



SPRINGFIELD-BECKLEY MUNICIPAL AIRPORT Master Plan/Airport Layout Plan

Airport planning is a continuous and strategic process used to establish a framework for the efficient development of airports that is consistent with local, state and national standards and goals. The Springfield-Beckley Municipal Airport (SGH) planning process culminates in an Airport Layout Plan (ALP), which will serve as the official record drawing set depicting Airport developments envisioned by the City as part of complying with federal planning standards and grant assurances. The SGH ALP provides the framework for future airport development that would cost-effectively satisfy aviation demand, while considering potential environmental and socioeconomic impacts. This plan will be updated continually as demand or circumstances change.

Vision & Guiding Principles



A strategic planning meeting was held with local leaders to develop a list of guiding principles to steer the development alternatives needed for the airport to meet aviation demand.

1. Focus on safety and security as the first priorities
2. Focus on Air National Guard changes and impacts on Airport growth and development
3. Preserve space for terminal, hangar and utilities efficiently and cost-effectively
4. Provide enhancements for easy and aesthetically pleasing access points in and around the Airport
5. Use emerging technologies to increase all-weather usage of the Airport
6. Preserve investments in existing facilities and property contiguous with taxiways and aprons, for aviation purposed with airside needs

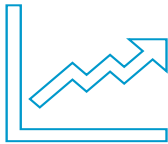
A vision was also developed for SGH during the planning process: to be recognized as the premier center for aviation, innovation and business development in the region

To understand the needs of our aviation community, a user survey was developed and designed to identify and evaluate various aspects and services of the Springfield-Beckley Municipal Airport. What we learned from our users was that our infrastructure was invaluable to their success. The top four concerns for our users were:

1. Maintain existing runway lengths
2. Maintain approach minimums
3. Replace old T-hangars
4. Increase auto marking



User Needs



Forecasts

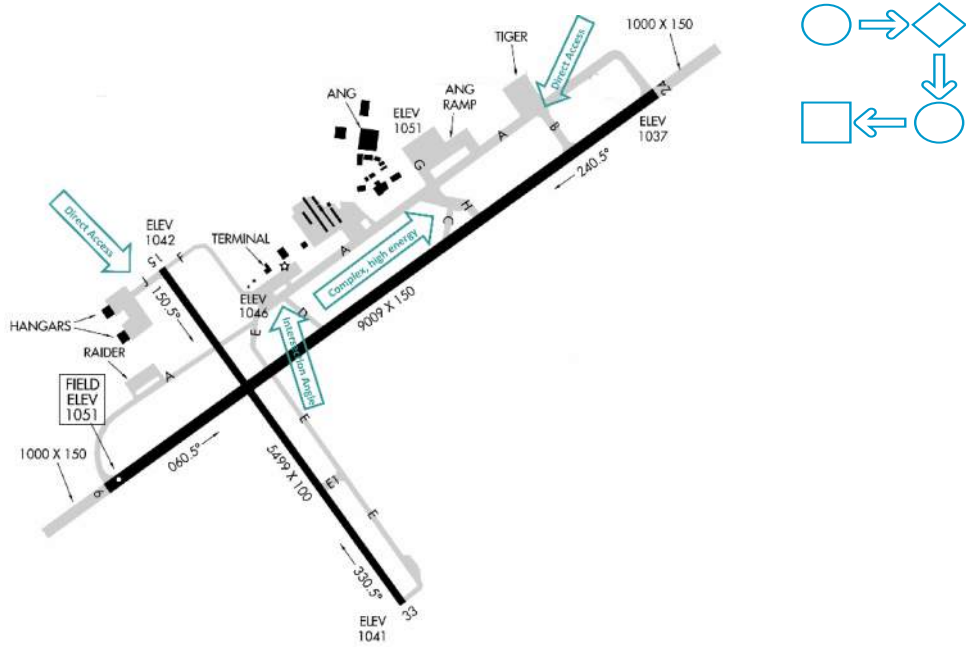
To help determine what future facilities might be needed, the planning process included a projection of future aviation activity for SGH. These are required by the FAA and receive a specific approval from the agency. SGH’s projected based aircraft and airport operations (i.e., takeoffs and landings) are shown below and **were approved by the FAA** in April of 2017. The forecasts serve as the basis for determining the facilities required for the airport. They represent an unconstrained projection of activity, which assumes that Springfield will be able to develop the various facilities necessary to accommodate based aircraft and future operations.

