WINCHESTER REGIONAL AIRPORT

AIRPORT LAYOUT PLAN UPDATE

PREPARED FOR
WINCHESTER REGIONAL AIRPORT AUTHORITY
WINCHESTER, VIRGINIA

BY
DELTA AIRPORT CONSULTANTS
JULY 2005

DELTA AIRPORT CONSULTANTS, INC.
9711 Farrar Court, Suite 100
Richmond, Virginia 23236

TABLE OF CONTENTS

LIST OF TABLES

LIST OF EXHIBITS

A. INTRODUCTION

The purpose of the Airport Layout Plan Update for the Winchester Regional Airport (OKV) is to provide the Winchester Regional Airport Authority with useful, understandable information and guidance to maintain and/or improve a safe and efficient airport. It also provides the Federal Aviation Administration (FAA) and the Virginia Department of Aviation (DOAV) with information concerning the immediate needs and planned development at the Winchester Regional Airport. This narrative report summarizes the existing facilities, forecast of aviation demand, facility requirements and alternatives used to prepare an updated set of Airport Layout Plan Drawings. A reduced set of the Airport Layout Plan Drawings is included in **Appendix A** of this report.

B. AIRPORT LOCATION AND SETTING

The Winchester Regional Airport is located in the northern Shenandoah Valley in the northwest corner of Virginia, in Frederick County. Principle vehicular access to the airport is from either State Route 522 to State Route 645 (Airport Road) from the west or from State Route 50 to Airport Road from the east. The airport is operated by the Winchester Regional Airport Authority and is approximately 371 acres in size (fee-simple) with an additional 36 acres controlled through avigation easements.

The topography of the area immediately surrounding the airport is gently rolling terrain. The airport has a published elevation of 727 feet above Mean Sea Level (MSL). The mean maximum temperature of the hottest month is 88 degrees Fahrenheit.

Exhibit 1, Airport Location Map, locates the airport relative to the Commonwealth of Virginia. **Exhibit 2**, Airport Vicinity Map, identifies the immediate vicinity around the airport.

AIRPORT LOCATION MAP
WINCHESTER REGIONAL AIRPORT

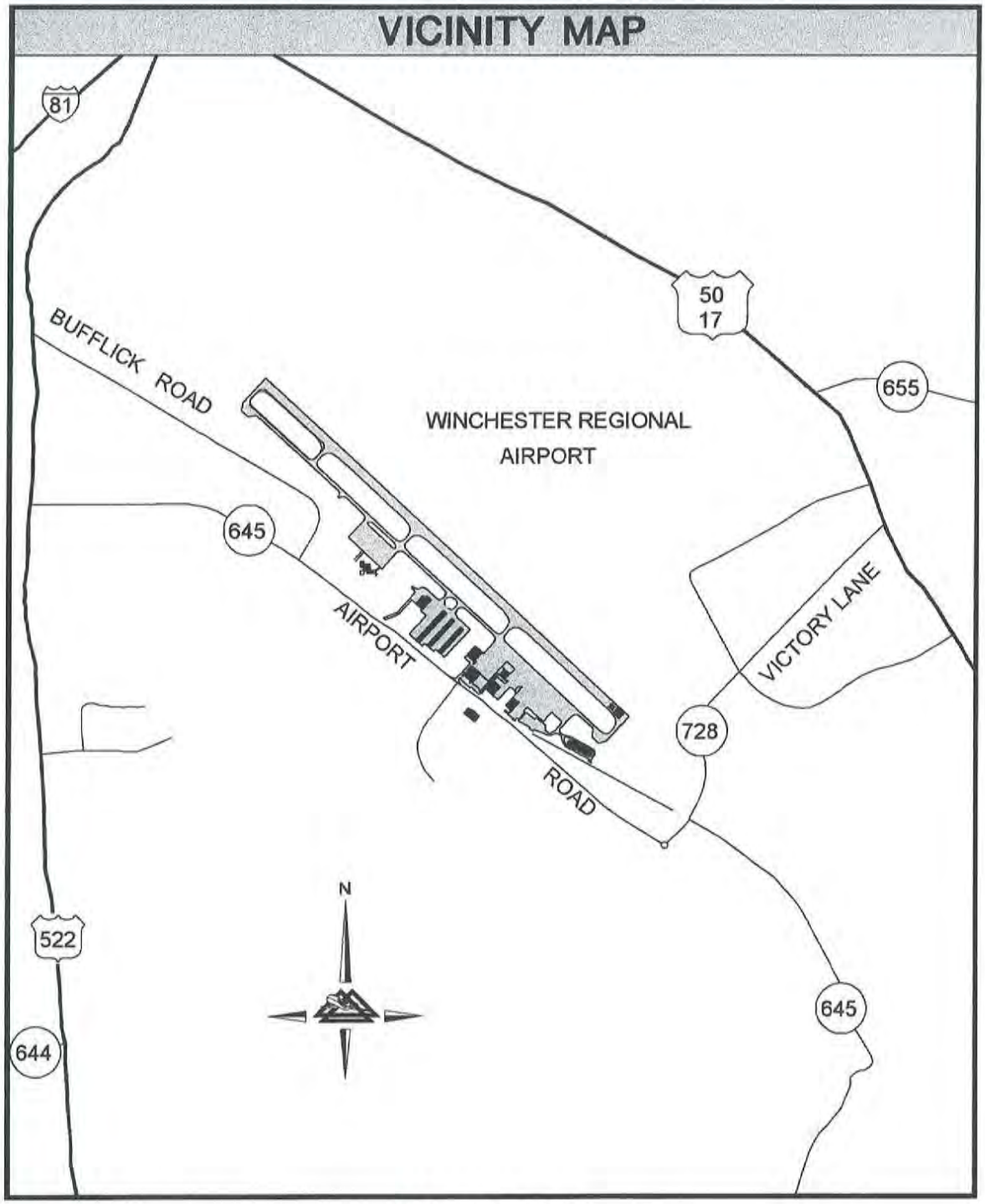
EXHIBIT
1

www.deltaairport.com

DRAWN BY:	BNK	CHECKED BY:	JML	SCALE:	NTS	DATE:	MARCH 2005

DRAWING: 04005-location.dwg LAYOUT: LAYOUT 1

VICINITY MAP



NOT TO SCALE

DRAWING: 04005-vicinity.dwg LAYOUT: Layout1

www.deltaairport.com

AIRPORT VICINITY MAP WINCHESTER REGIONAL AIRPORT								EXHIBIT 2
DRAWN BY:	DLC	CHECKED BY:	JML	SCALE:	NTS	DATE:	MARCH 2005	

C. EXISTING FACILITIES

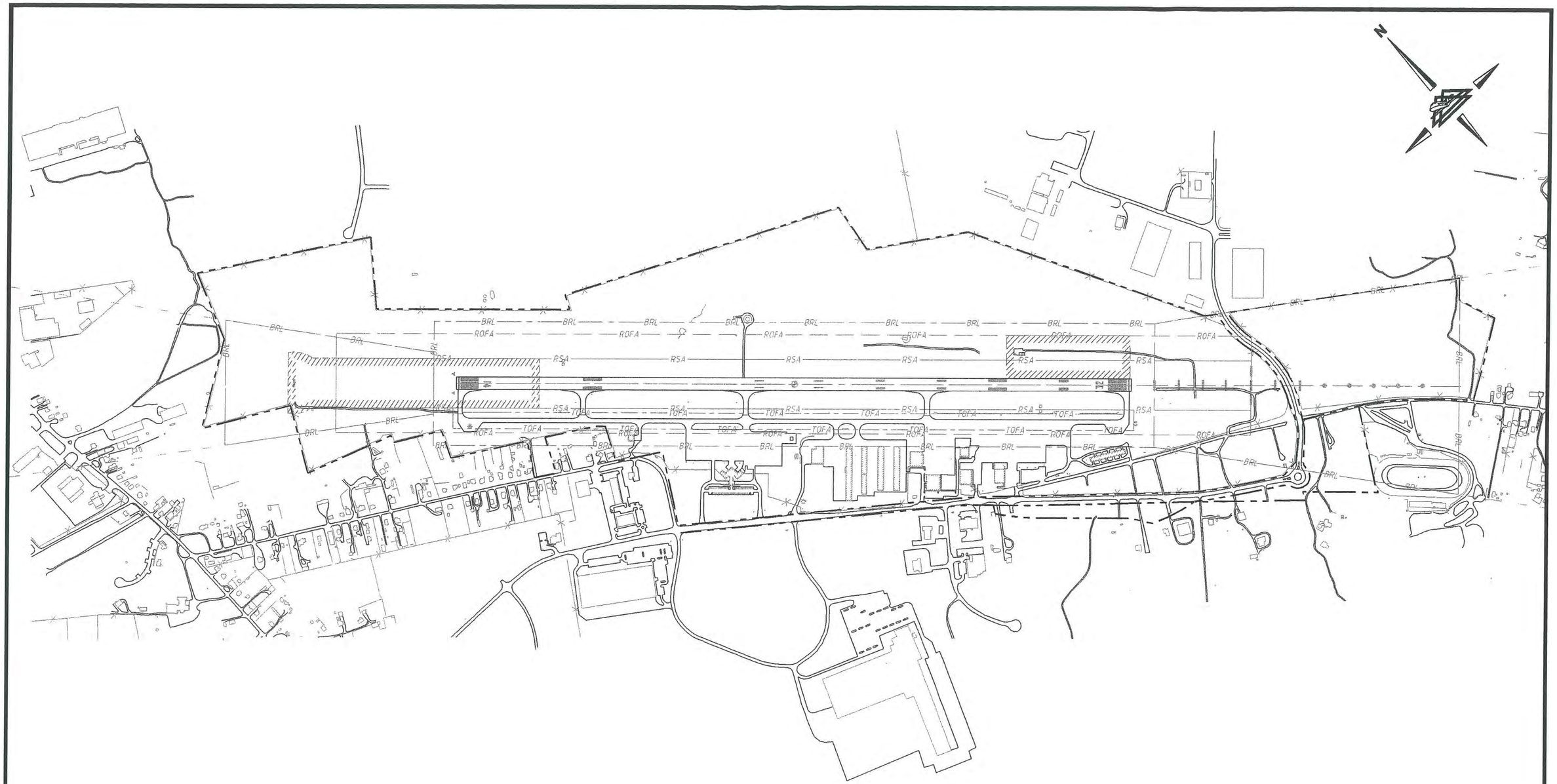
The existing facilities at the Winchester Regional Airport are summarized in **Table 1** and shown on **Exhibit 3**. The inventory information is current as of March 2005.

Table 1
Winchester Regional Airport
Existing Facilities

Item	Description
General Airport Information	
Coordinates:	N 39°08'36.68" W 78°08'40.00"
Three Letter Identifier:	OKV
Field Elevation:	727' MSL
Communications:	122.7 UNICOM/CTAF 124.850 AWOS-III
Airport Reference Code (ARC)	C-II
Land	
Fee-Simple:	371 acres
Easement:	36 acres
Runway 14-32	
Length:	5,500'
Width:	100'
Type:	Asphalt grooved
Markings:	RWY 14 non-precision, RWY 32 precision
Pavement Strength:	Single – 45,000 lbs. Dual – 60,000 lbs.
Condition:	Good (PCI number 83-92)
Instrument Approaches	
Precision:	RWY 32 (259' / ½ mile)
Non-Precision:	RWY 14 (713' / 1 mile)
NAVAIDS:	CAT I ILS RWY 32, LOC RWY 32, MALSR RWY 32, GPS RWY 14, VOR/DME, NDB, GPS-A, GPS-B
Weather Source	AWOS-III on field (Upgrading to III-PT in 2005).
Taxiways	
Parallel:	Yes, 5 exit taxiways 35' wide

Lighting	
Runway:	MIRL
Taxiway:	MITL
Visual Approach:	REILs RWY 14, 2-Box PAPIs RWY 14-32, 36" Rotating Beacon, 1 Lighted Wind Cone
Apron	
Based:	
Size (square yards):	Approximately 24,000 SY
Condition:	Fair to good (PCI number 41-97)
Tie-downs:	45
Transient:	
Size (square yards):	Approximately 21,000 SY
Condition:	Good (PCI number 60-100)
Tie-downs:	27
Hangars	
T-Hangar Units:	4 (55 units)
Corporate/Conventional Hangars:	5
FBO/Maintenance Hangar:	1
Fuel Farm	
Type:	Above-ground Storage Tank (AST)
Jet-A Fuel Storage:	20,000 gallon
Avgas Fuel Storage:	20,000 gallon
Self-Service Pump:	1,000 gallon
Other Fuel Facilities	
Auto Fuel Storage:	700 gallon
Diesel Fuel Storage:	2 Tanks (300 gallons each)
Terminal Building	
Size:	9,000 SF
Condition:	Poor - Fair
Auto Parking (Spaces)	73 parking spaces (Main Parking)
Security and Fire Protection	Patrolled by Frederick County Sheriff's Department 8' perimeter fencing w/ barbwire Millwood Volunteer Fire Department
Utilities	
Water Supply:	Frederick County Sanitation Authority
Sanitary Sewer:	Frederick County Sanitation Authority
Gas:	Shenandoah Gas Service
Electric:	Allegheny Power System
Telephone:	Verizon

Sources: Delta Airport Consultants, Inc. Site Visit June 2004
Airport Management



EXISTING AIRPORT LAYOUT DRAWING
WINCHESTER REGIONAL AIRPORT

EXHIBIT 3

www.deltaairport.com

DRAWN BY:	AMT	CHECKED BY:	DWD	SCALE:	1"=800'	DATE:	MARCH 2005

DRAWING: 04 exh1-3.dwg LAYOUT: 11x17

D. AIRCRAFT ACTIVITY

The FAA is required to publish the "National Plan of Integrated Airport Systems" (NPIAS) as mandated by Section 47103 of Title 49 of United States Code (USC). In 1994, Congress consolidated and recodified all the aviation laws and statutes into Title 49 of the USC. Section 41703 of Title 49 directs the Secretary of Transportation to maintain a plan for developing public-use airports in the United States. This FAA planning document is intended to identify the nation's airport needs over a ten year planning period, representing a continuous planning effort. Likewise, the Virginia Air Transportation Plan (VATSP) which was recently updated in 2003, identifies the state's airport needs.

Airports contained in the NPIAS are divided into two categories that reflect the type of service they provide to the community. The service levels also represent statutory funding categories associated with the airport grant program. As outlined in FAA Order 5090.3C, Field Formulation of the National Plan of Integrated Airport Systems (NPIAS), the service levels include the following:

1. **Commercial Service Airports** are publicly owned airports that enplane 2,500 or more passengers annually and receive scheduled passenger aircraft service. Commercial service airports are either:
    - **(a) Primary** – airport that enplanes more than 10,000 passengers annually; or
    - **(b) Non-primary** – airport that enplanes between 2,500 and 10,000 passengers annually.
2. **General Aviation Airports** while not specifically defined are considered to be airports not classified as commercial service. General aviation airports include:

    - **(a) Reliever** is an airport designated by the FAA as having the function of relieving congestion at a commercial service airport and providing more general aviation access to the overall community. Privately owned airports may be identified as reliever airports.

(b) **Privately owned public-use** airports that enplane 2,500 or more passengers annually and receive scheduled passenger service are also classified as general aviation because they do not meet the criteria for commercial service (i.e., are not publicly owned).

(c) **Other General Aviation** are airports that are largely intended to serve the needs of general aviation users (users who conduct non-military operations not involving the carriage of passengers or cargo for hire or compensation).

In addition to defining the role of the airport, the FAA has a system to correlate airport design criteria to the physical (wingspan) and operating (approach speed) characteristics of the most demanding aircraft currently using or expected to use an airport with greater than 500 annual operations. This airport classification system is contained in FAA Advisory Circular (AC) 150/5300-13. The Airport Reference Code (ARC) system is comprised of two components. The first component, based on approach speed, is depicted by a letter (A-E) designating the aircraft approach category. The second component based on the wing span, is depicted by a roman numeral (I-VI) designating the airplane design group. **Table 2** identifies the Aircraft Approach Categories and Aircraft Design Groups that have been established by the FAA.

Table 2
Winchester Regional Airport
Approach Categories and Design Groups

Approach Category	Aircraft Design Group
A - Less than 91 knots	I - Wing span less than 49 feet
B - 91 to 120 knots	II - Wing span 49 feet to 78 feet
C - 121 to 140 knots	III - Wing span 79 feet to 117 feet
D - 141 to 165 knots	IV - Wing span 118 feet 170 feet
E – 166 knots or greater	V - Wing span 171 feet to 213 feet VI - Wing span 214 feet to 261 feet

Source: FAA AC 150/5300-13, Airport Design

The NPIAS lists the Winchester Regional Airport as a general aviation airport. The Virginia Department of Aviation classifies OKV as a general aviation regional airport, which is generally consistent with the NPIAS. Winchester Regional Airport is a growing facility with increasing volumes of itinerant corporate jet and cargo operations. Based on discussions with airport representatives and on-site observations, activity by larger corporate jet aircraft with wing spans up to 118 feet (Group III) is occurring and is anticipated to increase over the planning period. Although operational trends indicate the increased use of the airport by C/D-III aircraft, sufficient information does not currently exist to fully justify changing the airport reference code from C-II to D-III. However, to ensure that development does not preclude a change in the ARC, new/expanded facilities should consider an ARC of D-III. An evaluation at the time of each project should be completed to determine what design characteristics should be incorporated.

Based on existing aircraft operations, the current airport reference code is C-II. The Hawker HS125, Hawker 800, Lear 55, and Challenger aircraft types represent approach category 'C' aircraft, while the Hawker 800, Citation II, Falcon 20, and King Air B200 represent Group II wingspan characteristics. The Hawker 800 is a good representative design aircraft for current activity at Winchester Regional Airport.

As mentioned above, operational trends indicate that the Airport may become a C/D-III airport in the future. C/D-III aircraft that are using the airport today include the G-500/550, Global Express and DC-9. The future design aircraft is anticipated to be the G500/550 series as it is a relatively common aircraft within this category of business aircraft.

To provide a perspective on various airport reference code classifications, examples of aircraft are listed in **Table 3.**

Table 3
Winchester Regional Airport
Typical Aircraft

Aircraft	ARC	Approach Speed (Knots)	Wing Span (Ft.)	Max Takeoff Weight (lbs)
Cessna 150	A-I	55	32.7	1,600
Cessna 172	A-I	61	36.1	2,658
Beech Bonanza F33A	A-I	70	33.5	3,400
Beech Baron 58P	B-I	101	37.8	6,200
Piper Navajo	B-I	100	40.7	6,200
Cessna Citation	B-I	108	47.1	11,850
Beech King Air C90	B-II	100	50.2	9,650
Cessna Citation II	B-II	108	51.7	14,100
Cessna Citation V	B-II	108	52.2	16,300
Dassault Falcon 50/2000	B-II	113/109	61.9/63.4	37,480/35,800
Lear 55C	C-I	128	43.8	21,500
Hawker 800/Horizon	C-II	127/132	51.3/61.8	28,000/37,500
Challenger CL-604	C-II	125(est.)	64.3	48,200
Jetstar	C-II	127	44.5	44,500
Boeing B-737 (BBJ)	C-III	140	95	133,500
Grumman G-IV	D-II	141	68	65,300
Grumman G-V (500/550)	D-III	141	93	90,500

Source: FAA AC 150/5300-13, Airport Design
Aircraft Manufacturer Data

E. FORECAST OF AVIATION DEMAND

The forecast of aviation demand establishes the nature and magnitude of aeronautical activity and the need for airport development for the ensuing planning period. The resulting forecasts will be used to determine facility requirements. As outlined in the scope, the forecast provides projections of general aviation activity for based aircraft by type, aircraft operations by type, and local versus itinerant total operations. The following phases of development are presented in this study:

- Phase I Short Term (0-5 years) 2005 – 2009
- Phase II Intermediate Term (6-10 years) 2010 – 2014
- Phase III Long Term (11-20 years) 2015 – 2024

The forecast of general aviation operations was derived from and reflects the 2003 Virginia Air Transportation System Plan (VATSP). The VATSP projects significant growth in both based aircraft and aircraft operations at the Winchester Regional Airport. It is anticipated that the based aircraft forecast trend will be consistent with the system plan in regards to the actual annual growth rate. However, the VATSP when interpolated lists 86 aircraft as existing (2004). The January 1, 2004 based aircraft survey (as filed with the DOAV) lists 106 aircraft based at the Winchester Regional Airport. Interviews with the Airport indicate that by mid 2004, based aircraft had increased to 112. Therefore, the forecast will use the documented based aircraft figure of 112 as the base line. A copy of the Annual Based Aircraft Survey for OKV is presented in **Appendix B** of this report.

Utilizing the actual based aircraft inventory and the average annual growth rates for based aircraft by type from the 2003 VATSP (*GAF Table 3, Historic and Future Average Annual Growth Rates by Based Aircraft Type*, see **Appendix C**), **Table 4** was prepared to provide the based aircraft forecast by type for the 20-year planning period.

The projected aircraft operations are also expected to be consistent with the VATSP trends, and therefore were generated using the VATSP annual average growth rate of 2.1 percent as noted in *GAF Table 7, Comparison of VATSP and FAA Operations Forecasts* (see Appendix C). The VATSP operations forecast for the Winchester Regional Airport in the year 2000 and 2005 was 29,794 and 34,513 respectively. Using a growth rate of 2.1 percent, the volume of 2004 operations was interpolated to be approximately 33,803 operations. This figure and the VATSP average annual growth rate were used to develop the operations forecast as provided in Table 2. In addition, Table 2 also provides the projected operations by aircraft type generated to reflect the VATSP forecast using the same fleet mix for the allocated years.

Table 4
Winchester Regional Airport
Forecast Summary

Forecast Element	Year				
	Base Year (2004)	2005	2009	2014	2024
Total Based Aircraft	112	114	121	130	146
Annual Growth Rate[1]		1.6 %	1.4 %	1.4 %	1.2 %
Based Aircraft by Type					
SE Piston	88	89	92	97	106
ME Piston	16	16	17	17	17
ME Turbo-prop	1	2	2	3	5
ME Turbo-jet	4	4	6	8	12
Rotorcraft	1	1	2	3	4
Other[3]	2	2	2	2	2
Operations by Aircraft Type[2]					
SE Piston	26,434	26,929	29,175	32,293	39,565
ME Piston	4,090	4,171	4,425	4,786	5,535
ME Turbo-prop	1,318	1,354	1,500	1,665	2,101
ME Turbo-jet	1,048	1,127	1,388	1,748	2,665
Rotorcraft	710	725	788	874	1,076
Other[2]	203	207	225	250	308
Total Operations	33,803	34,513	37,500	41,615	51,250
Annual Growth Rate[1]		2.1 %	2.1 %	2.1 %	2.1 %
Local Operations (40 %)	13,403	13,805	15,324	17,464	22,134
Itinerant Operations (60 %)	20,104	20,708	22,988	26,197	33,200

Note: [1]VATSP 2003 GAF Table 3 – Historic and Future Average Annual Growth Rates by Based Aircraft Type
[2]VATSP 2003 GAF Table 7 – Comparison of VATSP and FAA Operations Forecasts
[3]Represents ultra lights, gliders, and military aircraft.
Sources: Delta Airport Consultants, Inc., Analysis

As shown, the Winchester Regional Airport can anticipate continued growth. The local/itinerant division of operations for the airport is approximately 40 percent (local)/60 percent (itinerant) as reported by the most current FAA Form 5010-1, Airport Master Record (1999). This ratio was also verified based on discussions with airport management. These forecasts indicate that all aspects of the aviation demand at the airport will continue to grow during the planning period. Therefore, ongoing development of facilities will enable the airport to continue to accommodate the growth in aviation demand and contribute to the economic vitality of the service area.

As part of this study, the forecasts were reviewed and approved by both the Federal Aviation Administration and Virginia Department of Aviation. Copies of the approved letters are included in Appendix C.

F. LAND USES

An examination of the Frederick County Comprehensive Policy Plan (2003) and the land use surrounding the airport was conducted to determine if the planned development shown on the ALP is consistent with local plans. Land uses around the airport include recreational, industrial, residential and commercial/business uses. Planned land uses for this area are expected to remain generally the same in the future, and are not anticipated to conflict with planned airport development. Planned land uses are illustrated in **Exhibit 4**.

G. DEVELOPMENT ALTERNATIVES

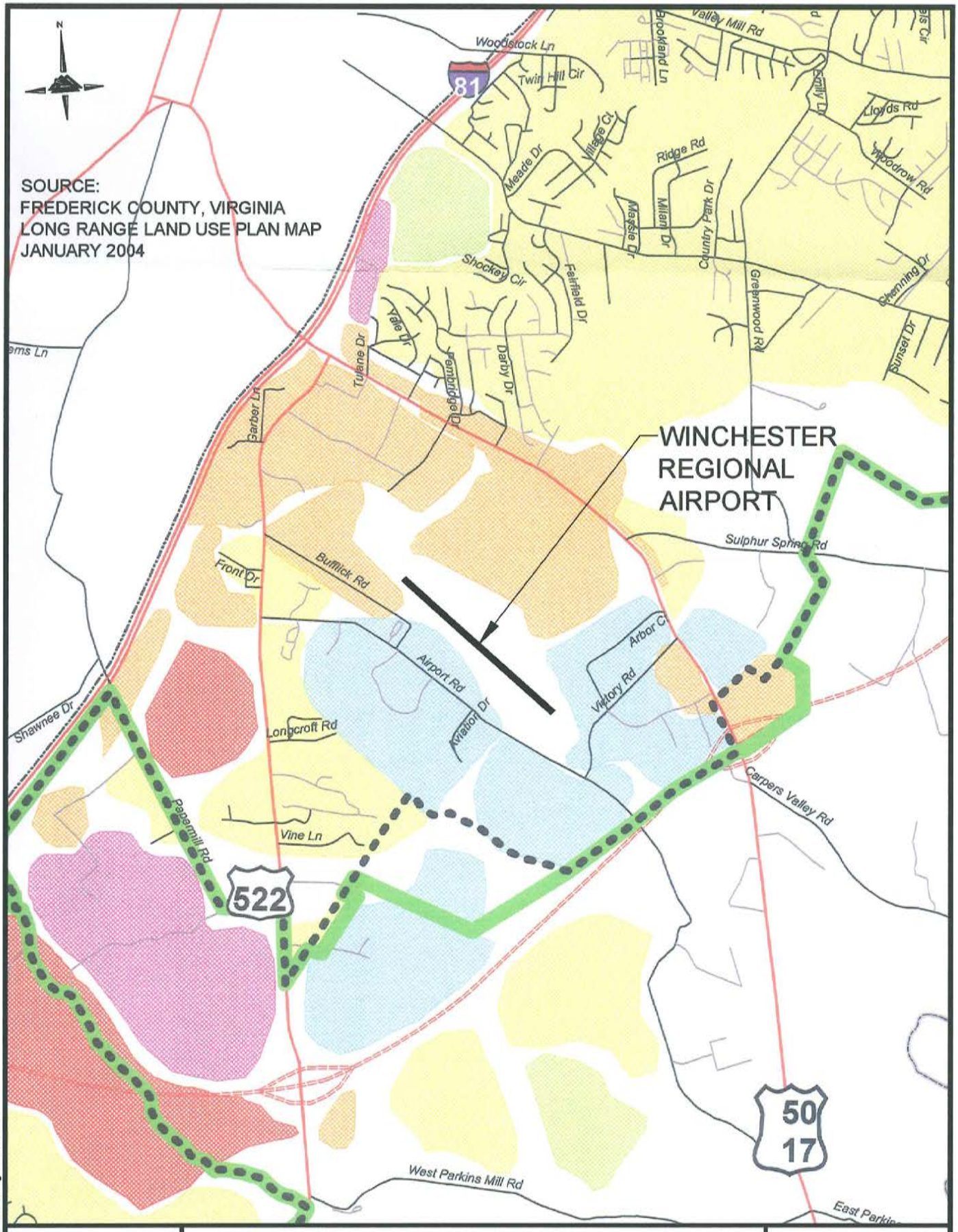
1. **Alternatives:** Two airfield development alternatives and several terminal area development options were prepared to meet aviation needs at the airport.

2. **Environmental Corridor:** In developing the layout on the north side of the runway, an "***Environmental Corridor*** " was defined. This area consists of steep sloped topography and is covered by various types of vegetation, including low growing grasses, shrubs and trees. Some areas may potentially be wetlands. The sloped topography and potential wetlands makes this area difficult to develop and was avoided during the development of alternatives.

3. **Taxiways:** Taxilane locations were evaluated based on the following criteria:

   (a) To prevent the need to cross an active runway, a full parallel taxiway has been included on the north side of the runway. Development of this taxiway will occur in segments based on the activity level on the north side.

   (b) Hold aprons and "by-pass" taxiways have been proposed based on various limitations.

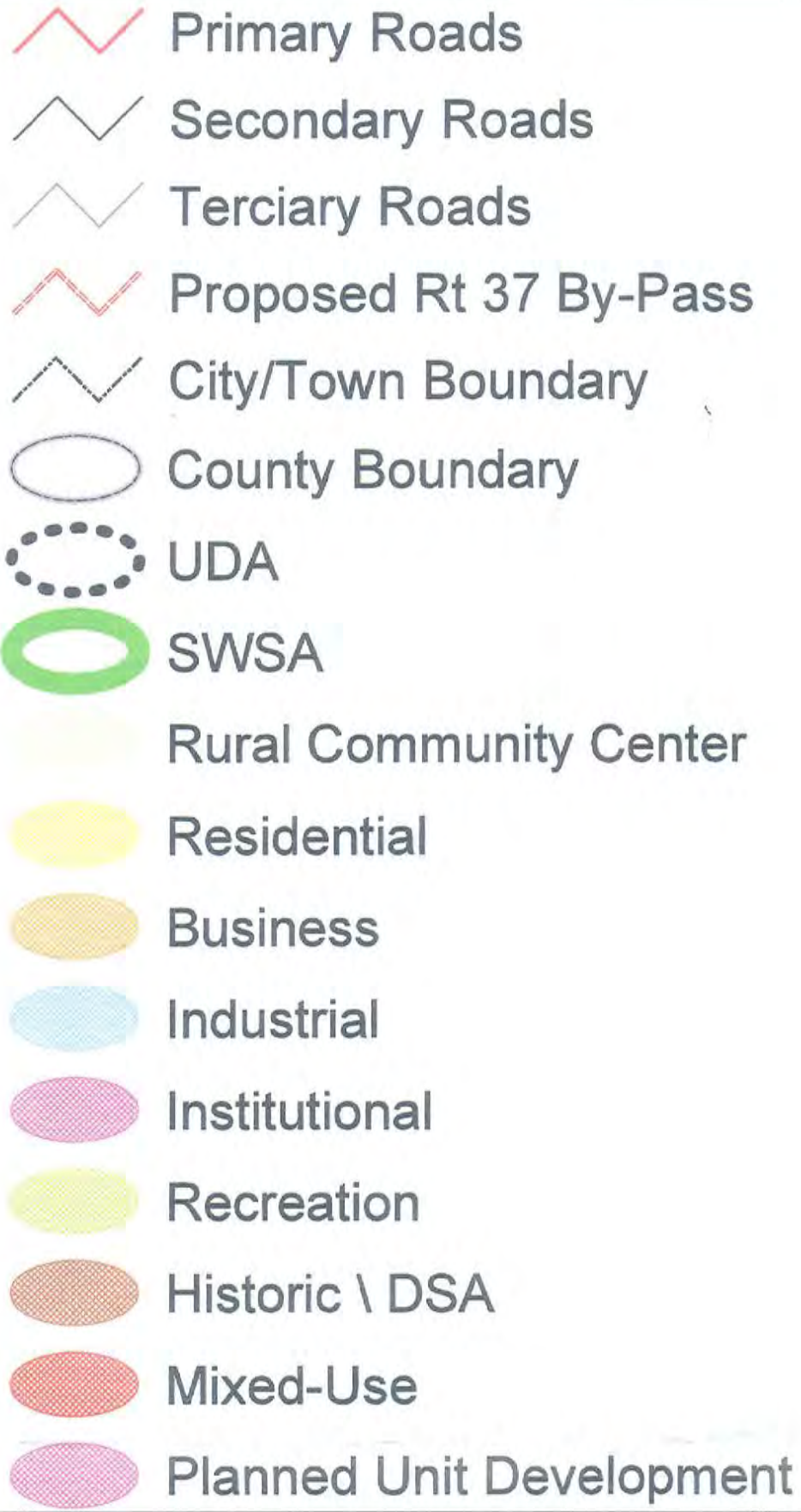


DRAWING: 04005-exh4.dwg LAYOUT: 4

www.deltaairport.com

PLANNED LAND USES WINCHESTER REGIONAL AIRPORT	EXHIBIT 4

DRAWN BY:	BNK	CHECKED BY:	DWD	SCALE:	NONE	DATE:	MARCH 2005



www.deltaairport.com

PLANNED LAND USES
WINCHESTER REGIONAL AIRPORT

DRAWN BY:	BNK	CHECKED BY:	DWD	SCALE:	NONE	DATE:	MARCH 2005

EXHIBIT
LEGEND

DRAWING: 04005-exh4.dwg LAYOUT: LEGEND

(c) The location of exit taxiways is based on using the cumulative utilization of aircraft by group presented in Appendix 9 for AC 150-5300-13. A review of the forecast of airport operations indicates that single engine and light twin engine aircraft will make up approximately 90 percent of all operations through the planning period, as such, taxiways were evaluated to capture as much of this aircraft group as possible.

(1) Existing Taxiway B is located approximately 4,500 feet form the Runway 32 threshold and 1,000 feet from the Runway 14 threshold. At this location, the exit utilization of Taxiway B is anticipated to be:

	Wet Conditions	Dry Conditions
Runway 14		
Single Engine	4%	6%
Twin Engine	0%	0%
Large Aircraft (see note)	0%	0%
Runway 32		
Single Engine	100%	100%
Twin Engine	97%	100%
Large Aircraft (see note)	4%	24%

NOTE: It should be noted that the percentages presented for "large aircraft" are based on the FAA's definition for large aircraft – aircraft between 12,500 and 300,000 pounds. Since the "large aircraft" operating at Winchester Regional Airport will be less than 160,000 pounds, the percentages of "large aircraft" using the taxiways at Winchester Regional Airport will likely be significantly higher than shown in the table.

From Runway 32, Taxiway B will allow almost 100% of all aircraft to exit prior to reaching the runway end. This efficiency would benefit operations for both the north and south side of the airfield. As such, existing Taxiway B could remain at its existing throughout the planning period. However, development on the north side of the airfield locates an intermediate taxiway further to the west than existing Taxiway B. It is desirable to have opposite side entrance/exit taxiways located immediately across from each other to decrease runway occupancy time and to simplify taxi operations. Therefore, it is proposed to relocate Taxiway B approximately 400 feet closer to the Runway 14, immediately across from the proposed north side connector. Both taxiways will be identified as Taxiway B.

In addition to acting as exit taxiways, the location as proposed on the ALP (approximately 600 feet from the Runway 14 threshold) also will allow for these two taxiways to serve as entrance/by-pass taxiways during Runway 14 operations.

(2) Existing Taxiway C is 3,100 feet from the Runway 32 threshold and 2,400 feet from the Runway 14 threshold. At this location, the taxiway utilization would be:

	Wet Conditions	Dry Conditions
Runway 14		
Single Engine	84%	99%
Twin Engine	1%	10%
Large Aircraft	0%	0%
Runway 32		
Single Engine	96%	100%
Twin Engine	10%	39%
Large Aircraft	0%	0%

Because it is anticipated that most of the single and light twin engine aircraft will continue to operate on the south side of the airfield (i.e. based aircraft) and that the terminal area is planned to remain on the south side of the airfield, Taxiway C is shown as remaining.

To allow for the efficient exiting of aircraft using the north side (60 percent of all operations are transient with most of those single and light twin aircraft) it is proposed that a corresponding taxiway also be located on the north side of the airfield. This new taxiway would be designated Taxiway C.

