CHAPTER FIVE - MASTER PLAN CONCEPT

The Airport Master Plan Update for Dallas Executive Airport has included the development of aviation demand forecasts, an assessment of future facility needs, and the evaluation of airport development alternatives to meet future facility needs. Draft phase reports have been presented to the Planning Advisory Committee (PAC) which is comprised of key constituents with an investment or interest in Dallas Executive Airport.

In the previous chapter, several alternatives were analyzed which explored different options for the future growth and development of Dallas Executive Airport. Each alternative provided a unique approach for facility development, and the layouts were presented for the purposes of evaluation. Those airport alternatives have been refined into a single development concept for the Master Plan, which is included for presentation in this chapter. The following sections will describe, in narrative and graphic form, the recommended development plan for the future use of Dallas Executive Airport.

An objective of this planning effort is to equip decision-makers with the flexibility to either accelerate or slow development goals based on actual demand. If demand slows, the obvious result would be minimized development of the airport beyond routine airport safety and maintenance. If, however, aviation demand accelerates, such as might happen as the United States exits a deep recessionary period, development could need to be expedited to meet potential demand. Any plan can account for limited or no development, but the lack of a plan for accelerated growth can sometimes be challenging for decision-makers. Therefore, to ensure flexibility in planning and development allowing proper response to unforeseen needs, the Master Plan Concept considers the full and balanced development potential of airport property.

MASTER PLAN CONCEPT

The Master Plan Concept provides a planning outline for development of Dallas Executive Airport through the 20-year planning period and beyond. It represents an ultimate configuration for the airport that meets Federal Aviation Administration (FAA) and Texas Department of Transportation – Aviation Division (TxDOT) design standards to the extent practicable and provides a variety of landside development options to meet the increasing demands on the airport by aviation and non-aviation operations. It is important to note that the development concept provides for anticipated facility needs over the next 20 years and establishes a vision and direction for meeting facility needs even beyond the planning horizons established in this Master Plan.

In assessing development needs, this study has separated the airport system into airside and landside functional areas. Airside components relate to runways, taxiways, navigational aids, etc., and require the greatest commitment of land area to meet the physical layout of the airfield system. Landside components include hangars, aircraft parking aprons, terminal services, etc. Landside planning also factors the utilization of remaining airport property to provide revenue support for the airport and to spur economic growth for the regional area. The Master Plan Concept is a consolidation of these airside and landside functions as depicted on **Exhibit 5A**.

