

Update Airport Layout Plan Chapter Six

Phased Development and Cost Estimates



Chapter Six – Phased Development and Cost Estimates

6.0 Introduction

Capital improvements and preventive maintenance at the H.H. Coffield Regional Airport are scheduled for three successive time periods: Phase I; 2013–2017, Phase II; 2018–2022, and Phase III; 2023–2033. The following sections describe and depict the various improvements, by phase, along with an estimated cost for each item. Development items are shown on three exhibits following the text. The recommended phasing is not set in stone and changes in aviation demand, City perspective; funding or area economics may alter proposed improvement timing.

Estimates were developed using historical year (2012) costs. Each figure represents an estimate of the total project cost. Estimates include construction, engineering, administration, testing, surveying and legal expenses. It should be noted that these estimates are order of magnitude accurate for planning purposes, based upon area bid tabulations. A contingency amount was added to anticipate unforeseen circumstances. This approach reduces the chance of budget surprises when a more detailed investigation and design is initiated. Cost estimates may be reviewed and updated in the future as necessary to account for technological improvements, changes in the economy, future construction innovations, and/or changes in local conditions.

The proposed improvement items are based on an unsubstantiated need and not availability of funding; these costs constitute a constrained

display of future airport needs. The timing of these improvements may vary due to funding constraints. The tables identify FAA, TXDOT and City participation. City participation may be revenues from the operation of the Airport or from general funds. This could also include general aviation or corporate hangar developers, aviation business owners, aerospace companies or similar companies or individuals that wish to make an investment in the Airport. These types of developments are generally not eligible for TXDOT funding.

6.1 Short-Term Improvements

During this period (2013-2017), several relatively minor development and improvement items are planned to provide for safe and efficient airport operations and to allow for planned development. This table is synonymous with a constrained Airport Capital Improvement Plan (ACIP). The following descriptions accompany the table and the exhibit on upcoming pages.

1. Displaced Runway 17 End (2013)

An approximate 250 foot relocation of Runway 17 would be necessary to move the OFA off FM Road 908. Also, a 250 foot displacement would be necessary to clear a 20:1 threshold siting surface. The current runway end will be displaced 250 from its current end. Compliance with these two standards (OFA/TSS) though not compulsory, is reasonable practice. The Airport perimeter fence remains within the OFA. A 90 percent TXDOT grant is planned for this project.

2. Acquire OFA and Easement (2014)

Acquisition of the entire OFA in fee is recommended, but not compulsory. ± 1.2 acres near the end of Runway 35 and within the old rail right-of-way are of subject. A trapezoidal area beyond each runway end exists termed a Runway Protection Zone. Land uses within this area should be limited such that an aviation easement is the minimum amount of encumbrance recommended. Compliance with this RPZ standard, though not compulsory, is reasonable practice. The area is approximately 12 acres for properties on both runway ends. A 90 percent TXDOT grant is planned for this project.

3. Lower Trees within Runway 35 RPZ (2015)

Trees should be lowered or removed within the area described above to clear a 20:1 threshold siting surface. Compliance with this TSS standard though not compulsory, is reasonable practice. This project is planned to be completed with City work crews.

4. Lower On-Airport Trees (2015)

Trees should be lowered or removed for nearly all airport properties to clear airspace and for a safe operating environment. Clear airspace in this instance refers to a 7:1 transitional surface and maintenance of this surface clear, though not compulsory, is reasonable practice. This project is planned to be completed with City work crews.

5. Raze Smaller Hangar, Remove Portion of Apron (2015)

The smaller of the two east-side hangars is within the OFA, does not clear the 7:1, and has aged past its useful life. OFA Standards compliance and maintenance of a clear 7:1 surface, though not compulsory, is reasonable practice. The existing apron is wholly within the OFA. This apron, except for a portion to be retained for an access taxiway, should be removed and replaced

at a standard (farther from runway centerline) location with upcoming, planned projects.