Year	Based Aircraft	Piston	Jet	Rotor	Operations
2016	41	40	1	0	14,350
2021	44	42	2	0	15,505
2026	47	43	4	0	16,520
2031	50	44	5	1	17,465
2036	54	46	7	1	18,900

The information from the user needs survey and the forecasts were compared to the existing facilities at SGH to determine what the airport might need to meet aviation demand. Because FAA airport design standards and regulations change over time, the existing airport conditions were also evaluated for FAA compliance. The facilities analysis recommended these infrastructure needs:

- Maintain existing runway lengths
 - Focus on satellite-based technology for instrument approaches
 - Improve pilot situational awareness when transitioning from aprons to runways
 - Replace old T-hangars and site them to meet new FAA separation standards
 - Increase aircraft storage capacity
 - Upgrade airfield signage to LED after useful life is reached
 - Upgrade terminal and increase parking
- Purchase land for the runway protection zones
 - Bring Runway 33 into compliance with FAA design standards
 - Make fencing and wildlife hazard safety enhancements
 - Provide vertiport capability
 - Remove/clear trees that are obstructions
 - Develop corporate hangars campus
 - Rehabilitate airfield pavements (both runways in next 20 years)
 - Expand apron and re-use ATCT as appropriate

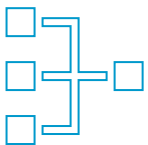
Facility Analysis



Environmental Overview

Before determining the best alternative to accommodate the recommended facilities, an environmental overview of SGH was performed to assist in the evaluation of developmental impacts and to have a clear understanding of the environmental requirements needed to move forward with any proposed improvements. This overview revealed that Clark County is a “maintenance area” for certain air quality standards so any improvements to capacity should be evaluated before constructed for compliance with air quality regulations. Additionally, SGH sits within an agricultural area on high-quality soils with the potential for agricultural activity, so projects with the potential for farmland conversion should be evaluated before construction for impacts.

In determining the preferred locations and layout of the improvements required for meeting user needs, forecasted demand, and FAA design standards, the guiding principles discussed at the beginning of this document were applied to each alternative. This draft plan has been selected considering the operational needs of the airport, efficiency, safety, constructability, cost, flexibility and the environment. While aviation needs are forecasted for an unconstrained demand, construction is based on realized demand. While aviation activity may lag or exceed what has been forecasted, the airport’s plan should provide for all anticipated aviation needs should they be realized.



Preferred Alternatives

The following draft Airport Layout Plan presents the preferred alternatives for improving the Springfield-Beckley Municipal Airport. The City of Springfield considers community input an important part of the planning process. Please email any comments or concerns about this plan to [sgh.alp@woolpert.com] or mail to Seth Timmerman, 1251 West Blee Road, Springfield, OH 45502 by April 17th, 2020.