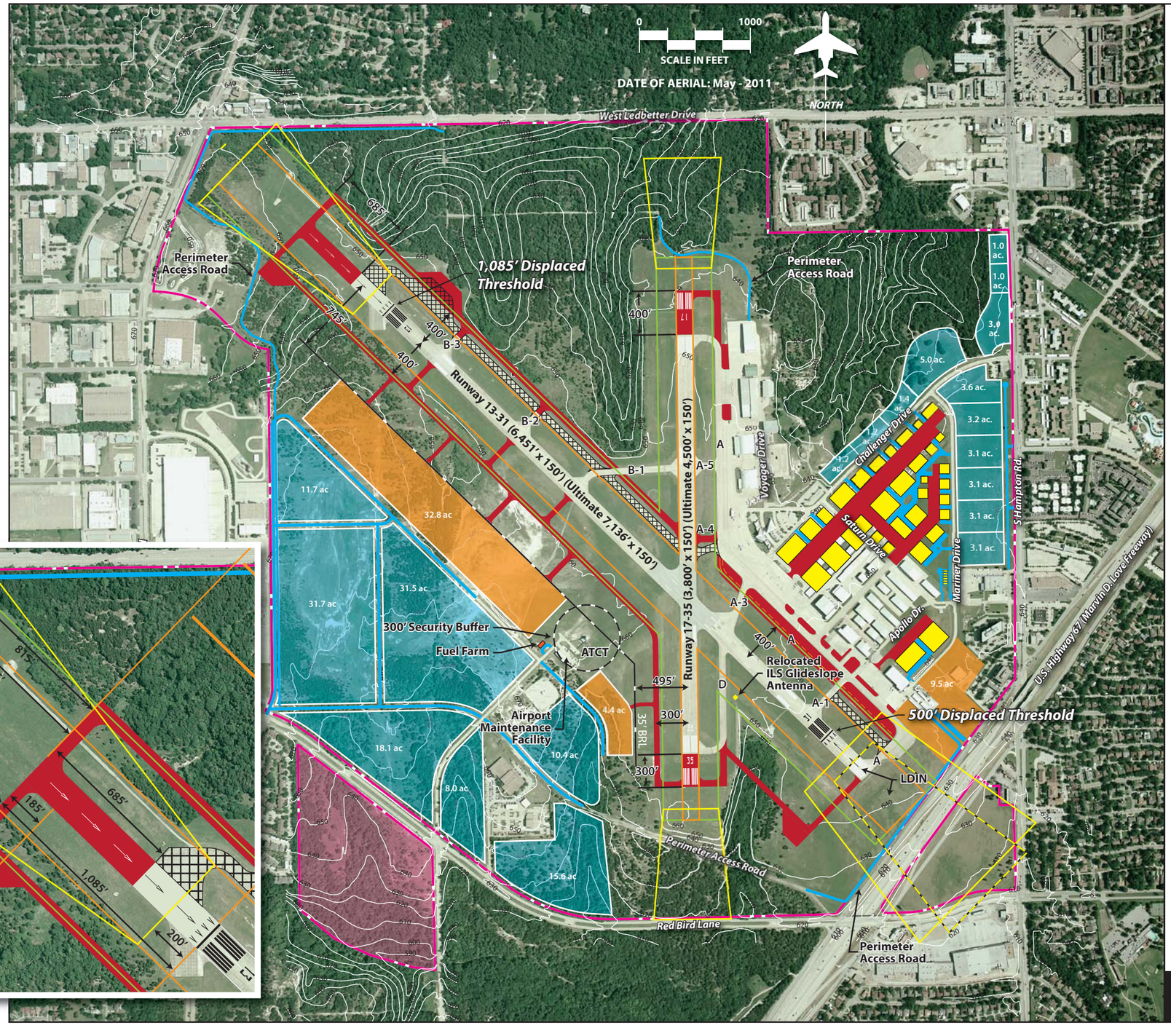
AIRSIDE DEVELOPMENT CONCEPT

The major airside issues addressed in the recommended development concept include the following:

- Adherence to ultimate Airport Reference Code (ARC) D-III design standards on Runway 13-31 and ARC B-II design standards on Runway 17-35.
- Extension of Runway 13-31 685 feet to the northwest to better accommodate all business jet operations up to and including those in ARC D-III.

City of Dallas

Dallas Executive Airport



RUNWAY 13 INSET

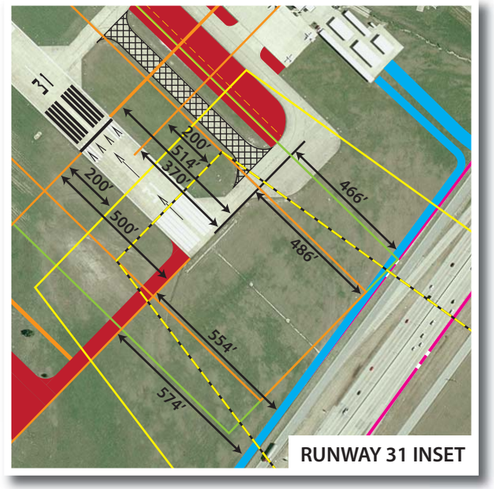
LEGEND

- Airport Property Line
- Runway Safety Area (RSA)
- Object Free Area (OFA)
- Approach Runway Protection Zone (RPZ)
- Departure RPZ
- Ultimate Airfield Pavement
- Pavement to be Removed
- Ultimate Building
- Ultimate Road/Parking
- Aviation Revenue Support Parcel
- Non-Aviation Revenue Support Parcel
- Non-Aviation Development

	RUNWAY	
	13	31
TORA	6,766′	6,051′
TODA	6,766′	6,051′
ASDA	6,622′	6,951′
LDA	5,537′	6,451′

KEY:

TORA: Take-Off Run Available
TODA: Take-Off Distance Available
ASDA: Accelerate-Stop Distance Available
LDA: Landing Distance Available
ILS: Instrument Landing System
LDIN: Lead-In Lights



RUNWAY 31 INSET

Exhibit 5A:
MASTER PLAN CONCEPT

- Displace the Runway 13-31 thresholds to meet appropriate safety area needs beyond each end of the ultimate runway configuration.
- Implementation of declared distances on Runway 13-31 to satisfy runway safety area (RSA) and runway protection zone (RPZ) standards beyond each runway end.
- Extension of Runway 17-35 700 feet (400 feet to the north and 300 feet to the south) to enable a larger portion of the general aviation fleet mix to utilize the runway when needed.
- Construct additional taxiways and realign existing taxiways associated with Runways 13-31 and 17-35.
- Upgrades to lighting and marking aids on the runway and taxiway systems.

Airfield Design Standards

FAA and TxDOT have established design criteria to define the physical dimensions of runways and taxiways and the imaginary surfaces surrounding them which provide for the safe operation of aircraft at the airport. These design standards also define the separation criteria for the placement of landside facilities.

As discussed previously, design criteria primarily center on the airport's critical design aircraft. The critical aircraft, as defined by TxDOT, is the largest type of aircraft expected to operate at the airport on a regular basis. Regular basis is further defined as a minimum of 250 annual operations (takeoffs and landings). Factors included in the airport design are an aircraft's wingspan, tail height, and approach speed. The FAA has established the ARC to relate these factors to airfield design standards.

Analysis in Chapter Three indicated that Dallas Executive Airport is presently used by a wide range of general aviation aircraft. The majority of these include single and multi-engine aircraft which fall into approach categories A and B and airplane design groups (ADG) I and II. In addition, larger business jets included within approach categories B, C, and D and ADGs II and III also utilize the airport, but on a less frequent basis. Based upon flight plan data in Chapter Three, annual operations by jet aircraft in approach category D and ADG II have historically exceeded the critical aircraft threshold of 250 operations per year. As such, the existing critical aircraft falls in ARC D-II.

The Master Plan anticipates that jet aircraft usage will increase in the future and include larger business jets such as the Global Express, Gulfstream V, and Boeing Business Jet. These aircraft have operated at the airport in the past; however, they have not conducted a minimum of 250 annual operations. These aircraft, which belong in ADG III, are increasing in the national fleet and could appear more regularly at general aviation reliever airports such as Dallas Executive Airport. As a result, ultimate planning should conform to ARC D-III standards. Long term planning for primary Runway 13-31 should be for ARC D-III standards to accommodate the most demanding ultimate design aircraft.

A detailed evaluation was conducted in Chapter Four to determine the feasibility of Runway 17-35 being upgraded to accommodate a larger portion of the jet aircraft fleet mix that utilizes the airport. Due to physical constraints, development costs, and incompatible land uses beyond each end of the runway, justification for upgrading to a runway length that can accommodate a larger percentage of the business jet fleet while adhering to appropriate FAA and TxDOT safety standards was not considered practical or financially prudent. As a result, Runway 17-35 will continue to accommodate the majority of smaller general aviation aircraft and should be ultimately planned to ARC B-II standards. **Table 5A** presents the design standards to be applied to the ultimate airfield configuration at Dallas Executive Airport.

Runway 13-31

Runway 13-31 is currently 6,451 feet long by 150 feet wide and serves as the primary runway at Dallas Executive Airport. Analysis in the previous chapter considered improvements to the runway in the form of a runway extension while meeting appropriate safety design standards.

The Master Plan Concept proposes a 685-foot northerly extension on Runway 13-31. The runway extension is planned to better accommodate all business jet operations up to and including those in ARC D-III. Furthermore, the additional runway length could allow for increased useful load (fuel, passengers, and baggage) and longer stage lengths for jet aircraft that may operate at the airport in the future. While adequate for most of the current aircraft fleet utilizing the airport, the present length of Runway 13-31 can limit some larger aircraft when daily temperatures climb well above 90 degrees. As a result, the current length can limit some aircraft during the summer months at Dallas Executive Airport. The proposed runway extension will also serve to maximize runway length