6. Access Taxiway, Relocate Fuel (2015)

A portion of the existing apron will remain and serve as an access taxiway nearer to the runway. Construction of the remainder taxiway to a standard offset from runway centerline is recommended. Simultaneously, the existing fueling apparatus will be either removed or replaced to a new location along the new taxiway. This taxiway will also allow new hangar construction (likely ground lease) adjacent. A 90 percent TXDOT grant is planned for this project.

7. Construct Phase I Apron (2016)

An apron will also for aircraft turns along with parking for fueling or overnighing. Projects 6, 7 and 8 are envisioned and intended to be completed around the same time for operational continuity. A 90 percent TXDOT grant is planned for these projects.

8. Construct MIRL (2016)

The existing low-intensity edge lighting system is in substantial disrepair and aged beyond its useful life. A new medium-intensity system is planned. A 90 percent TXDOT grant is planned for these projects.

9. Relocate Airport Access Road (2017)

The existing Airport access road enters the OFA near the existing apron and should be relocated around and behind the larger hangar. Compliance with this OFA standard though not compulsory, is reasonable practice. This project is planned to be completed with City work crews.

Exhibit ST near the end of this chapter depicts these items numerically-tabulated and referenced in plan view. These items total \$1,186,500, and \$152,750 is planned for City of Rockdale participation.

6.2 Intermediate-Term Improvements

During this period (2018-2022), several relatively minor improvement items are planned to provide for safe and efficient airport operations and to allow for planned development. The following descriptions accompany the table and the exhibit on upcoming pages.

1. Relocate Segmented Circle (2018)

A portion of the existing segmented circle is within the OFA and should be relocated to standards location. Compliance with this OFA standard though not compulsory, is reasonable practice. A 90 percent TXDOT grant is planned for this project.

2. Raze Larger Hangar (2019)

The larger of the two east-side hangars is just outside the OFA, but does not clear the 7:1, and has aged past its useful life. A clear 7:1 surface, though not compulsory, is reasonable practice. This project is planned to be completed with City work crews.

3. Construct Phase II Apron (2020)

Additional apron will provide for aircraft turns along with additional parking for fueling or overnighing. Phase I and II apron area approximates the original apron area. A 90 percent TXDOT grant is planned for this project.

4. Acquire Avigation Easement (2021)

A circular clear area is required around an AWOS for reasonably accurate wind readings. Land uses within this area should be limited such that an avigation easement is the minimum amount of encumbrance recommended. Compliance with this clearing standard, though not compulsory, is reasonable practice. The area is approximately 5 acres. Actual AWOS installation is the next project. A 90 percent TXDOT grant is planned for this project and the next.

5. Install AWOS (2022)

An Automated Weather Observing System (AWOS) is not a required piece of airport equipment, but is a very helpful tool for local pilots and the general aviation community as a whole. This equipment takes hourly winds reading which flying and general public may view.

6. Update ALD/ALP (2022)

Is it expected that ten years will have expired since this planning effort, and an update to address all has happened in the community, the region and the aviation world should be done to ensure a responsive plan at that point. A 90 percent TXDOT grant is planned for this project.

Exhibit IT near the end of this chapter depicts these items numerically-tabulated and referenced in plan view. These items total \$619,500, \$86,700 is planned for City of Rockdale participation.

6.3 Long-Term Improvements

During this period (2023-2033), several relatively major improvement items are planned to provide for safe and efficient airport operations and to allow for planned development. A runway extension and rehabilitation and perimeter fencing highlight the overall development. The following descriptions accompany the table and the exhibit on upcoming pages.

1/2. Environmental Assessment (EA)/Mitigation (2023/2024)

It is anticipated that a planned runway extension to meet TXDOT's minimum 'basic service' runway length as specified in TXDOT system plan will require an EA, and potentially environmental mitigation as a consequence. A 90 percent TXDOT grant is planned for this project. Costs (as a consequence of scope) for mitigation are unknown.

3. Acquire Fee Land (±27 Acres) for Southerly Runway Extension (2025)

An approximate 483 foot southerly runway extension for a total of 3,200 feet is planned. This configuration results in a recommendation to acquire approximately 27 acres in fee. Note that aircraft have 3,200 feet available for landing Runway 17 only and all other operations have 3,450 feet available. A 90 percent TXDOT grant is planned for this project.