(3) Existing Taxiway D is located approximately 1,600 feet form the Runway 32 threshold and 3,900 feet from the Runway 14 threshold. At this location, the exit utilization of Taxiway D is anticipated to be:

	Wet Conditions	Dry Conditions
Runway 14		
Single Engine	100%	100%
Twin Engine	80%	98%
Large Aircraft	1%	8%
Runway 32		
Single Engine	23%	39%
Twin Engine	0%	0%
Large Aircraft	0%	0%

From Runway 32, Taxiway D will allow almost 100% of all single engine and light twin engine aircraft to exit prior to reaching the runway end during dry conditions, but is less efficient during wet conditions. However, relocating this taxiway will not significantly enhance airfield operations. In addition, based on north side development, locating a new north side connector opposite existing Taxiway D will provide very good apron access. Therefore, Taxiway D is proposed to remain and a corresponding Taxiway D is proposed on the north side of the airfield.

4. **Aprons/Hangars:** Aprons and hangars shown on the plan are based on a using general hangar sizes and are not developed for any specific aircraft. It is anticipated that hangars and associated site development will be completed on a demand basis for specific aircraft. Apron sizing is generally based on the following criteria:

   (a) Develop an aircraft parking area in front of each hangar so that the entire hangar can be emptied (i.e. apron space equals size of hangar).

   (b) Separate taxilane object free areas and parking areas as appropriate

H. AIRPORT LAYOUT PLAN DRAWINGS

The Airport Layout Plan (ALP) is a graphic representation of the existing and future development at the Winchester Regional Airport. As a 'federally obligated' airport that accepts federal funding for development and, in exchange, commits to a series of grant assurances related to the operation of the airport, the Airport Authority must maintain a current and approved ALP. All proposed development, regardless of funding source, must be identified on an approved ALP prior to implementation. The following is a summary description of the three plan sheets prepared for this study.

The **Airport Layout Plan Drawing (ALP)** is a graphic representation of existing airport facilities and proposed improvements during the planning period. The ALP indicates all pertinent clearance and dimensional information required to show conformance with applicable FAA standards. The drawing depicts the recommended location and configuration of facilities required for future airport development to meet the demand needs during the 20-year planning period. It is important to note that the ALP serves as a guide for proposed development and is a key document that should be kept current. When formally approved by the FAA, this drawing serves as a public document that is a record of aeronautical requirements, both present and future. An approved ALP is also required for any funding consideration by the FAA and DOAV.

Development projects illustrated on the ALP are shown in phases:
Phase I Development – 0 to 5 years

Phase II Development – 6 to 10 years

Phase III Development – 11 to 20 years

The **Terminal Area Plan (TAP)** graphically presents the existing and proposed layout of terminal facilities such as aprons, buildings and hangars. The TAP is a larger scale than the ALP to enable a more detailed presentation.

The **Airport Property Map (APM)** (formerly known as Exhibit "A") depicts: the boundaries of the existing and proposed airport property; identifies owners of each adjacent property; contains tables providing historical transaction data; and provides preliminary data for proposed land acquisitions.

I. AIRPORT LAYOUT PLAN SUMMARY TABLES

The following pages contain summary tables indicating specific details concerning the features of the airport. These tables were prepared for placement on the Airport Layout Plan as required by the FAA's Eastern Region Airport Layout Plan Checklist, and are included in the this narrative as required by Washington Airports District Office (WADO) Airport Layout Plan Narrative Report Checklist. The following tables include the *Runway Data Table*, *The Airport Data Table*, *The Facilities Table*, and the *Modifications of Standards Table*. The VFR and IFR Wind Roses are also included.

Table 5 – Runway Data Table: This table lists specific details concerning the existing and proposed conditions of Runway 14-32.

Table 6 – Airport Data Table: This table lists airport specific information such as the airport elevation, NAD 83 reference points, magnetic variation, NPIAS and state level of service, the airport reference code (ARC), the design aircraft, and taxiway lighting.

Table 7 – Facilities Table: This table is a list of facilities (terminal, hangars, fuel tanks, vault, NAVAIDS, etc.) located on the airport. They are numbered on the ALP for reference.

Table 8 – Modifications of Standards: This table is a list of conditions at the airport that are not in compliance with FAA standards. This table lists the standard modified, the FAA standards, the existing condition, the proposed action to address this non-standard condition, and an approval date.

VFR and IFR Wind Roses: The primary method of analyzing wind conditions at an airport is by using a wind rose. Wind data is represented on the wind rose in terms of the percentage of time winds of different velocities blow from various compass directions. The concentric circles on the wind rose indicate wind velocity in nautical miles per hour. The radial lines on the wind rose define the compass directions from which the winds originate. The numbers within the segments are percentages of time the wind blows from that direction. For this Airport Layout Plan Update, wind data for the period of 1991-2000 was obtained from the National Climatic Center in Asheville, North Carolina, for the Dulles International Airport. The wind roses indicate that Runway 14-32 does provide better than 95 percent wind coverage criteria for a single-runway configuration in for larger aircraft, and adequate coverage for small aircraft. Wind roses for VFR and IFR conditions at the Airport are shown. Under both VFR and IFR conditions the winds favor Runway 32.

Table 5
Winchester Regional Airport
Runway Data Table

RUNWAY DATA TABLE				
	Runway 14		Runway 32	
RUNWAY DATA	EXISTING	PROPOSED	EXISTING	PROPOSED
Effective Gradient (%)	.44	SAME	.44	SAME
Maximum Grade Within RWY Length	.71	SAME	.71	SAME
Runway Bearing (True)	N46°-27'-03.3"W	SAME	S46°-27'-03.3"E	SAME
Wind Coverage (%)	86.06	SAME	95.13	SAME
Runway Length	5,500'	SAME	5,500'	SAME
Runway Width	100'	SAME	100'	SAME
Displaced Threshold	N/A	N/A	N/A	N/A
Usable Runway Length	5,500'	SAME	5,500'	SAME
Surface Type	ASPHALT	SAME	ASPHALT	SAME
Pavement Strength				
Single Wheel	45,000 LBS	SAME	45,000 LBS	SAME
Dual Wheel	60,000 LBS	SAME	60,000 LBS	SAME
Approach Surface Slope	34:1	SAME	50:1	SAME
Approach Minimums	1 MILE	3/4 MILE	1/2 MILE	SAME
Visual Approach Aids	REIL, 2B PAPI	REIL, ODALS, 4B PAPI	2B PAPI	4B PAPI
Instrument Approach Aids	GPS	GPS, ODALS	MALSR, TH lights	SAME
Runway Lighting	MIRL	HIRL	MIRL	HIRL
Runway Marking	NON-PRECISION	SAME	PRECISION	SAME
Airport Reference Code (ARC)	C-II	D-III ≤ 150,000 lbs.	C-II	D-III ≤ 150,000 lbs.
Critical Aircraft	HAWKER 800	G-500/550	HAWKER 800	G500/550
Runway Protection Zone Dimensions	500'X1010'X1700'	1000'X1510'X1700'	1000'X1750'X2500'	SAME
Runway Object Free Area (ROFA)				
Length Beyond Runway	1,000'	SAME	900' TO 1,000' (MOD)	SAME
Width	800'	SAME	680' TO 800' (MOD)	SAME
Runway Safety Area (RSA)				
Length Beyond Runway	1,000'	SAME	1,000'	SAME
Width	400'	500'	400'	500'
Obstacle Free Zone (OFZ)	400' X 5,900'	SAME	400' X 5,900'	SAME
FAR Part 77 Category	NON-PRECISION	SAME	PRECISION	SAME
Runway End Coordinates (NAD 83)				
Latitude	39° 08' 55.49" N	SAME	39° 08' 17.88" N	SAME
Longitude	78° 09' 05.21" W	SAME	78° 08' 14.79" W	SAME
Runway End Elevations (MSL)	726.61'	SAME	701.18'	SAME
Displaced Threshold Elevation (MSL)	N/A	N/A	N/A	N/A
TDZ Elevation (MSL)	722.80 MSL	SAME	701.50 MSL	SAME
Line of Sight Violations	NONE	NONE	NONE	NONE

Table 6
Winchester Regional Airport
Airport Data Table

AIRPORT DATA TABLE		
AIRPORT DATA	**EXISTING**	**PROPOSED**
Airport Elevation (MSL)	726'	SAME
Airport Reference Point (NAD 83)		
Latitude	39° 08' 36.68" N	SAME
Longitude	78° 08' 40.00" W	SAME
Man Max Temperature of Hottest Month	88°	SAME
Airport NAVAIDS	MIRL, BEACON, REILS, PAPI, ILS, MALSR, GRS	SAME, + HIRL, ODALS
Magnetic Variation (July 2005)	9° 59' W	-
NPIAS Service Level	GA	SAME
State Service Level	GA REGIONAL	SAME
Wind Coverage Crosswind Component		
VFR	95.22%	SAME
IFR	98.81%	SAME
Airport Reference Code	C-II	D-III (< 150,000 lbs.)
Design Aircraft	HAWKER 800	GULFSTREAM 500/550
Taxiway Lighting	MITL	SAME

Table 7
Winchester Regional Airport
Facilities Table

FACILITIES TABLE					
#	**Facility Name**	**Top Elevation**	**#**	**Facility Name**	**Top Elevation**
1	Terminal Building	744' MSL	14	Electrical Vault	735' MSL
2	Open Span Hangar	748' MSL	15	Field Maintenance Building (Prop.)	732' MSL
3	Fuel Tanks (AG)	720' MSL	16	Corporate Hangars (Prop.)	742' MSL
4	Airport Beacon	742' MSL	17	Corporate Hangars (Prop.)	760' MSL
5	Open Span Hangar	744' MSL	18	Corporate Hangars (Prop.)	760' MSL
6	T-Hangars (44 Units)	728' MSL	19	Glide Slope Antenna	
7	Open Span Hangars	725' MSL	20	Localizer	
8	Open Span Hangars	734' MSL	21	Localizer Shelter	
9	Open Span Hangars	730' MSL	22	Corporate Hangars (Prop.)	745' ± MSL
10	Open Span Hangars	737' MSL			
11	Open Span Hangars	742' MSL			
12	T-Hangar (10 Units)	718' MSL			
13	AWOS	732' MSL			

Table 8
Winchester Regional Airport
Modifications of Standards

MODIFICATIONS OF DESIGN STANDARDS					
No.	**Standard Modification**	**FAA Standards**	**Existing Condition**	**Proposed Action**	**Date Approved**
1	RW/TW Separation	400'	300' (See note)	Meet Std. by relocating Taxiway A	4/2/91
2	ROFA	No road in ROFA	Road in ROFA	MOS	Pending

NOTE: The original MOS was based on the airport maintaining a B-II ARC and approach minimums greater than 1 mile. The changes proposed and/or published ILS approach with ½ mile minimums required re-evaluation of the MOS.

J. AIRPORT SECURITY MEASURES

The Winchester Regional Airport Security Plan (ASP) was implemented in July 2003. The purpose of the ASP is to describe the facilities, methods and procedures to prevent the use of Winchester Regional Airport as a site of departure by a terrorist and to prevent any act of sabotage against officials, employees, tenants, aircraft or airport facilities. The security measures recommended in the Security Plan are being implemented at this time. These measures are summarized in **Tables 9 and 10**.

As changes are made to the Airport, it is very important to review and amend the Airport Security Plan to ensure that it is kept current.

K. ALTERNATIVES ANALYSIS AND RECOMMENDATION

Two alternatives are presented as part of this ALP Update report.

1. **Alternative 1,** shown on Exhibit 5, was developed with the idea of generally maintaining existing conditions along the south side of the airfield (i.e. sized for Group II aircraft – wing spans up to 79 feet) and focus on developing the north side. The side south generally presents the layout as shown on the current ALP. Some additional terminal area development is shown around midfield adjacent to the existing General Aviation Terminal.

Table 9
Winchester Regional Airport
Airport Security Measures

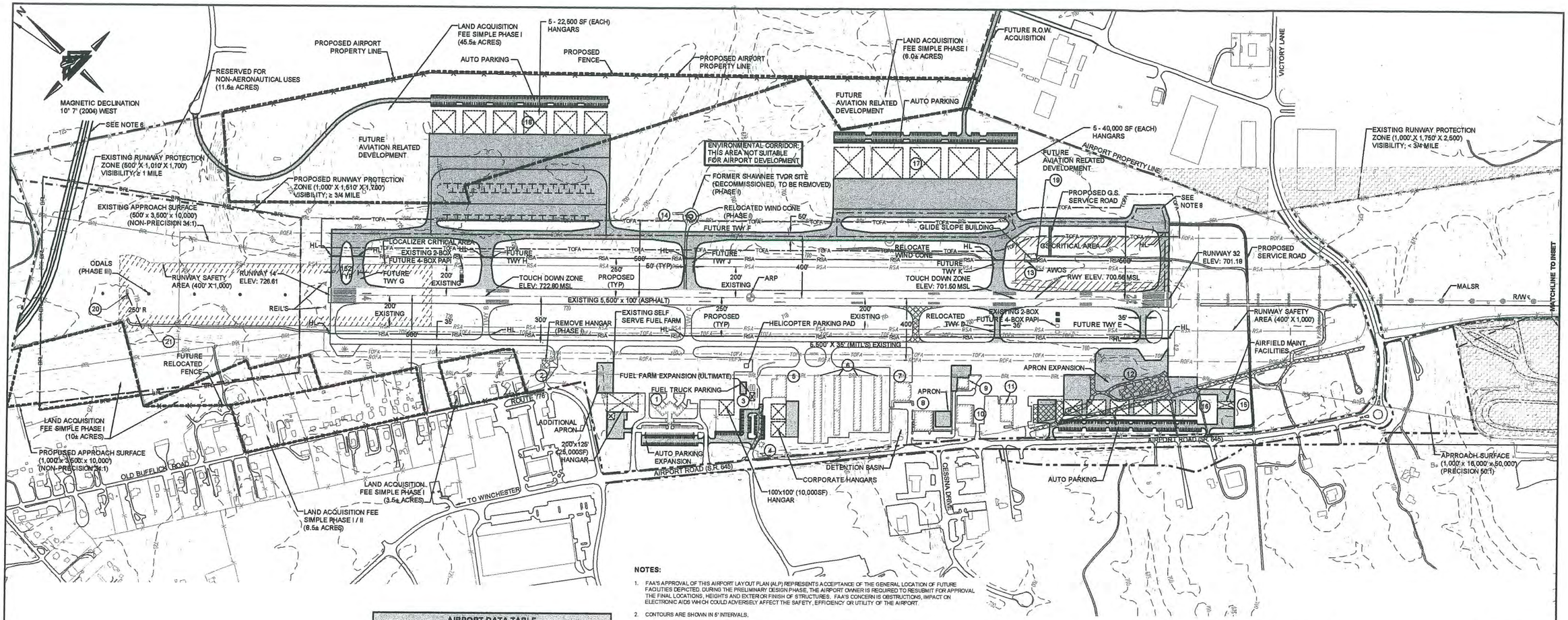
Perimeter Fencing	Chain Link, 95% of airport property, 8 feet high w/ barbed wire, 4 feet high w/wooden posts, meets FAA specs
Vehicle/Pedestrian Access Gates	18 vehicle/ 4 pedestrian, automated access control, lock and key or key pad, wireless remote
Airfield Access Doors	3 pedestrian airside uncontrolled
Access Control Systems	Automated access control, lock and key, wireless remote, excorting and challenging
Security Lighting	Admin and Ops Building, T-hangars #'s 1-42, tranisent apron and SE ramp equipped with exterior lights
Security Forces	*Law Enforcement* - Frederick County Sheriff's Dept. and Virginia State Police
	Aircraft Rescue and Fire Fighting - Frederick County Emergency Services
	Contracted Security Guards - none current
Security Education and Training	Developing program and periodic training excercises
Personnel Identification	Airport Manager provides photo ID badges for airport employees and directors
Vehicle Identification	Airport Executive Director/Manager is studying a program
Record Keeping Procedures	*Law Enforcement Response* - records maintained by Frederick County Sheriff's Dept., copies w/ Airport Manager
	Distribution/Storage/Disposal - need-to-know distribution, stored w/ Airport Manager, Shred to dispose

Source: Airport Security Plan for Winchester Regional Airport, July 2003.

Table 10
Winchester Regional Airport
Tenant Security Measures

Item	Description
Vehicle/Pedestrian Access Gates	Private vehicle/pedestrian gates have either an ACS or a mechanical lock system
Access Control Systems/Procedures	Automated Access Control- proximity card system, others use mechanical lock and key
	Contracted Security Guards- none used at this time
	Access Control Procedures- scheduled appointments/deliveries confirmed at the facility entry, ID/Baggage check
	Escorting & Challenging- procedures for visitors/passengers, challenge suspicious actions or activity
Security Lighting	Exterior lighting on all buildings except wooden t-hangar
Personnel Identification	ID badges for themselves and employees

Source: Airport Security Plan for Winchester Regional Airport, July 2003.



NOTES:

1. FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS A CCEPTANCE 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'S CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY OR UTILITY OF THE AIRPORT.
2. CONTOURS ARE SHOWN IN 5' INTERVALS.
3. ALL COORDINATES ARE BASED IN NAD 83.
4. ALL ELEVATIONS ARE IN FEET MEAN ABOVE SEA LEVEL. (NAVD 88)
5. THERE ARE NO KNOWN EXISTING OFZ PENETRATIONS.
6. THE VIRGINIA DEPARTMENT OF TRANSPORTATION IS PROPOSING TO CONSTRUCT A NEW 4 LANE ROADWAY APPROXIMATELY 1,800 FEET TO 2,000 FEET OFF THE END OF RUNWAY 14. THE PROPOSAL WILL REQUIRE THE RELEASE OF APPROXIMATELY 4.13 ACRES OF EXISTING AIRPORT PROPERTY. THE LAND RELEASE IS IDENTIFIED AS PARCEL 55 ON THE AIRPORT PROPERTY MAP.
7. A GROUP OF TREES AND THE AIRPORT PERIMETER FENCE (ALONG THE PROPERTY LINE) ARE BOTH PENETRATIONS TO THE THRESHOLD SITING SURFACE TO RUNWAY 14 WITH THE TREES CURRENTLY THE MOST CRITICAL. THE AIRPORT HAS PROGRAMMED ACQUISITION OF THE ADJACENT PARCEL. ONCE ACQUIRED, THE FENCE AND TREES CAN BE MOVED TO CLEAR THE SURFACE. IF NECESSARY, OBSTRUCTION LIGHTING WILL BE INSTALLED AS AN INTERIM STEP PRIOR TO REMOVAL OF THE OBSTRUCTIONS.
8. RUNWAY 32 NORTHEAST HOLD APRON IS GENERALLY SIZED TO ACCOMMODATE 2 GULF STREAM IV AIRCRAFT. HOWEVER, ACTUAL NEED FOR AND SIZE OF HOLD APRON SHALL BE EVALUATED ONCE NORTHEAST SIDE DEVELOPMENT HAS OCCURRED AND ACTUAL AIRCRAFT OPERATIONAL LEVEL AND FLEET MIX ARE BETTER DEFINED.
9. AT THE TIME OF COMPLETION OF THE ALP, DATA SUPPORTED BUT DID NOT FULLY JUSTIFY CHANGING THE ARC FROM C-II TO D-III. HOWEVER , TO ENSURE THAT FUTURE NORTH SIDE DEVELOPMENT DOES NOT PRECLUDE THE CHANGE, THE NORTH SIDE DEVELOPMENT REFLECTS DESIGN CHARACTERISTICS FOR AN ARC OF D-III . EACH PROJECT SHOULD BE EVALUATED AT THE BEGINNING OF DESIGN TO DETERMINE WHAT DESIGN ARC SHOULD BE INCORPORATED.

RUNWAY DATA TABLE

DESCRIPTION	RUNWAY 14 EXISTING	RUNWAY 14 PROPOSED	RUNWAY 32 EXISTING	RUNWAY 32 PROPOSED
RUNWAY END COORDINATES (NAD 83)				
LATITUDE	39° 08' 55.49" N	SAME	39° 08' 17.86" N	SAME
LONGITUDE	78° 09' 05.21" W	SAME	78° 08' 14.79" W	SAME
APPROACH MINIMUMS	1 MILE	3/4 MILE	1/2 MILE	SAME
FAR PART 77 CATEGORY	NON-PRECISION	NON-PRECISION	PRECISION	PRECISION
APPROACH SURFACE SLOPE	34:1	SAME	50:1	SAME
RUNWAY LENGTH	5,500'	SAME	5,500'	SAME
RUNWAY WIDTH	100'	SAME	100'	SAME
USABLE RUNWAY LENGTH	5,500'	SAME	5,500'	SAME
SURFACE TYPE	ASPHALT	SAME	ASPHALT	SAME
PAVEMENT STRENGTH				
SINGLE WHEEL	45,000 LBS	SAME	45,000 LBS	SAME
DUAL WHEEL	60,000 LBS	SAME	60,000 LBS	SAME
RUNWAY LIGHTING	MIRL	HIRL	MIRL	HIRL
RUNWAY MARKING	NON-PRECISION	SAME	PRECISION	SAME
EFFECTIVE GRADIENT (%)	.44	SAME	.44	SAME
MAX. GRADE WITHIN RWY LENGTH	.71	SAME	.71	SAME
LINE OF SIGHT VIOLATIONS	NONE	NONE	NONE	NONE
WIND COVERAGE (%)	86.08	SAME	95.13	SAME
VISUAL APPROACH AIDS	REIL, 2B PAPI	REIL, ODALS, 4B PAPI	MALSR, 2B PAPI	4B PAPI
INSTRUMENT APPROACH AIDS	GPS	GPS, ODALS	ILS, GPS, MALSR	SAME
AIRPORT REFERENCE CODE (ARC)	C-II	D-III	C-II	D-III
CRITICAL AIRCRAFT	HAWKER 800	GULFSTREAM 500/550	HAWKER 800	GULFSTREAM 500/550
RUNWAY SAFETY AREA (RSA)				
LENGTH BEYOND RUNWAY	1,000'	SAME	1,000'	SAME
WIDTH	400'	SAME	400'	SAME
RUNWAY OBJECT FREE AREA (ROFA)				
LENGTH BEYOND RUNWAY	1,000'	SAME	900' TO 1,000' (MOD)	SAME
WIDTH	800'	SAME	680' TO 800' (MOD)	SAME
OBSTACLE FREE ZONE (OFZ)	400' X 5,900'	SAME	400' X 5,900'	SAME
RUNWAY END ELEVATIONS (MSL)	726.81'	SAME	701.18'	SAME

AIRPORT DATA TABLE

AIRPORT DATA	EXISTING	PROPOSED
AIRPORT ELEVATION (MSL)	726'	SAME
AIRPORT REFERENCE POINT (NAD 83)		
LATITUDE	39° 08' 38.68" N	SAME
LONGITUDE	78° 08' 40.00" W	SAME
MEAN MAX. TEMPERATURE OF HOTTEST MONTH	86°	SAME
WIND COVERAGE (10.5 KNOTS)		
VFR	95.22%	SAME
IFR	88.81%	SAME
MAGNETIC VARIATION (2004)	10° 7' WEST	-
DATE OF MAGNETIC VARIATION	2004	-
AIRPORT REFERENCE CODE	C-II	D-III
NPIAS SERVICE LEVEL/STATE ROLE	E&V GA REGIONAL	SAME
TAXIWAY LIGHTING	MITL	SAME
AIRPORT NAVAIDS	MIRL BEACON, REIL'S, 2B PAPI ILS, MALSR, RWY 32, GPS	SAME + HIRL, 4B PAPI + ODALS RWY 14

LEGEND

EXISTING	DESCRIPTION	PROPOSED
RSA	RUNWAY SAFETY AREA (RSA)	
ROFA	RUNWAY OBJECT FREE AREA (ROFA)	ROFA
RPZ	RUNWAY PROTECTION ZONE (RPZ)	
TOFA	TAXIWAY OBJECT FREE AREA (TOFA)	TOFA
BRL	BUILDING RESTRICTION LINE (BRL)	BRL
	PAVEMENT	
	AIRPORT PROPERTY LINE	
	AVIGATION EASEMENT	
	FEE SIMPLE LAND ACQUISITION	
	APPROACH SURFACE	
	GLIDESLOPE CRITICAL AREA	
	LOCALIZER CRITICAL AREA	
	AIRPORT REFERENCE POINT	
	BUILDINGS	
	FENCE	
	DEMOLITION	
	WIND CONE/SEGMENTED CIRCLE	
	COMPASS ROSE	
HL	HOLD LINE	
	ROTATING BEACON	
	PAVEMENT	

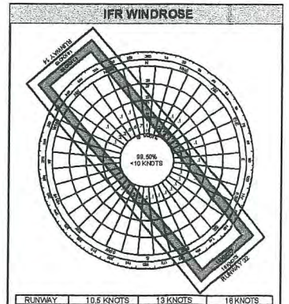
FACILITIES TABLE

#	FACILITY NAME	TOP ELEV.	#	FACILITY NAME	TOP ELEV.
1	TERMINAL BUILDING	744' MSL	15	FIELD MAINTENANCE BUILDING (PROPOSED)	732' MSL
2	OPEN SPAN HANGAR	748' MSL	16	CORPORATE HANGARS (PROPOSED)	742' MSL
3	FUEL TANKS (ABOVE GROUND)	720' MSL	17	CORPORATE HANGARS (PROPOSED)	760' MSL
4	AIRPORT BEACON	742' MSL	18	CORPORATE HANGARS (PROPOSED)	760' MSL
5	OPEN SPAN HANGAR	744' MSL	19	GLIDE SLOPE ANTENNA 39°08'25.55" N LAT 78°08'20.48" W LONG	
6	T-HANGARS (44 UNITS)	729' MSL	20	LOCALIZER 39°09'04.7" N LAT 78°09'17.5" W LONG	
7	OPEN SPAN HANGARS	726' MSL	21	LOCALIZER SHELTER	
8	OPEN SPAN HANGARS	734' MSL			
9	OPEN SPAN HANGARS	730' MSL			
10	OPEN SPAN HANGARS	737' MSL			
11	OPEN SPAN HANGARS	742' MSL			
12	T-HANGARS (10 UNITS) (REMOVE PHASE I)	718' MSL			
13	AWOS 39°08'26.06" N LAT 78°08'20.68" W LONG	732' MSL			
14	ELECTRICAL VAULT	735' MSL			

MODIFICATIONS OF DESIGN STANDARDS

NO.	STANDARD MODIFIED	FAA STANDARDS	EXISTING CONDITIONS	PROPOSED ACTION	DATE APPROVED
1	RWTW SEPARATION	400'	300'	MAINTAIN AT 300' (MOS)	04/02/1991
2	VICTORY LANE LOCATED IN ROFA	NO ROADS IN ROFA	ROAD IN ROFA	MOS	PENDING

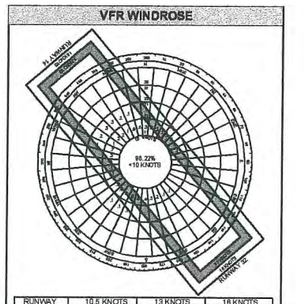
IFR WINDROSE



RUNWAY	10.5 KNOTS	13 KNOTS	16 KNOTS
14	90.08	94.47	97.80
32	81.67	95.43	99.00
COMBINED	88.81	98.74	99.89

WIND DATA PERIOD: 1991-2000
SOURCE: NATIONAL CLIMATIC DATA CENTER
STATION: DULLES INTERNATIONAL AIRPORT

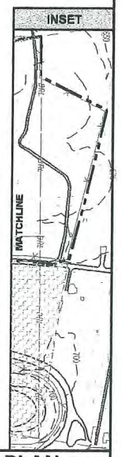
VFR WINDROSE



RUNWAY	10.5 KNOTS	13 KNOTS	16 KNOTS
14	86.08	91.87	99.26
32	95.13	99.86	99.99
COMBINED	95.22	99.24	99.97

WIND DATA PERIOD: 1991-2000
SOURCE: NATIONAL CLIMATIC DATA CENTER
STATION: DULLES INTERNATIONAL AIRPORT

INSET



NO.	REVISIONS	BY	APP.	DATE

AIRPORT LAYOUT PLAN ALTERNATIVE "1"

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 5

DRAWN BY:	MJH	SCALE:	1"=300'
CHECKED BY:	JCL	DATE:	MAY 2005

FEDERAL AVIATION ADMINISTRATION	
APPROVED	DATE

VIRGINIA DEPARTMENT OF TRANSPORTATION	
APPROVED	DATE

WINCHESTER REGIONAL AIRPORT	
APPROVED	DATE

DRAWING: 04005-alp-1-26 foot.dwg LAYOUT: 11X17
XREFS: 04005-title-block.dwg, 04005-airspace.dwg, 04005-airspace-1-26 foot.dwg, IMAGES: ORV dgn October 2004.jpg

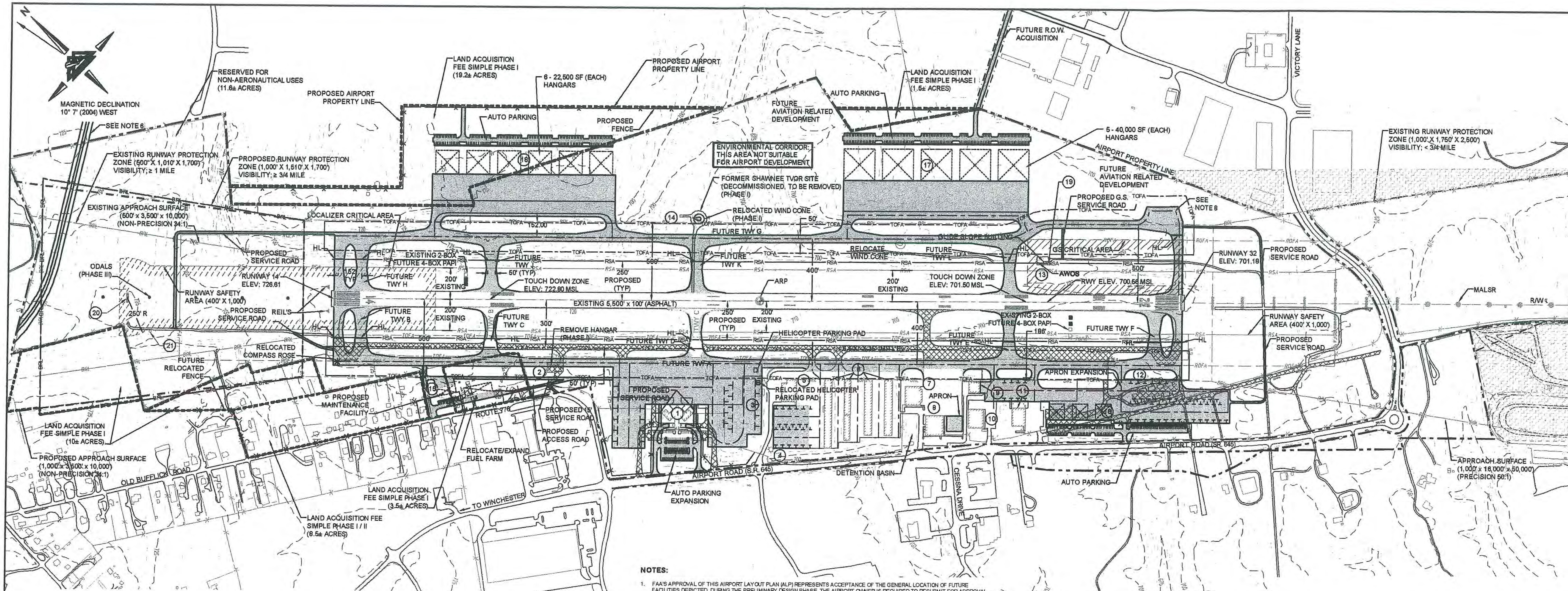
The north side development is generally sized to accommodate Group III aircraft (wing spans up to 118 feet). The north side development also accommodates additional tie-down space that could be used for either based or transient activities depending on actual user needs. The development as presented would require the acquisition of approximately 50 acres of land along the northern boundary of the airport. The area of acquisition could be reduced on the west side with adjustments to the west side access road.

Development on the north side would likely be event driven, i.e. a user with a large aircraft bases at the airport. Hangars shown are sized to accommodate Group III aircraft and are shown only in general concept only. Hangars on the west side are 150' x 150' which would accommodate one to two Group III aircraft. The east side hangars are 200' x 200' and could accommodate two to three Group III aircraft. The actual size of each hangar would be based on its intended use.

2. **Alternative 2,** presented as Exhibit 6, was developed based on the continued and increased use of the airport by larger aircraft. To accommodate the long term growth of the airport, the entire airfield would be designed to accommodate Group III aircraft.

On the south side, the substandard runway-taxiway separation (for Group III aircraft) would be addressed by relocating Taxiway A 100 feet to the south. This shift would eliminate approximately 30 tie-downs within the transient and based aircraft tie-down apron areas. To compensate for these losses, the transient apron is proposed to be expanded around the existing GA terminal building and larger tie-downs areas proposed to accommodate the increasing transient aircraft size.

Also, the increased transient apron will require the relocation of the airport's fuel farm. It is proposed to relocate the fuel farm to the southwest side of the airfield on land that is currently or is proposed to be acquired by the Authority. Also located in this area is the Airport's airfield maintenance building which will house airfield maintenance/snow removal equipment and supplies.



NOTES:

1. 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'S CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS OR ADVERSE EFFECTS ON CONTROLLER VIEW OF AIRCRAFT APPROACH AND GROUND MOVEMENT AREAS WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY OR UTILITY OF THE AIRPORT.
2. CONTOURS ARE SHOWN IN 5' INTERVALS.
3. ALL COORDINATES ARE BASED IN NAD 83.
4. ALL ELEVATIONS ARE IN FEET MEAN ABOVE SEA LEVEL. (NAVD 88)
5. THERE ARE NO KNOWN EXISTING OFZ PENETRATIONS.
6. THE VIRGINIA DEPARTMENT OF TRANSPORTATION IS PROPOSING TO CONSTRUCT A NEW 4 LANE ROADWAY APPROXIMATELY 1,800 FEET TO 2,000 FEET OFF THE END OF RUNWAY 14. THE PROPOSAL WILL REQUIRE THE RELEASE OF APPROXIMATELY 4.13 ACRES OF EXISTING AIRPORT PROPERTY. THE LAND RELEASE IS IDENTIFIED AS PARCEL 55 ON THE AIRPORT PROPERTY MAP.
7. A GROUP OF TREES AND THE AIRPORT PERIMETER FENCE (ALONG THE PROPERTY LINE) ARE BOTH PENETRATIONS TO THE THRESHOLD SITING SURFACE TO RUNWAY 14 WITH THE TREES CURRENTLY THE MOST CRITICAL. THE AIRPORT HAS PROGRAMMED ACQUISITION OF THE ADJACENT PARCEL. ONCE ACQUIRED, THE FENCE AND TREES CAN BE MOVED TO CLEAR THE SURFACE. IF NECESSARY, OBSTRUCTION LIGHTING WILL BE INSTALLED AS AN INTERIM STEP PRIOR TO REMOVAL OF THE OBSTRUCTIONS.
8. RUNWAY 32 NORTHEAST HOLD APRON IS GENERALLY SIZED TO ACCOMMODATE 2 G-IV AIRCRAFT. HOWEVER, ACTUAL NEED FOR AND SIZE OF HOLD APRON SHALL BE EVALUATED ONCE NORTHEAST SIDE DEVELOPMENT HAS OCCURRED AND ACTUAL AIRCRAFT OPERATIONAL LEVEL AND FLEET MIX ARE BETTER DEFINED.
9. AT THE TIME OF COMPLETION OF THE ALP, DATA SUPPORTED BUT DID NOT FULLY JUSTIFY CHANGING THE ARC FROM C-II TO D-III. HOWEVER, TO ENSURE THAT FUTURE DEVELOPMENT DOES NOT PRECLUDE THE CHANGE, THE ALP REFLECTS DESIGN CHARACTERISTICS FOR AN ARC OF D-III. EACH PROJECT SHOULD BE EVALUATED AT THE BEGINNING OF DESIGN TO DETERMINE WHAT DESIGN ARC SHOULD BE INCORPORATED.