Table 5A: ULTIMATE AIRFIELD PLANNING DESIGN STANDARDS

	Runway 13-31		Runway 17-35
Runways			
Airport Reference Code	**D-III**		**B-II**
Approach Visibility Minimums	3/4-mile - Runway 31 ≥ 1 mile - Runway 13		≥ 1 mile - Both Ends
Runway Safety Area			
Width (ft.)	500		150
Length Beyond Runway End (ft.)	1,000		300
Object Free Area			
Width (ft.)	800		500
Length Beyond Runway End (ft.)	1,000		300
Obstacle Free Zone			
Width (ft.)	400		400
Length Beyond Runway End (ft.)	200		200
Precision Obstacle Free Zone	**Runway 31**		
Width (ft.)	800		N/A
Length Beyond Runway End (ft.)	200		N/A
Runway Protection Zone	**Rwy 13**	**Rwy 31**	**Both Ends**
Inner Width (ft.)	500	1,000	500
Outer Width (ft.)	1,010	1,510	700
Length (ft.)	1,700	1,700	1,000
Runway Centerline to:			
Holding Positions (ft.)	256		200
Parallel Taxiway Centerline (ft.)	400		240
Taxiways			
Width (ft.)	50		35
Safety Area Width (ft.)	118		79
Object Free Area Width (ft.)	186		131
Taxiway Centerline to:			
Fixed or Moveable Object (ft.)	93		66

Source: FAA Advisory Circular 150/5300-13, *Airport Design*

when accounting for safety area deficiencies; in particular, those related to RSA and RPZ criteria.

As discussed in Chapter Four, the airport's perimeter fencing and U.S. Highway 67 and its outer roadways obstruct Runway 13-31's RSA beginning approximately 507 feet southeast of the runway end. It should be noted that an internal perimeter access road is currently being designed and will traverse the area adjacent to the northwest and southeast sides of Runway 13-31. Upon completion, the perimeter access road will allow for only 486 feet of RSA beyond the southeast end of the runway and 965 feet of RSA beyond the northwest end of the runway. For existing ARC D-II and ultimate ARC D-III critical aircraft design, the FAA-required RSA is 500 feet wide extending 1,000 feet beyond the far ends of each runway. Only 600 feet of RSA is required prior to the landing thresholds. Since operations are performed to both runway ends, depending on wind conditions, the RSA effectively needs to extend 1,000 feet beyond each runway end. A detailed RSA determination was made in Chapter Four regarding the current RSA deficiency that exists beyond the southeast end of Runway 13-31 and provided potential options, as outlined in FAA Order 5200.8, *Runway Safety Area Program*, to mitigate the deficiency including:

1. Constructing the traditional graded RSA surrounding the runway;
2. Relocating, shifting, or realignment of the runway;
3. Reduction in runway length where the existing runway length exceeds that which is required for the existing or projected design aircraft;
4. Implementation of declared distances;
5. Installation of Engineered Materials Arresting Systems (EMAS); and
6. A combination of runway relocation, shifting, grading, realignment, or reduction.

FAA design standards also call for the airport to provide positive land use control over the land in the RPZ. The FAA recommends that an airport control the RPZ through outright ownership. Purchasing airspace and other land use rights through avigation easements is another option. Finally, if ownership of the property is not possible, land use controls via zoning can be enacted.

The RPZs associated with Runway 13-31 currently extend beyond airport property. Approximately 2.62 acres of the Runway 13 RPZ extend beyond airport property to the northwest and encompass five commercial properties and portions of Ledbetter Drive and Westmoreland Road. Adjacent to the southeast side of the airport, east of U.S. Highway 67, approximately 16.27 acres of the Runway 31 RPZ extends beyond airport property to include five commercial properties and 12 residential properties.

In order to conform to FAA design standards for the RSA and RPZ deficiencies previously discussed, Runway 13-31 is ultimately planned for displaced thresholds and the implementation of declared distances. As depicted on **Exhibit 5A**, a 1,085-foot displaced threshold (accounting for the proposed 685-foot northerly runway extension) is proposed on Runway 13 and a 500-foot displaced threshold for Runway 31. These displacements would shift the approach and departure RPZs on both runway ends away from incompatible land uses. The approach RPZ for Runway 13 and the departure RPZ for Runway 31 (same surface located off the northwest end of the runway) would be contained on existing airport property. Farther southeast, the approach RPZ for Runway 31 and departure RPZ for Runway 13 would still extend beyond existing airport property; however, the area outside current airport property would only encompass portions of roads (U.S. Highway 67, Red Bird Lane, and South Hampton Road) and parking areas and not include commercial buildings and residences.