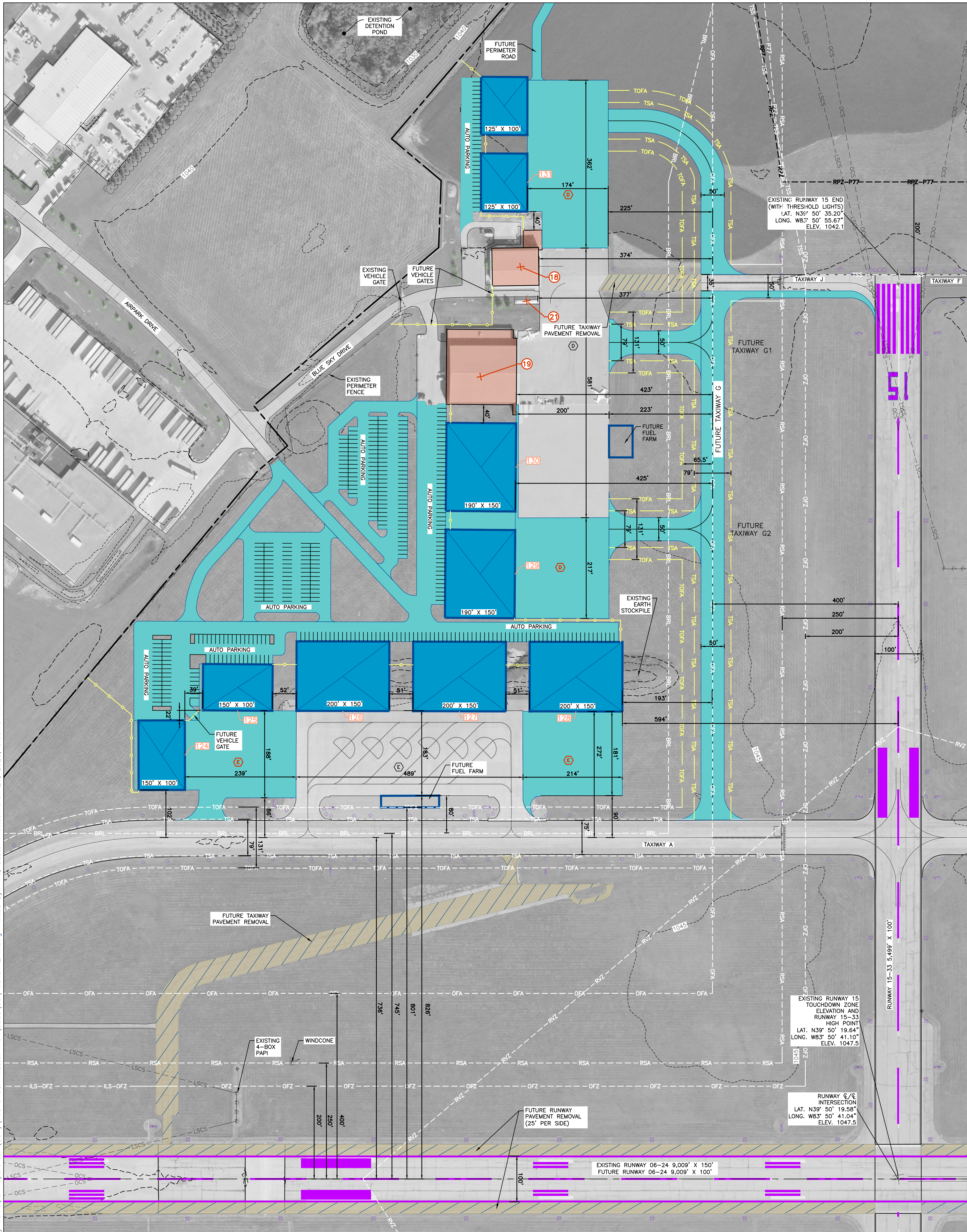
GENERAL NOTES

1. ALP REFLECTS AIRPORT DESIGN STANDARDS PER FAA ADVISORY CIRCULAR 150/5300-13A, CHANGE #1. ALP PREPARED IN ACCORDANCE WITH FAA ALP CHECKLIST (SOP 2.00) DATED OCTOBER 1, 2013. REFERENCE ALP DATA SHEET FOR APPLICATION TO DESIGN STANDARDS, SURVEYED INFORMATION, SOURCE OF BASE MAPPING, AND SUPPORTING ALP DATA.
2. SEE ALP DATA SHEET FOR REFERENCE TO SUPPORTING ALP DATA. SEE TERMINAL AREA DRAWINGS FOR BUILDING/STRUCTURE DATA.
3. ALL ELEVATIONS EXPRESSED IN MEAN SEA LEVEL (MSL), UNLESS OTHERWISE NOTED. ROADWAY ELEVATIONS REFLECT GROUND SURFACE ELEVATION. TRAVERSEWAY ELEVATIONS AT ROAD CENTERLINES ARE ALP DETERMINED AT THEIR ACTUAL SURFACE ELEVATION.
4. RESTRICTION AREAS: BUILDING RESTRICTION LINE (BRL) ESTABLISHED TO PROVIDE 35' OBSTACLE CLEARANCE BASED ON PART 77 IMAGINARY SURFACES AND THE AWO'S PROTECTION AREA. DEVELOPMENT LIMITED TO 15' BELOW THE WIND SENSOR ELEVATION WITHIN A 500' RADIUS OF THE AWO'S, AND LIMITED TO 10' ABOVE THE WIND SENSOR ELEVATION FROM A 500 TO 1,000' RADIUS.
5. AIRFIELD PERMETER FENCE IS 10' TALL WITH 1' BARBED WIRE.

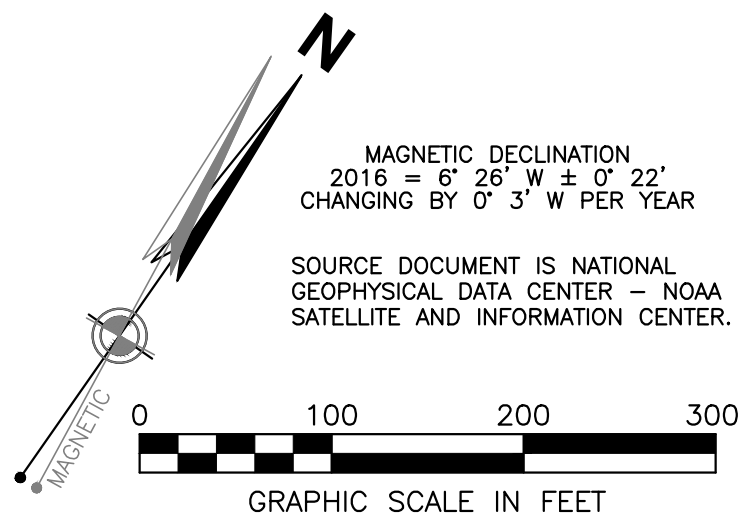
(*) INNOVATION DATA OF PART 77 APPROACH TO MATCH PRIMARY SURFACE PER FAA ORDER JO 7400.2Z, CHANGE 1 (DATED 7-24-2014).

