SURVEYOR

NORTH BASED ON
GEORGIA STATE
PLANE COORDINATE
SYSTEM—WEST ZONE

LEGEND

- IRON PIN SET—1/2" Ø REBAR (TYP.)
- IRON PIN FOUND—1/2" Ø REBAR (TYP.)
- CONCRETE MONUMENT SET
- CONCRETE MONUMENT FOUND
- △ CALCULATED POINT
- CH CHORD DISTANCE
- LC LENGTH OF ARC
- R RADIUS
- OHP OVERHEAD POWER
- OHT OVERHEAD TELEPHONE
- CAIV OVERHEAD CABLE TV
- PP POWER POLE
- R/W RIGHT OF WAY
- LP LIGHT POLE
- FENCE
- LL LAND LOT
- BL BUILDING LINE
- AC ACRES
- SF SQUARE FEET
- CL CENTERLINE
- CR COUNTY ROAD
- P.O.B. POINT OF BEGINNING
- N/F NOW OR FORMERLY
- T.C.R. TROUP COUNTY RECORDS
- DB DEED BOOK/PAGE NUMBER
- PB PLAT BOOK/PAGE NUMBER
- [19] HOUSE NUMBER
- FH FIRE HYDRANT
- HB HEIGHT OF BUILDING
- 760- AIRSPACE CONTOURS
- AS AIRSPACE HEIGHT

Sample Survey Exhibit

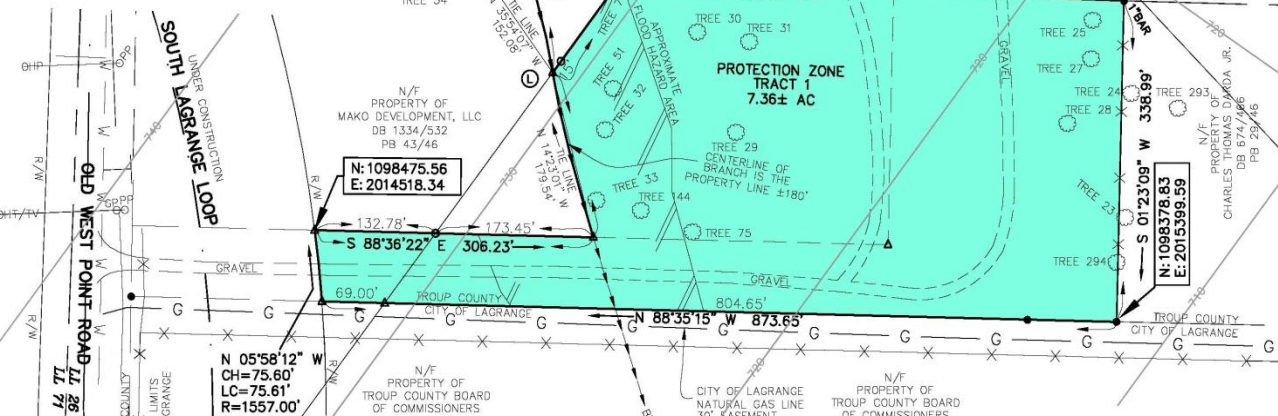


GRAPHIC SCALE



EASEMENT POINTS

POINT	EASEMENT ELEVATION	GROUND ELEVATION	HEIGHT RESTRICTION
A	744.07	682.4	61.7
B	742.38	683.9	58.5
C	741.20	688.5	52.7
D	761.94	693.9	68.0
E	745.61	690.3	55.3
F	746.51	694.1	52.4
G	742.73	693.4	49.3
H	738.49	691.4	49.1
I	732.04	694.9	37.1
J	731.15	695.0	36.1
K	730.80	695.5	35.3
L	730.80	677.3	53.5
M	730.80	700.2	30.6
N	765.90	703.8	62.1
O	739.33	709.0	30.3
P	757.76	718.3	39.5
Q	717.74	707.5	10.2



LEGEND

- IRON PIN SET-1/2" Ø REBAR (TYP.)
- IRON PIN FOUND - 1/2" Ø REBAR (TYP.)
- CONCRETE MONUMENT SET
- CONCRETE MONUMENT FOUND
- ▲ CALCULATED POINT
- CH CHORD DISTANCE
- LC LENGTH OF ARC
- R RADIUS
- OHP OVERHEAD POWER
- OHT OVERHEAD TELEPHONE
- LP OVERHEAD CABLE TV
- PP POWER POLE
- PP LIGHT POLE
- R/W RIGHT OF WAY
- XX FENCE
- LL BUILDING LINE
- LL LAND LOT
- BC ACRES
- SF SQUARE FEET
- CR CENTERLINE
- P.O.B. POINT OF BEGINNING
- N/O NOW OR FORMERLY
- T.C.R. TROUP COUNTY RECORDS
- DB DEED BOOK/PAGE NUMBER
- PL PLAT BOOK/PAGE NUMBER
- HS HOUSE NUMBER
- ▲ AIRSPACE CONTOURS
- ▲ BELLSOUTH (AT&T) MANHOLE

RECORDED:
PLAT BOOK
PAGE

THE FIELD DATA UPON WHICH THIS MAP OR PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 29,385 FEET AND AN ANGULAR ERROR OF <02" PER ANGLE POINT, AND WAS ADJUSTED USING COMPASS RULE.

THIS SURVEY HAS BEEN CALCULATED FOR CLOSURE BY LATITUDES AND DEPARTURES AND IS FOUND TO BE ACCURATE WITHIN ONE FOOT IN 208,029 FEET.

