

**SECTION 7**

**AIRPORT PLANS**



## SECTION 7 AIRPORT PLANS

### INTRODUCTION

The 20-year Fullerton Municipal Airport Master Plan development program is described here and illustrated in a set of eight plans (see Appendix C), which have been reduced from large-scale sheets. Sheet 1 is the Title Sheet. The overall development plan, including airside and landside improvements is shown in Sheet 2, Airport Layout Plan. The Building Area Plan, Sheet 3, provides greater detail of the airport building areas. Sheet 4, Part 77 Airspace Plan, and Sheet 5, Part 77 Inner Approach Surfaces, depict the imaginary surfaces on and around the airport of which penetrations could potentially affect airport operations, as provided in Federal Aviation Regulations (FAR) Part 77. The Runway Protection Zone Plan, Sheet 6, illustrates land uses and facilities within the RPZ areas. Land uses and noise contours surrounding the airport are shown in the Off-Airport Land Use Plan, Sheet 7. Exhibit "A," Sheet 8, gives the acquisition history of airport property.

The improvements depicted on these drawings are based on the selected development concept described in Section 6 and shown in Figure 2-1. The improvements address facilities needed to satisfy projected demands of aviation activity at the airport over the next 20 years. The development plan is flexible and can accommodate changing needs as they might occur.

### AIRPORT LAYOUT PLAN

The Airport Layout Plan (ALP), Sheet 2, is a graphic presentation of existing facilities and airport improvements planned to 2023. It also provides valuable tabular information detailing existing and proposed facilities. The proposed development shown on the ALP addresses future demand for aviation facilities and services to the extent possible within the limited airport property.

The development shown in the ALP uses Airport Reference Code (ARC) B-I for airplanes with a maximum gross takeoff weight of 12,500 pounds as the basis for design. Specific design standards applied include:

- Establishing the aircraft parking limit line on the north side of the field 39.5 feet from the taxiway centerline in accordance with FAA standards for Airport Reference Code B-I.



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- Establishing the building restriction line on the north side of the field along the south edge of the newer mid-field hangar, approximately 337 feet from the runway centerline, as described in Section 6. Future buildings on the north side could impact the instrument approach landing minima and exceed FAR Part 77 standards if placed closer to the runway.
- Establishing the Runway Protection Zones (RPZs) based on runways serving small aircraft exclusively (maximum gross takeoff weight no more than 12,500 pounds), with visual approaches and instrument approach procedures having approach visibility minimums not lower than one mile. The airport currently has circling approach procedures and straight-in approach procedures for Runway 24 with minimums of one mile visibility.

The updated Airport Master Plan conforms to all FAA design standards with the exception of the ARC B-I standards for Runway Safety Area, Runway Object Free Area and Runway Obstacle Free Zone beyond the ends of the runways. Mitigation for this condition, which pre-dated the FAA standards, is discussed below.

The ALP will be periodically reviewed and updated to reflect changes in airport facilities and revisions to proposed development. To receive federal funding assistance, projects must be shown on and/or be consistent with the ALP.

Master Plan improvement projects are described below by phase of development. In addition to the specific projects described below, efforts will be required over the course of the planning period to maintain facilities such as pavements. The extent and timing of future maintenance activities are uncertain and therefore not included in the Master Plan improvement projects.

**Phase 1A (2003 to 2005)**

*Apply to FAA for modification of Standards for Runway Safety Area, Runway Object Free Area, and Runway Obstacle Free Zone.* The City will apply to the FAA to continue airport operation with non-standard Runway Safety Area (RSA), Runway Object Free Area (ROFA), and Runway Obstacle Free Zone (OFZ) at the ends of Runways 6 and 24. The request for modification of standards will be submitted as prescribed in FAA Order 5300.1E.

As discussed in Section 6, runway alternatives were thoroughly evaluated, and it was concluded that standard safety areas cannot be provided while maintaining sufficient runway length for general aviation operations. In lieu of shortening the runway, the following actions will be taken:

- Install Distance Remaining Signs for each runway end. These signs will be located along the left side of the runway in each direction, in accordance with FAA Advisory Circular AC 150/5340-18C, Standards for Airport Sign Systems. The signs normally indicate the runway distance remaining in increments of 1,000 feet but could potentially be located every 500 feet at Fullerton due to the relatively short runway. The signs will be located such that the distance remaining indicated by each sign allows for a standard RSA at the far end of the runway. For example, the 1,000-foot distance remaining sign for Runway





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24 will be located approximately 1,220 feet from the Runway 6 end to provide a 240-foot RSA beyond 1,000 feet from the sign. The signs will be illuminated at all times the runway edge lights are illuminated.