TAXIWAY TESM AND SHOULDER WIDTH TABLE	
EXISTING TAXIWAY EDGE SAFETY MARGINS (TESM)	EXISTING TAXIWAY SHOULDER WIDTHS
TAXIWAY A = 10'	TAXIWAY A = 20'
TAXIWAY B = 10'	TAXIWAY B = 20'
TAXIWAY C = 10'	TAXIWAY C = 20'
TAXIWAY D = 10'	TAXIWAY D = 25'
TAXIWAY E = 7.5'	TAXIWAY E = 15'
TAXIWAY E1 = 7.5'	TAXIWAY E1 = 15'
TAXIWAY F = 10'	TAXIWAY F = 20'
TAXIWAY G = 10'	TAXIWAY G = 20'
TAXIWAY H = 10'	TAXIWAY H = 20'

TERMINAL STRUCTURE TABLE	
BUILDING NUMBER	FUNCTION
FUTURE BUILDINGS AND STRUCTURES	
101	T-HANGAR ROW E (NEW)
102	T-HANGAR ROW D (NEW)
103	CORPORATE HANGAR ROW
104	FUTURE TERMINAL
105	CORPORATE HANGAR ROW
106	CORPORATE HANGAR (45' HEIGHT)
107	MAINTENANCE BUILDING
108	CORPORATE HANGAR ROW
109	CORPORATE HANGAR ROW
110	TERMINAL BUILDING ADDITION
111	CORPORATE HANGAR ROW
112	CORPORATE HANGAR ROW
113	T-HANGARS
114	T-HANGARS
115	CORPORATE HANGAR (45' HEIGHT)
116	CORPORATE HANGAR (45' HEIGHT)
117	CORPORATE HANGAR (45' HEIGHT)
118	CORPORATE HANGAR (45' HEIGHT)
119	CORPORATE HANGAR (45' HEIGHT)
120	CORPORATE HANGAR (45' HEIGHT)
121	CORPORATE HANGAR (45' HEIGHT)
122	VTOL TERMINAL BUILDING
123	VTOL MAINTENANCE CENTER
124	CORPORATE HANGAR (45' HEIGHT)
125	CORPORATE HANGAR (45' HEIGHT)
126	CORPORATE HANGAR (45' HEIGHT)
127	CORPORATE HANGAR (45' HEIGHT)
128	CORPORATE HANGAR (45' HEIGHT)
129	CORPORATE HANGAR (45' HEIGHT)
130	CORPORATE HANGAR (45' HEIGHT)
131	CORPORATE HANGAR (45' HEIGHT)
132	VTOL BUILDING
133	TERMINAL BUILDING ADDITION



LEGEND: SYMBOLS		
EXISTING	FUTURE	FACILITY
		BUILDING
		AIR NATIONAL GUARD BASE LIMITS
		AVIATIONAL EASEMENTS
		AIR NATIONAL GUARD BASE TRANSFERRED TO AIRPORT
		LAND ACQUISITION
		BUILDING NUMBER
		PAVEMENT AREA DESIGNATION
		TRAVERSEWAY POINT WITH ELEVATION
		MED INTENSITY RUNWAY EDGE LIGHT
		MED INTENSITY RUNWAY THRESHOLD LIGHT
		REIL
		MED INTENSITY TAXIWAY LIGHT
		SSALR LIGHTING SYSTEM
		PAPI/WASI
		GUIDANCE SIGN
		WINDCONE
		AWOS/BEACON/GLIDESLOPE
		AIRPORT REFERENCE POINT
		AIRCRAFT TIE DOWN
		TREE



LEGEND: LINETYPE		
EXISTING	FUTURE	FACILITY
		AIRPORT PROPERTY LINE
		PARCEL LINE
		RUNWAY/TAXIWAY CENTERLINE
		CONTOURS
		EDGE OF PAVEMENT (PAVEMENT AREA)
		FENCE LINE
		CFR PART 77 SURFACES
		THRESHOLD SITING APPROACH SURFACES
		DEPARTURE SURFACES
		GLIDESLOPE QUALIFICATION SURFACE
		RUNWAY PROTECTION ZONE
		RUNWAY SAFETY AREA
		RUNWAY OBJECT FREE AREA
		RUNWAY OBSTACLE FREE ZONE
		RUNWAY PRECISION OBSTACLE FREE ZONE
		RUNWAY VISIBILITY ZONE
		TAXIWAY SAFETY AREA
		TAXIWAY OBJECT FREE AREA
		TAXILANE OBJECT FREE AREA
		AWOS CRITICAL AREA (30' HEIGHT CLEARANCE)
		35' BUILDING RESTRICTION LINE
		ILS CRITICAL AREA
		INNER APPROACH OBSTACLE FREE ZONE
		LIGHT SIGNAL CLEARANCE SURFACE
		OBSTACLE CLEARANCE SURFACE