300 0 300 600
SCALE: 1"=300' FEET

RUNWAY DATA TABLE

DESCRIPTION	RUNWAY 14		RUNWAY 32	
	EXISTING	PROPOSED	EXISTING	PROPOSED
RUNWAY END COORDINATES (NAD 83)				
LATITUDE	39° 08' 55.48" N	SAME	39° 08' 17.88" N	SAME
LONGITUDE	78° 09' 05.21" W	SAME	78° 08' 14.79" W	SAME
APPROACH MINIMUMS	1 MILE	3/4 MILE	1/2 MILE	SAME
FAR PART 77 CATEGORY	NON-PRECISION	NON-PRECISION	PRECISION	PRECISION
APPROACH SURFACE SLOPE	34:1	SAME	50:1	SAME
RUNWAY LENGTH	5,500'	SAME	5,500'	SAME
RUNWAY WIDTH	100'	SAME	100'	SAME
USABLE RUNWAY LENGTH	5,500'	SAME	5,500'	SAME
SURFACE TYPE	ASPHALT	SAME	ASPHALT	SAME
PAVEMENT STRENGTH				
SINGLE WHEEL	45,000 LBS	SAME	45,000 LBS	SAME
DUAL WHEEL	60,000 LBS	SAME	60,000 LBS	SAME
RUNWAY LIGHTING	MIRL	HIRL	MIRL	HIRL
RUNWAY MARKING	NON-PRECISION	SAME	PRECISION	SAME
EFFECTIVE GRADIENT (%)	.44	SAME	.44	SAME
MAX. GRADE WITHIN RWY LENGTH	.71	SAME	.71	SAME
LINE OF SIGHT VIOLATIONS	NONE	NONE	NONE	NONE
WIND COVERAGE (%)	86.06	SAME	85.13	SAME
VISUAL APPROACH AIDS	REIL, 2B PAPI	REIL, ODALS, 4B PAPI	MALSR, 2B PAPI	4B PAPI
INSTRUMENT APPROACH AIDS	GPS	GPS, ODALS	ILS, GPS, MALSR	SAME
AIRPORT REFERENCE CODE (ARC)	C-II	D-III	C-II	D-III
CRITICAL AIRCRAFT	HAWKER 800	GULFSTREAM 500/550	HAWKER 800	GULFSTREAM 500/550
RUNWAY SAFETY AREA (RSA)				
LENGTH BEYOND RUNWAY	1,000'	SAME	1,000'	SAME
WIDTH	400'	SAME	400'	SAME
RUNWAY OBJECT FREE AREA (ROFA)				
LENGTH BEYOND RUNWAY	1,000'	SAME	900' TO 1,000' (MOD)	SAME
WIDTH	800'	SAME	680' TO 800' (MOD)	SAME
OBSTACLE FREE ZONE (OFZ)	400' X 5,900'	SAME	400' X 5,900'	SAME
RUNWAY END ELEVATIONS (MSL)	726.61'	SAME	701.18'	SAME

AIRPORT DATA TABLE

AIRPORT DATA	EXISTING	PROPOSED
AIRPORT ELEVATION (MSL)	726'	SAME
AIRPORT REFERENCE POINT (NAD 83)		
LATITUDE	39° 08' 36.66" N	SAME
LONGITUDE	78° 08' 40.00" W	SAME
MEAN MAX. TEMPERATURE OF HOTTEST MONTH	88°	SAME
WIND COVERAGE (10.5 KNOTS)		
VFR	85.22%	SAME
IFR	98.81%	SAME
MAGNETIC VARIATION (2004)	10° 7' WEST	-
DATE OF MAGNETIC VARIATION	2004	-
AIRPORT REFERENCE CODE	C-II	D-III
NPIAS SERVICE LEVEL/STATE ROLE	GA/ GA REGIONAL	SAME
TAXIWAY LIGHTING	MITL	SAME
AIRPORT NAVAIDS	MIRL BEACON, REILS, 2B PAPI ILS, MALSR, RW 32, GPS	SAME + HIRL, 4B PAPI + ODALS RW14

LEGEND

EXISTING	DESCRIPTION	PROPOSED
—RSA—	RUNWAY SAFETY AREA (RSA)	
— — —ROFA—	RUNWAY OBJECT FREE AREA (ROFA)	— — —ROFA—
— — — —	RUNWAY PROTECTION ZONE (RPZ)	— — — —
— — —TOFA—	TAXIWAY OBJECT FREE AREA (TOFA)	— — —TOFA—
— - —BRL—	BUILDING RESTRICTION LINE (BRL)	— - —BRL—
———	PAVEMENT	———
— - - —	AIRPORT PROPERTY LINE	— · — · —
	AVIGATION EASEMENT	
	FEE SIMPLE LAND ACQUISITION	■■■■■■
	APPROACH SURFACE	— · — · —
	GLIDESLOPE CRITICAL AREA	
	LOCALIZER CRITICAL AREA	
	AIRPORT REFERENCE POINT	
	BUILDINGS	
—x—	FENCE	—x—
	DEMOLITION	
	WIND CONE/SEGMENTED CIRCLE	
	COMPASS ROSE	
HL	HOLD LINE	
	ROTATING BEACON	
	PAVEMENT	

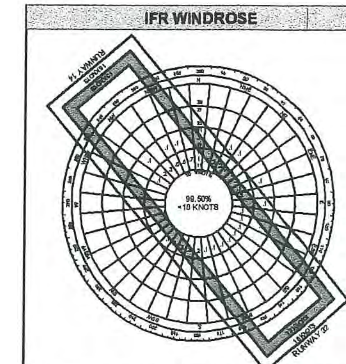
FACILITIES TABLE

#	FACILITY NAME	TOP ELEV.	#	FACILITY NAME	TOP ELEV.
1	TERMINAL BUILDING	744' MSL	15	FIELD MAINTENANCE BUILDING (PROPOSED)	740' MSL
2	OPEN SPAN HANGAR	748' MSL	16	CORPORATE HANGARS (PROPOSED)	742' MSL
3	FUEL TANKS (ABOVE GROUND)	720' MSL	17	CORPORATE HANGARS (PROPOSED)	760' MSL
4	AIRPORT BEACON	742' MSL	18	CORPORATE HANGARS (PROPOSED)	760' MSL
5	OPEN SPAN HANGAR	744' MSL	19	GLIDE SLOPE ANTENNA 39° 08' 25.55" N LAT 78° 08' 20.48" W LONG	
6	T-HANGARS (44 UNITS)	728' MSL	20	LOCALIZER 39° 09' 04.7" N LAT 78° 09' 17.6" W LONG	
7	OPEN SPAN HANGARS	725' MSL	21	LOCALIZER SHELTER	
8	OPEN SPAN HANGARS	734' MSL			
9	OPEN SPAN HANGARS	730' MSL			
10	OPEN SPAN HANGARS	737' MSL			
11	OPEN SPAN HANGARS	742' MSL			
12	T-HANGARS (10 UNITS) (REMOVE PHASE I)	718' MSL			
13	AWOS 39° 08' 26.05" N LAT 78° 08' 20.66" W LONG	732' MSL			
14	ELECTRICAL VAULT	735' MSL			

MODIFICATIONS OF DESIGN STANDARDS

NO.	STANDARD MODIFIED	FAA STANDARDS	EXISTING CONDITIONS	PROPOSED ACTION	DATE APPROVED
1	RW/TW SEPARATION	400'	300'	RELOCATE TAXIWAY A TO 400'	04/02/1991
2	VICTORY LANE LOCATED IN ROFA	NO ROADS IN ROFA	ROAD IN ROFA	MOS	PENDING

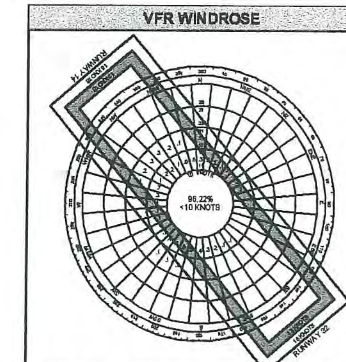
IFR WINDROSE



RUNWAY	10.5 KNOTS	13 KNOTS	16 KNOTS
14	90.08	94.47	97.98
32	91.67	95.43	98.00
COMBINED	98.81	99.74	99.93

WIND DATA PERIOD: 1991-2000
SOURCE: NATIONAL CLIMATIC DATA CENTER
STATION: DULLES INTERNATIONAL AIRPORT

VFR WINDROSE



RUNWAY	10.5 KNOTS	13 KNOTS	16 KNOTS
14	86.06	87.87	89.25
32	85.13	96.88	98.39
COMBINED	95.22	98.24	99.67

WIND DATA PERIOD: 1991-2000
SOURCE: NATIONAL CLIMATIC DATA CENTER
STATION: DULLES INTERNATIONAL AIRPORT

INSET

NO.	REVISIONS	BY	APP.	DATE

AIRPORT LAYOUT PLAN ALTERNATIVE "2"

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 6

FEDERAL AVIATION ADMINISTRATION	
APPROVED	DATE

VIRGINIA DEPARTMENT OF TRANSPORTATION	
APPROVED	DATE

WINCHESTER REGIONAL AIRPORT	
APPROVED	DATE

DRAWN BY:	MJH	SCALE:	1"=300'
CHECKED BY:	JCL	DATE:	MAY 2005

DRAWING: 04005-alp-2.dwg LAYOUT: 11X17
XREFS: 04005-plan-ex.dwg; 04005-topo-ex.dwg; 04005-geom-pro-2.dwg IMAGES: OKV_spot_October, 2004.jpg;

Based tie-down aircraft would be accommodated by a new and larger apron located on the southwest side of the airfield adjacent to Runway 32. Eight (8) additional tie-downs are located near the FBO area and could be assigned for use by flight training schools. Also located in the southeast quadrant are additional hangars. The new hangars are proposed to be located adjacent to and in line with existing hangars, providing consistent development patterns. The hangars are sized to accommodate up to Group II aircraft, wing spans up to 79 feet.

North side development is reduced in size from Alternate 1 and would focus strictly on based users requiring aircraft hangars (i.e. no additional tie-downs.) Reducing the area of development reduces the land acquisition necessary to approximately 21 acres. Development on the north side would likely be event driven, i.e. a user with a large aircraft bases at the airport. As with Alternate 1, hangars shown are sized to accommodate Group III aircraft and are shown only in general concept only. Hangars on the west side are 150' x 150' which would accommodate one to two Group III aircraft. The east side hangars are 200' x 200' and could accommodate two to three Group III aircraft. The actual size of each hangar would be based on its intended use. The distance of the hangars from the runway allow for roof lines of approximately 35 feet which are necessary for hangars of this size.

3. **Recommended Alternative.** It is recommended that the Authority adopt Alternative No. 2 as the Airport Layout Plan for Winchester Regional Airport.

Both alternatives presented accommodate growth at the airport. However, Alternative 1 does not fully meet and presents inconsistent FAA design criteria. The south side development of Alternative 1 is designed to Group II runway/taxiway separation standards (300 feet) while the north side is designed to Group III runway/taxiway separation standards (400 feet). Coordination with the FAA and DOAV indicates that there would be little support to develop the airport with inconsistent design criteria, likely limiting participation from both agencies in funding the future development of the airfield.

It is recognized that Alternative No. 2 will require the relocation of Taxiway A. However, its cost is eligible for Federal and State funding. In addition, the relocation would likely be completed in phases sequenced to the existing Taxiway approaching the end of its useful life.

Alternative 2 develops the airport to meet FAA design criteria, gaining support for future federal and state funding of projects. This alterative also provides for the long term growth of the airport and its increasing role as a regional airport able to accommodate larger business aircraft. As airspace restrictions and delays for aircraft continue to increase at other closer-in Washington area airports, use of Winchester Regional by more and larger aircraft is expected to grow.

At a Winchester Regional Airport Authority meeting held on May 19, 2005, the Authority voted to select Alternative 2 with some minor variations, most notably changing the proposed aircraft tie-down area adjacent to the T-Hangars to Open Span Hangars (as shown on Alternative 1). Other minor changes have been made based on final FAA and DOAV comments. These changes simplify the connector taxiway system. The adopted ALP is included along with the Terminal Area Plans and Airport Property Map in Appendix A.

L. AIRPORT CAPITAL IMPROVEMENT PLAN

1. Introduction

Using the selected Airport Layout Plan, development proposed has been broken down into three phases matching the phases of the Aviation Forecasts:

- Phase I Short Term (0-5 years)
- Phase II Intermediate (6-10 years)
- Phase III Long Term (11-20 years)

Tables 11 through 13 provide a title of each anticipated project for the phased development. The phasing is based on reasonable assumptions, but by no means should be followed exactly. Changes in demand, priorities, economy and funding may alter the need or timing of proposed facilities.

These tables also include by phase, estimates of probable costs in constant 2005 dollars. These planning cost estimates are intended as order of magnitude costs only and should be periodically reviewed and updated to account for inflation and other changed conditions. More detailed project definitions and associated estimates must be developed prior to the implementation of any project identified herein. Each figure represents the total estimated cost, including construction engineering, administration, surveying, and testing. Also, since these are preliminary order of magnitude estimates for planning purposes, a contingency amount was added to each cost item to cover unforeseen conditions which may occur during actual development. This approach is an industry standard used to prepare preliminary planning estimates, and though somewhat conservative, reduces the likelihood of budget surprises when detailed design is completed and bids received. More detailed information on each project is included in Appendix D.

2. FUNDING

Funding will likely come from four (4) primary sources.

a. FAA Funding

To promote the development of airports to meet the nation's needs, the Federal Government embarked on a Grants-In-Aid Program to state and local governments after the end of World War II. This early program, the Federal Aid to Airport Program (FAAP) was authorized by the Federal Treasury Act of 1946 and provided its funding from the Treasury.

More recently the Airport Improvement Program (AIP) has been established to provide continued funding to airports. The latest reauthorization funds most AIP eligible projects at Winchester Regional Airport at 95 percent.

b. Virginia Department of Aviation Funding

Funding for airport improvements by the Commonwealth of Virginia is administered by the Virginia Department of Aviation (DOAV) as authorized by the Virginia Aviation Board. Similar to the Federal Trust Fund, funding from the Commonwealth is derived from user fees, i.e. aircraft fuel taxes and sales tax on aircraft.

On projects with federal funds, the State will provide an additional 3 percent making the local contribution 2 percent. On non-federal funded projects the state generally will provide 80% of the funds with the Authority providing the additional 20 percent.

c. Local Funding

Local funding for the Winchester Regional Airport is currently provided by the representative public jurisdictions that comprise the Winchester Regional Airport Authority. Local funding must be used to make up the balance after FAA and State participation for the total anticipated project costs. The Airport receives operating income from landing fees, fuel sales, lease fees, rental car fees, automobile parking fees and other similar income.

d. Other Funding

Another potential source of funds for airport improvements is from private investors. Private investors may construct needed facilities as part of a lease agreement with the Airport Authority that will allow time to amortize their investments. This type of funding is particularly suitable for open span corporate hangar development since they are typically not eligible for FAA or State funding.

3. AIRPORT DEVELOPMENT PROGRAM

This section presents airport improvement projects by phase for the 20 year planning period. Planning estimates of probable cost, as well as breakdown of potential FAA, State, local and other funding are also listed, as well as a funding summary.

Phase I: 0 to 5 Year Development

Highlights of anticipated development over the next five years includes:

- Development initially focusing on the south side of the airfield.

- One of the first construction projects is anticipated to be the reconstruction/expansion of the existing based tie-down apron adjacent to Runway 32. This project is anticipated to occur in the next few years because of the existing poor pavement condition and in preparation of starting the relocation of Taxiway A.

- As part of the based tie-downs apron expansion, it is anticipated that the by-pass taxiway will also be constructed as the hold apron will have to be removed.

- It should be noted that the entire based apron area and Taxiway A are shown in one phase. However, that does not mean that the entire area is constructed in one project.

- Also included in the first phase of development is the expansion of the transient apron and construction of the airport airfield maintenance facility. The maintenance facility has been on the airport's need list for several years and should be constructed in the next few years.

- The transient apron expansion is proposed in the first phase in preparation of the relocation of Taxiway A in the second phase, and the loss of tie-downs that will occur when Taxiway A is relocated.

- Because of recent stricter EPA/VA DEQ regulations and renewed general interest, constructing an aircraft wash rack is shown in the early years.

- Development of the five proposed open span/corporate hangars on the south side area also shown in Phase I but will be built only as demand dictates.

- Although not shown, an Environmental Assessment for the north side development will need to be completed prior to any development on the north side. This should be considered during Phase I.

- The continued purchase of land along Bufflick Road and new proposed acquisition along the north side will be included in Phase I.

- Runway 14-32 will require rehabilitation/overlay in the first five years.

Phase II: 6 to 10 Year Development

Highlights of Phase II include:

- Phase II focuses on the relocation of Taxiway A with any area not relocated in Phase I being completed in Phase II.

- Phase II presents the first development on the north side of the airfield. The development initially is proposed to be located on the northwest ramp with a partial parallel taxiway to RW 14. Depending on funding future Taxiway B (north) may also be constructed. As discussed in the report all development on the north side will be completed on a demand only basis, including that shown to occur in Phase II.

- Phase II includes the relocation and expansion of the fuel farm. Its relocation is necessary for the ultimate build out of the transient apron. By this time all the necessary land in the proposed fuel farm construction area should have been acquired.

- The Runway 14 perimeter road is proposed in this phase to provide fuel truck access to the north side development. This road would not be required until the first hangar is built on the north side.

Phase III: 11 to 20 Year Development

Highlights of Phase III include:

- The remaining development is shown as occurring in Phase III. It is likely that some of the hangar development and maybe some of the airfield development will occur past the 20-year planning period, depending on the demand for hangar space.

- Included in Phase III is the constructing of the full north side parallel taxiway. This would likely occur in multiple projects (2 or 3).

- The transient apron would be built out in this phase.

Table 11
Winchester Regional Airport
Phase I Proposed Airport Capital Improvement Program

PHASE I (0 TO 5 YEARS) PROPOSED AIRPORT CAPITAL IMPROVEMENT PROGRAM

No	PROJECT DESCRIPTION	TOTAL COST	FEDERAL FUNDS	STATE FUNDS	LOCAL FUNDS	OTHER FUNDS	REMARKS
1	Acquire Land - Bufflick Road	$ 2,500,000.00	$ 2,375,000.00	$ 75,000.00	$ 50,000.00		95/3/2 FAA/State/Local
2	Construct Taxiway E / Relocate Taxiway A - Phase I / Apron Expansion - Phase I	$ 3,900,000.00	$ 3,705,000.00	$ 117,000.00	$ 78,000.00		95/3/2 FAA/State/Local
3	Relocate Taxiway A, Phase II / Construct Auto Parking / Apron Expansion - Phase II	$ 5,000,000.00	$ 4,750,000.00	$ 150,000.00	$ 100,000.00		95/3/2 FAA/State/Local
4	Wash Rack	$ 220,000.00		$ 176,000.00	$ 44,000.00		80/20 State/Local, bridge loan grant
5	Renovate General Aviation Terminal	$ 625,000.00		$ 387,500.00	$ 237,500.00		62/38 State/Local (based on original construction)
6	Install Runway Lighting (Upgrade MIRLs to HIRLs and 2-Box PAPI to 4 box PAPI)	$ 200,000.00	$ 190,000.00	$ 6,000.00	$ 4,000.00		95/3/2 FAA/State/Local
7	Rehabilitate and Expand GA Terminal Parking Lot	$ 600,000.00		$ 480,000.00	$ 120,000.00		80/20 State/Local
8	Rehabilitate Runway 14-32	$ 3,000,000.00	$ 2,850,000.00	$ 90,000.00	$ 60,000.00		95/3/2 FAA/State/Local
9	Construct Maintenance Facility Phase I and Service Road	$ 1,900,000.00		$ 1,520,000.00	$ 380,000.00		80/20 State/Local for building and site. Project scope should be refined to determine actual participation by VA DOAV
10	Construct Corporate Hangars	$ 3,100,000.00				$ 3,100,000.00	100 Other (20,000SF Hangar @ $100/SF)
11	Transient Apron Expansion - Phase I	$ 2,400,000.00	$ 2,280,000.00	$ 72,000.00	$ 48,000.00		95/3/2 FAA/State/Local
12	Environmental Assessment 5yr ACIP	$ 350,000.00	$ 332,500.00	$ 10,500.00	$ 7,000.00		95/3/2 FAA/State/Local
	Phase 1 Total :	**$ 23,795,000.00**	**$ 16,482,500.00**	**$ 3,084,000.00**	**$ 1,128,500.00**	**$ 3,100,000.00**	

Table 12
Winchester Regional Airport
Phase II Airport Capital Improvement Program

PHASE II (6 TO 10 YEARS) PROPOSED AIRPORT CAPITAL IMPROVEMENT PROGRAM

No.	PROJECT DESCRIPTION	TOTAL COST	FEDERAL FUNDS	STATE FUNDS	LOCAL FUNDS	OTHER FUNDS	REMARKS
1	Relocate Taxiway A - Phase III and Construct Taxiway D Shoulders	$ 1,140,000.00	$ 1,083,000.00	$ 34,200.00	$ 22,800.00		95/3/2 FAA/State/Local
2	Relocate Taxiway A - Phase IV	$ 900,000.00	$ 855,000.00	$ 27,000.00	$ 18,000.00		95/3/2 FAA/State/Local
3	Relocate/Expand Fuel Farm	$ 850,000.00	$ 807,500.00	$ 25,500.00	$ 17,000.00		95/3/2 FAA/State/Local (AIP eligible relocation due to AIP building project)
4	Relocate Taxiway A - Phase V	$ 2,300,000.00	$ 2,185,000.00	$ 69,000.00	$ 46,000.00		95/3/2 FAA/State/Local
5	Relocate Taxiway A - Phase VI and Construct Auto Parking Expansion / Taxiway C Shoulders	$ 3,600,000.00	$ 3,420,000.00	$ 108,000.00	$ 72,000.00		95/3/2 FAA/State/Local
6	Construct Service Road	$ 340,000.00	$ 323,000.00	$ 10,200.00	$ 6,800.00		95/3/2 FAA/State/Local
7	Construct Taxiway F - Phase I and Corporate Hangars With Auto Parking / Access Road - Phase I	$ 5,700,000.00	$ 1,235,000.00	$ 39,000.00	$ 26,000.00	$ 4,400,000.00	95/3/2 FAA/State/Local for $1,300,000 & 100 Other for $4,400,000 (22,500SF Hangar @ $100/SF)
8	Construct Corporate Hangars With Auto Parking - Phase II	$ 4,500,000.00				$ 4,500,000.00	100 Other (22,500SF Hangar @ $100/SF)
9	Construct Taxiway B and Corporate Hangars With Auto Parking - Phase III	$ 5,400,000.00	$ 760,000.00	$ 24,000.00	$ 16,000.00	$ 4,600,000.00	95/3/2 FAA/State/Local for $800,000 & 100 Other for $4,600,000 (22,500SF Hangar @ $100/SF)
10	Construct Maintenance Facility Phase II	$ 800,000.00		$ 640,000.00	$ 160,000.00		100 Local
11	Environmental Assessment 6-10yr ACIP	$ 350,000.00	$ 332,500.00	$ 10,500.00	$ 7,000.00		95/3/2 FAA/State/Local
	Phase 2 Total :	**$ 25,880,000.00**	**$ 11,001,000.00**	**$ 987,400.00**	**$ 391,600.00**	**$ 13,500,000.00**	

Table 13
Winchester Regional Airport
Phase III Proposed Airport Capital Improvement Program

PHASE III (11 TO 20 YEARS) PROPOSED AIRPORT CAPITAL IMPROVEMENT PROGRAM

No.	PROJECT DESCRIPTION	TOTAL COST	FEDERAL FUNDS	STATE FUNDS	LOCAL FUNDS	OTHER FUNDS	REMARKS
1	Construct Corporate Hangars With Auto Parking - Phase IV	$ 4,600,000.00				$ 4,600,000.00	100 Other (22,500SF Hangar @ $100/SF)
2	Construct Corporate Hangars With Auto Parking - Phase V	$ 4,600,000.00				$ 4,600,000.00	100 Other (22,500SF Hangar @ $100/SF)
3	Construct Taxiway F - Phase II and Corporate Hangars With Auto Parking - Phase VI	$ 5,800,000.00				$ 5,800,000.00	100 Other (22,500SF Hangar @ $100/SF)
4	Construct North Side Hold Apron	$ 250,000.00	$ 237,500.00	$ 7,500.00		$ 5,000.00	95/3/2 FAA/State/Local
5	Construct Taxiway D and Corporate Hangars With Auto Parking - Phase VII	$ 9,400,000.00	$ 1,900,000.00	$ 60,000.00	$ 40,000.00	$ 7,400,000.00	95/3/2 FAA/State/Local for $2,000,000 & 100 Other for $7,400,000 (40,000SF Hangar @ $100/SF)
6	Construct Corporate Hangars With Auto Parking - Phase VIII	$ 7,500,000.00				$ 7,500,000.00	100 Other (40,000SF Hangar @ $100/SF)
7	Construct Corporate Hangars With Auto Parking - Phase IX	$ 7,700,000.00				$ 7,700,000.00	100 Other (40,000SF Hangar @ $100/SF)
8	Construct Taxiway F - Phase III	$ 3,200,000.00	$ 3,040,000.00	$ 96,000.00	$ 64,000.00		95/3/2 FAA/State/Local
9	Construct Corporate Hangars With Auto Parking - Phase X	$ 8,100,000.00				$ 8,100,000.00	100 Other (40,000SF Hangar@ $100/SF)
10	Construct Corporate Hangars With Auto Parking - Phase XI	$ 8,800,000.00				$ 8,800,000.00	100 Other (40,000SF Hangar @ $100/SF)
11	Transient Apron Expansion - Phase II	$ 1,900,000.00	$ 1,805,000.00	$ 54,150.00	$ 40,850.00		95/3/2 FAA/State/Local
12	Construct Taxiway F - Phase IV	$ 3,400,000.00	$ 3,230,000.00	$ 96,900.00	$ 73,100.00		95/3/2 FAA/State/Local
13	Environmental Assessment 11-20yr ACIP	$ 350,000.00	$ 332,500.00	$ 10,500.00	$ 7,000.00		95/3/2 FAA/State/Local
14	Master Plan Update	$ 350,000.00	$ 332,500.00	$ 10,500.00	$ 7,000.00		95/3/2 FAA/State/Local
	Phase 3 Total :	**$ 65,950,000.00**	**$ 10,877,500.00**	**$ 335,550.00**	**$ 231,950.00**	**$ 54,505,000.00**	

M. SUMMARY

The value of the Winchester Regional Airport to the local communities and the National Airport System is significant. The importance of an airport with modern, up to date facilities, should not be underestimated.

The Airport Layout Plan Update has identified approximately $115,625,000 in future airport improvements needed to accommodate the existing and future aviation demand for the twenty year planning horizon. Based on existing funding programs, the Airport can expect approximately $42,767,950 from the FAA and DOAV. Combined with $71,105,000 in private monies for hangar development and $1,752,050 in local funds, the Winchester Regional Airport Authority has a realistic capital program to meet future development needs. The Airport Layout Plan should allow the airport to continue to prosper and accommodate the region's needs.

APPENDIX A

ALP SET

(SEE BLUE POCKETS IN BACK)

APPENDIX B

JANUARY 2004 BASED AIRCRAFT SURVEY

VIRGINIA DEPART OF AVIATION

5702 Gulfstream Road, Richmond International Airport Virgin. 0-2422, 1-800-292-1034

ANNUAL BASED AIRCRAFT SURVEY OF LICENSED OR REGISTERED AIRPORTS, HELICOPTERS AND LANDING AREAS

To be Completed by the Airport Owner or Manager for All Aircraft Based at This Airport as of the First Day of January of the Current Year for Public Airports and First Day of July of the Current Year for Private Airports
(Required by 24 VAC 5-20-350, Regulations Governing the Licensing and Operation of Airports and Aircraft and Obstructions to Airspace in the Commonwealth of Virginia, 24 VAC5-20-10 et seg.)

Airport: Winchester Regional Airport Name of Person Completing Survey: Renny Manuel Phone Number (540) 662-5786 Date January 3, 2004

Aircraft Number	No. of Engines	Year	Aircraft Model	Aircraft Manufacturer	Aircraft Owner's Name	Owner's Address				Phone Number
						Street	City	State	Zip	
003RN	1		Ultralight	Ultralight	Robert O. Noyer	1317 Darlington Drive	Winchester	VA	22602	(540) 722-3628
100LN	2	1975	PA 23-250 Aztec	Piper	James L. Lum II	640 North Cameron Street	Winchester	VA	22601	(540) 665-8930
109MS	Jet	1991	P180	Piaggio	Daymon Associates	%Windcrest 700 Fairfield Ave	Stamford	CT	06902	
112CP	1	2001	MT-7-235	Maule Air Inc	Civil Air Patrol	105 S. Hansell Street	Maxwell AFB	AL	36112	
114CE	1	1996	Rockwell 114-B	Commander Aircraft Co.	Howard Carlyle	1752 Berryville Pike	Winchester	VA	22603	(540) 837-1392
122PL	1	2001	R-22 Helicopter	Robinson	David L. Lippke	34442 Bridgestone Lane	Bluemont	VA	20135	(540) 554-8279
12779	1	1973	172	Cessna	Mile High Flying Club	% Joe Manzella 120 Driftwood Drive	Stephens City	VA	22655	(540) 678-2080
1326E	1	1946	Champ	Aeronca	Winchester Stardusters Syndicated	c/o Wendy Wright Po Box 364	Boyce	VA	22620	(540) 837-3031
1347C	1	2003	SR22	Cirrus Design Corp	Blue Ridge Aero Inc	Po Box 369	Berryville	VA	22611	
1350K	1	1946	8A	Luscombe	Calvin Pierce	283 Maple Avenue	Harpers Ferry	WV	25425	(304) 876-8367
1467T	1	1972	PA 28-180 Cherokee	Piper	Thomas E. Gatewood	318 Orchard Circle	Hamilton	VA	20158	(540) 338-3046
15J	1	1991	MC-4	Midget Mustang	Mark C. Hutchins	117 Skyview Lane	Front Royal	VA	22630	(540) 635-2203
1703J	1	1967	140	Piper	Mike Woods	116 Margate Court	Winchester	VA	22602	(540) 662-8628
1841E	1	1946	Champ	Aeronca	Aeronca Flying Club	% Anna McLaurin 139 Mountain View Lane	Winchester	VA	22602	(540) 667-0205
20157	1	1972	172M	Cessna	Lambert Brown	1213 Hites Road	Middletown	VA	22645	
207AF	2	N/A	C-50	Beechcraft	Pegasus Ltd	2259 Las Brisas Court	Wellington	FL	33414	
20977	1	1978	PA-28-161	Piper	Mountain Air Aviation	5809 Midhill Street	Bethesda	MD	20817	
20985	1	1979	PA-28-181 Archer II	Piper	Aero X Flying Club	% Jeff Orndorff Post Office Box 4004	Winchester	VA	22604	(540) 662-4527
20PP	1	1956	PA-22-150 Tripacer	Piper	Sullivan, Glen H.	3820 Massaponax Church Road	Fredericksburg	VA	22408	
20YK	1	N/A	YAK-50	Yakovlev	Mann Enterprises, Inc.	% John Mann Route 1 Box 508-A	Hume	VA	22639	(540) 364-3220
21159	1	1974	172M	Cessna	Greg A. Kope	18685 Canby Road	Leesburg	VA	20175	(703) 777-9495
2152L	2	1976	58TC	Beechcraft	Mid-Atlantic Aircraft, LLC	615 Airport Road, Suite 109	Winchester	VA	22602	(540) 678-1661
2476J	1	2001	172s	Cessna	Jeff Hester	1011 Breckinridge Lane	Winchester	VA	22601	

VIRGINIA DEPART OF AVIATION
5702 Gulfstream Road, Richmond International Airport Virgin 0-2422, 1-800-292-1034

ANNUAL BASED AIRCRAFT SURVEY OF LICENSED OR REGISTERED AIRPORTS, HELICOPTERS AND LANDING AREAS

To be Completed by the Airport Owner or Manager for All Aircraft Based at This Airport as of the First Day of January of the Current Year for Public Airports and First Day of July of the Current Year for Private Airports
(Required by 24 VAC 5-20-350, Regulations Governing the Licensing and Operation of Airports and Aircraft and Obstructions to Airspace in the Commonwealth of Virginia, 24 VAC5-20-10 et seg.)

Airport: Winchester Regional Airport Name of Person Completing Survey: Renny Manuel Phone Number (540) 662-5786 Date January 3, 2004

Aircraft Number	No. of Engines	Year	Aircraft Model	Aircraft Manufacturer	Aircraft Owner's Name	Owner's Address				Phone Number
						Street	City	State	Zip	
25762	1	1977	152	Cessna	Charles S. Shaw	4605 Tapestry Drive	Fairfax	VA	22032	(703) 503-5782
2578U	2	N/A	PA 34-200T Seneca	Piper	Instrulogic Corporation	45 Main Street	Round Hill	VA	20141	(540) 338-2222
27J	1	N/A	F8L Falco	Experimental	Paul & Sue Oliver	293 Big Park Road	Hedgesville	WV	25427	(304) 754-8259
280AT	Jet	1979	Westwind 1124	Isarel Aircraft Ind	Air Trek Inc	28000-A5 Airport Road	Punta Gorda	FL	33982	(941) 639-7855
28815	1	1978	AA-5B	Grumman American	William L. Boggs, Jr.	15569 Limestone School Road	Leesburg	VA	20176	
2987T	1	1966	200 D Meyers	Aero Commander	Richard F. Shimer	14888 Berlin Turnpike	Purcellville	VA	20132	540-882-3449
3000F	2	1978	PA-34-200T	Piper	Larry T. Omps	171 Omps Drive	Winchester	VA	22601	
3003X	1	1966	150F	Cessna	Edward M Ward	367 Pine Road	Stephenson	VA	22656	(540) 535-7206
30VP	2	1997	King Air B200	Raytheon Aircraft Company	Valley Proteins, Inc.	Post Office Box 3588	Winchester	VA	22604	(540) 877-2590
32PL	1	1980	182Q	Cessna	David L. Lippke	34332 Bridgestone Lane	Bluemont	VA	20135	(540) 554-8279
32RM	1	1961	3202	Nord	Clyde R. Kizer	4287 Ringwood Road	Nokesville	VA	22123	(703) 754-8628
33077	1	1975	PA-28-140 Cherokee	Piper	Aras K. Grinius	6102 Scotch Drive	Alexandria	VA	22310	(703) 691-5023
3342Z	1	1960	PA 22-150 Pacer	Piper	Juregen Nies	506 Lakeview Drive	Cross Junction	VA	22625	(540) 888-7969
34636	1	1973	177B Cardinal	Cessna	Cardinal Partners Limited	% Larry Bean 2287 Brucetown Road	Clearbrook	VA	22624	(540) 667-0498
3547B	2	1979	PA-31-350 Chieftain	Piper	Fabritek Company, Inc.	% Rob Hahn 416 Battaile Drive	Winchester	VA	22601	(540) 662-9095
357MB	2	1970	Aztec PA-23	Piper	Daniel B. Tully	38616 Stonewall Farm Lane	Middleburg	VA	20117	(540) 687-6555
3580U	1	1963	182F	Cessna	Winchester Skylane Flyers, LLC	540 Old Fort Road	Winchester	VA	22601	
365BA	0	2000	L-23 Super Blanik-Glider	LET	Civil Air Patrol	105 S. Hansell Street	Maxwell AFB	AL	36112	
3741F	1	1966	172 H	Cessna	OKV, Inc.	2642 Daniel Terrace	Winchester	VA	22601	(540) 662-7660
38635	1	1977	PA-28-201	Piper	ED/IT Inc	17534 Raven Rocks Road	Bluemont	VA	20135	
4001	2	1940	12A	Lockheed	Mann Enterprises, Inc.	11402 Hume Road	Hume	VA	22639	

VIRGINIA DEPART' OF AVIATION

5702 Gulfstream Road, Richmond International Airport Virginia 0-2422, 1-800-292-1034

ANNUAL BASED AIRCRAFT SURVEY OF LICENSED OR REGISTERED AIRPORTS, HELICOPTERS AND LANDING AREAS

To be Completed by the Airport Owner or Manager for All Aircraft Based at This Airport as of the First Day of January of the Current Year for Public Airports and First Day of July of the Current Year for Private Airports
(Required by 24 VAC 5-20-350, Regulations Governing the Licensing and Operation of Airports and Aircraft and Obstructions to Airspace in the Commonwealth of Virginia, 24 VAC5-20-10 et seg.)