In addition to displacing the runway thresholds, declared distances are planned to further mitigate RSA and object free area (OFA) deficiencies. Chapter Four outlined the definitions and applicability of declared distances associated with existing and ultimate conditions on Runway 13-31.

For Runway 13, the 685-foot extension would allow for the runway to provide a take-off distance available (TODA) and take-off run available (TORA) of 6,766 feet, which would be 370' less than the entire length of pavement. The TODA and TORA would be shorter to account for the reduction of the shifted departure RPZ. The accelerate-stop distance available (ASDA) would be equal to the total pavement length (7,136 feet) minus 514 feet which would account for the RSA deficiency beyond the southeast end of Runway 13-31 upon construction of the perimeter access road. As such, 6,622 feet of ASDA would be offered on Runway 13. The landing distance available (LDA) would equal the total pavement length minus a 1,085-foot displaced threshold on Runway 13 as well as another 514 feet for RSA deficiency off the southeast end of the runway. The LDA for Runway 13 would be the least of declared distances at 5,537 feet.

Declared distances for Runway 31 would include a TODA and TORA of 6,051 feet to account for the ultimate departure RPZ extending to the edge of existing airport property on the northwest side of the runway. The ASDA would be equal to the total pavement length minus 185 feet of RSA and OFA deficiency that would account for the location of the perimeter access road being proposed on the northwest side of the airport. As a result, 6,951 feet of ASDA would be made available on Runway 31. Finally, the LDA for Runway 31 would be 6,451 feet to account for the full length of pavement minus the proposed 500-foot displaced threshold on Runway 31 and an additional 185 feet of RSA and OFA deficiency on the northwest side of the runway.

Exhibit 5A further outlines the declared distances associated with Runways 13 and 31 that are needed when considering the RSA, OFA, and RPZ deficiencies. It should be noted that the declared distances being proposed do not account for the OFA deficiency on the southeast end of Runway 13-31. The proposed plan considers the FAA will agree to a modification to standard for the OFA. If the full OFA is required by the FAA, the ASDA and LDA would need to be further reduced by 20 feet on Runway 13. It should be noted that the FAA can allow Modifications to Standard for OFA deficiencies on an airfield in the event that further improvements are not practicable.

The development concept includes relocating the localizer antenna associated with the instrument landing system (ILS) approach on Runway 31 to a position 1,685 feet from the existing Runway 13 end. The proposed location would allow the antenna to

be properly positioned to meet ARC D-II/III design for when the runway is extended by 685 feet. Once the antenna is relocated, the area should be graded to meet applicable RSA gradient standards. Farther southeast, the glideslope antenna and lead-in lighting (LDIN) system, also associated with the ILS approach to Runway 31, would need to be relocated to account for the 500-foot displaced threshold being proposed on Runway 31. According to the FAA, glideslope antennas can be sited between 750 and 1,250 feet from a runway threshold. As such, the glideslope antenna can be relocated farther northwest and still remain clear of Taxiway D and its associated safety areas. Finally, the first 500 feet of the LDIN system would need to be built into the pavement, so as not to be an obstruction to aircraft movements. The remaining portion of the approach lighting system can be constructed aboveground.

Runway pavement strength associated with Runway 13-31 was discussed earlier in this study. Currently, the runway provides pavement strengths of 35,000 pounds single wheel loading (SWL), 60,000 pounds dual wheel loading (DWL), and 110,000 pounds dual tandem wheel loading (DTWL). The recommended development plan includes strengthening Runway 13-31 to obtain an ultimate SWL of 60,000 pounds and DWL of 95,000 pounds. This will better meet the demands of existing and future critical design aircraft within ARC D-III on a regular basis.