GENERAL NOTES

1. ALP REFLECTS AIRPORT DESIGN STANDARDS PER FAA ADVISORY CIRCULAR 150/530-13A, CHANGE #1. ALP PREPARED IN ACCORDANCE WITH FAA ALP CHECKLIST (508 2.00) DATED OCTOBER 1, 2013. REFERENCE ALP DATA SHEET FOR APPLICATION TO DESIGN STANDARDS, SURVEYED INFORMATION, SOURCE OF DATA MAPPING, AND SUPPORTING ALP DATA.
2. SEE ALP DATA SHEET FOR REFERENCE TO SUPPORTING ALP DATA. SEE TERMINAL AREA DRAWINGS FOR BUILDING/STRUCTURE DATA.
3. ALL ELEVATIONS EXPRESSED IN MEAN SEA LEVEL (MSL), UNLESS OTHERWISE NOTED. ROADWAY ELEVATIONS REFLECT GROUND SURFACE ELEVATION. TRAVERSEWAY ELEVATIONS AT ROAD CENTERLINES ARE DISPLAYED AT THEIR ACTUAL SURFACE ELEVATION.
4. RESTRICTION AREAS: BUILDING RESTRICTION LINE (BRL) ESTABLISHED TO PROVIDE 35' OBSTACLE CLEARANCE BASED ON PART 77 IMAGINARY SURFACES AND THE AWO'S PROTECTION AREA: DEVELOPMENT LIMITED TO 15' BELOW THE WIND SENSOR ELEVATION WITHIN A 500' RADIUS OF THE AWO'S, AND LIMITED TO 10' ABOVE THE WIND SENSOR ELEVATION BETWEEN A 500 TO 1,000' RADIUS.
5. AIRFIELD PERIMETER FENCE IS 10' TALL WITH 1" BARBED WIRE.
6. (*) INNER WIDTH OF PART 77 APPROACH TO MATCH PRIMARY SURFACE FOR PAW ORDER JO 7400.2K, CHANGE 1 (DATED 7-24-2014).

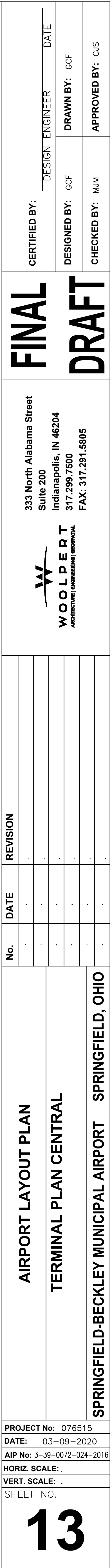
PAVEMENT AREAS		
AREA DESIGNATION	DESCRIPTION	AREA (SY)
EXISTING PAVEMENT AREAS		
D	APRON (581' x 200')	11,652
E	APRON (488' x 183')	10,756
FUTURE PAVEMENT AREAS		
D	APRON (INCLUDING EXISTING) (1,178' x 200')	23,234
E	APRON (INCLUDING EXISTING) (943' x 183')	19,820

TERMINAL STRUCTURE TABLE						
BUILDING NUMBER	FUNCTION	HEIGHT (FEET/AGL)	TOP ELEVATION (FEET/AMSL)	DISTANCE TO RUNWAY CENTERLINE	PART 77 CLEARANCE	DISPOSITION AND REMARKS
EXISTING BUILDINGS AND STRUCTURES						
18	CORPORATE HANGAR	27.5	1068.8	772.0	-71.8	
19	CORPORATE HANGAR	39.4	1080.7	822.0	-72.1	
21	FUEL TANK	9.3	1050.8	775.0	-87.9	