Airport: Winchester Regional Airport Name of Person Completing Survey: Renny Manuel Phone Number (540) 662-5786 Date January 3, 2004

Aircraft Number	No. of Engines	Year	Aircraft Model	Aircraft Manufacturer	Aircraft Owner's Name	Owner's Address				Phone Number
						Street	City	State	Zip	
4103Q	2	1968	310N	Cessna	Mid-Atlantic Aircraft, LLC	615 Airport Road, Suite # 109	Winchester	VA	22602	(540) 678-1661
41SS	1	1983	Glass Air	Experimental	Donald E. Ervin	413 Barker Lane	Bluemont	VA	20135	(540) 554-8495
421VT	2	1968	421	Cessna	Grace Airways	%Marc Thomason 299 Hunters Ridge Road	Winchester	VA	22602	
4220J	1	1966	PA 28-140 Cherokee	Piper	Samuel A. Milburn	770 Warm Springs Road	Winchester	VA	22603	(540) 667-5966
42465	1	1968	182L	Cessna	NA64 Yale Foundation, Inc.	% Stephen Barasch Po Box 125	Boyce	VA	22620	(540) 837-9362
43172	1	1946	BC12-D	Taylorcraft	David Cooper	22036 Oatlands Road	Aldie	VA	22001	(703) 749-4545
4429C	1	1981	152	Cessna	Aviation Equipment Co. LLC	8009 Lewinsville Rd	McLean	VA	22102	
44LJ	2	1972	PA-34-200	Piper	Bookaplane.com, LLC	380 Dundridge Dr	White Post	VA	22663	
4554T	1	1972	PA 28-180 Cherokee	Piper	Donald R. Stanton	300 Dunlap Drive	Berryville	VA	22611	(540) 955-0875
4559X	1	1976	PA 28-200	Piper	Lambert Brown	1213 Hites Road	Middletown	VA	22645	(540) 869-6694
46860	1	1979	152	Cessna	James L. Lum II	823 South Loudoun Street	Winchester	VA	22601	
4618T	2	1972	PA-34-200	Piper	Lambert Brown	1213 Hites Road	Middletown	VA	22645	(540) 542-1123
4833G	1	1979	172N Hawk	Cessna	Urs G. Wiederkehr	721 Sterling Drive	Winchester	VA	22601	(540) 662-7730
49624	1	1943	J-3 Cub	Piper	Backseat Flyers	% Joe Hahn 150 Campfield Lane	Winchester	VA	22602	(540) 662-8843
4963W	1	N/A	Commander 114	Rockwell International	Kenneth Coleman	6456 Back Road	Maurertown	VA	22644	(540) 459-2415
5020H	1	1979	172 M	Cessna	John R. Hale	15832 Berlin Turnpike	Purcellville	VA	20132	(703) 771-7931
50MD	1	1984	Acro Sport II	Experimental	Eric Fredericks	312 Amberwood Lane	Winchester	VA	22602	
50P	1	1947	Navion A	Rayethon Aircraft Company	Bruce R. Nield	1351 Grant Street	Herndon	VA	20170	(703) 437-5150
51979	1	1944	SNJ-5 T-6	North American	Fighter Command, Inc.	% Mark Hutchins 177 Skyview Lane	Front Royal	VA	22630	(540) 635-2203
51SJ	1	1968	Pitts	Experimental	Robert L. Jacobs	221 Clarke Lane	Berryville	VA	22611	
527TR	1	2002	SR22	Cirrus Design Corp	Elton Ray Williams	17631 Artists View Court	Round Hill	VA	20141	
52LF	1	N/A	YAK-52	Yakovlev	Robert Montague	Route 2, Box 426	Harpers Ferry	WV	25425	(304) 728-6079

VIRGINIA DEPART OF AVIATION

5702 Gulfstream Road, Richmond International Airport Virgini 0-2422, 1-800-292-1034

ANNUAL BASED AIRCRAFT SURVEY OF LICENSED OR REGISTERED AIRPORTS, HELICOPTERS AND LANDING AREAS

To be Completed by the Airport Owner or Manager for All Aircraft Based at This Airport as of the First Day of January of the Current Year for Public Airports and First Day of July of the Current Year for Private Airports
(Required by 24 VAC 5-20-350, Regulations Governing the Licensing and Operation of Airports and Aircraft and Obstructions to Airspace in the Commonwealth of Virginia, 24 VAC5-20-10 et seg.)

Airport: Winchester Regional Airport Name of Person Completing Survey: Renny Manuel Phone Number (540) 662-5786 Date January 3, 2004

Aircraft Number	No. of Engines	Year	Aircraft Model	Aircraft Manufacturer	Aircraft Owner's Name	Owner's Address				Phone Number
						Street	City	State	Zip	
5366A	2	1957	310-B	Cessna	Charles Gittens	% Post Office Box 144	Middletown	VA	22645	(703) 683-0660
5737W	1	1963	PA-28-150	Piper	John D. Landis	5299 Rockland Road	Front Royal	VA	22630	(540) 636-0297
5896G	1	1969	150K	Cessna	Mid-Atlantic Aircraft, LLC	615 Airport Road, Suite 109	Winchester	VA	22602	(540) 678-1661
6116C	2	1978	310 R	Cessna	Irvin Shendow	118 Hawthorne Drive	Winchester	VA	22601	(703) 667-4575
633AT	Jet	1993	500	Cessna	Air Trek Inc	28000-A5 Airport Road	Punta Gorda	FL	33982	(941) 639-7855
63903	2	1977	PA-23-250	Piper	Dixie Air Charter, LLC/James Lum	823 South Loudoun Street	Winchester	VA	22601	
6429V	1	1980	172RG	Cessna	James L. Lum II	823 South Loudoun Street	Winchester	VA	22601	
6455R	1	1966	PA-28-140 Cherokee	Piper	Delay-Winget LLC	2219 Buck Mountain Road	Bentonville	VA	22610	
66140	1	1974	150M	Cessna	Patrick Whitehead	8725 N Frederick Pike	Cross Junction	VA	22625	
6821T	1	1960	310	Cessna	Stanley Kerns	P O Box 7	Berryville	VA	22611	
6927N	1	1968	M-20-G Statesman	Mooney	William Mega	3911 Fairfax Farms Road	Fairfax	VA	22033	(703) 591-5495
6JA	1	1974	Starduster II	Experimental	Rick Catlett	710 South Stewart Street	Winchester	VA	22601	(540) 662-1780
70TA	1	1998	Long Easy	Experimental	Thomas A. Olgerison	Post Office Box 202	Upperville	VA	22176	(540) 364-4188
71174	1	1973	U206F	Cessna	Gary R. Keran	Post Office Box 202	Upperville	VA	22176	(540) 338-4231
7119B	1	1956	PA-22-150 Tripacer	Piper	John Fastnaught	100 Hilltop Court	Cross Junction	VA	22625	(540) 888-4088
712JT	1	1979	PA-23-250	Piper	James P. Mills	355 Fairville Road	Chadds Ford	PA	19317	
7223Y	1	1985	Baron 58	Beechcraft	Kenneth Coleman	6456 Back Road	Maurertown	VA	22644	
7233H	1	1946	J3C-65 Cub	Piper	Ray D. Hoover	1946 Airport Road	Winchester	VA	22602	(540) 667-6083
73755	1	1976	172 N Hawk	Cessna	Ray Cramer	4820 Village Drive	Fairfax	VA	22030	(703) 961-0217
739RR	1	1978	172N Hawk	Cessna	Victoria A. Pavloski	554 Whitacre Street	Winchester	VA	22601	
74587	1	1961	M20B	Mooney	James Elmore	293 Big Park Road	Hedgesville	WV	25427	
75342	1	1956	AT-6D	North American	Frank Sublett	625 South Stewart Street	Winchester	VA	22601	(540) 722-4989
756KZ	1	1979	R182 RG Skylane	Cessna	Eight Two Tango, Inc.	% Will Risdon 61 Manor Drive	Edinburg	VA	22824	(540) 984-3695
75722	1	1976	172N Hawk	Cessna	Gary R. Vanderhaven	100 Kabletown Road	Charles Town	WV	25414	(703) 648-6670

VIRGINIA DEPART' OF AVIATION

5702 Gulfstream Road, Richmond International Airport Virgini 3-2422, 1-800-292-1034

ANNUAL BASED AIRCRAFT SURVEY OF LICENSED OR REGISTERED AIRPORTS, HELICOPTERS AND LANDING AREAS

To be Completed by the Airport Owner or Manager for All Aircraft Based at This Airport as of the First Day of January of the Current Year for Public Airports and First Day of July of the Current Year for Private Airports
(Required by 24 VAC 5-20-350, Regulations Governing the Licensing and Operation of Airports and Aircraft and Obstructions to Airspace in the Commonwealth of Virginia, 24 VAC5-20-10 et seg.)

Airport: Winchester Regional Airport Name of Person Completing Survey: Renny Manuel Phone Number (540) 662-5786 Date January 3, 2004

Aircraft Number	No. of Engines	Year	Aircraft Model	Aircraft Manufacturer	Aircraft Owner's Name	Owner's Address				Phone Number
						Street	City	State	Zip	
759HP	1	1978	182 Q	Cessna	James E. Feir	7721 Tremayne Place, Apt. 215	McLean	VA	22102	(703) 892-9863
759JD	1	1978	182Q	Cessna	James M. Butler	812 Santmyer Drive SE	Leesburg	VA	20175	(703) 779-0756
7622L	1	1968	LA4 Laker	Lake Amphiban	Frank J. Finley	1391 Park Lake Drive	Reston	VA	20190	(703) 438-1740
777ML	1	1976	17-31ATC	Bellanca	William A. Eginton	106 Harrison Street N.E.	Leesburg	VA	20176	
7997W	1	1964	PA-28-180	Piper	Leslie A. Ferguson Melanson	2446 Senseny Road	Berryville	VA	22611	(540) 955-4264
80299	1	1975	172 M	Cessna	Mountain Air Aviation	5809 Midhill Street	Bethesda	MD	20817	
8062E	1	1978	172N Hawk	Cessna	James L. Lum II	823 South Loudoun Street	Winchester	VA	22601	
8120X	1	1979	PA 28-161 Warrior	Piper	Joyce Beard	10201 Stillhouse Road	Delaplane	VA	22025	(703) 364-9587
8183H	2		C-25H	Beechcraft	Mid-Atlantic Aircraft, LLC	615 Airport Road, Suite 109	Winchester	VA	22602	(540) 678-1661
8231B	1	1957	172	Cessna	Richard Gibbons	HC 78 Box 87C	Augusta	WV	26704	(301) 737-3442
8470L	1	1968	172	Cessna	South Branch Eagles	HC 78 Box 87C	Shanks	WV	26761	
8567N	1	1970	PA-28-235 Cherokee	Piper	Weekend Aviators, LTD	% John Fiocca 950 North River Road	Middletown	VA	22645	(540) 837-1398
8884B	1	1958	172	Cessna	Clifton Dixon	1649 Apple Pie Riege Road	Winchester	VA	22603	
88EX	Jet	1997	Citation 560	Cessna	Tag Aviation	675 Airport Road	Winchester	VA	22602	(540) 723-0365
9177Z	1	1979	F 33 A Bonanza	Beechcraft	Valley Proteins, Inc.	Post Office Box 3588	Winchester	VA	22604	(540) 877-2590
9427Y	1	1960	Bonanza N35	Beechcraft	Dave M. Diziabis	40425 Beacon Hill Drive	Leesburg	VA	20176	(703) 265-5431
9490X	1	1985	182 C	Cessna	Montan, Inc	% David Lamontagne P O Box 1	Hancock	ME	04640	
959RM	1	1970	172 K	Cessna	Richard B. Largent	3510 Perry Avenue	Kensington	MD	20895	(301) 946-2321
9709B	1	1981	172 RG	Cessna	Don Vaden	711 Millwood Avenue	Winchester	VA	22601	(540) 662-4154
9772A	1	1950	170 A	Cessna	Eric Fredericks	312 Amberwood Lane	Winchester	VA	22602	(540) 338-4953
9787B	1	1981	172 RG	Cessna	Thomas Reimer	Hangar # 31 Allegheny County Airport	West Mifflin	PA	15122	(412) 466-0462
9862J	1	1980	172N Hawk	Cessna	Ray D. Hoover	1946 Airport Road	Winchester	VA	22602	(540) 667-6083

APPENDIX C

FORECAST APPROVAL LETTERS

And

FORECAST BACK UP INFORMATION

U. S. Department
of Transportation

**Federal Aviation
Administration**

WASHINGTON AIRPORTS DISTRICT OFFICE
23723 Air Freight Lane, Suite 210
Dulles, Virginia 20166
Telephone: 703/661-1358
Fax: 703/661-1370

August 24, 2004

AUG 27 4

Ms. Renny Manuel
Executive Director
Winchester Regional Airport Authority
491 Airport Road
Winchester, Virginia 22602

RE: Winchester Regional Airport
Airport Layout Plan Update
Inventory and Forecast Approval

Dear Ms. Manuel:

We have reviewed the revised **Inventory and Forecast** submittal for the Winchester Regional Airport's Airport Layout Plan (ALP) Update forwarded with DAC letter dated August 18, 2004 that was received in our office on August 24, 2004.

Based on our review FAA has determined that the **Forecast Summary** as depicted in the attached **Table 2** is hereby approved. As we have previously discussed a determination regarding the specific Airport Reference Code and/or critical aircraft for this study has not been made yet and will be the subject of a separate approval.

Also, please note that adjacent airports were not identified on the appropriate exhibit provided with this submittal.

If you have any questions regarding these comments please do not hesitate to call.

Sincerely,
Original Signed By
Joseph B. Delia
Joseph B. Delia
Airport Engineer

cc: DOAV
Delta-RIC&CLT ✓

Table 2
Winchester Regional Airport
Forecast Summary

Forecast Element	Year				
	Base Year (2004)	2005	2009	2014	2024
Total Based Aircraft	112	114	121	130	146
Annual Growth Rate[1]		1.6 %	1.4 %	1.4 %	1.2 %
Based Aircraft by Type					
SE Piston	88	89	92	97	106
ME Piston	16	16	17	17	17
ME Turbo-prop	1	2	2	3	5
ME Turbo-jet	4	4	6	8	12
Rotorcraft	1	1	2	3	4
Other[3]	2	2	2	2	2
Operations by Aircraft Type[2]					
SE Piston	26,174	26,929	29,837	33,892	42,713
ME Piston	4,070	4,171	4,522	5,002	5,976
ME Turbo-prop	1,309	1,354	1,514	1,741	2,251
ME Turbo-jet	1,049	1,127	1,404	1,847	2,901
Rotorcraft	704	725	805	917	1,161
Other[2]	201	207	230	262	332
Total Operations	32,377	33,057	35,922	39,856	49,063
Annual Growth Rate[1]		2.1 %	2.1 %	2.1 %	2.1 %
Local Operations (40 %)	12,951	13,223	14,369	15,942	19,625
Itinerant Operations (60 %)	19,426	19,834	21,553	23,914	29,438

Note: [1]VATSP 2003 GAF Table 3 – Historic and Future Average Annual Growth Rates by Based Aircraft Type
[2]VATSP 2003 GAF Table 7 – Comparison of VATSP and FAA Operations Forecasts
[3]Represents ultra lights, gliders, and military aircraft.
Sources: Delta Airport Consultants, Inc., Analysis

4005 'c'

SEP 0 9 2004

COMMONWEALTH of VIRGINIA

Randall P Burdette
Director

Department of Aviation
5702 Gulfstream Road
Richmond, Virginia 23250-2422

V/TDD • (804) 236-3624
FAX • (804) 236-3635

September 7, 2004

Ms. Renny Manuel, Executive Director
Winchester Regional Airport Authority
491 Airport Road
Winchester, Virginia 22602

RE: Winchester Regional Airport Inventory and Forecast Revisions

Dear Ms. Manuel:

Thank you for providing the Virginia Department of Aviation a copy of the Revised Inventory and Forecast for the Winchester Regional Airport Layout Plan dated August 5, 2004 and the accompanying cover letter dated August 18, 2004. Following my review I find the submittals acceptable. The Department looks forward to receiving your next submittal.

If you have any questions regarding this matter please contact me at (804) 236-3632 at extension 105.

Sincerely,

Scott Denny
Senior Aviation Planner

cc: Joe Delia, FAA/WADO
Jeff Leske, Delta Airport Consultants, Inc.

small differences between the VATSP and FAA forecasts are further explained by the differences in the historic growth rates observed in the two datasets.[7]

While the number of based aircraft determines some facility requirements, the mix of aircraft types is also extremely important. Table 3 compares the historic growth in the national fleet by aircraft category with the growth at the VATSP airports. The table also shows the FAA projections for national growth and presents the assumptions used in the VATSP Update based aircraft fleet mix forecasts.

GAF – Table 3

Historic and Future Average Annual Growth Rates By Based Aircraft Type

Forecast and Period	Single Engine Piston	Multi Engine Piston	Multi Engine Turboprop	Multi Engine Jet	Heli-copter	Other	Total
FAA Aerospace Forecasts							
1990-2000	-0.8%	-1.5%	0.7%	5.2%	1.0%	12.1%	0.2%
2000-2011	0.7%	0.0%	1.2%	4.7%	1.4%	1.4%	0.9%
VATSP Update							
1990-2000	1.2%	0.9%	2.8%	10.2%	6.0%	6.3%	1.6%
2000-2005	1.0%	0.4%	2.0%	7.5%	3.7%	3.9%	1.6%
2005-2015	0.7%	0.0%	1.2%	4.7%	1.4%	1.4%	1.4%
2015-2020	0.7%	0.0%	1.2%	3.5%	1.4%	1.4%	1.2%

Source: FAA Aerospace Forecasts, VATSP Update Database

As expected given the overall differences in the national and VA growth rates, VA growth by based aircraft category has historically been faster than national growth. However, in both the Commonwealth and the nation, multi-engine jets represented one of the fastest growing aircraft categories between 1990 and 2000, while single- and multi-engine pistons represented the slowest growth. This pattern is expected to continue. The *FAA Aerospace Forecasts, FY2000 – 2011* show that the piston categories will continue to show the slowest growth in the nation, while the jets will grow the fastest. In order to capture the faster historic growth at the VATSP airports relative to the nation, as well as the projected national trends, three sets of growth rates were defined for the VATSP Update based aircraft fleet forecasts:

- Between 2000 and 2005, each category of based aircraft was projected to grow at the average of the VATSP airport historic rate and the FAA projected rate for the nation.
- From 2005 to 2015, growth in each category was projected to decline slightly to the FAA projected rate.

[7] The FAA Terminal Area Forecasts use historic data reported to the FAA, while the VATSP database combines information from local, state and federal sources to create the most accurate representation possible.

GAF – Table 7

Comparison of VATSP and FAA Operations Forecasts

VATSP Airports with Terminal Area Forecasts

Airport Category	Historic 1990	1995	2000	Forecast 2005	2015	Avg Annual Growth 1990-2000	2000-2015
VA Airports							
VATSP	1,721,519	1,651,216	1,425,443	1,564,238	1,871,829	-1.9%	1.8%
FAA TAF	1,759,460	1,652,920	1,599,438	1,661,209	1,786,521	-0.9%	0.7%
GA Airports							
VATSP	1,047,440	1,015,999	778,095	867,441	1,068,802	-2.9%	2.1%
FAA TAF	1,086,517	1,016,087	973,255	1,008,692	1,078,234	-1.1%	0.7%
Air Carrier Airports							
VATSP	674,079	635,217	647,348	696,797	803,027	-0.4%	1.4%
FAA TAF	672,943	636,833	626,183	652,517	708,287	-0.7%	0.8%
Northern Virginia Mini-System							
VATSP	205,730	193,045	201,744	225,093	263,801	-0.2%	1.8%
FAA TAF	207,730	193,133	189,722	201,351	223,275	-0.9%	1.1%
Southeast Virginia Mini-System							
VATSP	222,798	240,236	163,159	177,322	206,601	-3.1%	1.6%
FAA TAF	263,904	234,726	180,037	181,192	183,503	-3.8%	0.1%

Source: FAA Terminal Area Forecasts, VATSP Update Database

Notes:

Includes only those airports with FAA Terminal Area Forecasts

Northern Virginia System includes Shannon, Manassas, Stafford, Warrenton Fauquier, and Culpeper.

Southeast Virginia System includes Hampton Roads, Suffolk, Chesapeake, and Norfolk

IV. Summary

In summary, the VATSP Update forecasts of general aviation based aircraft and operations considered historic data from the Department of Aviation, the FAA, airport master plans, and Civil Air Patrol surveys. A number of forecast methodologies were devised and tested, and a preferred methodology was selected that represented the most reasonable estimate of future activity. Based aircraft were estimated using a linear trend methodology, with adjustments made to account for individual airport characteristics and new airport construction. Since the validity of the historic operations data was somewhat questionable, an operations forecast methodology was devised to estimate future operations using the number and mix of based aircraft at each airport. This methodology took advantage of the most accurate information available while avoiding the pitfall of unreliable historic data.

The VATSP Update forecasts reflect growth in based aircraft and operations that is slightly faster than FAA projections. The VATSP Update forecasts represent a reasonable future scenario for planning purposes, and include a breakdown of based aircraft and operations by aircraft type that can be used to determine existing and future facility requirements for the Commonwealth's air transportation system.

TABLE 9
VATSP UPDATE, FAA, AND MASTER PLAN FORECASTS

Airport Name	Historic Based Aircraft			VATSP Update Forecast			FAA Terminal Area Forecasts			Master Plan Forecasts			
	1990	1995	2000	2005	2015	2020	2000	2005	2015	2000	2005	2015	2020
Lonesome Pine	21	19	20	20	21	21	16	16	16	-	-	-	-
Louisa County	10	22	34	44	64	74	32	32	32	29	33	46	53
Lunenburg County	6	4	1	1	1	1	5	5	5	-	-	-	-
Luray Caverns	18	14	9	9	9	9	9	9	9	29	32	38	41
Manassas Regional	281	246	315	309	332	344	377	397	438	499	553	661	715
Marks Municipal	5	4	4	4	4	4	-	-	-	4	4	6	7
Mecklenburg-Brunswick Regional	9	9	14	18	25	29	10	10	10	15	17	22	25
Middle Peninsula Regional	16	23	30	37	51	58	23	23	23	-	-	-	-
Mountain Empire	37	30	26	26	26	26	27	27	27	45	52	68	76
New Kent County	51	34	38	38	38	38	43	43	43	50	63	79	86
New London	48	43	58	68	88	98	-	-	-	-	-	-	-
New Market	14	38	33	35	40	42	-	-	-	-	-	-	-
New River Valley	30	21	24	24	24	24	21	21	21	23	24	27	29
Orange County	26	21	22	22	22	22	22	22	22	29	35	41	43
Shannon	133	136	141	139	145	148	170	170	170	-	-	-	-
Smith Mountain Lake	9	16	13	13	13	13	-	-	-	-	-	-	-
Stafford (New)	-	-	-	39	53	60	-	-	-	-	-	-	-
Suffolk Municipal	40	47	80	90	110	120	50	55	65	-	-	-	-
Tangier Island	0	0	0	-	-	-	-	-	-	-	-	-	-
Tappahannock Municipal	12	10	14	17	-	-	-	-	-	16	17	20	22
Tappahannock (Replacement)	-	-	-	-	31	36	-	-	-	-	-	-	-
Tazewell County	13	12	10	10	10	10	13	13	13	14	17	21	22
Twin County	10	11	14	17	22	24	9	9	9	12	14	16	17
Virginia Highlands	60	57	55	55	55	55	55	55	55	68	75	93	103
Virginia Tech	29	30	33	36	41	43	28	28	28	-	-	-	-
Wakefield Municipal	14	10	28	35	49	56	-	-	-	-	-	-	-
Warrenton-Fauquier	90	92	98	103	113	118	109	119	140	116	128	152	164
Waynesboro	46	35	26	26	26	26	-	-	-	37	49	75	88
Whitman Strip	12	14	15	16	19	20	-	-	-	-	-	-	-
William M. Tuck	25	27	19	19	19	19	25	25	25	24	29	35	37
Williamsburg-Jamestown	47	47	56	63	76	83	52	52	52	50	54	60	62
Winchester Regional	62	69	79	88	107	116	96	101	111	109	122	147	159
Subtotal	2,055	2,141	2,437	2,663	3,082	3,287	2,099	2,168	2,309	2,096	2,333	2,782	3,009
Annual Growth Rate vs 2000	1.7%	2.6%	-	1.8%	1.6%	1.5%		0.6%	0.6%		2.2%	1.9%	1.8%

TABLE 10

BASED AIRCRAFT FLEET MIX

Airport Name	2000 Fleet Mix							2005 Projected Fleet Mix						
	SEP	MEP	MET	MEJ	HEL	OTH	TOT	SEP	MEP	MET	MEJ	HEL	OTH	TOT
Lonesome Pine	12	4	0	1	1	2	20	12	4	0	1	1	2	20
Louisa County	29	3	1	1	0	0	34	37	4	1	2	0	0	44
Lunenburg County	1	0	0	0	0	0	1	1	0	0	0	0	0	1
Luray Caverns	9	0	0	0	0	0	9	9	0	0	0	0	0	9
Manassas Regional	247	31	14	14	5	4	315	235	31	13	20	6	5	309
Marks Municipal	4	0	0	0	0	0	4	4	0	0	0	0	0	4
Mecklenburg-Brunswick Rgnl	12	1	1	0	0	0	14	14	1	1	2	0	0	18
Middle Peninsula Regional	23	6	1	0	0	0	30	28	7	1	0	0	0	37
Mountain Empire	23	2	0	0	0	1	26	23	2	0	0	0	1	26
New Kent County	36	0	0	0	0	2	38	36	0	0	0	0	2	38
New London	55	1	0	0	0	2	58	64	1	0	0	0	3	68
New Market	28	2	0	0	0	3	33	30	2	0	0	0	4	35
New River Valley	21	3	0	0	0	0	24	19	3	1	1	0	0	24
Orange County	21	1	0	0	0	0	22	21	1	0	0	0	0	22
Shannon	125	14	0	0	0	2	141	123	14	0	0	0	2	139
Smith Mountain Lake	9	4	0	0	0	0	13	9	4	0	0	0	0	13
Stafford (New)	0	0	0	0	0	0	0	31	0	6	2	0	0	39
Suffolk Municipal	72	5	1	0	2	0	80	81	5	1	0	3	0	90
Tangier Island	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tappahannock Municipal	14	0	0	0	0	0	14	17	0	0	0	0	0	17
Tappahannock (Replacement)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tazewell County	5	1	1	0	0	3	10	5	1	1	0	0	3	10
Twin County	10	0	0	0	0	4	14	11	0	0	0	0	5	17
Virginia Highlands	40	5	0	0	3	7	55	37	5	1	1	3	8	55
Virginia Tech	24	3	2	0	1	3	33	24	3	2	1	1	4	36
Wakefield Municipal	26	1	0	0	0	1	28	32	1	0	0	0	1	35
Warrenton-Fauquier	81	11	0	0	0	6	98	85	11	0	0	0	7	103
Waynesboro	15	2	0	0	0	9	26	14	2	0	0	0	10	26
Whitman Strip	0	0	0	0	0	15	15	0	0	0	0	0	16	16
William M. Tuck	19	0	0	0	0	0	19	19	0	0	0	0	0	19
Williamsburg-Jamestown	50	5	0	0	1	0	56	56	5	0	0	1	0	63
Winchester Regional	66	11	1	1	0	0	79	74	12	1	2	0	0	88
Subtotal	2,015	221	54	35	23	89	2,437	2,174	229	66	61	27	105	2,663
	82.7%	9.1%	2.2%	1.4%	0.9%	3.7%	100.0%	81.6%	8.6%	2.5%	2.3%	1.0%	3.9%	100.0%

TABLE 10
BASED AIRCRAFT FLEET MIX

Airport Name	2015 Projected Fleet Mix							2020 Projected Fleet Mix						
	SEP	MEP	MET	MEJ	HEL	OTH	TOT	SEP	MEP	MET	MEJ	HEL	OTH	TOT
Lonesome Pine	12	4	0	2	1	2	21	12	3	0	2	1	2	21
Louisa County	53	5	2	4	0	0	64	61	6	2	5	0	0	74
Lunenburg County	1	0	0	0	0	0	1	1	0	0	0	0	0	1
Luray Caverns	9	0	0	0	0	0	9	9	0	0	0	0	0	9
Manassas Regional	246	30	14	30	7	5	332	251	30	15	35	7	6	344
Marks Municipal	4	0	0	0	0	0	4	4	0	0	0	0	0	4
Mecklenburg-Brunswick Rgnl	19	1	2	3	0	0	25	21	2	2	4	0	0	29
Middle Peninsula Regional	40	9	2	0	0	0	51	45	10	2	0	0	0	58
Mountain Empire	23	2	0	0	0	1	26	23	2	0	0	0	1	26
New Kent County	36	0	0	0	0	2	38	35	0	0	0	0	3	38
New London	83	1	0	0	0	4	88	92	1	0	0	0	4	98
New Market	33	2	0	0	0	4	40	35	2	0	0	0	5	42
New River Valley	19	2	1	2	0	0	24	19	2	1	2	0	0	24
Orange County	21	1	0	0	0	0	22	21	1	0	0	0	0	22
Shannon	129	14	0	0	0	3	145	132	13	0	0	0	3	148
Smith Mountain Lake	9	4	0	0	0	0	13	9	4	0	0	0	0	13
Stafford (New)	41	0	8	3	0	0	53	46	0	10	4	0	0	60
Suffolk Municipal	99	6	2	0	3	0	110	108	7	2	0	4	0	120
Tangier Island	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tappahannock Municipal	29	0	2	0	0	0	31	0 33	0	3	0	0	0	36
Tappahannock (Replacement)	29	0	2	0	0	0	31	33	0	3	0	0	0	36
Tazewell County	5	1	1	0	0	3	10	5	1	1	0	0	4	10
Twin County	14	0	0	0	0	7	22	16	0	0	0	0	8	24
Virginia Highlands	37	4	1	2	3	8	55	36	4	1	2	3	8	55
Virginia Tech	27	3	2	2	1	4	41	28	3	3	3	2	5	43
Wakefield Municipal	45	2	0	0	0	2	49	52	2	0	0	0	3	56
Warrenton-Fauquier	93	11	0	0	0	8	113	97	12	0	0	0	9	118
Waynesboro	14	2	0	0	0	10	26	14	2	0	0	0	11	26
Whitman Strip	0	0	0	0	0	19	19	0	0	0	0	0	20	20
William M. Tuck	19	0	0	0	0	0	19	19	0	0	0	0	0	19
Williamsburg-Jamestown	68	6	0	0	2	0	76	75	7	0	0	2	0	83
Winchester Regional	89	13	1	3	0	0	107	97	14	2	3	0	0	116
Subtotal	2,545	240	86	100	32	125	3,129	2,711	245	93	121	34	136	3,341
	81.3%	7.7%	2.8%	3.2%	1.0%	4.0%	100.0%	81.1%	7.3%	2.8%	3.6%	1.0%	4.1%	100.0%

TABLE 11
VATSP UPDATE OPERATIONS FORECAST

Airport Name	2000 Ops Forecast by Type - Preferred							2005 Ops Forecast by Type - Preferred						
	SEP	MEP	MET	MEJ	HEL	OTH	TOT	SEP	MEP	MET	MEJ	HEL	OTH	TOT
Lonesome Pine	4,885	1,270	177	595	595	887	8,409	5,035	1,269	189	797	671	1,026	8,987
Louisa County	10,302	1,161	798	639	278	80	13,257	13,695	1,519	1,099	1,099	376	107	17,895
Lunenburg County	347	8	-	-	11	2	368	358	8	-	-	11	2	380
Luray Caverns	3,126	70	-	-	99	20	3,315	3,225	72	-	-	103	21	3,420
Manassas Regional	103,351	11,726	8,540	5,307	4,682	2,439	136,046	102,341	11,982	8,298	7,120	5,092	2,797	137,630
Marks Municipal	3,399	333	233	100	233	67	4,366	3,506	344	241	103	241	69	4,503
Mecklenburg-Brunswick Rgnl	4,271	420	635	50	116	33	5,526	5,345	529	815	914	164	47	7,814
Middle Peninsula Regional	8,358	1,868	759	103	239	68	11,395	10,665	2,334	1,003	131	305	87	14,525
Mountain Empire	8,018	803	206	88	206	477	9,797	8,254	813	213	91	213	556	10,141
New Kent County	12,796	304	-	-	434	923	14,457	13,140	315	-	-	449	1,077	14,980
New London	19,484	713	-	-	655	968	21,819	23,502	854	-	-	794	1,319	26,470
New Market	10,339	778	-	-	385	1,332	12,834	11,321	839	-	-	427	1,660	14,247
New River Valley	7,295	1,028	185	79	185	53	8,826	7,210	997	723	757	209	60	9,956
Orange County	7,383	424	-	-	243	49	8,099	7,623	431	-	-	251	50	8,355
Shannon	24,993	1,438	-	-	848	998	28,277	25,369	1,474	-	-	867	1,181	28,890
Smith Mountain Lake	3,480	1,118	-	-	143	29	4,769	3,609	1,134	-	-	148	30	4,920
Stafford (New)	-	-	-	-	-	-	-	12,117	534	3,644	1,009	373	107	17,784
Suffolk Municipal	25,015	2,180	1,155	272	1,472	182	30,277	28,994	2,491	1,373	317	1,848	211	35,234
Tangier Island	943	21	-	-	30	6	1,000	943	21	-	-	30	6	1,000
Tappahannock Municipal	4,863	108	-	-	155	31	5,157	5,913	132	-	-	188	38	6,270
Tappahannock (Replacement)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tazewell County	2,299	397	619	43	100	1,283	4,740	2,325	393	642	45	104	1,453	4,962
Twin County	3,872	182	128	55	128	1,710	6,074	4,602	225	158	68	158	2,291	7,501
Virginia Highlands	15,113	1,948	473	203	1,728	3,063	22,527	15,128	1,924	1,038	903	1,896	3,402	24,292
Virginia Tech	9,129	1,177	1,329	124	708	1,338	13,805	9,870	1,256	1,479	886	835	1,609	15,936
Wakefield Municipal	8,949	571	221	95	221	482	10,539	11,510	727	286	123	286	701	13,633
Warrenton-Fauquier	28,857	3,920	786	337	786	2,734	37,421	31,188	4,160	857	367	857	3,361	40,789
Waynesboro	6,694	753	-	-	349	3,834	11,630	6,763	743	-	-	366	4,332	12,204
Whitman Strip	2,178	188	-	-	269	6,328	8,963	2,434	210	-	-	301	7,072	10,017
William M. Tuck	6,390	210	147	63	147	42	6,999	6,592	217	152	65	152	43	7,220
Williamsburg-Jamestown	17,956	1,709	-	-	1,043	125	20,833	20,760	1,938	-	-	1,277	145	24,120
Winchester Regional	23,365	3,692	1,145	788	626	179	29,794	26,929	4,171	1,354	1,127	725	207	34,513
Subtotal	727,414	80,227	42,361	21,806	31,338	42,929	946,076	815,855	88,056	52,384	36,091	36,611	51,833	1,080,830
OPBA	361	363	784	623	1,363	482	388	375	384	789	589	1,335	494	406
Growth vs 2000														2.7%