4. Lower Trees within Acquired Property (2026)

Trees should be removed within the area described above to provide for a safe operating environment. Compliance with these standards though not compulsory, is reasonable practice. This project is planned to be completed with City work crews.

5. Lower Gas Line (2026)

A cursory utility inventory revealed a gas supply line of unknown size just south of current Airport property which may need to be relocated or lowered depending upon its current depth and owner permissions. A 90 percent TXDOT grant is planned for this project. Costs are currently unknown, but could be substantial.

6. Rehabilitate (To 60 Feet Wide) and Extend Runway 483 Feet to the South (2027)

An approximate 483 foot southerly runway extension for a total of to 3,200 feet is planned (3,450 feet for all operations except landing Runway 17). This improvement includes reconstruction and fixes for grades. A 90 percent TXDOT grant is planned for this project.

7. Install MIRL, PAPIs and Beacon (2028)

Installation of a Medium Intensity Runway Lighting (MIRL) system is planned along with a Precision Path Indicator (PAPI) system for each runway end. The runway edge lights help to make the Airport more of an all-weather facility and the PAPI landing aids provides visual

glideslope reference for landing pilots. The Beacon is planned for rehabilitation. 90 percent TXDOT grant is planned for this project.

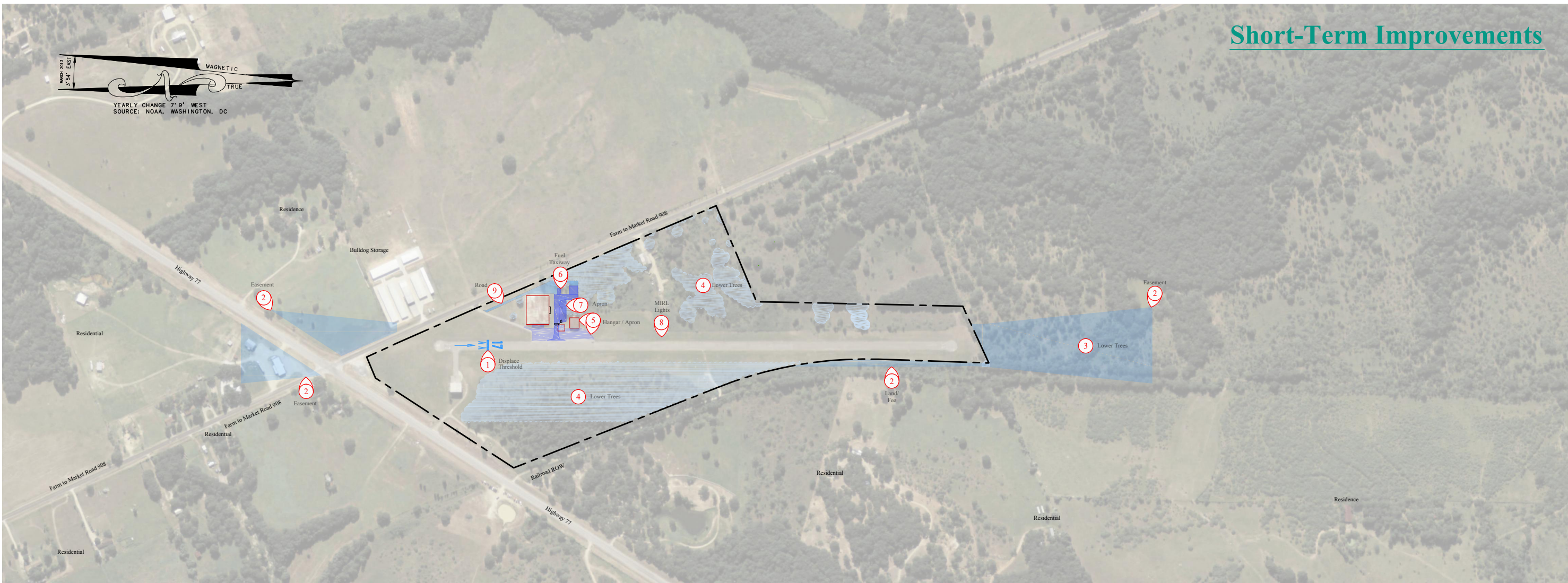
8. Construct Phase III Apron (2030)

This final apron area will provide for the additional forecast aircraft along with parking for fueling and overnighting. A 90 percent TXDOT grant is planned for this project.