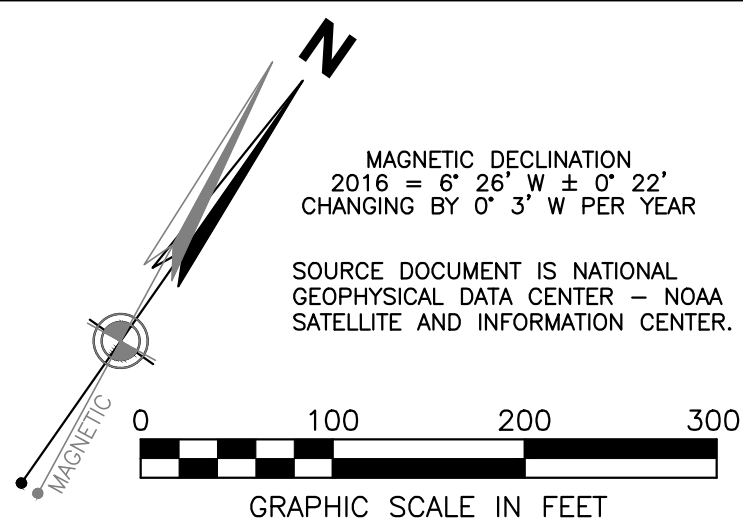
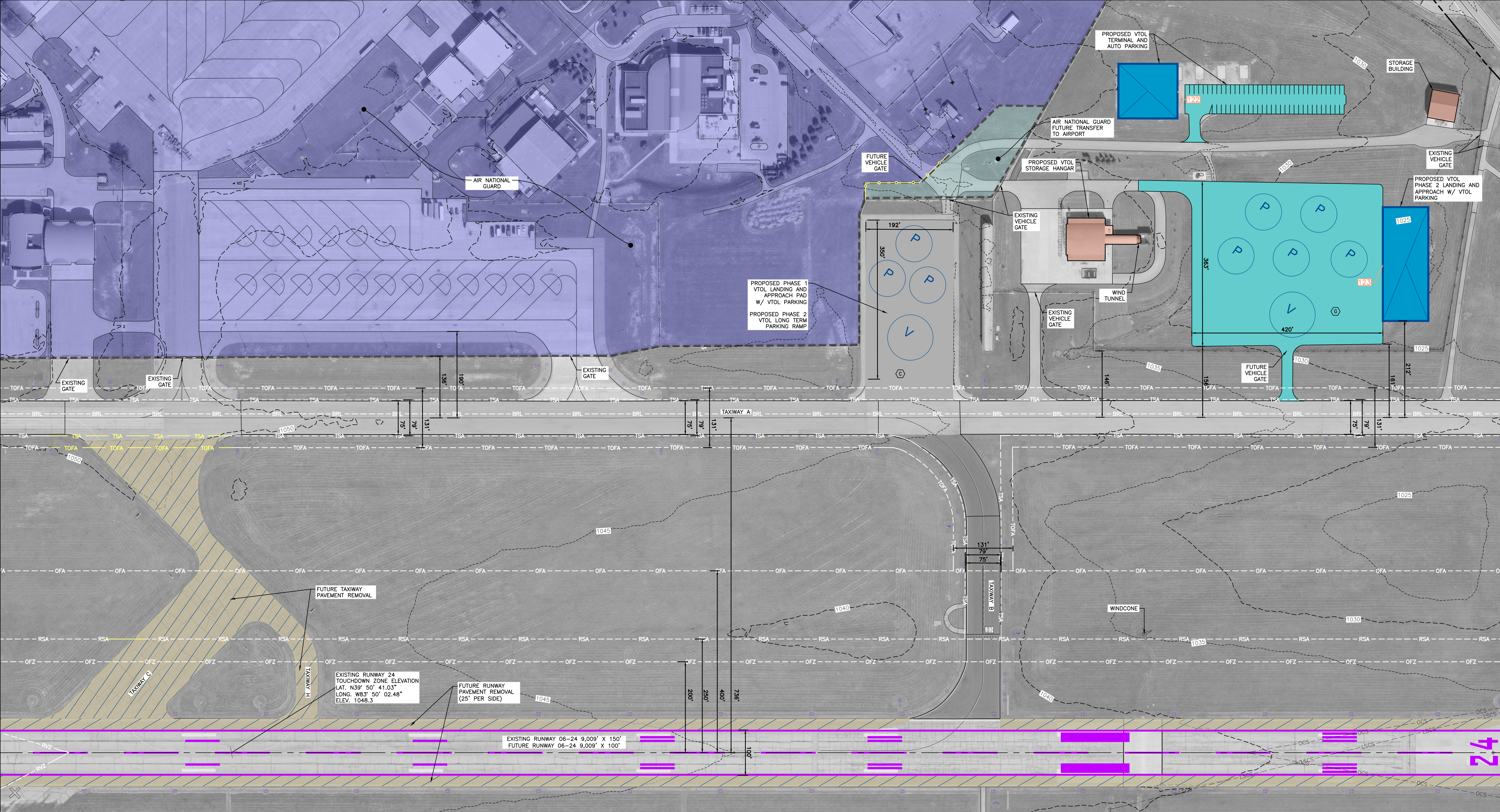
TERMINAL STRUCTURE TABLE						
BUILDING NUMBER	FUNCTION	PYTH. ELEVATION (FEET/MSL)	GROUND ELEV. (FEET/MSL)	MAX. BLDG. HT. ALLOWED (FEET/MSL)	DISTANCE TO RUNWAY CENTERLINE	DISPOSITION AND REMARKS
FUTURE BUILDINGS AND STRUCTURES						
124	CORPORATE HANGAR (45' HEIGHT)	1109.1	1048.6	65.5	839.0	
125	CORPORATE HANGAR (45' HEIGHT)	1123.0	1047.1	70.9	1010.0	
126	CORPORATE HANGAR (45' HEIGHT)	1122.4	1045.5	76.9	1008.0	
127	CORPORATE HANGAR (45' HEIGHT)	1104.0	1045.1	58.9	1008.0	
128	CORPORATE HANGAR (45' HEIGHT)	1077.7	1047.5	30.2	1007.0	GRADE FOR 45' HEIGHT
129	CORPORATE HANGAR (45' HEIGHT)	1020.9	1045.6	25.3	827.0	
130	CORPORATE HANGAR (45' HEIGHT)	1025.8	1045.8	82.0	825.0	
131	CORPORATE HANGAR (45' HEIGHT)	1201.0	1040.1	160.9	799.0	