Runway 17-35

The development concept includes an extension to Runway 17-35 and parallel Taxiway D 400 feet north and 300 feet south to provide a total runway length of 4,500 feet. As detailed in Chapter Three, this runway is better suited to predominant wind conditions at Dallas Executive Airport as it is utilized approximately 75 percent of the time. The existing length of the runway, however, currently limits it to smaller general aviation aircraft. Although 4,500 feet of runway length would still limit the use of larger business jets, this additional length will enable a larger portion of the general aviation fleet mix to utilize the runway when needed for wind conditions or for times when primary Runway 13-31 is closed for maintenance or emergency purposes.

Extending the runway to the north and south would warrant relocating the RPZs associated with a not lower than one-mile visibility minimum approach on each runway end. As illustrated on **Exhibit 5A**, the ultimate RPZs would remain on airport property and under total control of the airport, which is desirable.

Further improvements include the installation of a four-box precision approach path indicator (PAPI-4) on Runway 35. Currently, all runway ends except for Runway 35 are served by a form of visual approach lighting including four-box visual approach slope indicators (VASI-4) on Runway 13-31 and a PAPI-4 on Runway 17.

Taxiways

While no significant airfield capacity improvements should be necessary during the course of this planning period, the Master Plan Concept considers improving airfield efficiency through the use of additional taxiways. As previously discussed, runway extensions are proposed on the northwest end of Runway 13-31 and on each end of Runway 17-35. As a result, Taxiways A, B, and D would need to be extended to accommodate these runway extensions.

In order to accommodate critical aircraft in ARC D-III and/or a precision instrument approach procedure with visibility minimums of ½-mile on Runway 13-31, FAA standards call for the parallel taxiway serving the runway designed for such to be separated from the runway by at least 400 feet (centerline to centerline). Partial parallel Taxiway B serving the northwest portion of Runway 13-31 is currently located 300 feet east of the runway centerline and does not meet the ultimate 400-foot separation for ARC D-III design. The Master Plan Concept considers the relocation of Taxiway B to 400 feet east of the runway centerline and also includes a new connector taxiway linking the east apron with Taxiway B through Runway 17-35. It should be noted that significant costs would be associated with this project given the significant elevation changes

north of existing Taxiway B as outlined in Chapter Four. As a result, relocation of the taxiway to a 400-foot separation should only be considered if justification is clearly demonstrated and the FAA requires the improvement.

Taxiway A serves as the partial parallel taxiway for the southern portion of Runway 13-31. It is separated from Runway 13-31 by 530 feet (centerline to centerline). The development plan considers relocating Taxiway A to a distance of 400 feet from the runway centerline, and in doing so, creates additional apron area for dedicated aircraft parking on the east side of the airport.

A parallel taxiway serving the west side of Runway 13-31 is also depicted on the development plan. This taxiway would allow aircraft access leading to aviation development on the west side of the airport. Located 400 feet from the runway centerline, the proposed taxiway complies with FAA criteria for runway-to-parallel taxiway separation requirements for ARC D-III design criteria. Entrance/exit taxiways serving the west side of the parallel runway would mirror those provided on the east side of the runway.

The development plan also depicts the extension of the proposed parallel taxiway associated with Runway 13-31 to the south serving the southern portion of Runway 17-35. This taxiway would be located 300 feet from Runway 17-35 (centerline to centerline), which satisfies ARC B-II standards. Furthermore, ultimate taxiway development is also shown in the southeast portion of the airport connecting the Runway 31 and 35 ends. Significant improvements would be needed to this area prior to constructing the taxiways, which most likely would occur beyond the long term planning period of this study. Medium intensity taxiway lighting (MITL) should be applied to all active taxiways at the airport during the planning period.

The current hold position markings associated with Runways 13-31 and 17-35 are marked 250 feet and 200 feet, respectively, from each runway centerline. As previously discussed, hold lines associated with Runway 13-31 should be relocated to 256 feet from the runway centerline to account for the standard of relocating hold lines one foot for each additional 100 feet above sea level to meet FAA standards for approach category D aircraft.