9. Construct Perimeter Wildlife Fencing (2033)

Wildlife fencing will help to mitigate larger mammalian wildlife incursions and limit risk. A 90 percent TXDOT grant is planned for this project.

Exhibit LT at the end of this chapter depicts these items numerically-tabulated and referenced in plan view. These items total \$3,574,000, of which \$352,450 is planned for City of Rockdale participation.

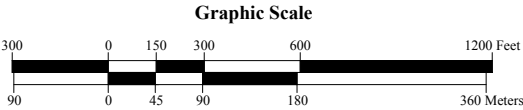


Short-Term Improvements

Legend

(E) Existing
Property Line
Existing Buildings

Short-Term Improvements (2013 - 2017)					
Number	Recommended Improvements	FAA	TxDot	City	Total
1	(2013) Displace (Mark) 17 threshold ±250' to clear 20:1 over Farm to Market Road 908	\$	\$ 20,250	\$ 2,250	\$ 22,500
2	(2014) Acquire Fee (OFA), (±1.2) Easement (±12 acres) for 17 and 35 RPZ		\$ 67,500	\$ 7,500	\$ 75,000
3	(2015) Lower Trees within acquired 35 RPZ			\$ 7,000	\$ 7,000
4	(2015) Lower On-Airport Trees			\$ 12,000	\$ 12,000
5	(2015) Raze smaller hangar (currently inside OFA), remove portion of existing apron		\$ 67,500	\$ 7,500	\$ 75,000
6	(2015) Construct access taxiway, relocate existing fueling system (currently within OFA)		\$ 459,000	\$ 51,000	\$ 510,000
7	(2016) Construct Phase I Apron; 625 sq. yds, (for maneuvering/fueling)		\$ 198,000	\$ 22,000	\$ 220,000
8	(2016) Construct MIRL		\$ 238,250	\$ 26,500	\$ 265,500
9	(2017) Relocate auto access road (currently within OFA)			\$ 17,000	
Totals:		\$	\$ 1,058,250	\$ 152,750	\$ 1,186,500