DRAFT

TERMINAL STRUCTURE TABLE						
BUILDING NUMBER	FUNCTION	PVT ELEVATION (FEET/MSL)	GROUND ELEV (FEET/MSL)	MAX. BLDG HT ALLOWED (FEET/MSL)	DISTANCE TO RUNWAY CENTERLINE	DISPOSITION AND TRIGGER
BUILDING AND STRUCTURES						
101	T-HANGAR ROW D (NEW)	1104.1	1042.0	62.1	921.0	"SEE T-HANGAR NOTE"
102	T-HANGAR ROW D (NEW)	1104.7	1042.7	62.0	925.0	"SEE T-HANGAR NOTE"
103	CORPORATE HANGAR ROW	1151.2	1046.7	104.4	1248.0	
104	FUTURE TERMINAL	1115.9	1043.0	72.9	1005.0	
105	CORPORATE HANGAR ROW	1104.9	1046.7	58.2	903.0	
106	CORPORATE HANGAR (45' HEIGHT)	1104.5	1043.9	55.2	877.0	
107	MAINTENANCE BUILDING	1155.9	1041.9	113.9	1234.0	
108	CORPORATE HANGAR ROW	1154.4	1041.3	113.1	1274.0	
109	CORPORATE HANGAR ROW	1201.0	1040.1	160.9	1680.0	
110	TERMINAL BUILDING ADDITION	1197.1	1045.2	151.9	1072.0	
111	CORPORATE HANGAR ROW	1198.0	1035.9	162.1	1902.0	
112	CORPORATE HANGAR ROW	1173.9	1037.7	142.2	1687.0	
113	T-HANGARS	1178.5	1039.9	138.6	1581.0	
114	T-HANGARS	1194.4	1037.9	96.5	1901.0	
115	CORPORATE HANGAR (45' HEIGHT)	1135.6	1041.7	93.9	896.0	
116	CORPORATE HANGAR (45' HEIGHT)	1134.8	1040.2	94.6	894.0	
117	CORPORATE HANGAR (45' HEIGHT)	1141.4	1039.1	102.3	892.0	
118	CORPORATE HANGAR (45' HEIGHT)	1201.0	1038.1	162.9	946.0	
119	CORPORATE HANGAR (45' HEIGHT)	1201.0	1035.5	165.5	944.0	
120	CORPORATE HANGAR (45' HEIGHT)	1201.0	1030.9	170.1	942.0	
121	CORPORATE HANGAR (45' HEIGHT)	1201.0	1028.2	172.8	941.0	
132	VTOL BUILDING	1116.7	1043.3	73.5	900.0	
133	TERMINAL BUILDING ADDITION	1133.9	1045.5	88.4	1123.0	



Layout Tab Name: 14, Images: SGH_OH_from sid 04, groyssale.tif, Xrefs: 76515 TBLK.dwg, 76515 proposed airspace.dwg, SGH EOR Points-FUTURE.dwg, 76515-P.dwg, SGH Additional Runway Points.dwg
Last Saved By:Fririe, 3/6/2020 7:14:49 AM
G:\DC\clients\Springfield-Beckley Municipal Airport OH (SGH)\76515 SGH Master Plan\Code\76515 TER.dwg Plotted By:Fririe, Gaster Plotted March 6, 2020, 9:06:33 AM



LEGEND: SYMBOLS		
EXISTING	FUTURE	FACILITY
		BUILDING
		AIR NATIONAL GUARD BASE LIMITS
		AVIATIONAL EASEMENTS
		AIR NATIONAL GUARD BASE TRANSFERRED TO AIRPORT
		LAND ACQUISITION
		BUILDING NUMBER
		PAVEMENT AREA DESIGNATION
		TRAVERSEWAY POINT WITH ELEVATION
		MED INTENSITY RUNWAY EDGE LIGHT
		MED INTENSITY RUNWAY THRESHOLD LIGHT
		REIL
		MED INTENSITY TAXIWAY LIGHT
		SSALR LIGHTING SYSTEM
		PAPI/VASI
		GUIDANCE SIGN
		WINDCONE
		AWOS/BEACON/GLIDESLOPE
		AIRPORT REFERENCE POINT
		AIRCRAFT TIE DOWN
		TREE

- GENERAL NOTES
1. ALP REFLECTS AIRPORT DESIGN STANDARDS PER FAA ADVISORY CIRCULAR 150/5300-13A, CHANGE #1. ALP PREPARED IN ACCORDANCE WITH FAA ALP CHECKLIST (SOP 2.000) DATED OCTOBER 1, 2013. REFERENCE ALP DATA SHEET FOR APPLICATION TO DESIGN STANDARDS, SURVEYED INFORMATION, SOURCE OF BASE MAPPING, AND SUPPORTING ALP DATA.