LANDSIDE DEVELOPMENT CONCEPT

The major landside issues addressed in the recommended development concept include the following:

- Construct additional aircraft storage hangars.
- Extend aircraft access to east and west areas of the airport, providing for additional aviation development should demand dictate.
- Provide additional apron space for aircraft parking on the east side of the airport.
- Identify airport support facilities to include additional fuel storage and the construction of a perimeter access road.
- Designate non-aviation development areas on airport property to further enhance potential revenues.

Hangars

The recommended development concept shows the location of certain hangar types on **Exhibit 5A**. Following the philosophy of separation of activity levels, larger high activity conventional hangars are located on the east side of the airport in close proximity to the main aircraft parking apron areas. Lower activity executive hangars are farther from the main parking apron areas and grouped together. **Table 5B** presents the total hangar areas provided in the landside development concept.

As can be seen from the table, the Master Plan Concept provides more than 600,000 square feet of additional hangar space, which exceeds the amount of hangar space needed over the next 20 years. Therefore, the hangar layout presented represents a vision for the airport that extends beyond the scope of this Master Plan. The reason for this is to provide airport decision-makers with dedicated areas on the airport that should be reserved for certain hangar types.

The proposed hangar layout presented on the development concept was designed through planning efforts between airport staff and the current airport's engineer (Garver Engineers). To accommodate aircraft access to the designated hangar areas, additional taxiway development will be needed. It should be noted that

Table 5B: AIRCRAFT HANGAR STORAGE SPACE PLANNED

Hangar Type	Provided in Master Plan
Executive Hangar Area (s.f.)	81,400
Conventional Hangar Area (s.f.)	520,800
Total Hangar Storage Area (s.f.)	**602,200**

the northerly extension of Taxiway R is currently under design and planned for construction in the short term planning period.

Several large conventional hangars are proposed that open to the proposed taxiways. These facilities would be capable of handling high activity operations, including fixed base operators (FBOs), corporate flight departments, air charter, aircraft maintenance, and large aircraft storage, among others. The Master Plan Concept also shows continued development of executive hangars in this vicinity to include 11 separate structures ranging in size from 3,600 square feet to 8,100 square feet.

The forecast for based aircraft at Dallas Executive Airport continues to show single engine and smaller multi-engine aircraft dominating the fleet mix. As a result, T-hangars and linear box hangars should continue to meet the needs of many of these smaller aircraft at the airport for the foreseeable future. As outlined earlier in this study, the airport currently offers approximately 192,800 square feet of this type of storage space. Although the development plan does not show specific T-hangar/linear box hangar layouts, there is additional space on the east and west sides of the airport to accommodate these hangar types should demand or private development preference dictate.

Aviation Development Parcels

Also included on the development plan are parcels dedicated for aviation-related activities. In the southeast landside area, approximately 9.5 acres of land are highlighted for airfield access revenue support. A portion of this area is currently utilized by the City of Dallas Police Department's helicopter operations. In addition, a vehicle roadway is ultimately being proposed through this area to provide enhanced access to landside development on the airfield. As depicted, the roadway would not allow airfield access to the northern portion of the aviation development parcel for fixed wing aircraft. As a result, the land to the north could continue to be utilized for helicopter activities or other specialized aviation operations. The southern portions of this parcel could be provided aircraft access by constructing a taxiway extending north from parallel Taxiway A.

The development plan also focuses on dedicating portions of vacant property on the west side of the airport for aviation-related parcels. As depicted on **Exhibit 5A**, proposed taxiways extending west of the ultimate parallel taxiway would provide access to approximately 37.2 acres of property that could contain an array of aviation activity ranging from corporate flight departments to FBO operations. Chapter Four provided separate hangar layout alternatives that could satisfy future aviation demand on the west side of the airport. Significant improvements will be needed for the utilization of these areas to include site preparation, roadway access, and utility extensions. While the development concept dedicates property for ultimate build-out, actual demand will dictate the timeline for future development, especially on the west side of the airport. As previously discussed, there is still ample space for aviation-related development on the east side of the airport. It is likely that the majority of development potential at the airport will continue to focus on the east side as it is able to better accommodate near term development.