No.	Revision	Ckd	Date

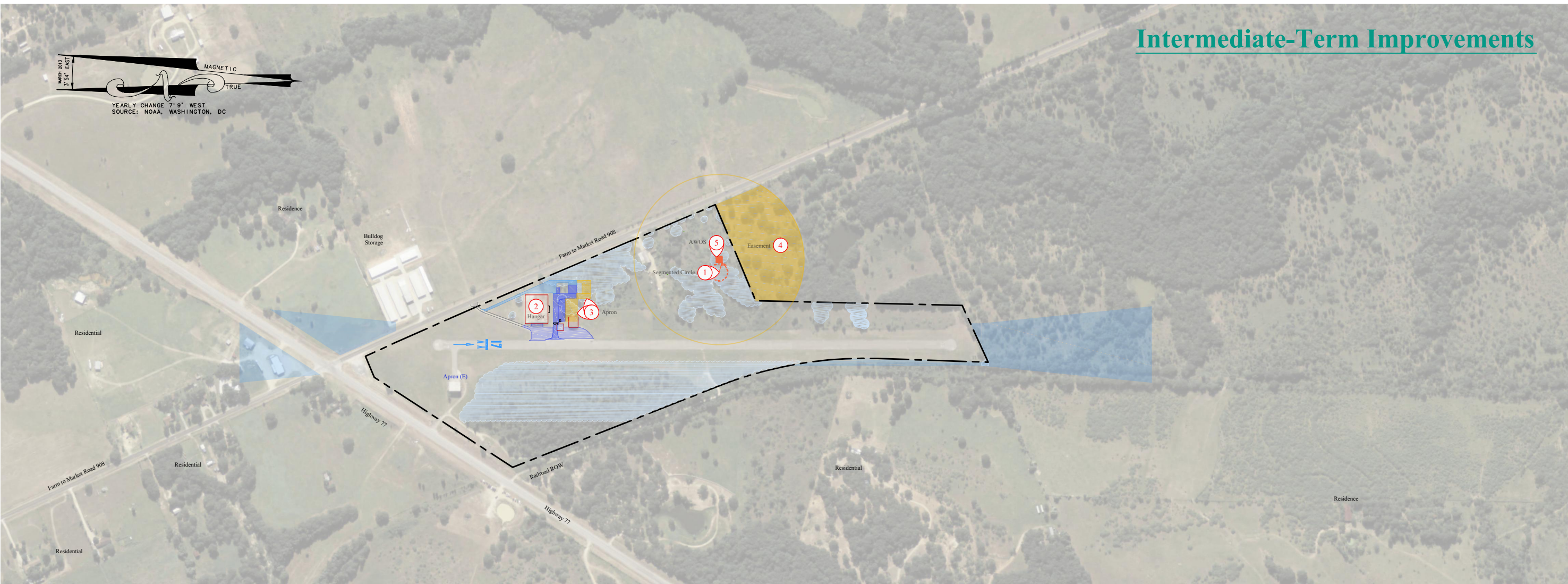
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TxDOT Contract Number: 2X1A V064

Project No.: RCK1400M	SPM	MTP	SMP	Date: April 2013
Designed By:				
Drawn By:				
Approved By:				

Short-Term Improvements
(Years 2013 - 2017)



Intermediate-Term Improvements

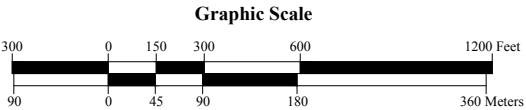
Legend

(E) Existing

Property Line

Existing Buildings

Intermediate-Term Improvements (2018 - 2022)					
Number	Recommended Improvements	FAA	TxDot	City	Total
1	(2018) Relocate Segmented Circle (Currently within OFA)	\$	\$ 22,500	\$ 2,500	\$ 25,000
2	(2019) Raze Larger Hangar			\$ 27,500	\$ 27,500
3	(2020) Construct Phase II Apron - 1025 sq. yds, (itinerant apron)		\$ 252,000	\$ 28,000	\$ 280,000
4	(2021) Acquire Avigation Easement (±5.4 acres) for AWOS Critical Area		\$ 10,800	\$ 1,200	\$ 12,000
5	(2022) Install AWOS		\$ 180,000	\$ 20,000	\$ 200,000
6	(2022) Update ALD (Non-AGIS compliant) (not shown)		\$ 67,500	\$ 7,500	\$ 75,000
	Totals:	\$	\$ 532,800	\$ 86,700	\$ 619,500