TABLE 11

VATSP UPDATE OPERATIONS FORECAST

Airport Name	2015 Ops Forecast by Type - Preferred							2020 Ops Forecast by Type - Preferred						
	SEP	MEP	MET	MEJ	HEL	OTH	TOT	SEP	MEP	MET	MEJ	HEL	OTH	TOT
Lonesome Pine	5,451	1,288	212	1,207	759	1,160	10,076	5,672	1,299	224	1,414	807	1,233	10,649
Louisa County	21,086	2,241	1,750	2,361	592	169	28,200	25,091	2,613	2,119	3,169	712	203	33,907
Lunenburg County	381	8	-	-	12	2	404	393	9	-	-	13	3	417
Luray Caverns	3,432	76	-	-	109	22	3,639	3,540	79	-	-	113	23	3,754
Manassas Regional	114,825	12,863	9,629	11,055	5,934	3,287	157,594	121,515	13,324	10,363	13,167	6,399	3,560	168,328
Marks Municipal	3,731	366	256	110	256	73	4,792	3,848	378	264	113	264	76	4,943
Mecklenburg-Brunswick Rgnl	7,954	765	1,250	1,917	257	73	12,217	9,354	888	1,493	2,544	308	88	14,675
Middle Peninsula Regional	15,785	3,263	1,537	192	448	128	21,353	18,598	3,737	1,842	226	527	150	25,080
Mountain Empire	8,802	830	227	97	227	629	10,812	9,088	839	234	100	234	668	11,164
New Kent County	13,950	336	-	-	479	1,212	15,977	14,373	347	-	-	495	1,286	16,501
New London	32,343	1,148	-	-	1,095	1,922	36,509	37,140	1,304	-	-	1,259	2,271	41,975
New Market	13,573	961	-	-	515	2,113	17,163	14,786	1,024	-	-	562	2,372	18,744
New River Valley	7,623	1,004	791	1,123	228	65	10,835	7,841	1,009	828	1,305	237	68	11,288
Orange County	8,130	441	-	-	267	53	8,891	8,395	446	-	-	275	55	9,171
Shannon	28,328	1,579	-	-	968	1,394	32,268	29,910	1,634	-	-	1,022	1,514	34,079
Smith Mountain Lake	3,895	1,153	-	-	157	31	5,236	4,046	1,162	-	-	162	32	5,402
Stafford (New)	17,302	785	5,387	1,996	550	157	26,177	20,088	924	6,364	2,606	647	185	30,815
Suffolk Municipal	37,769	3,116	1,830	413	2,510	275	45,915	42,532	3,441	2,085	465	2,888	310	51,722
Tangier Island	943	21	-	-	30	6	1,000	943	21	-	-	30	6	1,000
Tappahannock Municipal	11,404	283	1,294	-	404	81	13,466	13,650	339	1,585	-	485	97	16,157
Tappahannock (Replacement)	11,000	404	1,577	121	283	81	13,466	13,166	485	1,925	145	339	97	16,157
Tazewell County	2,458	396	701	48	112	1,615	5,330	2,526	399	732	50	116	1,702	5,524
Twin County	6,310	314	220	94	220	3,318	10,477	7,225	363	254	109	254	3,904	12,110
Virginia Highlands	15,975	1,948	1,129	1,288	2,100	3,785	26,226	16,416	1,962	1,178	1,479	2,210	3,993	27,237
Virginia Tech	11,871	1,449	1,838	1,473	1,050	2,032	19,713	12,943	1,549	2,037	1,804	1,170	2,271	21,775
Wakefield Municipal	17,149	1,051	427	183	427	1,106	20,344	20,217	1,222	504	216	504	1,342	24,004
Warrenton-Fauquier	36,514	4,633	1,003	430	1,003	4,180	47,762	39,380	4,875	1,082	464	1,082	4,647	51,530
Waynesboro	7,142	747	-	-	393	4,818	13,101	7,338	750	-	-	407	5,078	13,573
Whitman Strip	2,989	258	-	-	369	8,683	12,299	3,288	284	-	-	406	9,554	13,532
William M. Tuck	7,014	230	161	69	161	46	7,683	7,236	238	166	71	166	48	7,925
Williamsburg-Jamestown	26,939	2,387	-	-	1,706	187	31,219	30,299	2,616	-	-	1,949	210	35,074
Winchester Regional	34,759	5,104	1,792	1,951	941	269	44,816	39,016	5,580	2,037	2,445	1,059	303	50,440
Subtotal	1,022,335	103,224	70,660	59,769	46,096	65,881	1,367,966	1,126,385	110,838	78,870	73,187	51,099	73,745	1,514,124
OPBA	402	430	821	595	1,447	525	437	416	453	845	605	1,491	541	453
Growth vs 2000							2.5%							2.4%

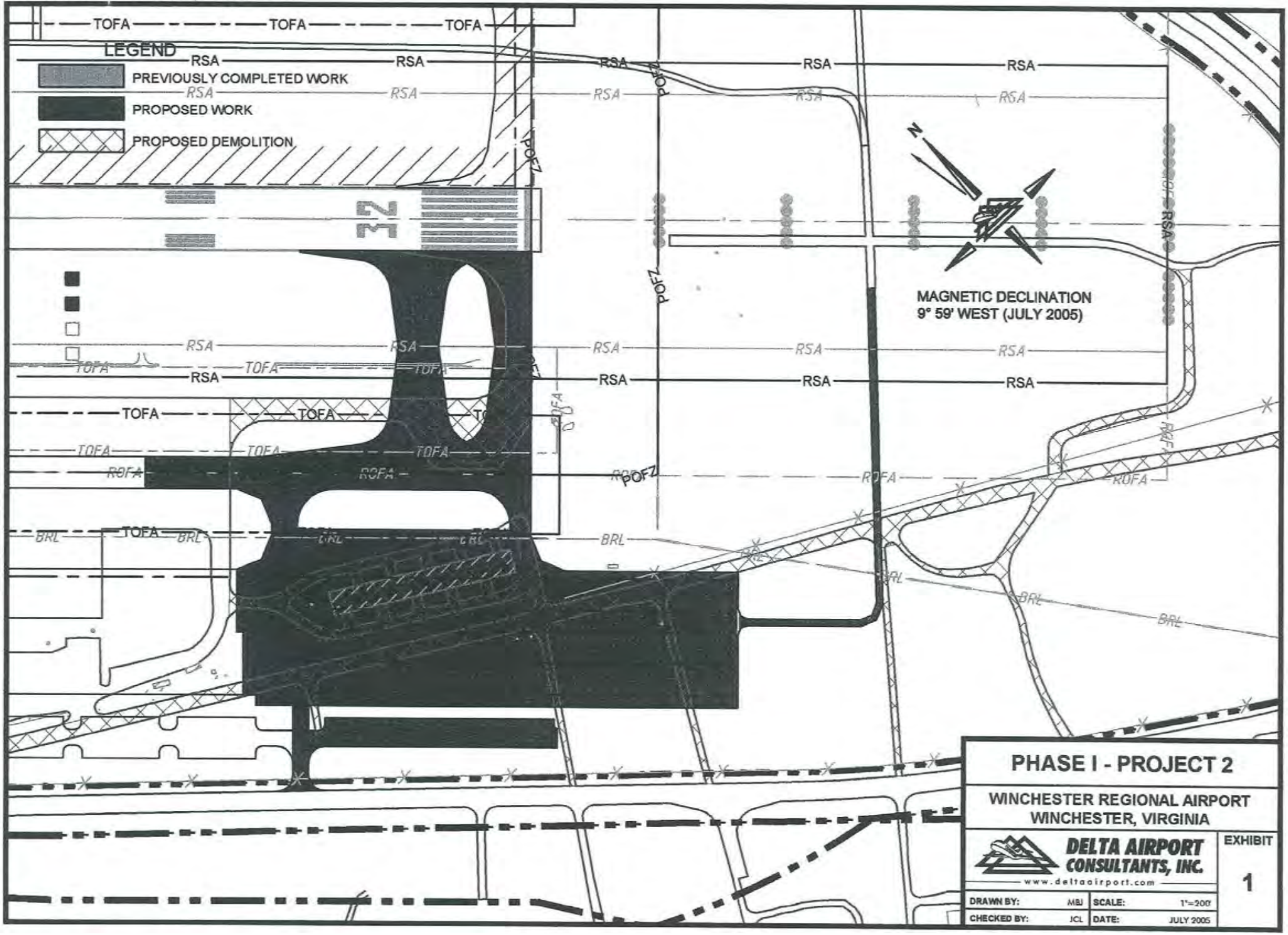
TABLE 12
OPERATIONS FORECAST COMPARISON

Airport Name	VATSP Update Forecast				FAA Terminal Area Forecasts			Master Plan Forecasts			
	2000	2005	2015	2020	2000	2005	2015	2000	2005	2015	2020
Lonesome Pine	8,409	8,987	10,076	10,649	6,275	6,275	6,275	-	-	-	-
Louisa County	13,257	17,895	28,200	33,907	6,250	6,250	6,250	-	-	-	-
Lunenburg County	368	380	404	417	4,410	4,410	4,410	-	-	-	-
Luray Caverns	3,315	3,420	3,639	3,754	10,120	10,120	10,120	12,470	13,820	16,520	17,870
Manassas Regional	136,046	137,630	157,594	168,328	131,253	138,658	152,131	199,600	221,200	264,400	286,000
Marks Municipal	4,366	4,503	4,792	4,943	-	-	-	4,452	4,867	5,818	6,315
Mecklenburg-Brunswick Rgnl	5,526	7,814	12,217	14,675	1,000	1,000	1,000	11,836	13,415	16,534	18,093
Middle Peninsula Regional	11,395	14,525	21,353	25,080	7,780	7,780	7,780	-	-	-	-
Mountain Empire	9,797	10,141	10,812	11,164	15,875	15,875	15,875	-	-	-	-
New Kent County	14,457	14,980	15,977	16,501	18,350	18,350	18,350	24,560	30,720	38,270	41,920
New London	21,819	26,470	36,509	41,975	-	-	-	-	-	-	-
New Market	12,834	14,247	17,163	18,744	-	-	-	-	-	-	-
New River Valley	8,826	9,956	10,835	11,288	13,000	13,000	13,000	17,858	19,427	22,655	24,174
Orange County	8,099	8,355	8,891	9,171	20,010	20,010	20,010	14,140	17,020	19,750	21,000
Shannon	28,277	28,890	32,268	34,079	22,450	22,450	22,450	-	-	-	-
Smith Mountain Lake	4,769	4,920	5,236	5,402	-	-	-	-	-	-	-
Stafford (New)	-	17,784	26,177	30,815							
Suffolk Municipal	30,277	35,234	45,915	51,722	10,866	12,041	14,352	-	-	-	-
Tangier Island	1,000	1,000	1,000	1,000	7,012	7,012	7,012	-	-	-	-
Tappahannock Municipal	5,157	6,270	13,466	16,157	-	-	-	10,654	11,174	12,830	13,804
Tappahannock (Replacement)	-	-	13,466	16,157							
Tazewell County	4,740	4,962	5,330	5,524	6,000	6,000	6,000	6,920	8,500	10,060	10,760
Twin County	6,074	7,501	10,477	12,110	16,910	16,910	16,910	5,620	6,600	7,700	8,200
Virginia Highlands	22,527	24,292	26,226	27,237	15,000	15,000	15,000	18,229	20,078	24,579	26,985
Virginia Tech	13,805	15,936	19,713	21,775	35,267	37,762	42,753	-	-	-	-
Wakefield Municipal	10,539	13,633	20,344	24,004	-	-	-	-	-	-	-
Warrenton-Fauquier	37,421	40,789	47,762	51,530	36,019	40,243	48,694	53,367	67,183	95,017	108,934
Waynesboro	11,630	12,204	13,101	13,573	-	-	-	13,127	16,757	23,374	26,624
Whitman Strip	8,963	10,017	12,299	13,532	-	-	-	-	-	-	-
William M. Tuck	6,999	7,220	7,683	7,925	15,120	15,120	15,120	11,520	14,120	16,760	17,960
Williamsburg-Jamestown	20,833	24,120	31,219	35,074	17,960	17,960	17,960	26,955	29,098	32,074	33,156
Winchester Regional	29,794	34,513	44,816	50,440	53,361	58,018	67,332	81,600	91,125	109,875	119,250
Subtotal	946,076	1,080,830	1,367,966	1,514,124	973,255	1,008,692	1,078,234	1,136,081	1,197,515	1,444,278	1,568,606
Growth vs 2000		2.7%	2.5%	2.4%		0.7%	0.7%		1.1%	1.6%	1.6%

APPENDIX D

ACIP BACK-UP INFORMATION

DRAWING: 040C -1 EXHIBITS.dwg LAYOUT: PH1 - PR1



J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT TAXIWAY E / RELOCATE TAXIWAY A - PHASE I / APRON EXPANSION - PHASE I
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 1 PROJECT 2

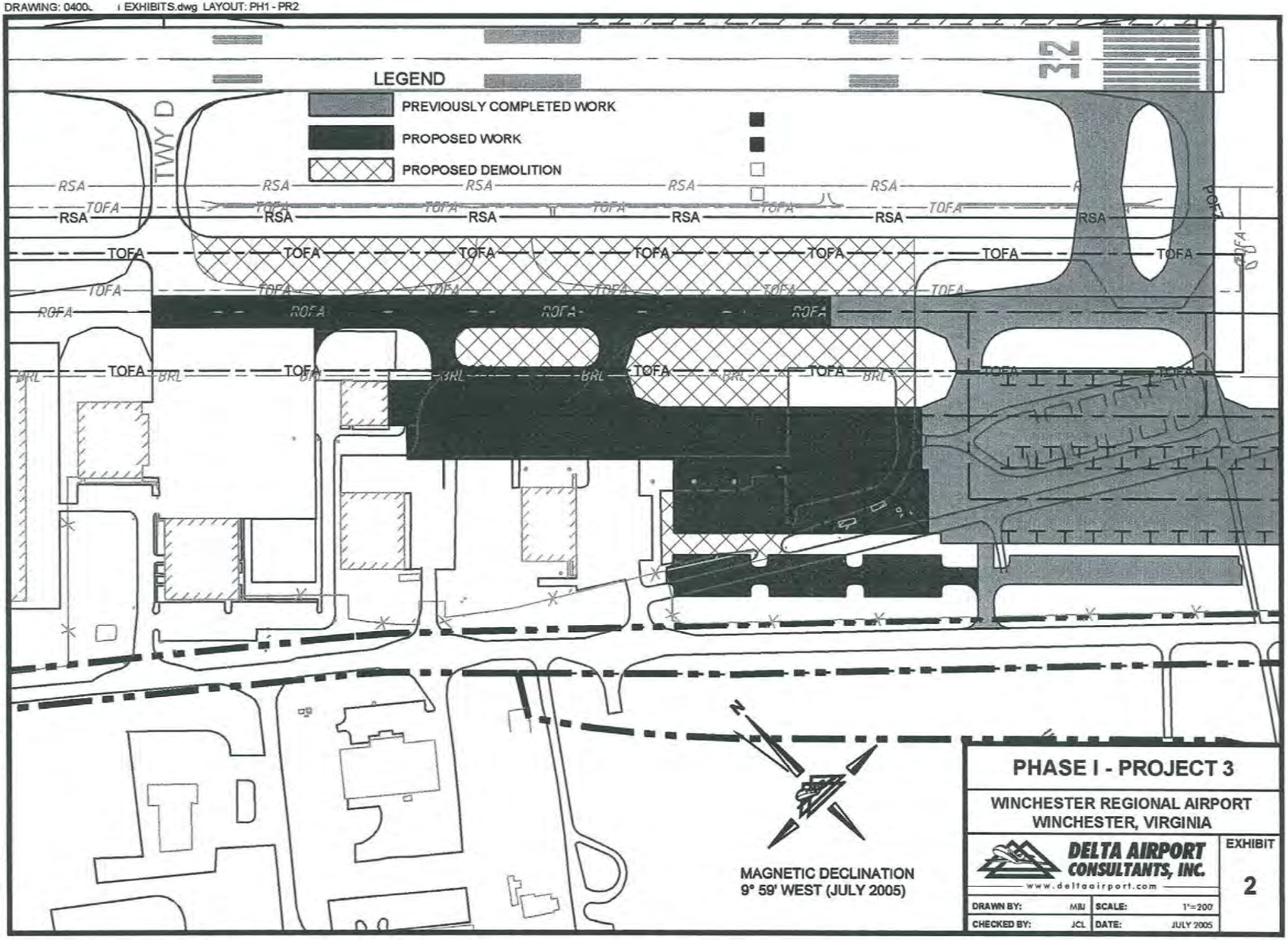
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$292,001.43	$292,001.43
2	P-152	UNCLASSIFIED EXCAVATION	CY	2477	$10.00	$24,770.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$57,884.70	$57,884.70
4	P-150	MISCELLANEOUS DEMOLITION	SY	16045	$30.00	$481,350.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	2308	$26.00	$60,008.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	22183	$26.00	$576,758.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	15127	$52.00	$786,604.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	0	$100.00	$0.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$397,474.94	$397,474.94
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$476,969.93	$476,969.93

CONSTRUCTION TOTALS:		$3,153,820.99
ENGINEERING FEES:		$252,305.68
CONSTRUCTION FEES:		$473,073.15
	TOTAL FEES:	$725,378.83
EST. TOTAL:		$3,900,000.00

DRAWING: 0400- ı EXHIBITS.dwg LAYOUT: PH1 - PR2



PHASE I - PROJECT 3

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 2

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
RELOCATE TAXIWAY A - PHASE II / CONSTRUCT AUTO PARKING / APRON EXPANSION - PHASE II
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 1 PROJECT 3

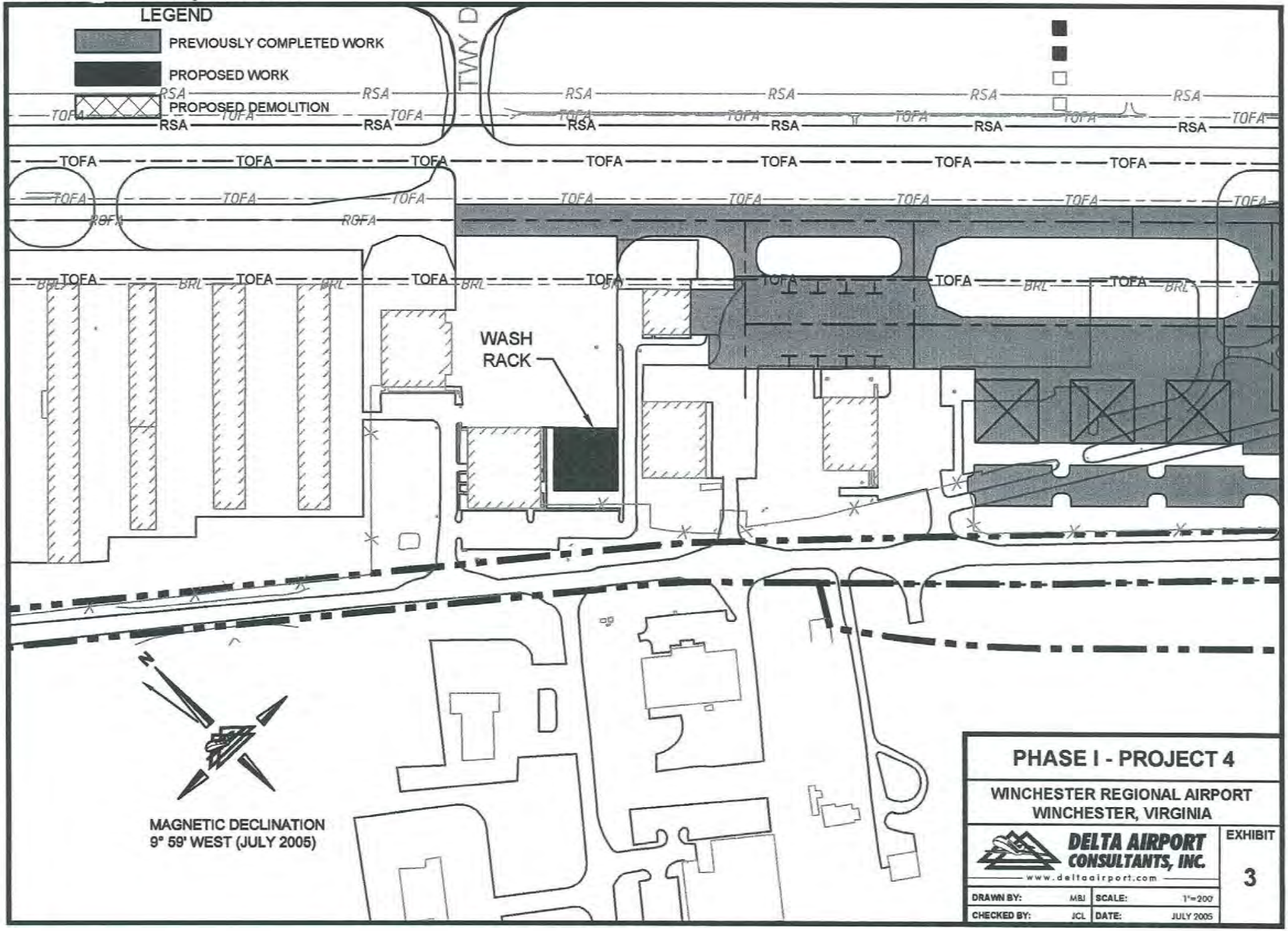
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$340,786.02	$340,786.02
2	P-152	UNCLASSIFIED EXCAVATION	CY	64452	$10.00	$644,520.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$75,752.70	$75,752.70
4	P-150	MISCELLANEOUS DEMOLITION	SY	21330	$30.00	$639,900.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	3021	$26.00	$78,546.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	15240	$26.00	$396,240.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	8317	$52.00	$432,484.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	3334	$100.00	$333,400.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$453,488.54	$453,488.54
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$610,866.25	$610,866.25

CONSTRUCTION TOTALS:		$4,005,983.51
ENGINEERING FEES:		$307,142.68
CONSTRUCTION FEES:		$600,897.53
	TOTAL FEES:	$908,040.21
EST. TOTAL:		$5,000,000.00

DRAWING: 040 -1 EXHIBITS.dwg LAYOUT: PH1 - PR3



PHASE I - PROJECT 4

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 3

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
WASH RACK
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 1 PROJECT 4

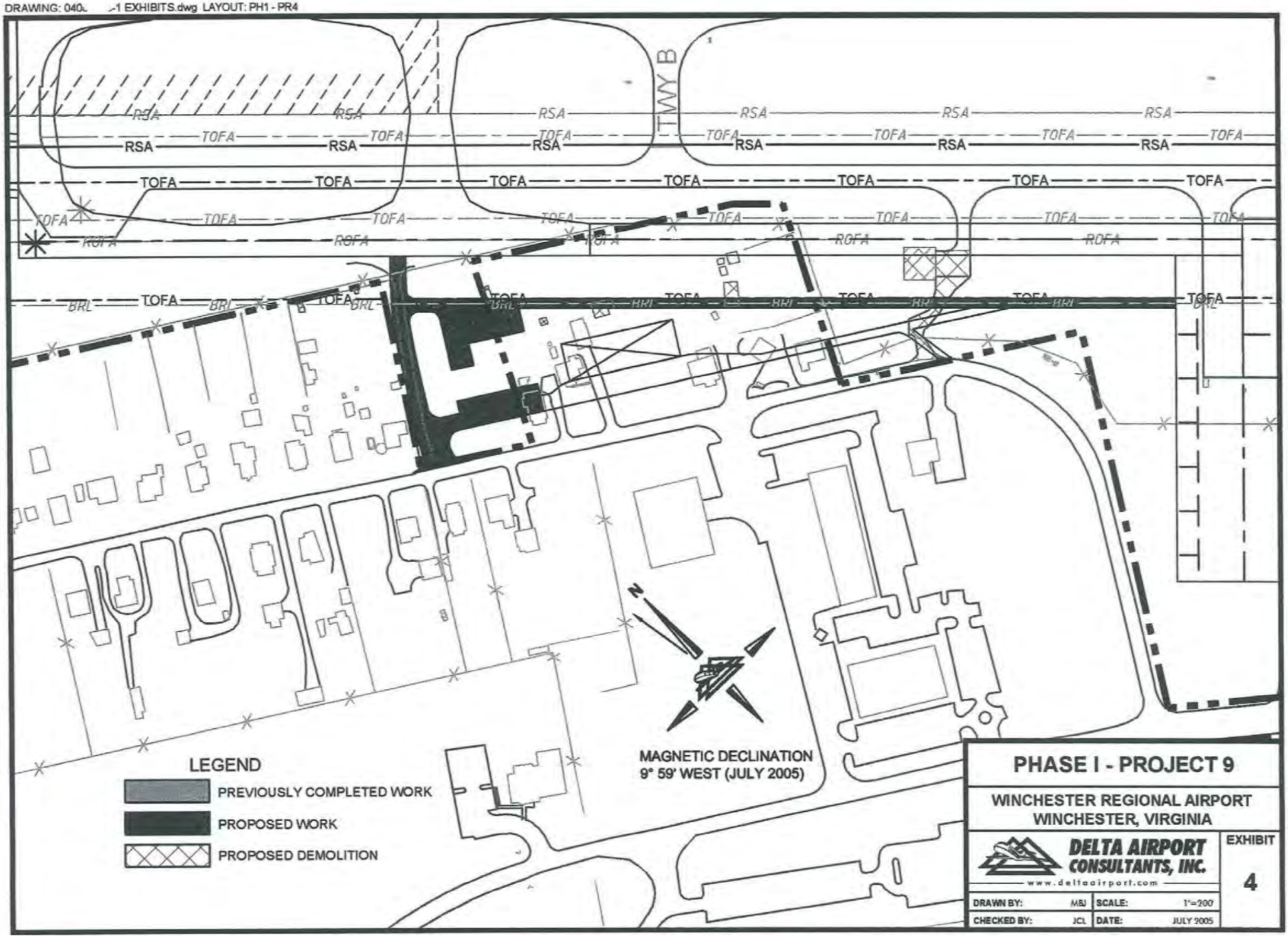
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$15,915.82	$15,915.82
2	P-152	UNCLASSIFIED EXCAVATION	CY	0	$10.00	$0.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$3,149.25	$3,149.25
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	1105	$95.00	$104,975.00
7		PARKING LOT PAVEMENT	SY	0	$26.00	$0.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	0	$52.00	$0.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	0	$100.00	$0.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$21,624.85	$21,624.85
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$25,949.82	$25,949.82

CONSTRUCTION TOTALS:		$171,614.74
ENGINEERING FEES:		$13,729.18
CONSTRUCTION FEES:		$25,742.21
	TOTAL FEES:	$39,471.39
EST. TOTAL:		$220,000.00

DRAWING: 040L -1 EXHIBITS.dwg LAYOUT: PH1 - PR4



PHASE I - PROJECT 9

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 4

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT MAINTENANCE FACILITY PHASE I AND SERVICE ROAD
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 1 PROJECT 9

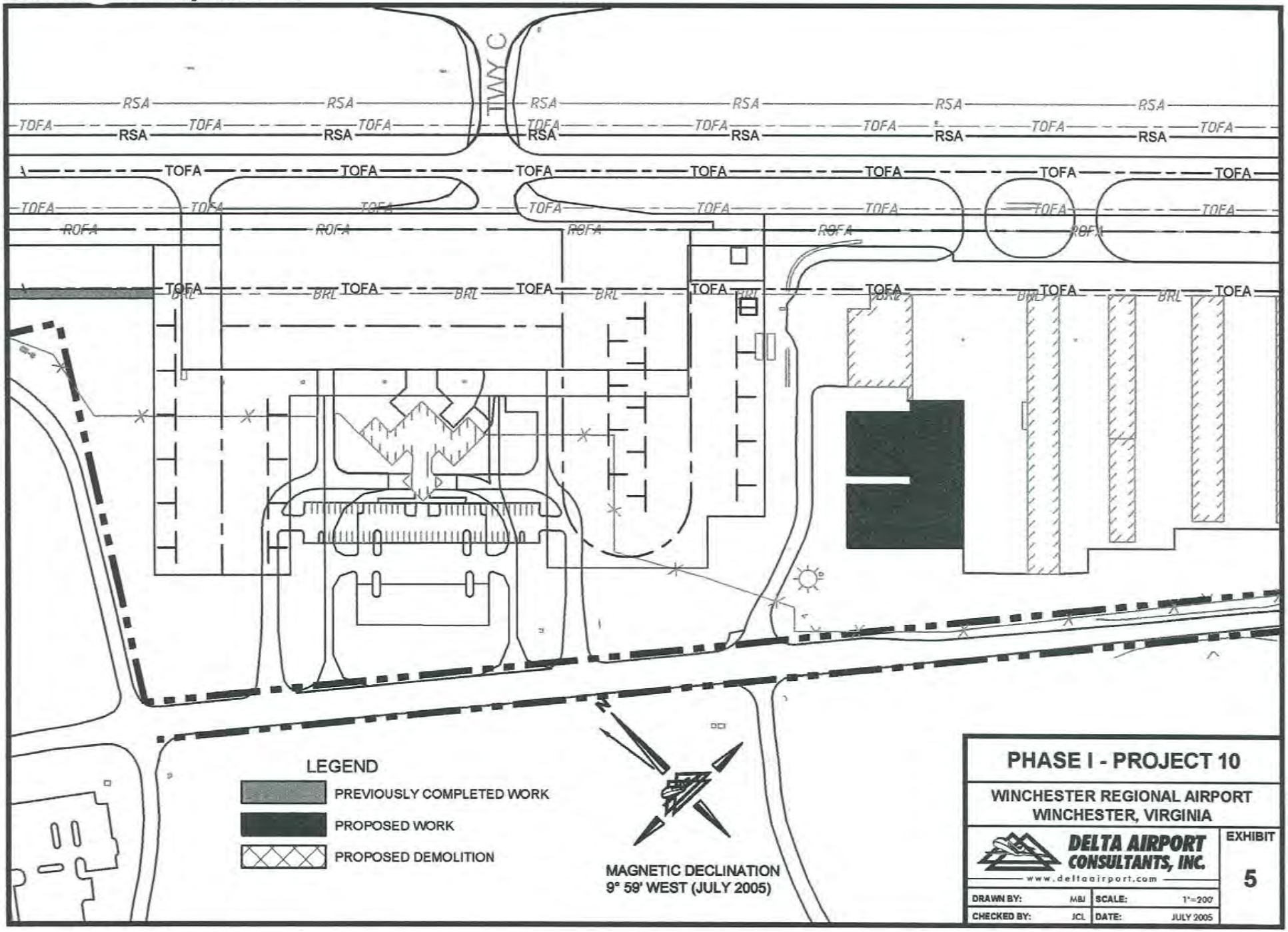
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$130,163.79	$130,163.79
2	P-152	UNCLASSIFIED EXCAVATION	CY	67853	$10.00	$678,530.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$28,872.48	$28,872.48
4	P-150	MISCELLANEOUS DEMOLITION	SY	1248	$30.00	$37,440.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	0	$26.00	$0.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	4671	$26.00	$121,446.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	0	$52.00	$0.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	1250	$100.00	$125,000.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$173,257.70	$173,257.70
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$232,909.24	$232,909.24

CONSTRUCTION TOTALS:		$1,527,619.20
ENGINEERING FEES:		$117,209.54
CONSTRUCTION FEES:		$229,142.88
	TOTAL FEES:	$346,352.42
EST. TOTAL:		$1,900,000.00

DRAWING: 040\ (EXHIBITS.dwg LAYOUT: PH1 - PR5



PHASE I - PROJECT 10

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 5

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT CORPORATE HANGARS
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 1 PROJECT 10

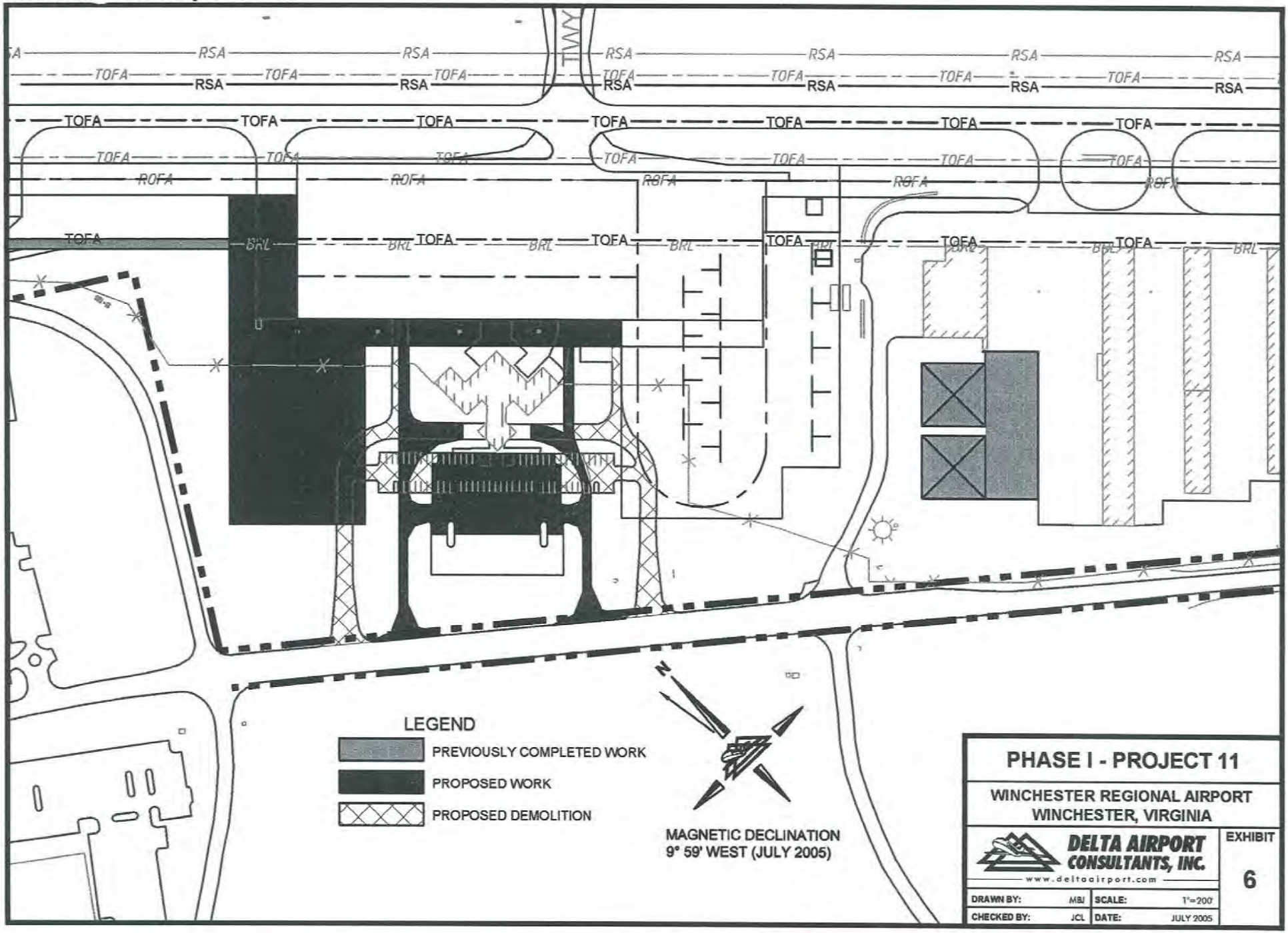
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$68,919.29	$68,919.29
2	P-152	UNCLASSIFIED EXCAVATION	CY	0	$10.00	$0.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$62,824.80	$62,824.80
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	0	$26.00	$0.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	2140	$44.00	$94,160.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	0	$52.00	$0.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	20000	$100.00	$2,000,000.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$31,396.96	$31,396.96
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$437,676.35	$437,676.35

CONSTRUCTION TOTALS:		$2,694,977.40
ENGINEERING FEES:		$135,598.19
CONSTRUCTION FEES (LIMITED):		$188,648.42
	TOTAL FEES:	$324,246.61
EST. TOTAL:		$3,100,000.00