Aircraft Parking Apron Space

Analysis in Chapter Three indicated that additional aircraft parking apron space is needed to accommodate general aviation activities through the planning period of this study. As a result, an expansion to the parking apron areas on the east side of the airport is depicted on **Exhibit 5A**. The development plan proposes relocating the portion of parallel Taxiway A serving Runway 13-31 to 400 feet from the runway centerline, which adheres to ultimate ARC D-III design standards. Furthermore, several apron in-fill areas are currently under design adjacent to Taxiway A that will provide additional parking apron space while also providing more efficient taxiing operations adjacent to the FBOs and specialty aviation operators along the flight line.

Airport Support Facilities

In an effort to provide better access to the airfield system, a perimeter access road is currently being designed adjacent to the outer portions of the airport. When complete, the road will allow

airport personnel the opportunity to better monitor airfield operations and also decrease the number of times that internal vehicle and maintenance operations will have to cross the runway system while traversing from the east to west side of the airport and vice versa. Furthermore, certain portions of the access road could ultimately be utilized as public roadways providing access to proposed landside development, in particular on the west side of the airport.

Additional airport support facilities include increasing fuel storage capacity on the airport. There are currently three fuel farms at Dallas Executive Airport that, when combined, allow for a total fuel storage capacity of 66,000 gallons. Of this total, 34,000 gallons are dedicated to Jet A fuel and 32,000 gallons are dedicated to 100LL. In order to accommodate the projected aviation demand through the long term planning period, it is recommended that additional fuel storage be provided. The airport's engineer has developed a plan to accommodate additional fuel storage on the east side of the airport adjacent to the intersection of Apollo Drive and Mariner Drive. As depicted on the development plan, six additional fuel tanks are proposed that would have the capability of storing 72,000 gallons of aviation fuel. Also included on the Master Plan Concept is a proposed fuel farm on the west side of the airport. As potential aviation development on the airport's west side expands, it is desirable to have fueling capabilities readily available to serve aircraft operations in this area.

Non-Aviation Development Parcels

The Master Plan Concept also reserves land on the airport for non-aviation purposes that could support commercial, retail, industrial, office, or business park activities. These uses may be allowable by TxDOT and the FAA because the parcels designated for aviation uses will be more than adequate to serve the planning horizon demand and beyond. In addition, physical land constraints and roadways prohibit certain portions of airport property from being accessed by aircraft. These land uses would provide the airport with an opportunity to improve revenue streams, increasing the airport's financial resources. It should be noted that the City of Dallas has not obtained specific approval from TxDOT and the FAA to use certain portions of airport property for non-aviation purposes as proposed on **Exhibit 5A** at this time. Chapter Four provided a detailed description of the steps that must be taken in order to allow non-aviation uses on airport property.

Twenty separate non-aviation revenue support parcels are depicted on the development plan, ranging in size from approximately one acre to 32 acres, which are positioned strategically and provided roadway access to/from portions of South Hampton Road, Challenger Drive, and Mariner Drive on the east side of the airport and to/from Red Bird Lane and proposed roadway development on the west side of the airport. It can be assumed that in the event certain areas of airport property were to be allowed non-aviation development, the parcels may be further reconfigured or divided to meet the specific needs of the developer.

Table 5C: PROPOSED REVENUE SUPPORT PARCEL DEVELOPMENT

Parcel Type	Total Acreage
Aviation	70.7
Non-Aviation	165
Total Proposed Parcel Development	**235.7**

Table 5C further provides a breakdown of the potential aviation and non-aviation development on Dallas Executive Airport as depicted on the Master Plan Concept. As proposed, there are four designated areas for future aviation development, including the area comprised of conventional and executive hangars previously discussed that total approximately 71 acres of space. Non-aviation development includes approximately 165 acres. Improved vehicle access and utility infrastructure would be needed in order to accommodate several of these non-aviation land uses, especially on the west side of the airport.

SUMMARY

The resultant plan represents an airfield facility that fulfills aviation needs and preserves long range viability while conforming to safety and design standards. It also maintains a landside complex that can be developed as demand dictates. Because the Master Plan is conceptual in nature, it allows for flexibility rather than dictating specific types and exact square footages of future land uses at the airport.

The following chapter will consider strategies for funding the recommended improvements and will provide a reasonable schedule for undertaking the projects based on demand over the course of the next 20 years.