No.	Revision	Ckd	Date

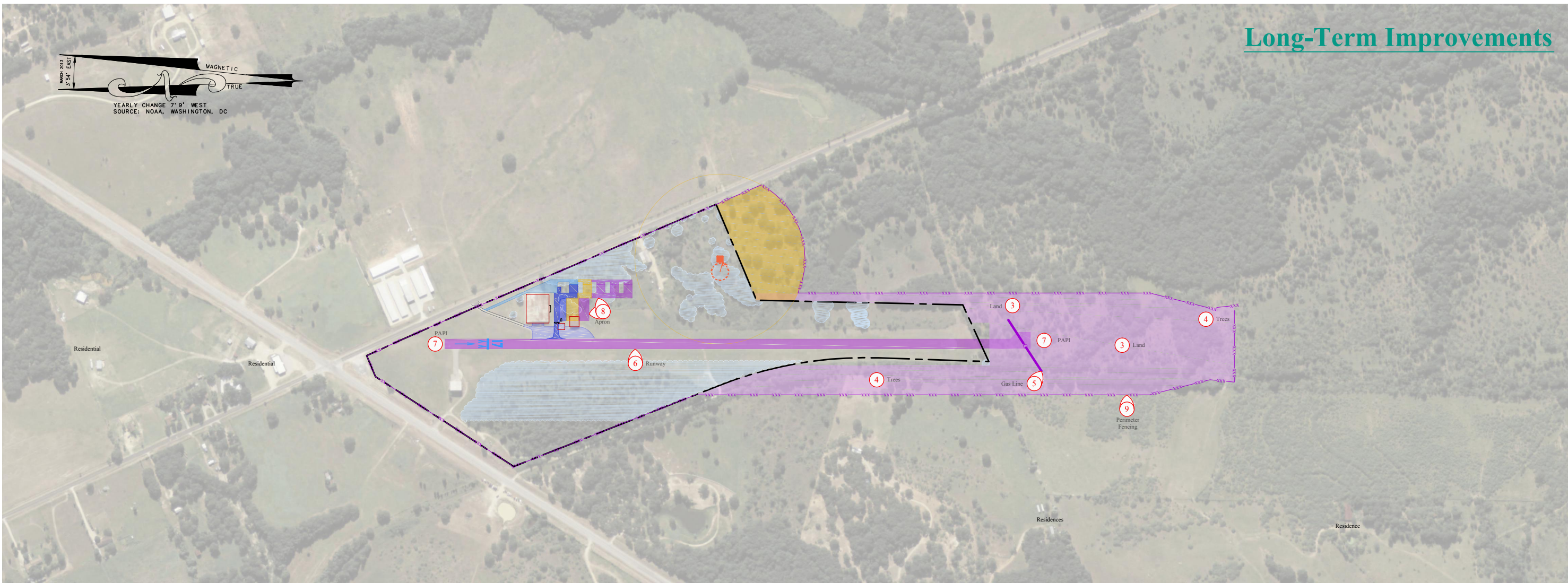
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Designed By: SPM	MTP
Drawn By: MTP	SMP
Approved By: SMP	April 2013
Date:	

Intermediate-Term
Improvements
(Years 2018 - 2022)

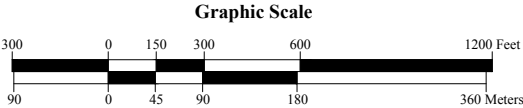


Long-Term Improvements

Legend

(E) Existing
Property Line
Existing Buildings

Long-Term Improvements (2023 - 2033)					
Number	Recommended Improvements	FAA	TxDot	City	Total
1	(2023) EA; Southerly Runway Extension (483' to 3,200') (not shown)	\$	\$ 76,500	\$ 8,500	\$ 85,000
2	(2024) EA mitigation (not shown)		Not Known		Not Known
3	(2025) Acquire Fee Land (±27 acres) for 483' Extension		\$ 175,500	\$ 1,950	\$ 195,000
4	(2026) Lower Trees within Acquired Property			\$ 14,000	\$ 14,000
5	(2026) Lower Gas Line		Not Known		Not Known
6	(2027) Rehabilitate Existing Runway (60' wide); construct 483' Extension (rehab will fix trans/long grade busts and build P-152 safety area)		\$ 1,462,500	\$ 162,500	\$ 1,625,000
7	(2028) Install MRL, PAPI and Beacon		\$ 531,000	\$ 59,000	\$ 590,000
8	(2030) Construct Phase III Apron (±1,750 square yards)		\$ 337,500	\$ 37,500	\$ 375,000
9	(2033) Construct Wildlife Perimeter Fencing		\$ 621,000	\$ 69,000	\$ 690,000
Totals:		\$ 0	\$ 3,204,000	\$ 352,450	\$ 3,574,000



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Drawn By:				
Approved By:				

Long-Term
Improvements
(Years 2023 - 2033)

Exhibit:
LT
of 4 Exhibits