DRAWING: 040\ 1 EXHIBITS.dwg LAYOUT: PH1 - PR6



PHASE I - PROJECT 11

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 6

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
TRANSIENT APRON EXPANSION - PHASE I
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 1 PROJECT 11

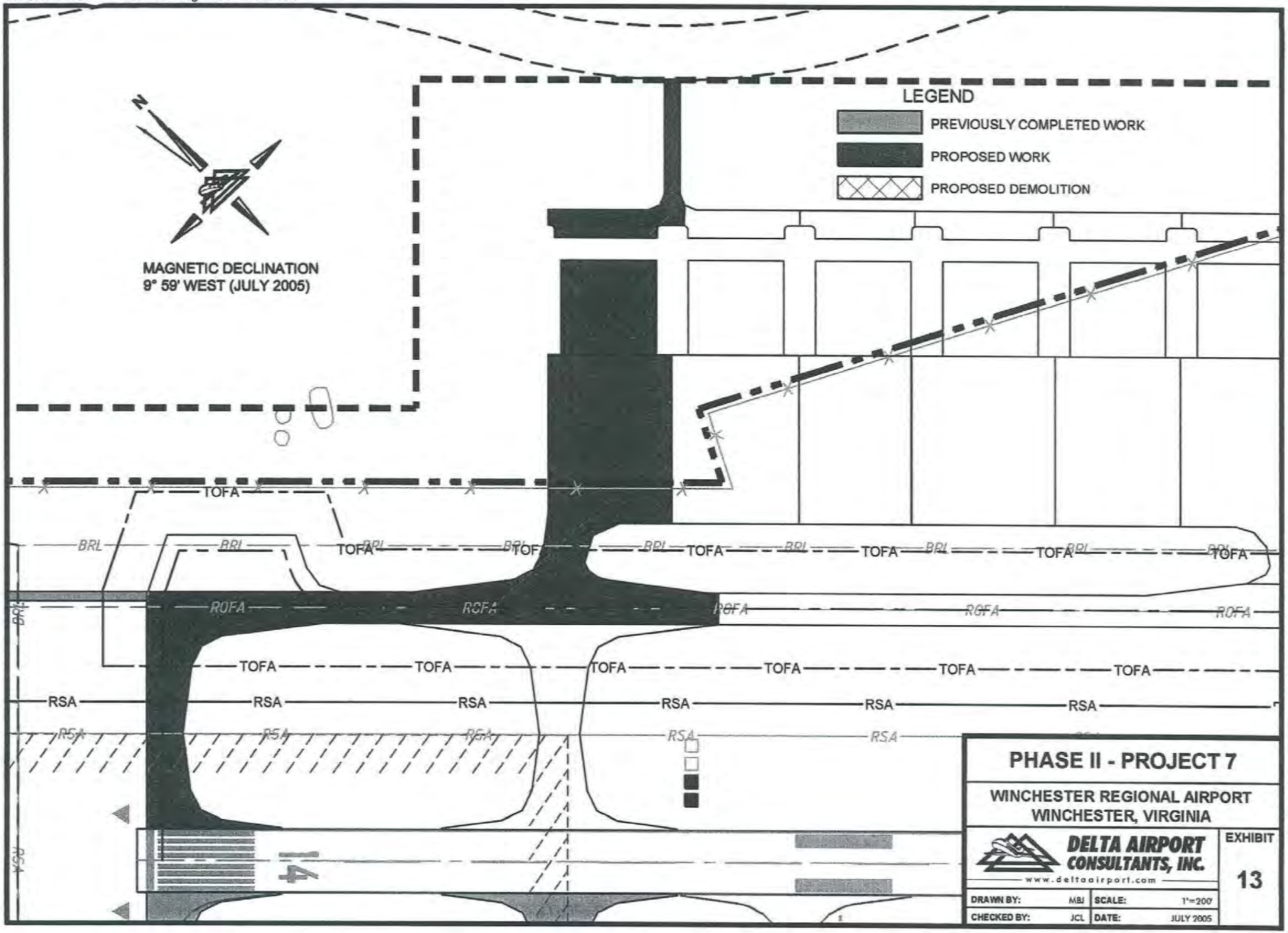
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$177,118.98	$177,118.98
2	P-152	UNCLASSIFIED EXCAVATION	CY	60000	$10.00	$600,000.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$35,108.64	$35,108.64
4	P-150	MISCELLANEOUS DEMOLITION	SY	4096	$30.00	$122,880.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	5392	$26.00	$140,192.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	11816	$26.00	$307,216.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	0	$52.00	$0.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	0	$100.00	$0.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$241,079.33	$241,079.33
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$289,295.19	$289,295.19

CONSTRUCTION TOTALS:		$1,912,890.14
ENGINEERING FEES:		$153,031.21
CONSTRUCTION FEES:		$286,933.52
	TOTAL FEES:	$439,964.73
EST. TOTAL:		$2,400,000.00

DRAWING: 04L -1 EXHIBITS.dwg LAYOUT: PH2 - PR7



J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT TAXIWAY F - PHASE I AND CORPORATE HANGARS WITH AUTO PARKING / ACCESS ROAD - PHASE I
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 2 PROJECT 7

PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

AIP ELIGIBLE

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$97,559.77	$97,559.77
2	P-152	UNCLASSIFIED EXCAVATION	CY	15000	$10.00	$150,000.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$19,335.60	$19,335.60
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	0	$26.00	$0.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	9510	$52.00	$494,520.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	0	$100.00	$0.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$132,771.12	$132,771.12
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$159,325.34	$159,325.34

CONSTRUCTION TOTALS:		$1,053,511.83
ENGINEERING FEES:		$84,280.95
CONSTRUCTION FEES:		$158,026.77
	TOTAL FEES:	$242,307.72
EST. TOTAL:		$1,300,000.00

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT TAXIWAY F - PHASE I AND CORPORATE HANGARS WITH AUTO PARKING / ACCESS ROAD - PHASE I
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 2 PROJECT 7

PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

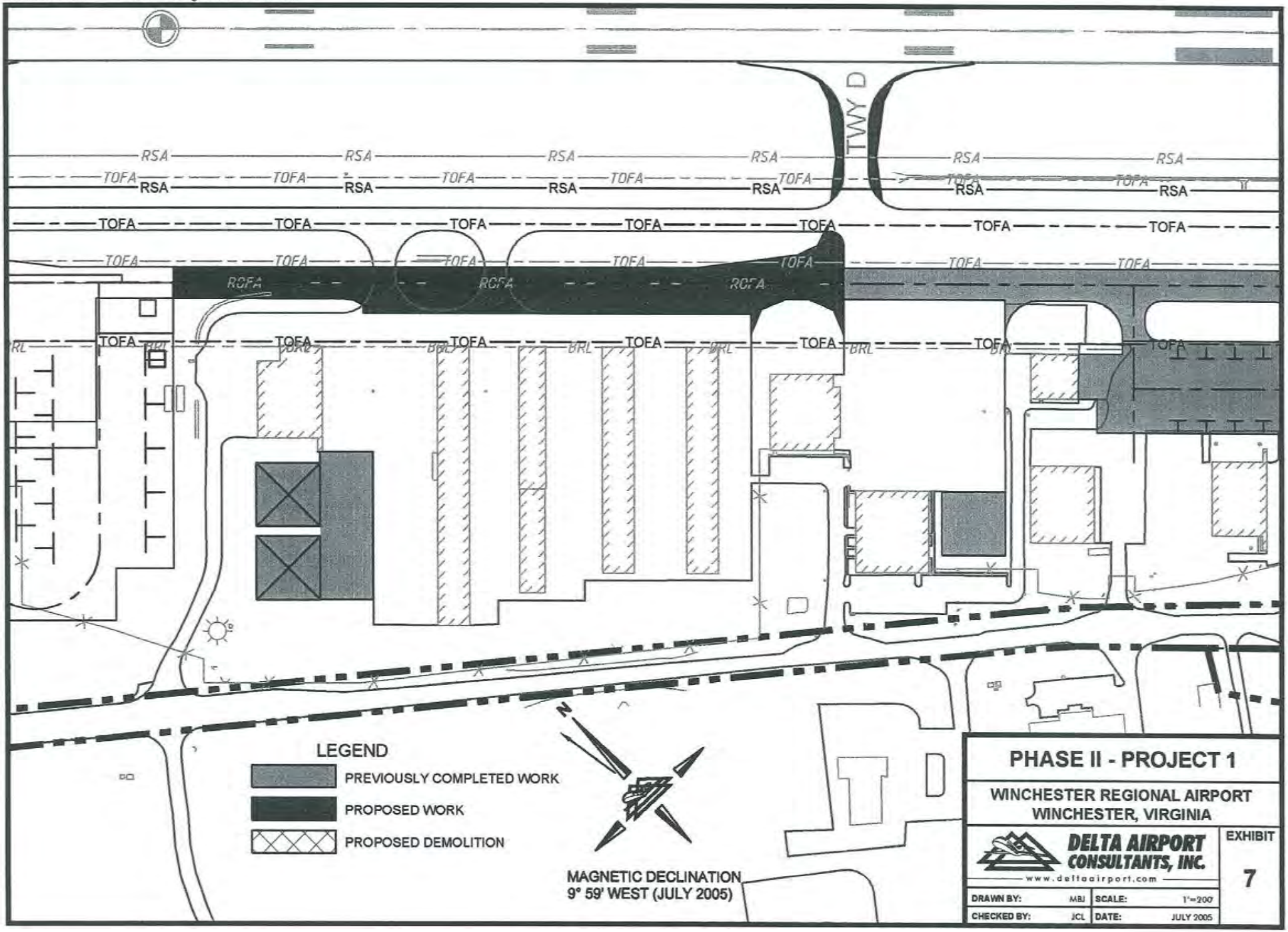
DELTA PROJ. NO. VA 04005

NON-AIP ELIGIBLE

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$128,493.09	$128,493.09
2	P-152	UNCLASSIFIED EXCAVATION	CY	14914	$10.00	$149,140.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$80,781.54	$80,781.54
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	1559	$26.00	$40,534.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	5751	$44.00	$253,044.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY		$52.00	$0.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	22500	$100.00	$2,250,000.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$104,699.91	$104,699.91
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$575,639.89	$575,639.89

CONSTRUCTION TOTALS:		$3,582,332.43
ENGINEERING FEES:		$196,586.59
CONSTRUCTION FEES:		$537,349.86
	TOTAL FEES:	$733,936.46
EST. TOTAL:		$4,400,000.00

DRAWING: 040\ 1 EXHIBITS.dwg LAYOUT: PH2 - PR1



PHASE II - PROJECT 1

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 7

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
RELOCATE TAXIWAY A - PHASE III AND CONSTRUCT TAXIWAY D SHOULDERS
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 2 PROJECT 1

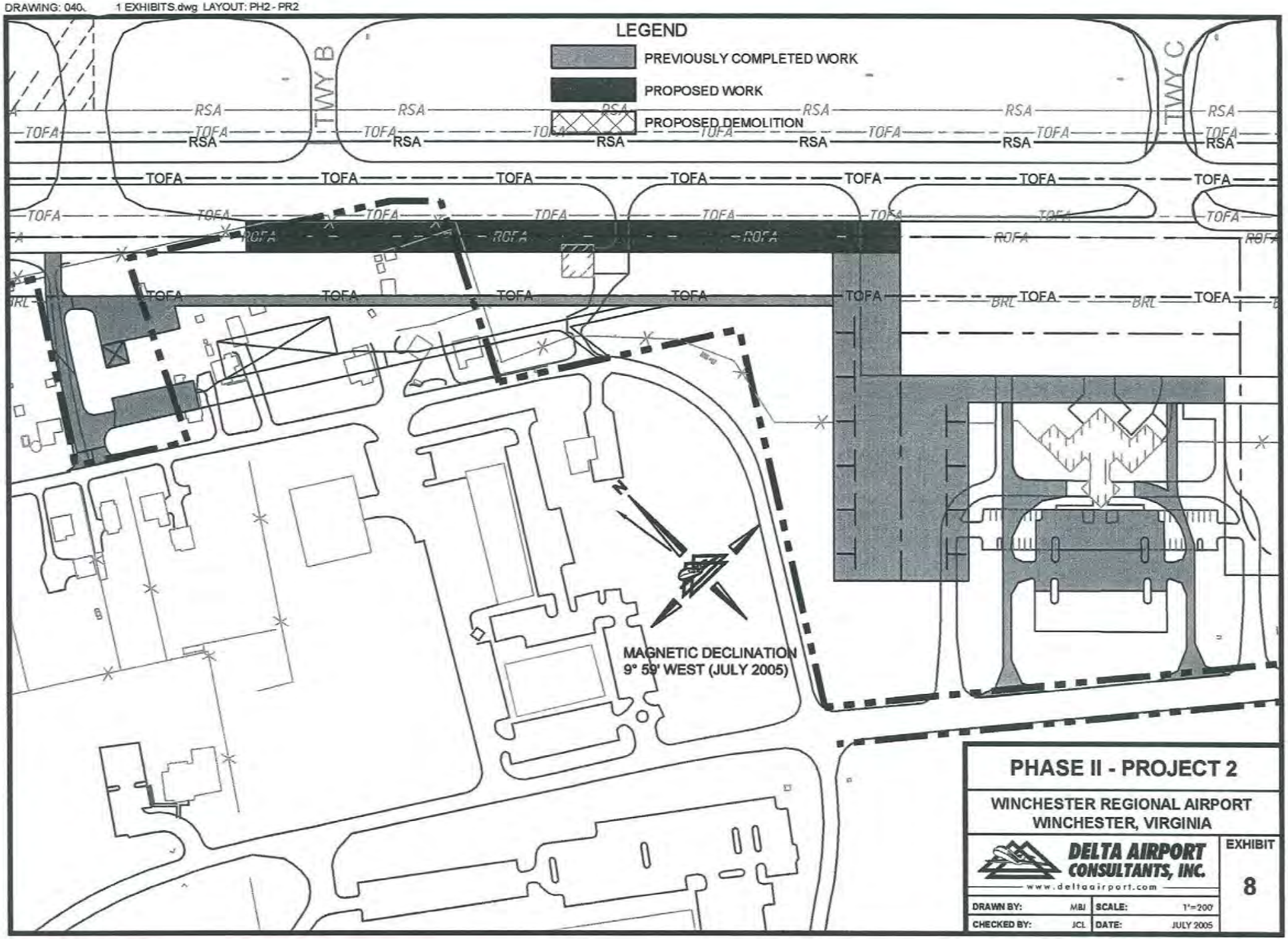
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$85,810.98	$85,810.98
2	P-152	UNCLASSIFIED EXCAVATION	CY	11297	$10.00	$112,970.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$17,006.34	$17,006.34
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	0	$26.00	$0.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	8729	$52.00	$453,908.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	0	$100.00	$0.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$116,776.87	$116,776.87
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$140,132.24	$140,132.24

CONSTRUCTION TOTALS:		$926,604.43
ENGINEERING FEES:		$74,128.35
CONSTRUCTION FEES:		$138,990.66
	TOTAL FEES:	$213,119.02
EST. TOTAL:		$1,140,000.00

DRAWING: 040. 1 EXHIBITS.dwg LAYOUT: PH2 - PR2



PHASE II - PROJECT 2

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 8

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
RELOCATE TAXIWAY A - PHASE IV
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 2 PROJECT 2

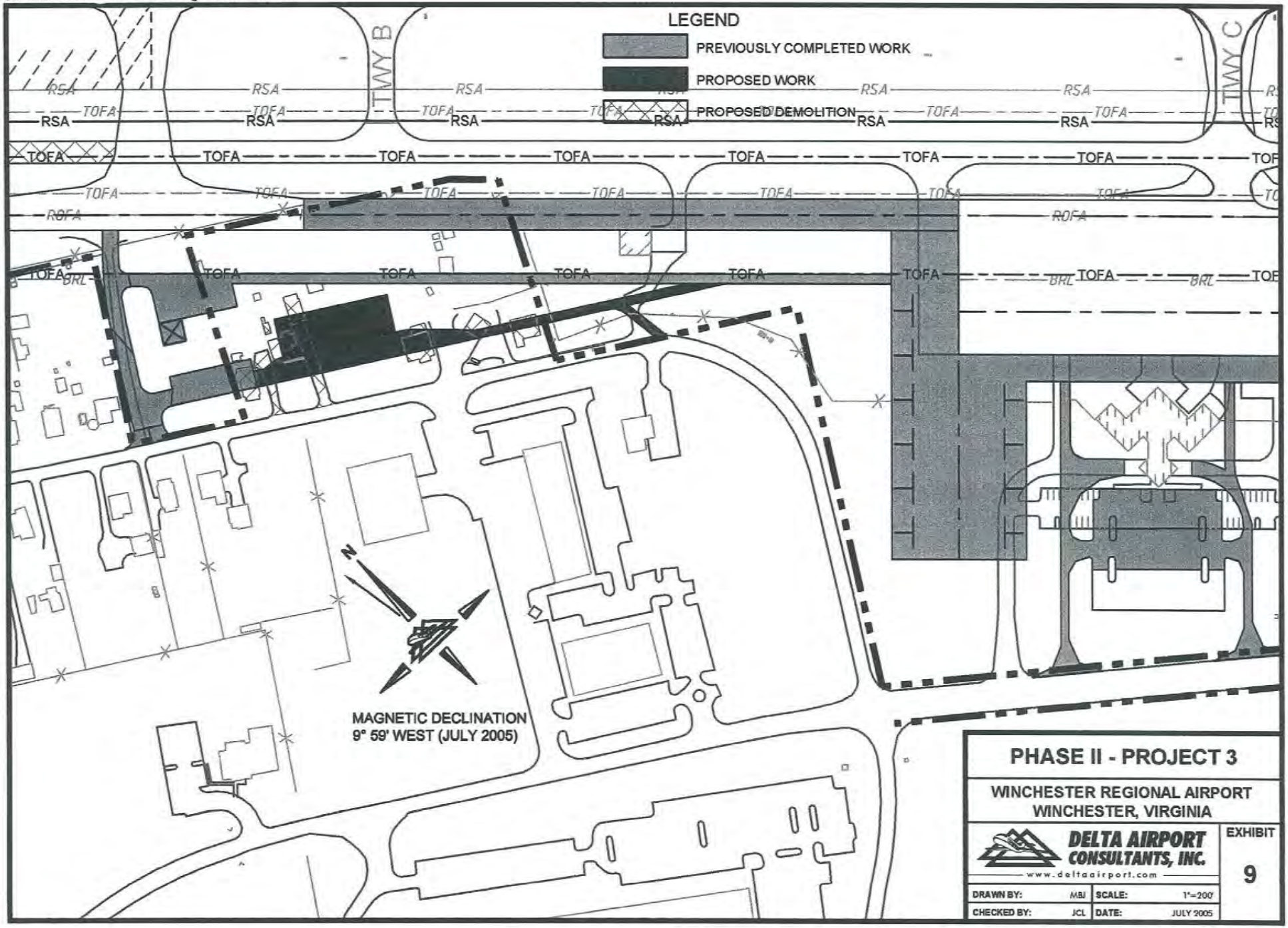
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$63,190.15	$63,190.15
2	P-152	UNCLASSIFIED EXCAVATION	CY	12000	$10.00	$120,000.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$12,521.64	$12,521.64
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	0	$26.00	$0.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	5719	$52.00	$297,388.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	0	$100.00	$0.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$85,981.93	$85,981.93
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$103,178.31	$103,178.31

CONSTRUCTION TOTALS:		$682,260.03
ENGINEERING FEES:		$54,580.80
CONSTRUCTION FEES:		$102,339.01
	TOTAL FEES:	$156,919.81
EST. TOTAL:		$900,000.00

DRAWING: 040L I EXHIBITS.dwg LAYOUT: PH2 - PR3



PHASE II - PROJECT 3

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 9

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
RELOCATE/EXPAND FUEL FARM
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 2 PROJECT 3

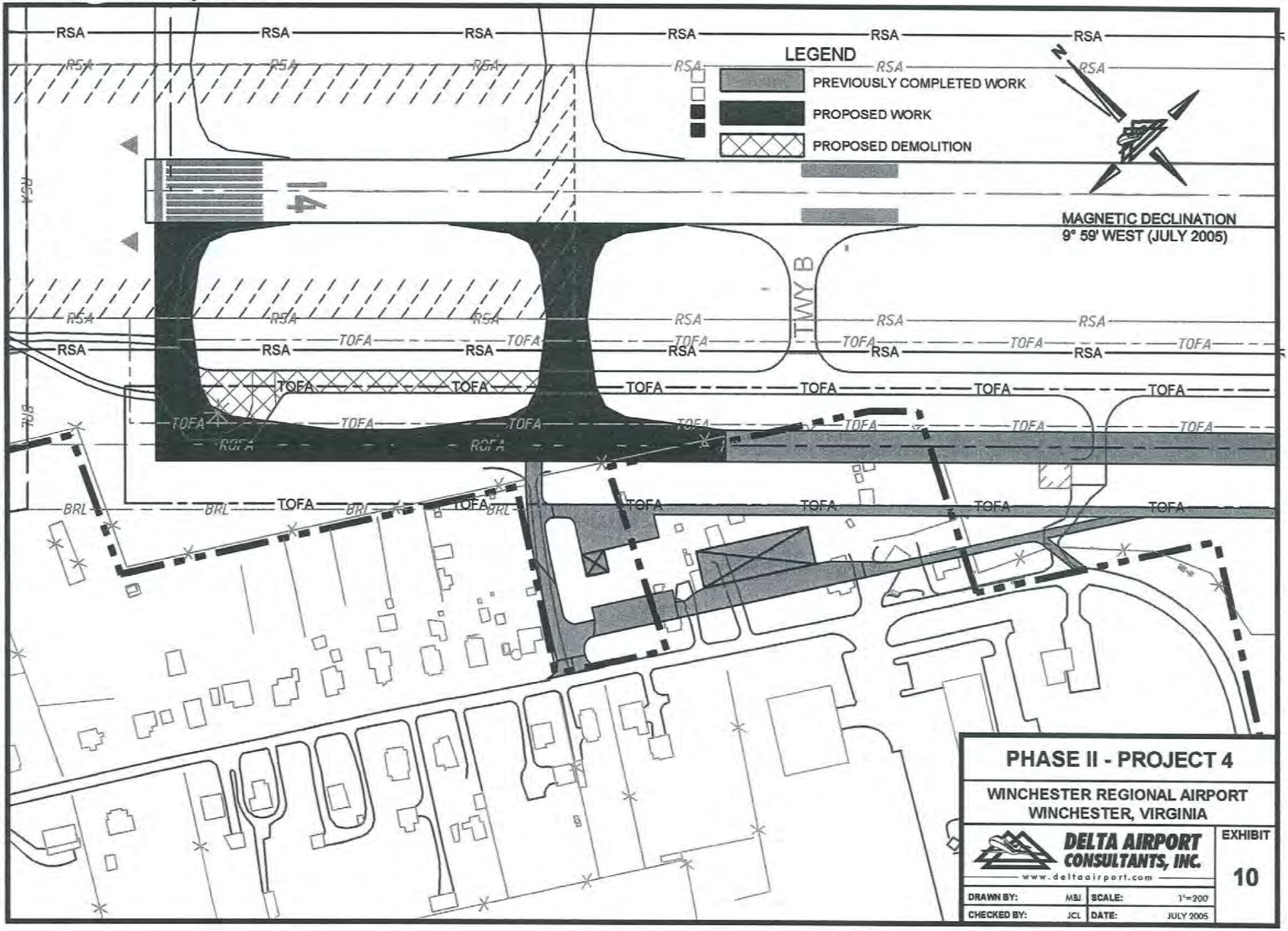
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$63,526.99	$63,526.99
2	P-152	UNCLASSIFIED EXCAVATION	CY	0	$10.00	$0.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$12,588.42	$12,588.42
4	P-150	MISCELLANEOUS DEMOLITION	SY	1453	$30.00	$43,590.00
5	R-502	CONCRETE CURB AND GUTTER	LF	480	$25.00	$12,000.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	1200	$95.00	$114,000.00
7		PARKING LOT PAVEMENT	SY	0	$26.00	$0.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	1924	$26.00	$50,024.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	0	$52.00	$0.00
11	M-121	FUEL STORAGE TANKS	GAL	100000	$2.00	$200,000.00
12	M-108	BUILDING CONSTRUCTION	SF	0	$100.00	$0.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$86,440.48	$86,440.48
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$103,728.58	$103,728.58

CONSTRUCTION TOTALS:		$685,898.48
ENGINEERING FEES:		$54,871.88
CONSTRUCTION FEES:		$102,884.77
	TOTAL FEES:	$157,756.65
EST. TOTAL:		$850,000.00

DRAWING: 04L -1 EXHIBITS.dwg LAYOUT: PH2 - PR4



PHASE II - PROJECT 4

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT
10

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
RELOCATE TAXIWAY A - PHASE V
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 2 PROJECT 4

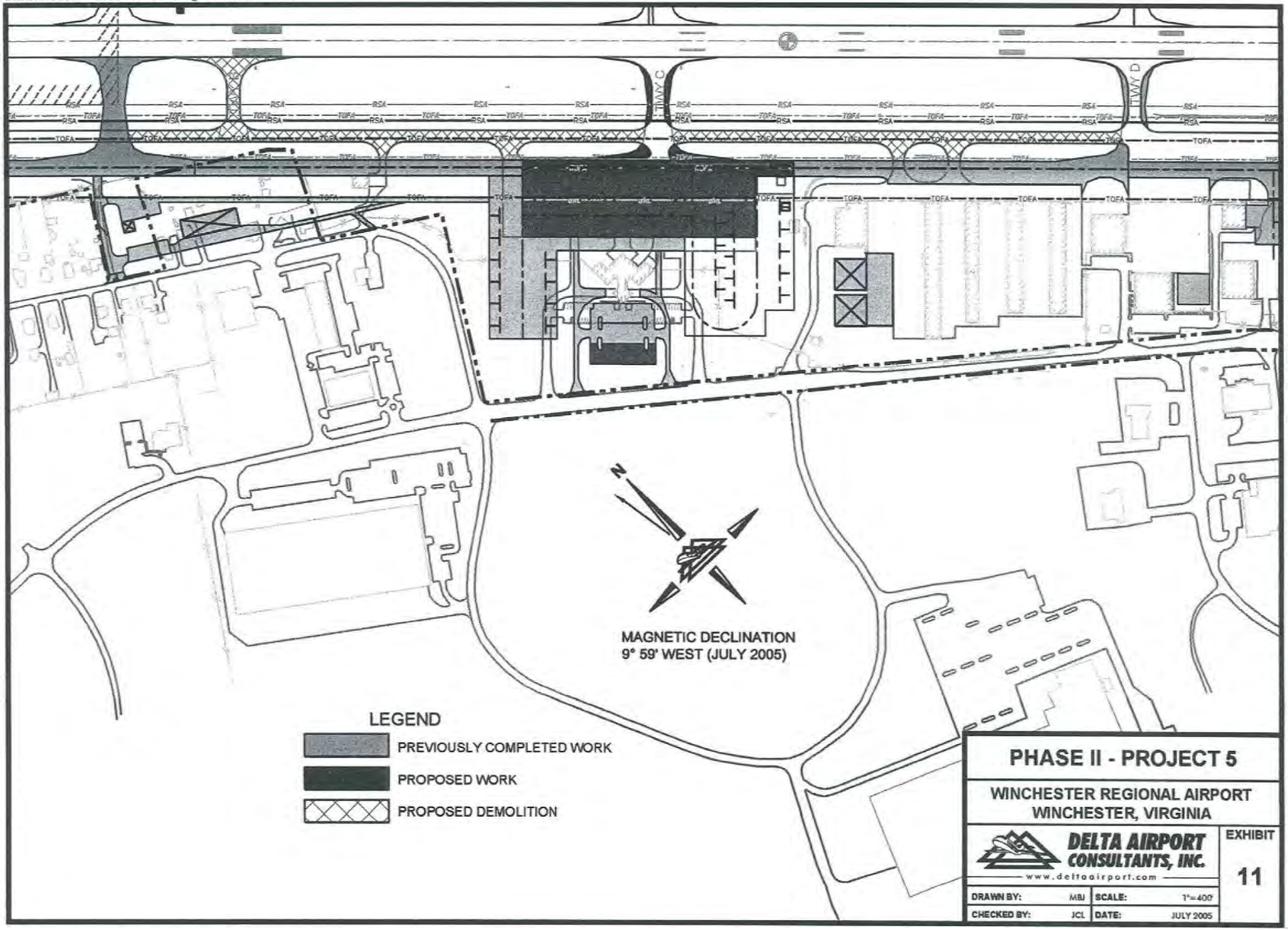
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$171,565.54	$171,565.54
2	P-152	UNCLASSIFIED EXCAVATION	CY	38539	$10.00	$385,390.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$34,007.64	$34,007.64
4	P-150	MISCELLANEOUS DEMOLITION	SY	3899	$30.00	$116,970.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	0	$26.00	$0.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	12139	$52.00	$631,228.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	0	$100.00	$0.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$233,519.13	$233,519.13
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$280,222.95	$280,222.95

CONSTRUCTION TOTALS:		$1,852,903.26
ENGINEERING FEES:		$148,232.26
CONSTRUCTION FEES:		$277,935.49
	TOTAL FEES:	$426,167.75
EST. TOTAL:		$2,300,000.00

DRAWING: 040L -1 EXHIBITS.dwg LAYOUT: PH2 - PR5



PHASE II - PROJECT 5

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 11

DRAWN BY:	MBJ	SCALE:	1"=400'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
RELOCATE TAXIWAY A - PHASE VI AND CONSTRUCT AUTO PARKING EXPANSION AND TAXIWAY C SHOULDERS
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 2 PROJECT 5

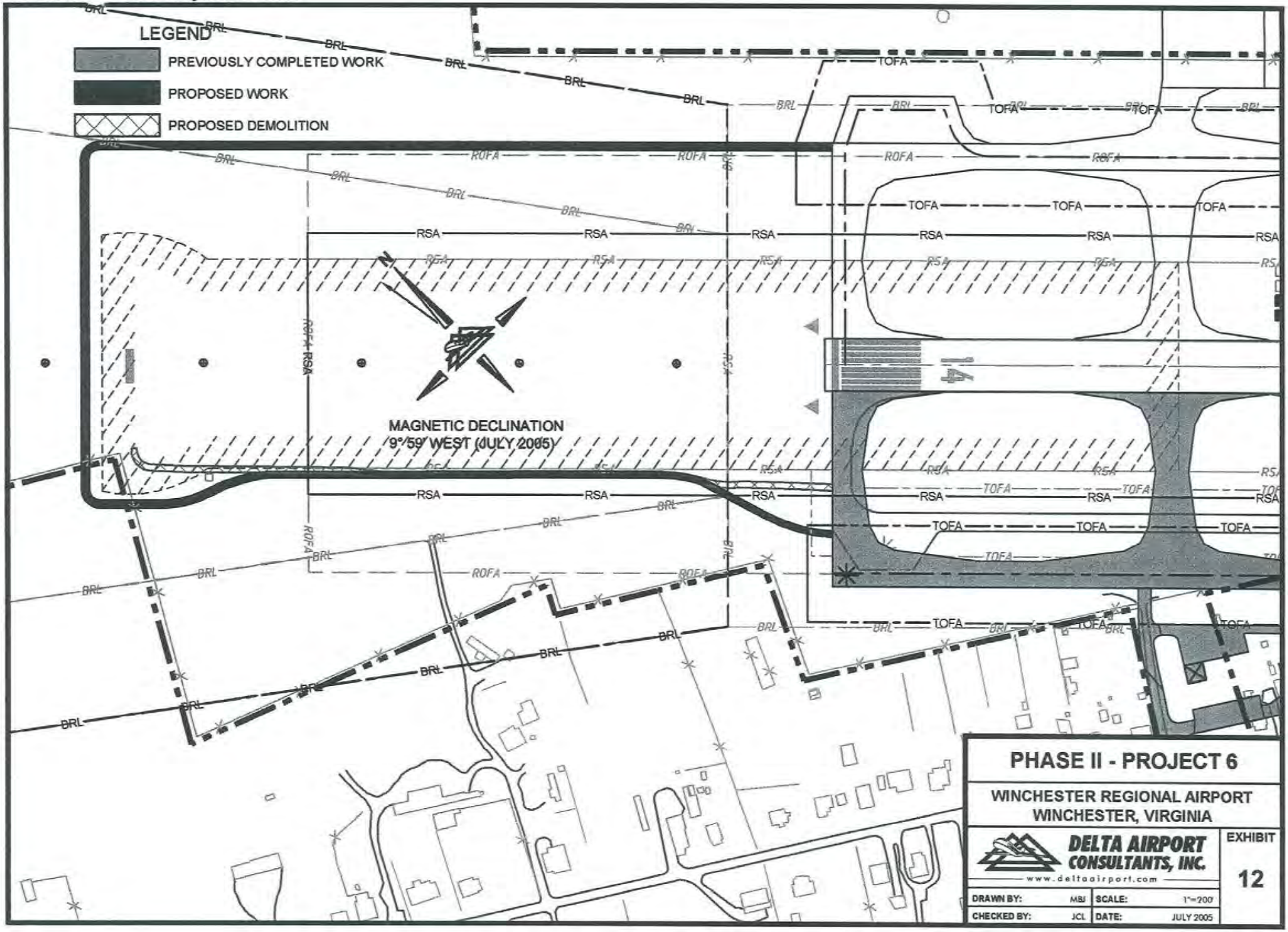
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$266,977.94	$266,977.94
2	P-152	UNCLASSIFIED EXCAVATION	CY	12963	$10.00	$129,630.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$52,923.66	$52,923.66
4	P-150	MISCELLANEOUS DEMOLITION	SY	15373	$30.00	$461,190.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	1443	$26.00	$37,518.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	21842	$52.00	$1,135,784.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	0	$100.00	$0.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$363,409.13	$363,409.13
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$436,090.96	$436,090.96

CONSTRUCTION TOTALS:		$2,883,523.69
ENGINEERING FEES:		$230,681.90
CONSTRUCTION FEES:		$432,528.55
	TOTAL FEES:	$663,210.45
EST. TOTAL:		$3,600,000.00

DRAWING: 04L -1 EXHIBITS.dwg LAYOUT: PH2 - PR6



PHASE II - PROJECT 6

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 12

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT SERVICE ROAD
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 2 PROJECT 6