2. SEE ALP DATA SHEET FOR REFERENCE TO SUPPORTING ALP DATA. SEE TERMINAL AREA DRAWINGS FOR BUILDING/STRUCTURE DATA.

3. ALL ELEVATIONS EXPRESSED IN MEAN SEA LEVEL (MSL), UNLESS OTHERWISE NOTED. ROADWAY ELEVATIONS REFLECT GROUND SURFACE ELEVATION, TRAVERSEWAY ELEVATIONS AT ROAD CENTERLINES ARE DISPLAYED AT THEIR ACTUAL SURFACE ELEVATION.

4. RESTRICTION AREAS: BUILDING RESTRICTION LINE (BRL) ESTABLISHED TO PROVIDE 35' OBSTACLE CLEARANCE BASED ON PART 77 IMAGINARY SURFACES AND THE AWOS PROTECTION AREA. DEVELOPMENT LIMITED TO 15' BELOW THE WIND SENSOR ELEVATION WITHIN A 500' RADIUS OF THE AWOS, AND LIMITED TO 10' ABOVE THE WIND SENSOR ELEVATION BETWEEN A 500 TO 1,000' RADIUS.

5. AIRFIELD PERIMETER FENCE IS 10' TALL WITH 1' BARBED WIRE.

6. (*) INNER WIDTH OF PART 77 APPROACH TO MATCH PRIMARY SURFACE PER FAA ORDER JO 7400.2K, CHANGE 1 (DATED 7-24-2014).

LEGEND: LINETYPE		
EXISTING	FUTURE	FACILITY
		AIRPORT PROPERTY LINE
		PARCEL LINE
		RUNWAY/TAXIWAY CENTERLINE
		CONTOURS
		EDGE OF PAVEMENT (PAVEMENT AREA)
		FENCE LINE
		CFR PART 77 SURFACES
		THRESHOLD SITING APPROACH SURFACES
		DEPARTURE SURFACES
		GLIDESLOPE QUALIFICATION SURFACE
		RUNWAY PROTECTION ZONE
		RUNWAY SAFETY AREA
		RUNWAY OBJECT FREE AREA
		RUNWAY OBSTACLE FREE ZONE
		RUNWAY PRECISION OBSTACLE FREE ZONE
		RUNWAY VISIBILITY ZONE
		TAXIWAY SAFETY AREA
		TAXIWAY OBJECT FREE AREA
		TAXIWAY OBSTACLE FREE AREA
		AWOS CRITICAL AREA (30' HEIGHT CLEARANCE)
		35' BUILDING RESTRICTION LINE
		ILS CRITICAL AREA
		INNER APPROACH OBSTACLE FREE ZONE
		LIGHT SIGNAL CLEARANCE SURFACE
		OBSTACLE CLEARANCE SURFACE

PAVEMENT AREAS		
AREA DESIGNATION	DESCRIPTION	AREA (SQ)
EXISTING PAVEMENT AREAS		
C	APRON (350' x 192')	6,590
FUTURE PAVEMENT AREAS		
G	APRON (420' x 363')	16,940

NOTE: AREA DESIGNATIONS FOR ALP PLANNING PURPOSE ONLY.

TERMINAL STRUCTURE TABLE					
BUILDING NUMBER	FUNCTION	P77 ELEVATION (FEET/MSL)	GROUND ELEV (FEET/MSL)	MAX. BLDG. HT. ALLOWED (FEET/MSL)	DISTANCE TO RUNWAY CENTERLINE
FUTURE BUILDINGS AND STRUCTURES					
122	VTOL TERMINAL BUILDING	1177.2	1039.0	60.5	1395.0
123	VTOL MAINTENANCE CENTER	1120.6	1023.2	60.5	950.0

CERTIFIED BY: DESIGN ENGINEER DATE

DESIGNED BY: GCF

CHECKED BY: MJM

APPROVED BY: CJS

FINAL DRAFT

333 North Alabama Street
Suite 200
Indianapolis, IN 46204
317.299.7500
FAX: 317.291.5505

WOOLPERT
ARCHITECTURE ENGINEERING CONSULTANTS

AIRPORT LAYOUT PLAN

TERMINAL PLAN NORTHEAST

SPRINGFIELD-BECKLEY MUNICIPAL AIRPORT SPRINGFIELD, OHIO

PROJECT No: 076515

DATE: 03-09-2020

AIP No: 3-39-0072-024-2016

HORIZ. SCALE:

VERT. SCALE:

SHEET NO.

14