EQUIPMENT USED: TOPCON GPT 3003HS
TRIMBLE SPS880 (GPS), EGPS VRN
FIELDWORK COMPLETED: 11/25/2009

AVIGATION EASEMENT PARCEL 071-1C-000-040(PARTIAL PARCEL)

A PERPETUAL AND ASSIGNABLE EASEMENT FOR A CLEAR ZONE APPROACH AREA OVER THAT PORTION OF LAND LOTS 25 AND 26, OF THE 5TH DISTRICT, TROUP COUNTY, GEORGIA DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT MARKING THE INTERSECTION OF THE EASTERLY RIGHT OF WAY OF SOUTH LAGRANGE LOOP AND THE SOUTHERLY RIGHT OF WAY OF WEST POINT ROAD (US 29/SR 14) THENCE ALONG THE SOUTHERLY RIGHT OF WAY OF WEST POINT ROAD N 61°21'47" E A DISTANCE OF 263.93' TO A POINT ABOVE THE CENTERLINE OF A BRANCH HAVING AN ELEVATION OF 744.07 ABOVE DATUM (NAVD 88); WHICH IS THE POINT OF BEGINNING OF SAID TRACT; CONTINUE ALONG THE RIGHT OF WAY OF SAID ROAD N 61°21'47" E A DISTANCE OF 140.24' TO A POINT HAVING AN ELEVATION OF 742.38 ABOVE DATUM; CONTINUE ALONG THE RIGHT OF WAY OF SAID ROAD WITH A CURVE TURNING TO THE LEFT WITH AN ARC LENGTH OF 107.40', WITH A RADIUS OF 1432.74', WITH A CHORD BEARING OF N 59°06'08" E, WITH A CHORD LENGTH OF 107.37' TO A POINT HAVING AN ELEVATION OF 741.20 ABOVE DATUM; CONTINUE ALONG THE RIGHT OF WAY OF SAID ROAD WITH A CURVE TURNING TO THE LEFT WITH AN ARC LENGTH OF 154.19', WITH A RADIUS OF 1432.74', WITH A CHORD BEARING OF N 53°52'18" E, WITH A CHORD LENGTH OF 154.12' TO A POINT HAVING AN ELEVATION OF 761.94 ABOVE DATUM; THENCE DEPARTING THE RIGHT OF WAY OF SAID ROAD S 14°35'22" E A DISTANCE OF 172.49' TO A POINT HAVING AN ELEVATION OF 746.51 ABOVE DATUM; THENCE N 72°33'55" E A DISTANCE OF 80.4' TO A POINT HAVING AN ELEVATION OF 746.51 ABOVE DATUM; THENCE S 14°23'42" E A DISTANCE OF 39.85' TO A POINT HAVING AN ELEVATION OF 742.73 ABOVE DATUM; THENCE S 25°45'27" E A DISTANCE OF 58.73' TO A POINT HAVING AN ELEVATION OF 738.49 ABOVE DATUM; THENCE S 08°12'27" E A DISTANCE OF 60.84' TO A POINT HAVING AN ELEVATION OF 732.04 ABOVE DATUM; THENCE S 08°12'27" E A DISTANCE OF 42.82' TO A POINT HAVING AN ELEVATION OF 731.15 ABOVE DATUM; THENCE S 14°35'07" E A DISTANCE OF 15.00' TO A POINT HAVING AN ELEVATION OF 730.80 ABOVE DATUM; THENCE S 37°11'46" W A DISTANCE OF 489.15' TO A POINT ABOVE THE CENTERLINE OF A BRANCH HAVING AN ELEVATION OF 730.80 ABOVE DATUM; THENCE ALONG THE CENTERLINE OF THE BRANCH IN A NORTH-WESTERLY DIRECTION A DISTANCE OF 571', MORE OR LESS, TO A POINT ABOVE THE CENTERLINE OF SAID BRANCH ALSO BEING ON THE SOUTHERLY RIGHT OF WAY OF WEST POINT ROAD (HAVING THE LINES STARTING AT THE SOUTHERLY POINT ON THE BRANCH OF N 35°40'07" W A DISTANCE OF 152.08' TO A POINT; THENCE N 08°00'04" W A DISTANCE OF 430.57' TO THE NORTHERLY POINT); WHICH IS THE POINT OF BEGINNING, HAVING AN AREA OF ±4.09 ACRES, MORE OR LESS.

THE DESCRIPTION ABOVE IS FOR THE LOWER ELEVATION LIMITS FOR THE CLEAR ZONE FOR RUNWAY 13; LAGRANGE-CALLAWAY AIRPORT.

AVIGATION EASEMENT PARCEL 071-1C-000-039(PARTIAL PARCEL)

A PERPETUAL AND ASSIGNABLE EASEMENT FOR A CLEAR ZONE APPROACH AREA OVER THAT PORTION OF LAND LOTS 25 AND 26, OF THE 5TH DISTRICT, TROUP COUNTY, GEORGIA DESCRIBED AS FOLLOWS:

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THE DESCRIPTION ABOVE IS FOR THE LOWER ELEVATION LIMITS FOR THE CLEAR ZONE FOR RUNWAY 13; LAGRANGE-CALLAWAY AIRPORT.

Why an Avigation Easement?

- ➔ An Avigation Easement is about safety.
- ➔ Safety to the approach surfaces.
- ➔ Removal of the encroachments helps to ensure a lesser chance of a plane wreck from clipping a tree on take off or landing.
- ➔ The Easement takes the liability off the property owner and places it on the County to keep the approach surface clear.
- ➔ Tree growth is inevitable.

- ➔ Surveyors will identify specific trees for removal
- ➔ Plans and Specs will be developed
- ➔ Coordination with property owners
- ➔ Public bidding by contractors
- ➔ Remove specific trees and grind stumps



Lynn Green, Director of Acquisition Services
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678.735.5196

Baker

T • H • C

Improving Your Community

THANK YOU!

QUESTIONS?