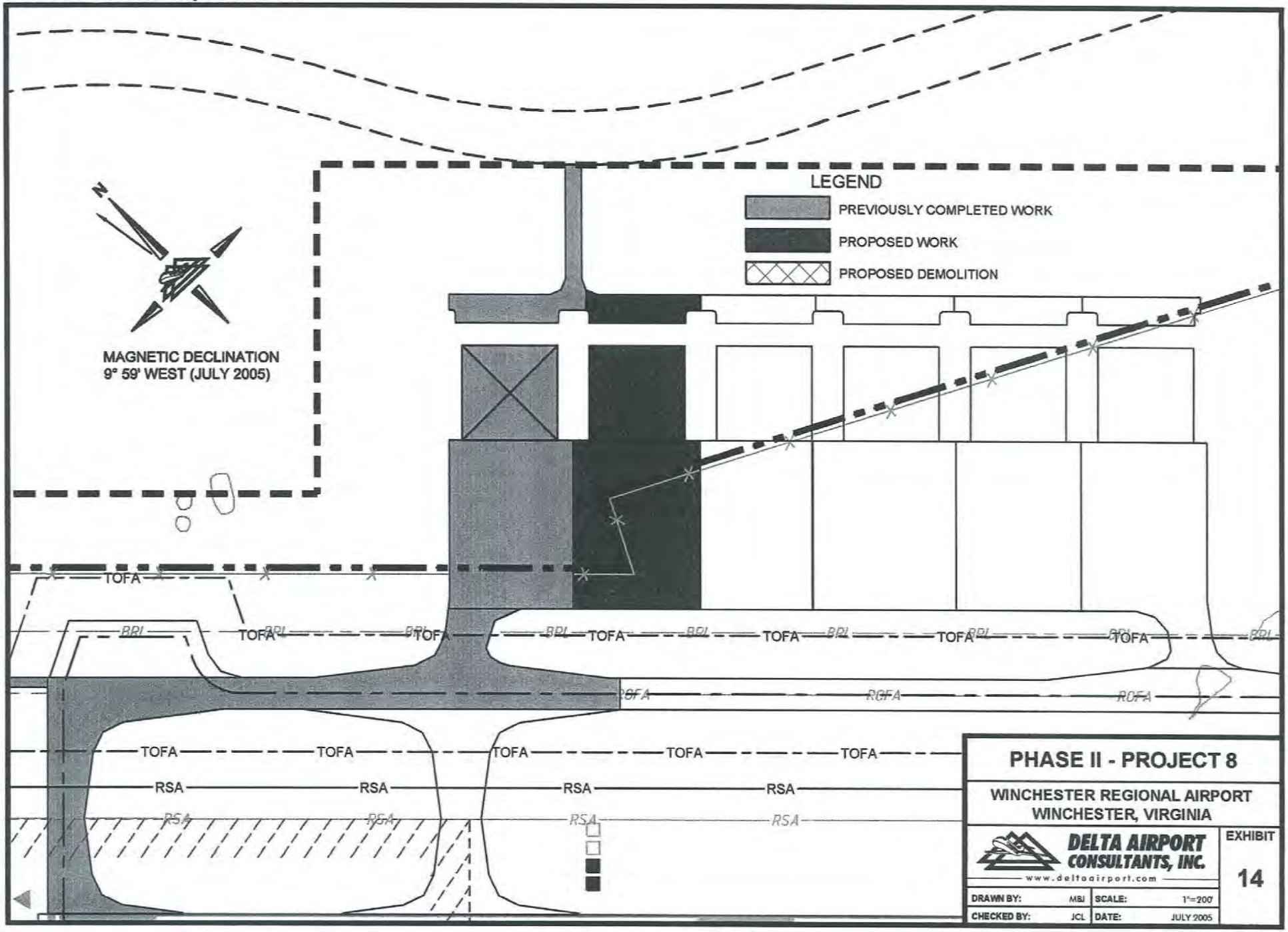
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$25,568.67	$25,568.67
2	P-152	UNCLASSIFIED EXCAVATION	CY	0	$10.00	$0.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$5,062.98	$5,062.98
4	P-150	MISCELLANEOUS DEMOLITION	SY	832	$30.00	$24,960.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	0	$26.00	$0.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	5531	$26.00	$143,806.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	0	$52.00	$0.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	0	$100.00	$0.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$34,765.80	$34,765.80
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$41,718.96	$41,718.96

CONSTRUCTION TOTALS:		$275,882.40
ENGINEERING FEES:		$22,070.59
CONSTRUCTION FEES:		$41,382.36
	TOTAL FEES:	$63,452.95
EST. TOTAL:		$340,000.00

DRAWING: 04C -1 EXHIBITS.dwg LAYOUT: PH2 - PR8



PHASE II - PROJECT 8

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 14

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT CORPORATE HANGARS WITH AUTO PARKING - PHASE II
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 2 PROJECT 8

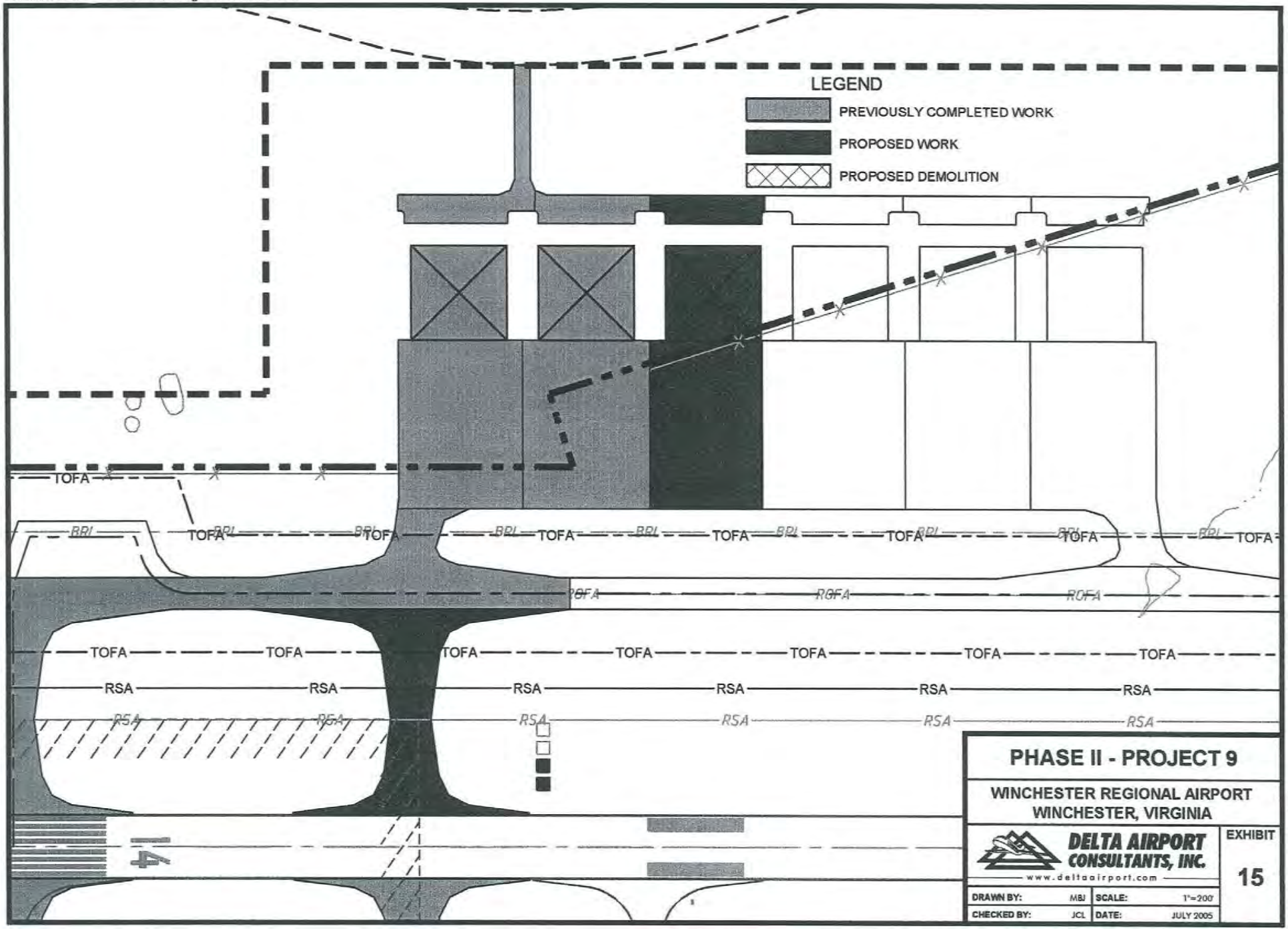
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$139,326.39	$139,326.39
2	P-152	UNCLASSIFIED EXCAVATION	CY	23224	$10.00	$232,240.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$82,929.30	$82,929.30
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	849	$26.00	$22,074.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	5909	$44.00	$259,996.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	0	$52.00	$0.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	22500	$100.00	$2,250,000.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$119,447.86	$119,447.86
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$593,337.43	$593,337.43

CONSTRUCTION TOTALS:		$3,699,350.98
ENGINEERING FEES:		$205,948.08
CONSTRUCTION FEES:		$554,902.65
	TOTAL FEES:	$760,850.73
EST. TOTAL:		$4,500,000.00

DRAWING: 04. ...-1 EXHIBITS.dwg LAYOUT: PH2 - PR9



PHASE II - PROJECT 9

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 15

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT TAXIWAY B AND CORPORATE HANGARS WITH AUTO PARKING - PHASE III
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 2 PROJECT 9

PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

AIP ELIGIBLE

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$56,884.65	$56,884.65
2	P-152	UNCLASSIFIED EXCAVATION	CY	15893	$10.00	$158,930.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$11,271.54	$11,271.54
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	0	$26.00	$0.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	4169	$52.00	$216,788.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	0	$100.00	$0.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$77,397.91	$77,397.91
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$92,877.49	$92,877.49

CONSTRUCTION TOTALS:		$614,149.59
ENGINEERING FEES:		$49,131.97
CONSTRUCTION FEES:		$92,122.44
	TOTAL FEES:	$141,254.40
EST. TOTAL:		$800,000.00

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT TAXIWAY B AND CORPORATE HANGARS WITH AUTO PARKING - PHASE III
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 2 PROJECT 9

PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

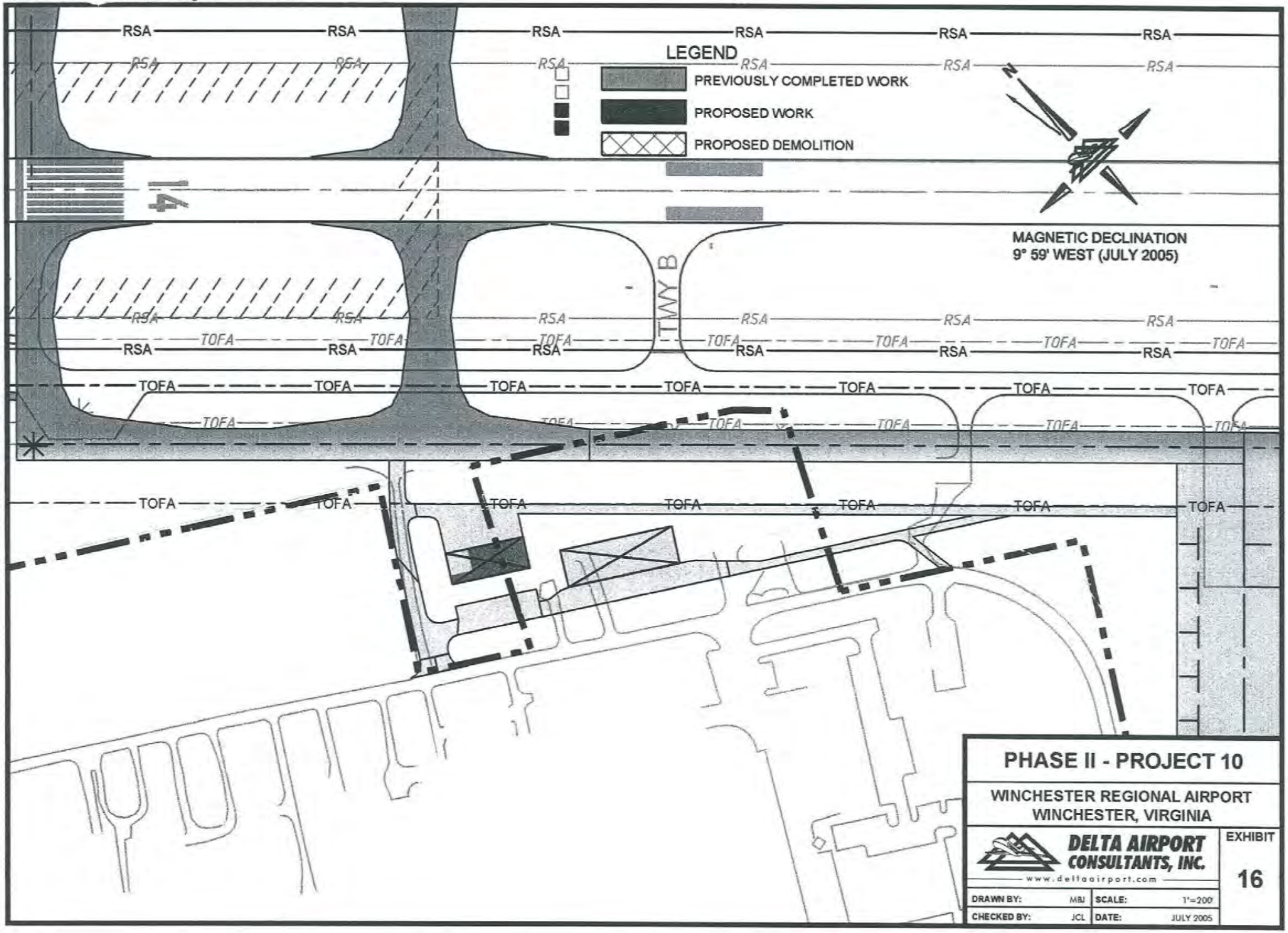
DELTA PROJ. NO. VA 04005

NON-AIP ELIGIBLE

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$145,064.75	$145,064.75
2	P-152	UNCLASSIFIED EXCAVATION	CY	30000	$10.00	$300,000.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$84,066.96	$84,066.96
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	842	$26.00	$21,892.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	5235	$44.00	$230,340.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	0	$52.00	$0.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	22500	$100.00	$2,250,000.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$127,259.79	$127,259.79
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$602,711.75	$602,711.75

CONSTRUCTION TOTALS:		$3,761,335.25
ENGINEERING FEES:		$210,906.82
CONSTRUCTION FEES:		$564,200.29
	TOTAL FEES:	$775,107.11
EST. TOTAL:		$4,600,000.00

DRAWING: 04C 1 EXHIBITS.dwg LAYOUT: PH2 - PR10



PHASE II - PROJECT 10

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 16

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

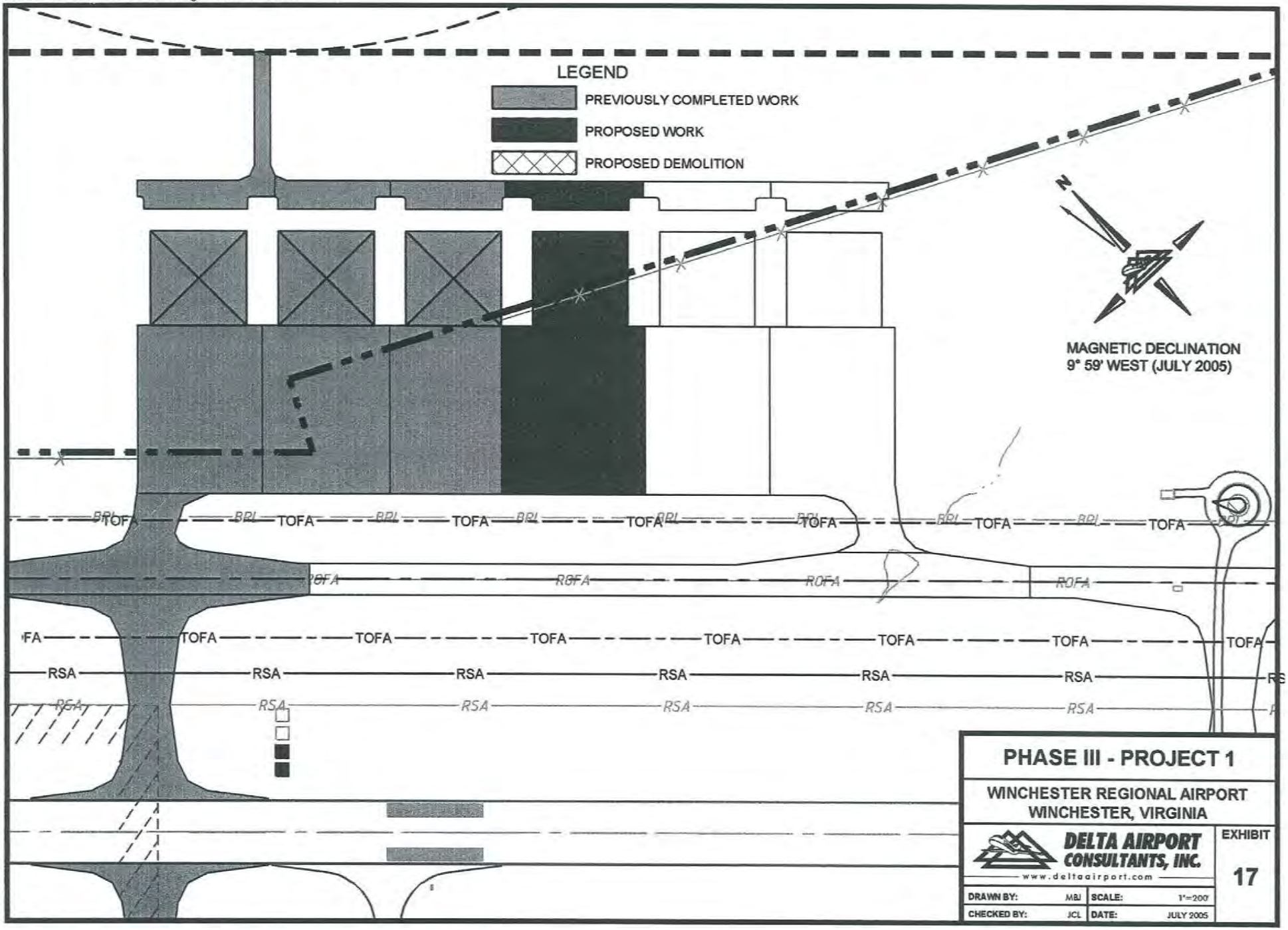
ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT MAINTENANCE FACILITY PHASE II
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 2 PROJECT 10

PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$13,691.00	$13,691.00
2	P-152	UNCLASSIFIED EXCAVATION	CY	0	$10.00	$0.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$15,000.00	$15,000.00
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	0	$26.00	$0.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	0	$52.00	$0.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	5000	$100.00	$500,000.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$3,000.00	$3,000.00
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$103,600.00	$103,600.00
CONSTRUCTION TOTALS:						$635,291.00
ENGINEERING FEES:						$30,823.28
CONSTRUCTION FEES:						$95,293.65
				TOTAL FEES:		$126,116.93
EST. TOTAL:						$800,000.00

DRAWING: 04L -1 EXHIBITS.dwg LAYOUT: PH3 - PR1



PHASE III - PROJECT 1

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT
17

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT CORPORATE HANGARS WITH AUTO PARKING - PHASE IV
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 3 PROJECT 1

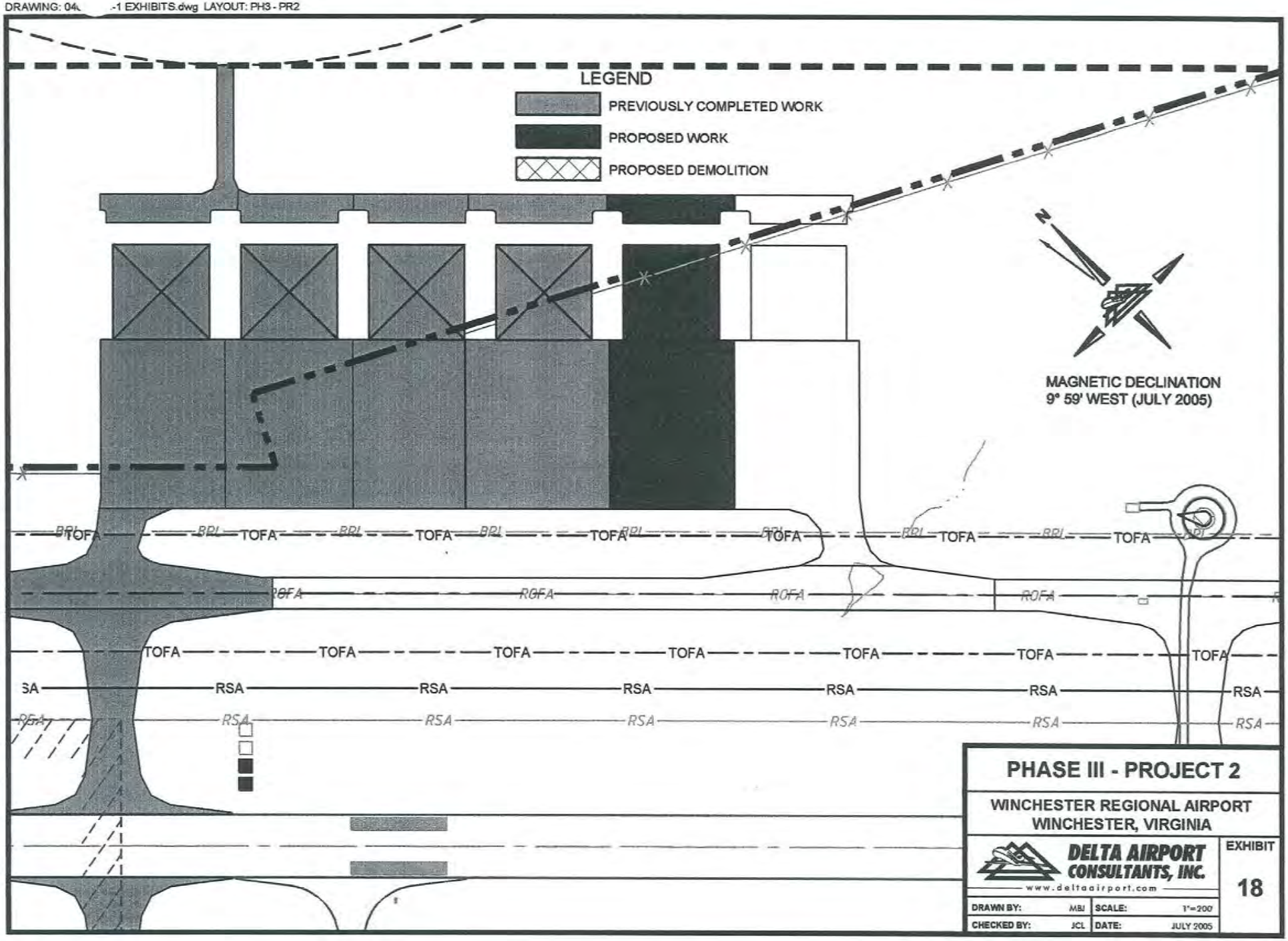
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$148,129.88	$148,129.88
2	P-152	UNCLASSIFIED EXCAVATION	CY	25310	$10.00	$253,100.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$84,674.64	$84,674.64
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	944	$26.00	$24,544.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	6701	$44.00	$294,844.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	0	$52.00	$0.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	22500	$100.00	$2,250,000.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$131,432.53	$131,432.53
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$607,719.03	$607,719.03

CONSTRUCTION TOTALS:		$3,794,444.09
ENGINEERING FEES:		$213,555.53
CONSTRUCTION FEES:		$569,166.61
	TOTAL FEES:	$782,722.14
EST. TOTAL:		$4,600,000.00

DRAWING: 04\ -1 EXHIBITS.dwg LAYOUT: PH3 - PR2



PHASE III - PROJECT 2

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 18

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT CORPORATE HANGARS WITH AUTO PARKING - PHASE V
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 3 PROJECT 2

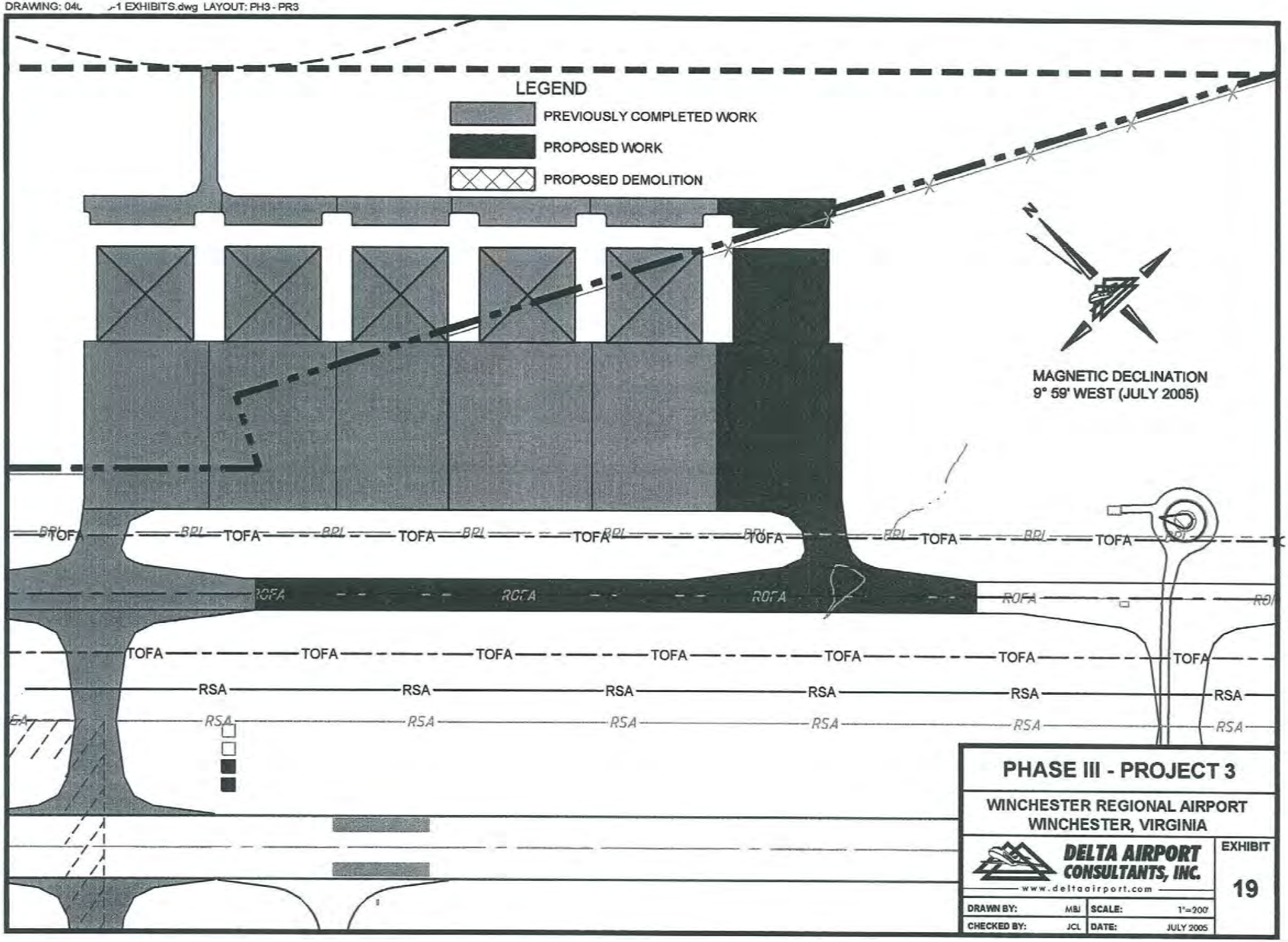
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$143,512.51	$143,512.51
2	P-152	UNCLASSIFIED EXCAVATION	CY	26289	$10.00	$262,890.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$83,759.22	$83,759.22
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	900	$26.00	$23,400.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	5811	$44.00	$255,684.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	0	$52.00	$0.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	22500	$100.00	$2,250,000.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$125,146.64	$125,146.64
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$600,175.97	$600,175.97

CONSTRUCTION TOTALS:		$3,744,568.34
ENGINEERING FEES:		$209,565.47
CONSTRUCTION FEES:		$561,685.25
	TOTAL FEES:	$771,250.72
EST. TOTAL:		$4,600,000.00

DRAWING: 04L -1 EXHIBITS.dwg LAYOUT: PH3 - PR3



PHASE III - PROJECT 3

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 19

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT TAXIWAY F - PHASE II AND CORPORATE HANGARS WITH AUTO PARKING - PHASE VI
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 3 PROJECT 3

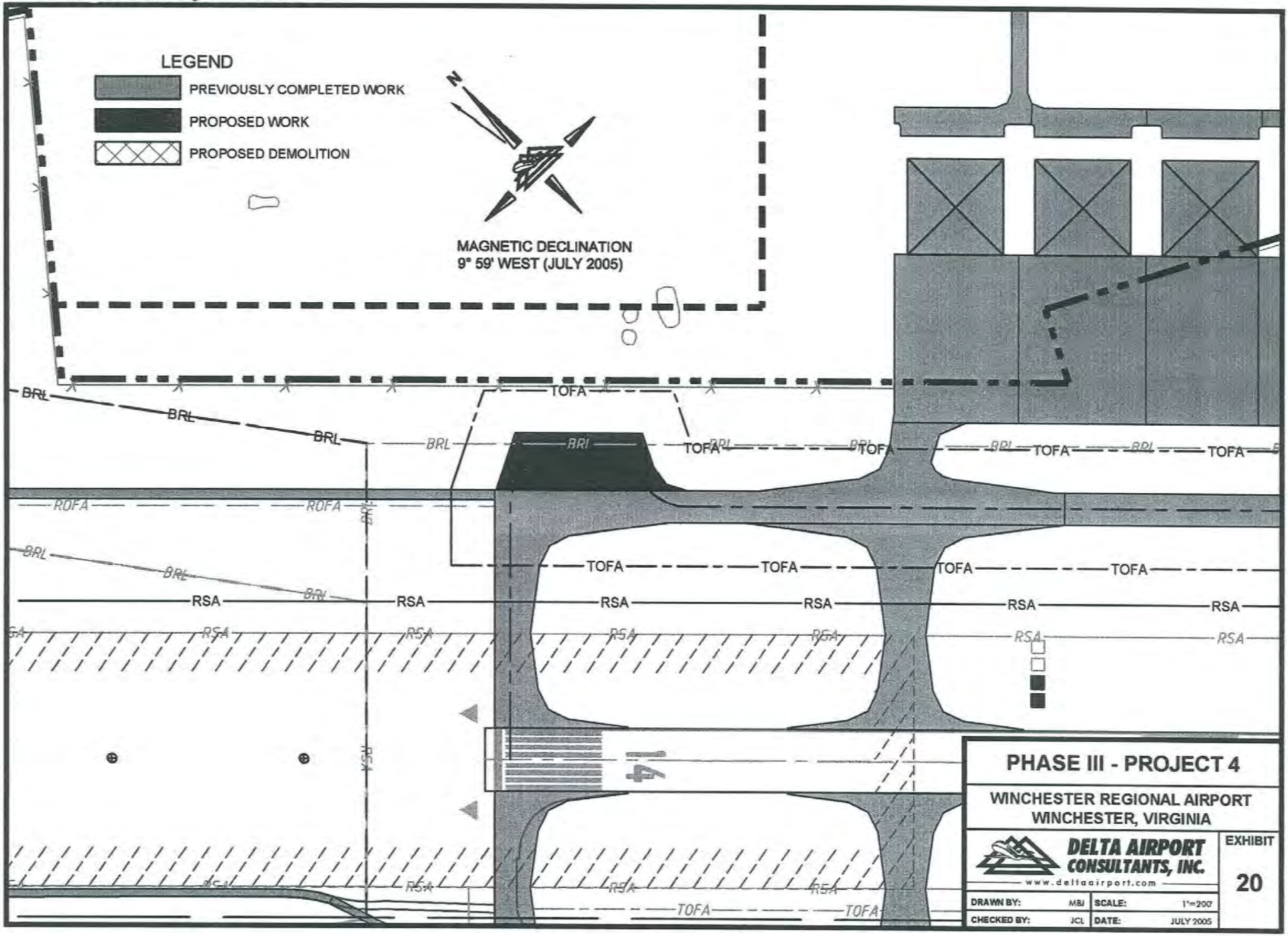
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$240,000.49	$240,000.49
2	P-152	UNCLASSIFIED EXCAVATION	CY	50028	$10.00	$500,280.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$102,888.48	$102,888.48
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	854	$26.00	$22,204.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	6655	$44.00	$292,820.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	7006	$52.00	$364,312.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	22500	$100.00	$2,250,000.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$256,500.90	$256,500.90
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$757,801.08	$757,801.08

CONSTRUCTION TOTALS:		$4,786,806.94
ENGINEERING FEES:		$292,944.56
CONSTRUCTION FEES:		$718,021.04
	TOTAL FEES:	$1,010,965.60
EST. TOTAL:		$5,800,000.00

DRAWING: 04C -1 EXHIBITS.dwg LAYOUT: PH3 - PR4



J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT NORTH SIDE HOLD APRON
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 3 PROJECT 4

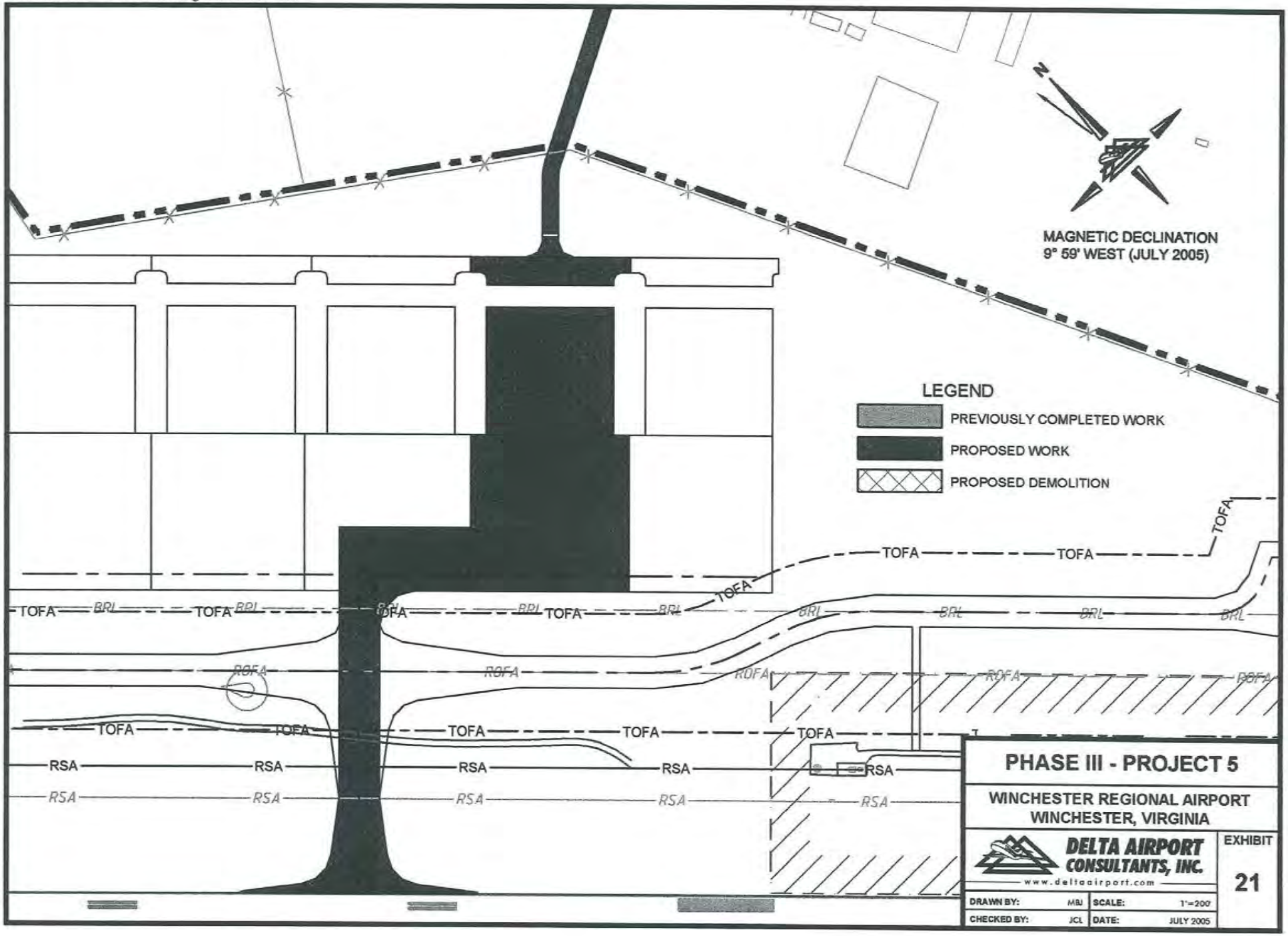
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$18,490.83	$18,490.83
2	P-152	UNCLASSIFIED EXCAVATION	CY	0	$10.00	$0.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$3,659.76	$3,659.76
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	0	$26.00	$0.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	2346	$52.00	$121,992.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	0	$100.00	$0.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$25,130.35	$25,130.35
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$30,156.42	$30,156.42

CONSTRUCTION TOTALS:		$199,429.36
ENGINEERING FEES:		$15,954.35
CONSTRUCTION FEES:		$29,914.40
	TOTAL FEES:	$45,868.75
EST. TOTAL:		$250,000.00

DRAWING: 04L 3-1 EXHIBITS.dwg LAYOUT: PH3 - PR5



PHASE III - PROJECT 5

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 21

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT TAXIWAY D AND CORPORATE HANGARS WITH AUTO PARKING / ACCESS ROAD - PHASE VII
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 3 PROJECT 5

PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

AIP ELIGIBLE

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$145,679.53	$145,679.53
2	P-152	UNCLASSIFIED EXCAVATION	CY	26780	$10.00	$267,800.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$28,875.60	$28,875.60
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	0	$26.00	$0.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	13360	$52.00	$694,720.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	0	$100.00	$0.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$198,279.12	$198,279.12
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$237,934.94	$237,934.94

CONSTRUCTION TOTALS:		$1,573,289.19
ENGINEERING FEES:		$125,863.14
CONSTRUCTION FEES:		$235,993.38
	TOTAL FEES:	$361,856.51
EST. TOTAL:		$2,000,000.00

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT TAXIWAY D AND CORPORATE HANGARS WITH AUTO PARKING / ACCESS ROAD - PHASE VII
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 3 PROJECT 5

PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

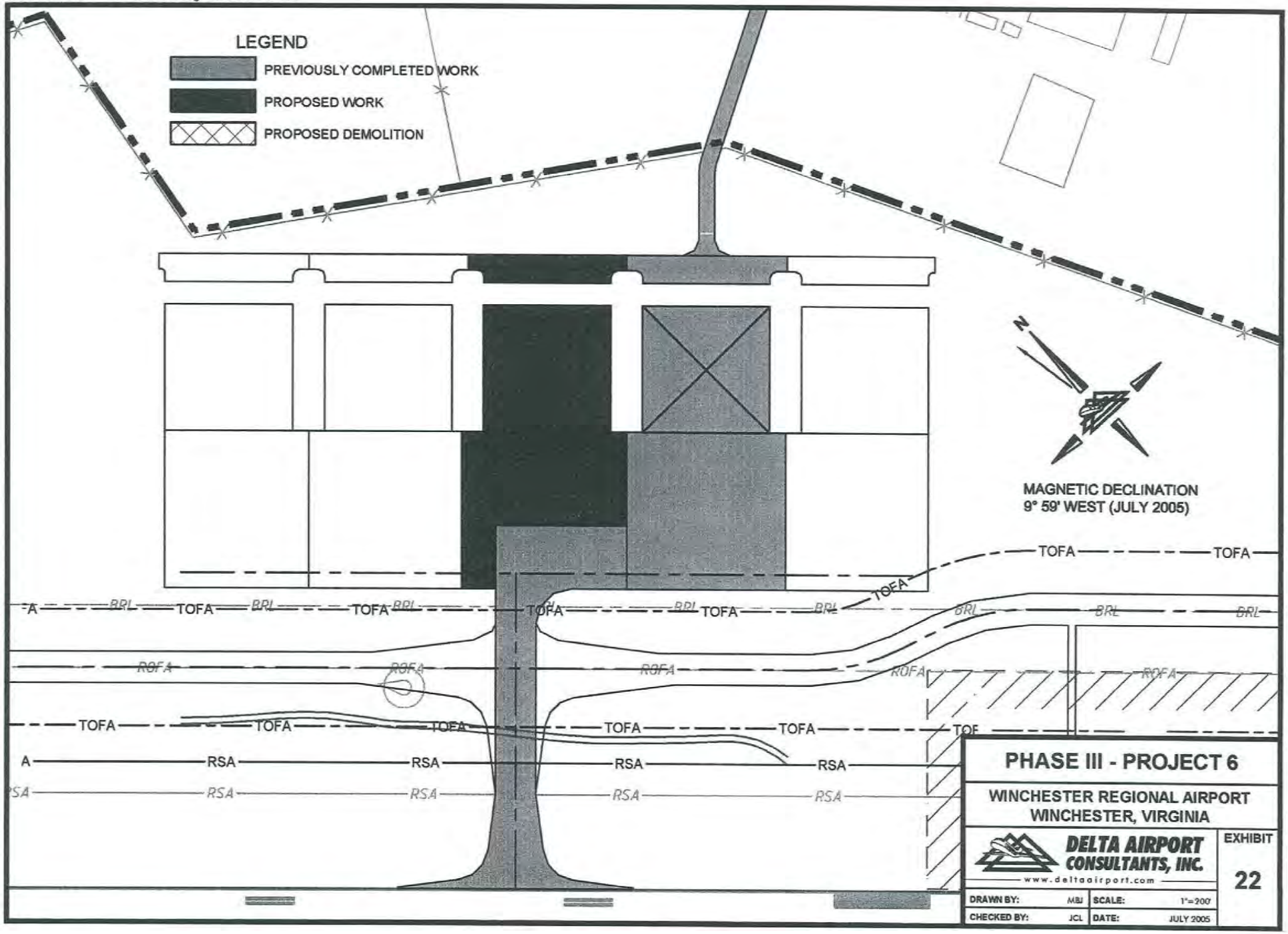
DELTA PROJ. NO. VA 04005

NON-AIP ELIGIBLE

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$200,794.84	$200,794.84
2	P-152	UNCLASSIFIED EXCAVATION	CY	50000	$10.00	$500,000.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$138,137.16	$138,137.16
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	4022	$26.00	$104,572.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY		$52.00	$0.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	40000	$100.00	$4,000,000.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$148,541.83	$148,541.83
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$978,250.20	$978,250.20

CONSTRUCTION TOTALS:		$6,070,296.03
ENGINEERING FEES:		$325,623.68
CONSTRUCTION FEES:		$910,544.40
	TOTAL FEES:	$1,236,168.09
EST. TOTAL:		$7,400,000.00

DRAWING: 04C... 3-1 EXHIBITS.dwg LAYOUT: PH3 - PR6



PHASE III - PROJECT 6

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 22

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT CORPORATE HANGARS WITH AUTO PARKING - PHASE VIII
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 3 PROJECT 6

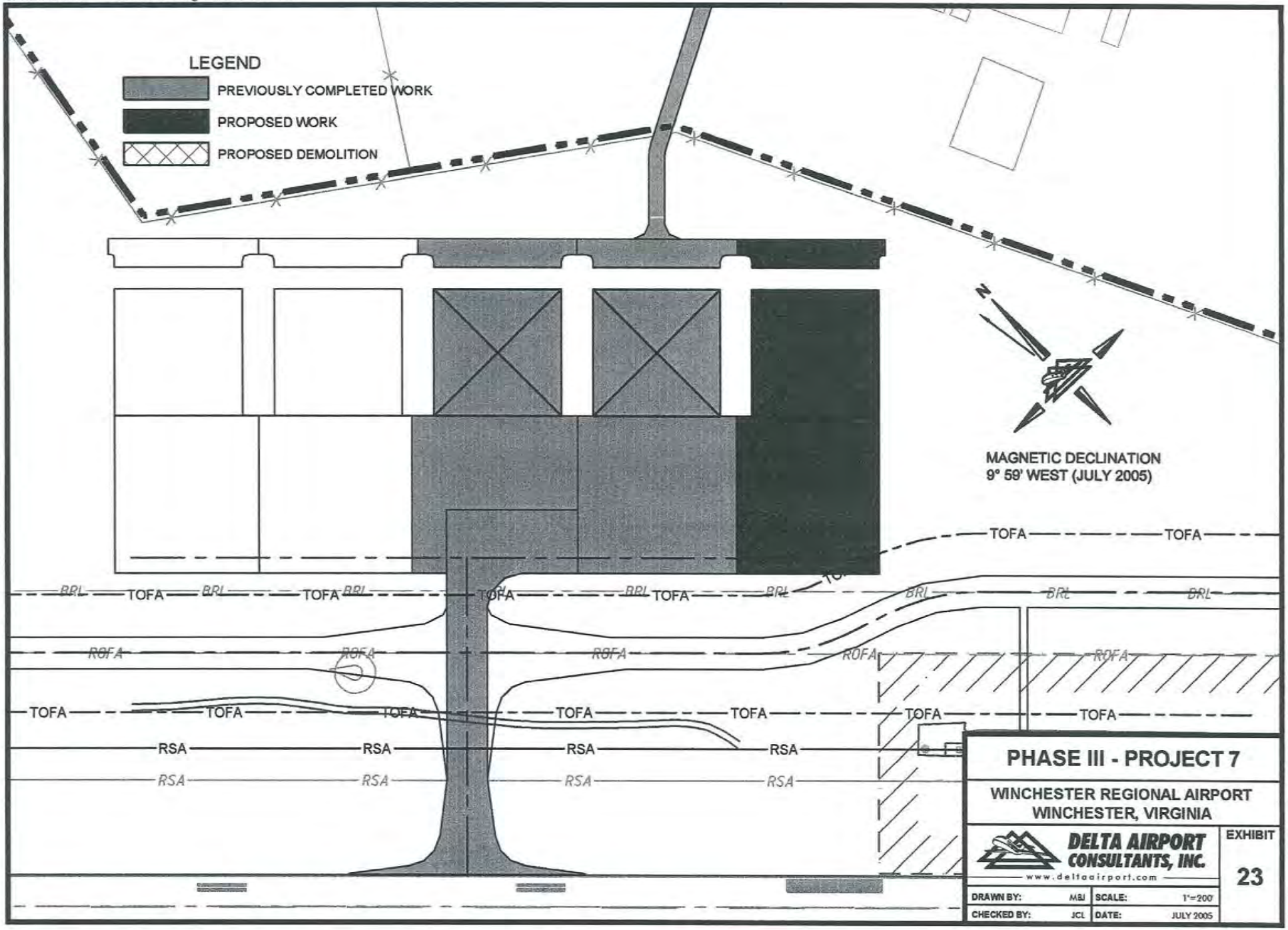
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$215,276.46	$215,276.46
2	P-152	UNCLASSIFIED EXCAVATION	CY	41651	$10.00	$416,510.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$141,008.22	$141,008.22
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	1144	$26.00	$29,744.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	4885	$52.00	$254,020.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	40000	$100.00	$4,000,000.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$168,256.44	$168,256.44
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$1,001,907.73	$1,001,907.73

CONSTRUCTION TOTALS:		$6,226,722.86
ENGINEERING FEES:		$338,137.83
CONSTRUCTION FEES:		$934,008.43
	TOTAL FEES:	$1,272,146.26
EST. TOTAL:		$7,500,000.00

DRAWING: 040 -1 EXHIBITS.dwg LAYOUT: PH3 - PR7



PHASE III - PROJECT 7

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT
23

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT CORPORATE HANGARS WITH AUTO PARKING - PHASE IX
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 3 PROJECT 7

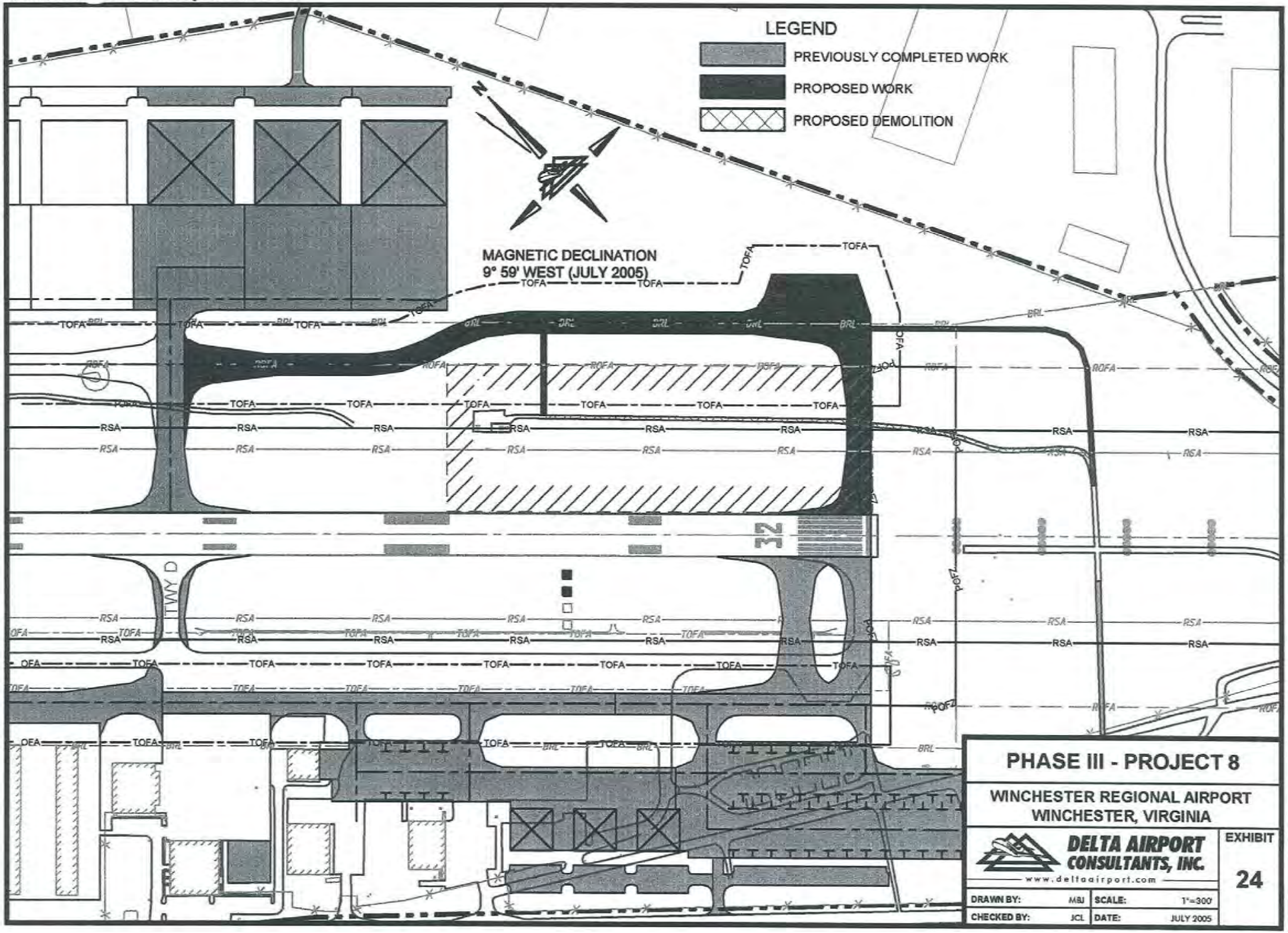
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$224,492.45	$224,492.45
2	P-152	UNCLASSIFIED EXCAVATION	CY	41010	$10.00	$410,100.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$142,835.34	$142,835.34
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	1095	$26.00	$28,470.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	6204	$52.00	$322,608.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	40000	$100.00	$4,000,000.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$180,802.67	$180,802.67
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$1,016,963.20	$1,016,963.20

CONSTRUCTION TOTALS:		$6,326,271.66
ENGINEERING FEES:		$346,101.73
CONSTRUCTION FEES:		$948,940.75
	TOTAL FEES:	$1,295,042.48
EST. TOTAL:		$7,700,000.00

DRAWING: 04. -1 EXHIBITS.dwg LAYOUT: PH3 - PR8



PHASE III - PROJECT 8

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 24

DRAWN BY:	MBJ	SCALE:	1"=300'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT TAXIWAY F - PHASE III
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 3 PROJECT 8

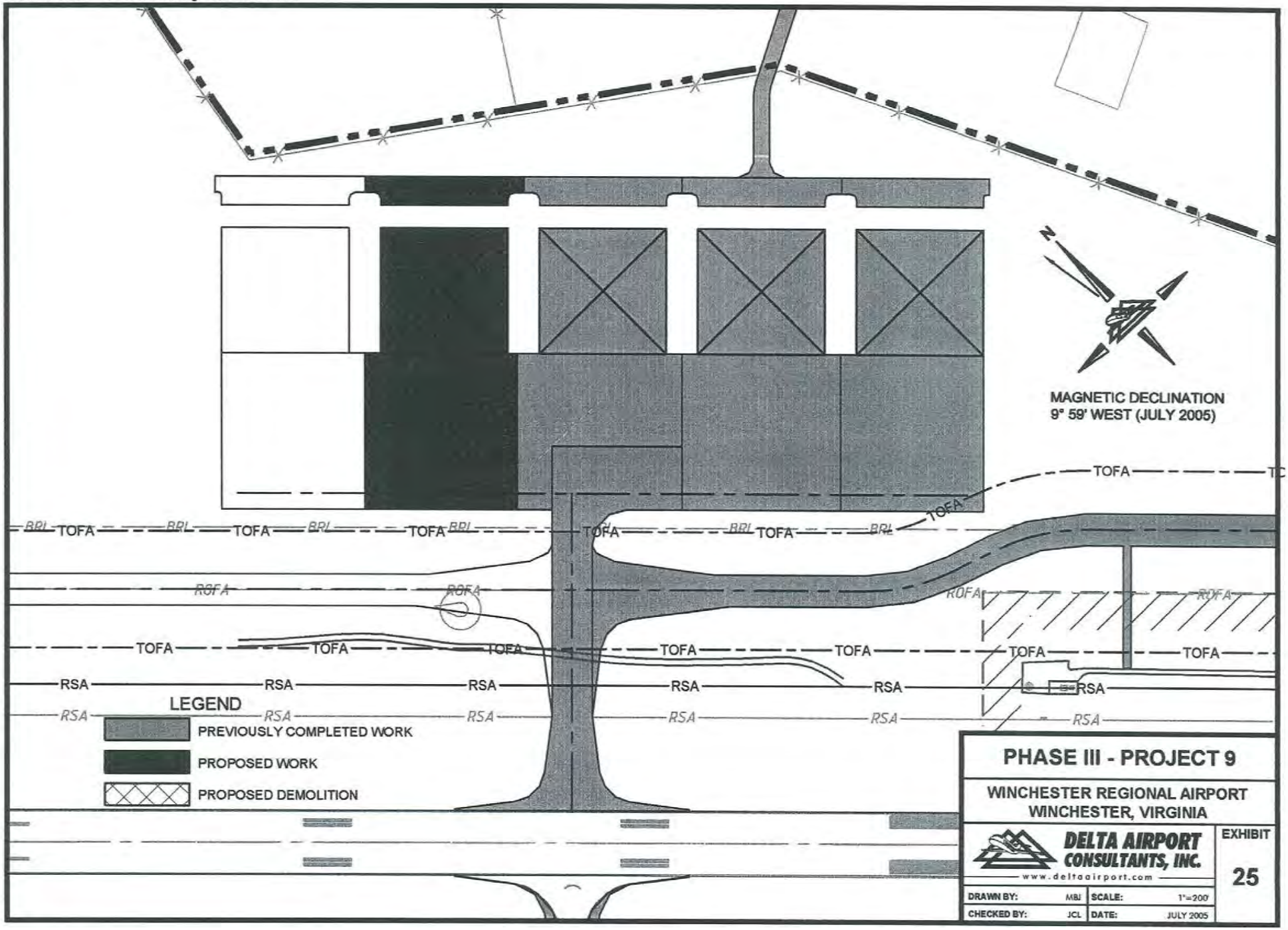
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$234,669.61	$234,669.61
2	P-152	UNCLASSIFIED EXCAVATION	CY	64684	$10.00	$646,840.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$46,518.36	$46,518.36
4	P-150	MISCELLANEOUS DEMOLITION	SY	1381	$30.00	$41,430.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	0	$26.00	$0.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	941	$26.00	$24,466.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	16113	$52.00	$837,876.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	0	$100.00	$0.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$319,426.07	$319,426.07
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$383,311.29	$383,311.29

CONSTRUCTION TOTALS:		$2,534,537.33
ENGINEERING FEES:		$202,762.99
CONSTRUCTION FEES:		$380,180.60
	TOTAL FEES:	$582,943.59
EST. TOTAL:		$3,200,000.00

DRAWING: 040_ _1 EXHIBITS.dwg LAYOUT: PH3 - PR9



PHASE III - PROJECT 9

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 25

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT CORPORATE HANGARS WITH AUTO PARKING - PHASE X
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 3 PROJECT 9

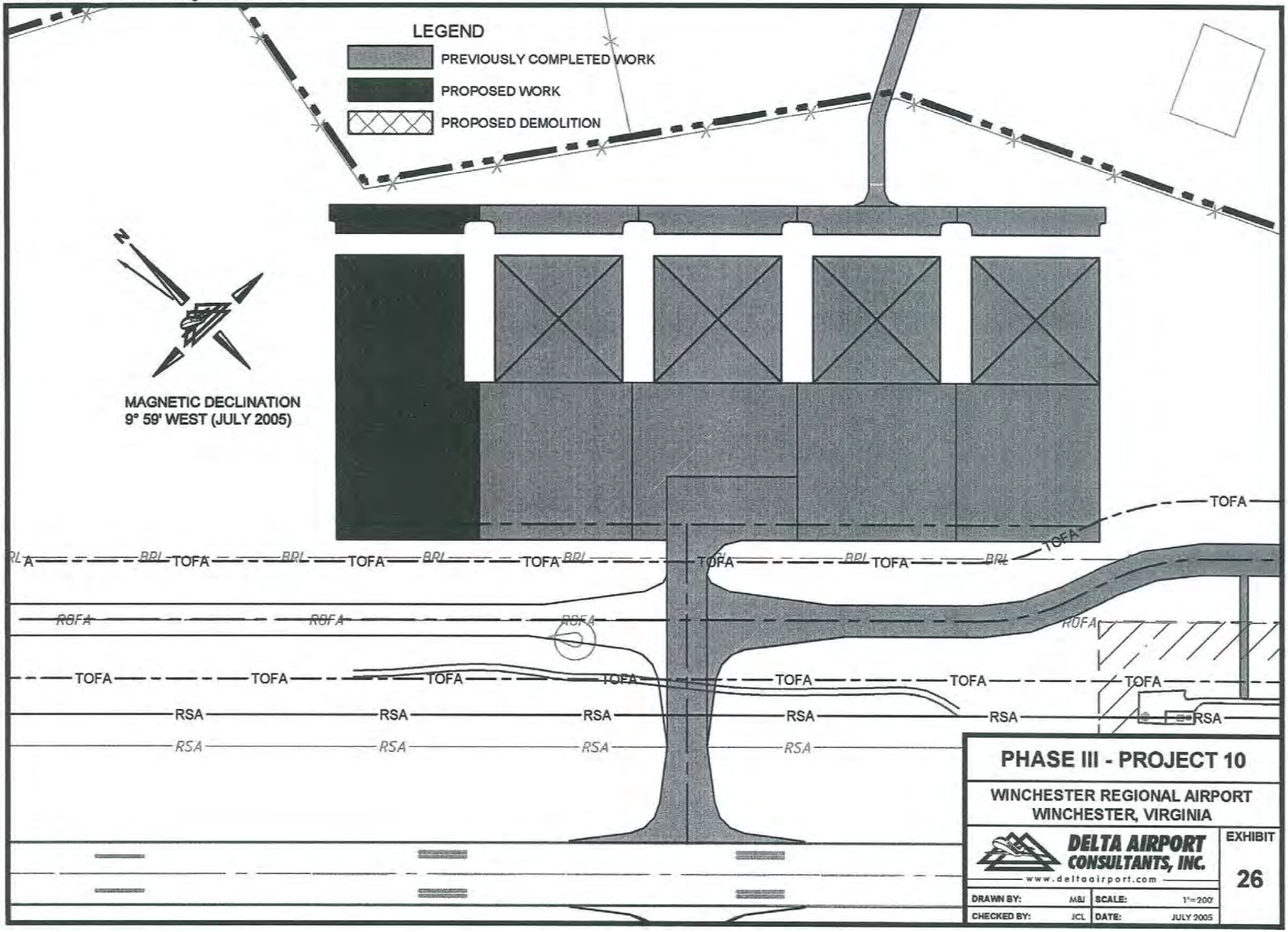
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$257,925.10	$257,925.10
2	P-152	UNCLASSIFIED EXCAVATION	CY	63182	$10.00	$631,820.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$149,463.54	$149,463.54
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	1145	$26.00	$29,770.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	6164	$52.00	$320,528.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	40000	$100.00	$4,000,000.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$226,316.31	$226,316.31
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$1,071,579.57	$1,071,579.57

CONSTRUCTION TOTALS:		$6,687,402.51
ENGINEERING FEES:		$374,992.20
CONSTRUCTION FEES:		$1,003,110.38
	TOTAL FEES:	$1,378,102.58
EST. TOTAL:		$8,100,000.00

DRAWING: 04L -1 EXHIBITS.dwg LAYOUT: PH3 - PR10



J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT CORPORATE HANGARS WITH AUTO PARKING - PHASE XI
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 3 PROJECT 10

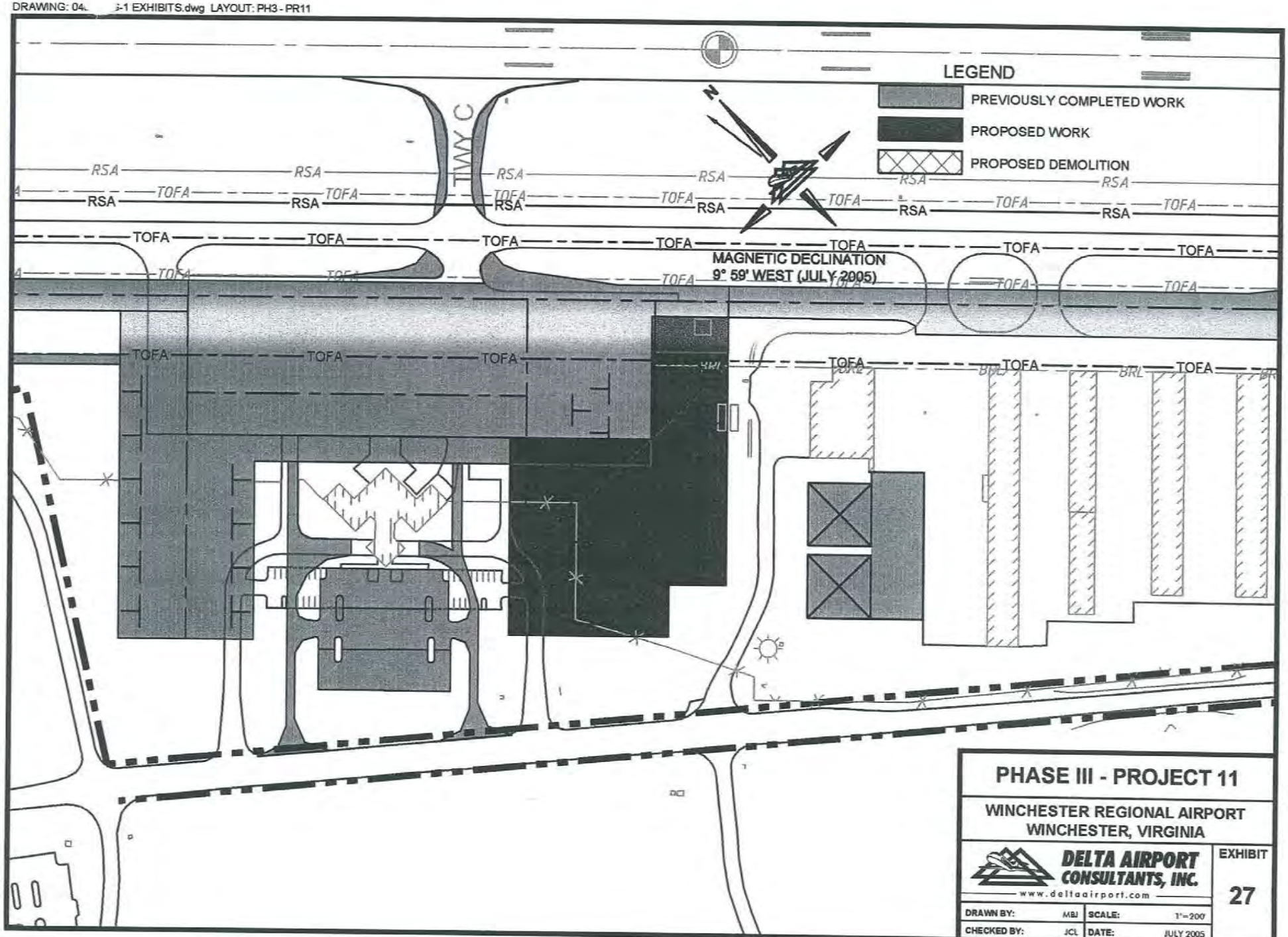
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$308,055.29	$308,055.29
2	P-152	UNCLASSIFIED EXCAVATION	CY	96230	$10.00	$962,300.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$159,402.12	$159,402.12
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	1104	$26.00	$28,704.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	6200	$52.00	$322,400.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	40000	$100.00	$4,000,000.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$294,561.22	$294,561.22
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$1,153,473.47	$1,153,473.47

CONSTRUCTION TOTALS:		$7,228,896.11
ENGINEERING FEES:		$418,311.69
CONSTRUCTION FEES:		$1,084,334.42
	TOTAL FEES:	$1,502,646.10
EST. TOTAL:		$8,800,000.00

DRAWING: 04_ _-1 EXHIBITS.dwg LAYOUT: PH3 - PR11



PHASE III - PROJECT 11

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 27

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
TRANSIENT APRON EXPANSION - PHASE II
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 3 PROJECT 11

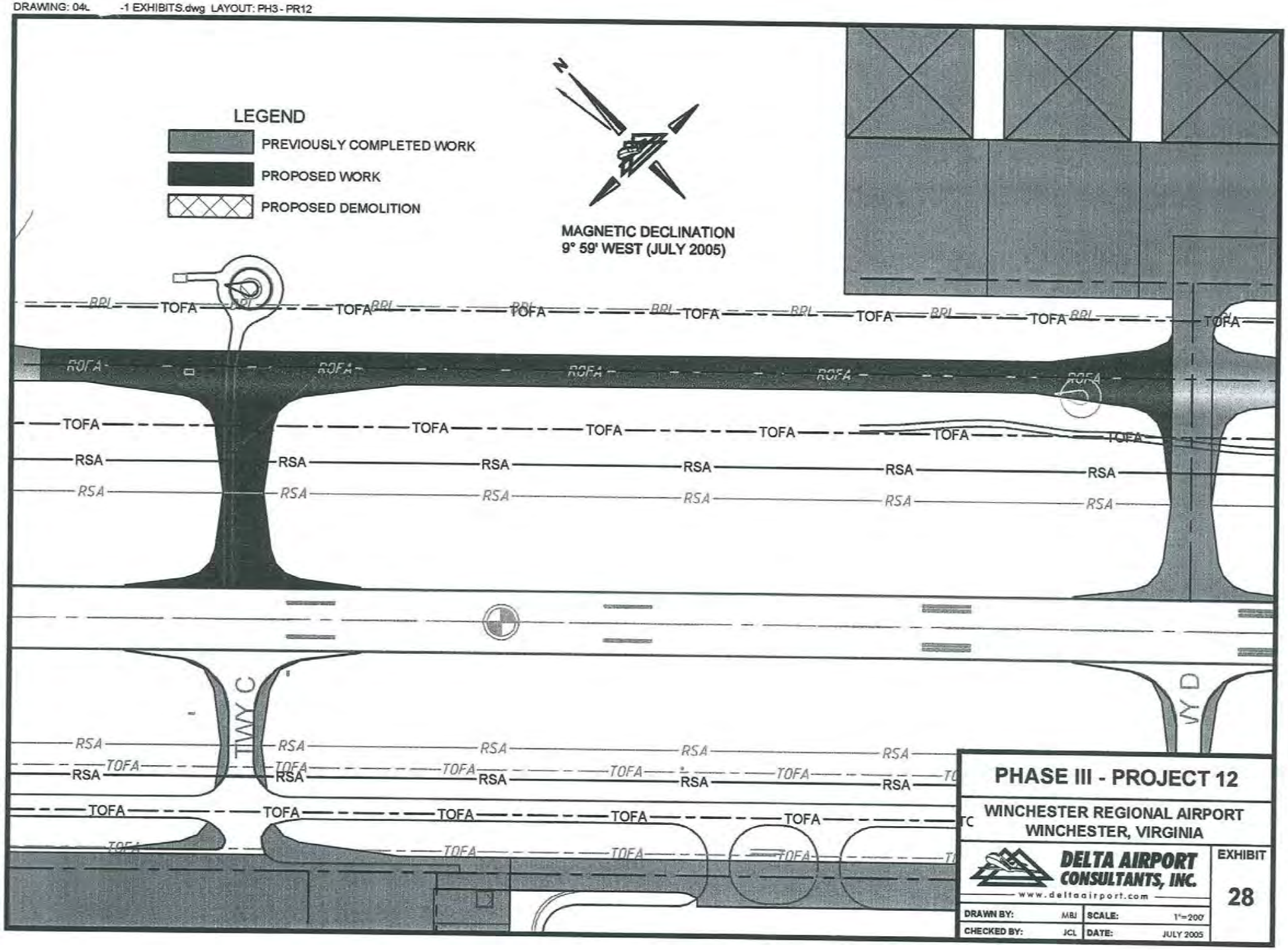
PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$138,060.26	$138,060.26
2	P-152	UNCLASSIFIED EXCAVATION	CY	19506	$10.00	$195,060.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$27,365.04	$27,365.04
4	P-150	MISCELLANEOUS DEMOLITION	SY	98	$30.00	$2,940.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	0	$26.00	$0.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	13734	$52.00	$714,168.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	0	$100.00	$0.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$187,906.61	$187,906.61
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$225,487.93	$225,487.93

CONSTRUCTION TOTALS:		$1,490,987.84
ENGINEERING FEES:		$119,279.03
CONSTRUCTION FEES:		$223,648.18
	TOTAL FEES:	$342,927.20
EST. TOTAL:		$1,900,000.00

DRAWING: 04L -1 EXHIBITS.dwg LAYOUT: PH3 - PR12



PHASE III - PROJECT 12

WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA

DELTA AIRPORT CONSULTANTS, INC.
www.deltaairport.com

EXHIBIT 28

DRAWN BY:	MBJ	SCALE:	1"=200'
CHECKED BY:	JCL	DATE:	JULY 2005

J:\PROJECT\2004proj\04005\[04005 ES-1.xls]1-2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST
CONSTRUCT TAXIWAY F - PHASE IV
WINCHESTER REGIONAL AIRPORT
WINCHESTER, VIRGINIA
PHASE 3 PROJECT 12

PHASE I: 0-5 YEARS
PHASE II: 6-10 YEARS
PHASE III: 11-20 YEARS

DELTA PROJ. NO. VA 04005

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	P-100	MOBILIZATION	LS	1	$253,780.11	$253,780.11
2	P-152	UNCLASSIFIED EXCAVATION	CY	90174	$10.00	$901,740.00
3	P-156	EROSION AND SEDIMENT CONTROL	LS	1	$50,307.12	$50,307.12
4	P-150	MISCELLANEOUS DEMOLITION	SY	0	$30.00	$0.00
5	R-502	CONCRETE CURB AND GUTTER	LF	0	$25.00	$0.00
6		P.C.C. PAVEMENT (8"PCC, 6" VDOT 21A)	SY	0	$95.00	$0.00
7		PARKING LOT PAVEMENT	SY	0	$26.00	$0.00
8		LIGHT DUTY PAVEMENT (2", 3", 6")	SY	0	$26.00	$0.00
9		MEDIUM DUTY PAVEMENT (3", 6", 8")	SY	0	$44.00	$0.00
10		HEAVY DUTY PAVEMENT (4", 6", 14")	SY	14907	$52.00	$775,164.00
11	M-121	FUEL STORAGE TANKS	GAL	0	$2.00	$0.00
12	M-108	BUILDING CONSTRUCTION	SF	0	$100.00	$0.00
13	D-715	DRAINAGE - 20% OF ABOVE ITEMS	LS	1	$345,442.22	$345,442.22
14	T-901	MISC. - 20% OF ABOVE ITEMS	LS	1	$414,530.67	$414,530.67

CONSTRUCTION TOTALS:		$2,740,964.13
ENGINEERING FEES:		$219,277.13
CONSTRUCTION FEES:		$411,144.62
	TOTAL FEES:	$630,421.75
EST. TOTAL:		$3,400,000.00