- Provide notification of non-standard RSAs in the Airport/Facility Directory and approach plates for the airport. This would allow pilots to make a takeoff or landing decision on the basis of the runway length that would be available if it had the standard RSA. A suggested notice for the Airport/Facility Directory is:

*“Runway end 06 does not have a standard Runway Safety Area for departures on Runway 24 or landings on Runway 24. The airport perimeter fence is located approximately 50 feet from the centerline of the Runway 06 end. To have the standard Runway Safety Area at the Runway 06 end, which would extend 240 feet beyond the runway end, the effective landing and takeoff lengths for Runway 24 are: landing length – approximately 2,670 feet, takeoff length – approximately 2,720 feet.*

*Runway end 24 does not have a standard Runway Safety Area for departures on Runway 06 or landings on Runway 06. The airport perimeter fence is located approximately 150 feet from the centerline of the Runway 06 end. To have the standard Runway Safety Area at the Runway 24 end, which would extend 240 feet beyond the runway end, the effective landing and takeoff lengths for Runway 06 are: landing length – approximately 2,490 feet, takeoff length – approximately 2,720 feet.*

*Runway distance remaining signs indicate remaining runway as if the standard Runway Safety Areas were located beyond the ends of the runways.”*

**Reconstruct Pavement at Northwest Ramp.** The northwest tiedown ramp pavement is in poor condition and will be reconstructed. This area was used for pavement crushing and construction staging for the south ramp pavement project completed in 2002. The project will include demolition of old pavement, grading, paving, striping, and installation of tiedown anchors.

**Construct Two Washracks on South Side.** New aircraft washracks will be constructed on the south side of the field at the following locations: (1) west of the electric vault, near the terminal building, and (2) at the southwest corner, adjacent to the intersection of West Commonwealth Avenue and Dale Street. Washrack construction will include a hardstand area, water supply, and sewer connection with and an oil-water separator.

**Construct approximately 38 Hangars in Northwest Corner and Area Between Air Combat and Ray's Flying Club.** Approximately 19 hangars (7 small rectangular and 12 T-hangars) will be constructed in the former northwest tiedown area. About 19 T-hangar units will be built in the area between Air Combat and Ray's Flying Club. The final hangar design will depend on a market demand assessment to be conducted before this hangar project begins. Occupants of the older



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wooden hangar buildings will have the opportunity to relocate their aircraft to the new hangars before those buildings are removed. This construction project will include site preparation and grading, utilities, paving and striping, hangar construction, and security gate and fencing modifications. New hangars will be equipped with electrical outlets, interior lighting and exterior lighting. Public restrooms will be provided in the T-hangar building at the northwest corner and one of the T-hangar buildings east of Air Combat.

***Relocate Wind Speed Instrument Near Northeast Ramp.*** A wind speed indicator near the northeast ramp, which transmits wind speed and direction information to the air traffic control tower, is approximately 28 feet from the taxiway centerline. This is within the taxiway object free area, which extends 39.5 feet from the taxiway centerline. The wind instrument will be moved approximately 12 feet farther from the taxiway to at least 40 feet from the taxiway centerline.

***Install Runway Distance Remaining Signs for Runways 6 and 24.*** Distance remaining signs will be installed for operations on Runways 6 and 24, as described earlier.

**Phase 1B (2006 to 2008)**

***Rehabilitate pavement at northeast ramp.*** The aircraft parking ramp pavement in the northeast corner between Biggles Aviation and the FAA's RTR facility will be rehabilitated. The project will include pavement repair and re-striping.

***Construct Approximately 14 Hangars To Replace the Two North-South Rows of Wooden T-Hangars.*** The two north-south rows of older wooden T-hangars will be removed and approximately 14 rectangular junior executive hangars will be constructed in that area. The final hangar design will depend on a market demand assessment to be conducted before the hangar project begins. Occupants of the remaining older wooden hangar buildings will have the opportunity to relocate their aircraft to the new hangars. This construction project will include demolition of existing structures, site preparation and grading, utilities, paving and striping, and hangar construction. New hangars will be equipped with electrical outlets, interior lighting and exterior lighting.

***Acquire Avigation Easements for Runway Protection Zone (RPZ) Areas.*** The FAA recommends that sufficient property interest be acquired for RPZ property not owned by an airport. An allowance has been included in the capital cost estimates to acquire avigation easements for the Runway 6 and Runway 24 RPZ property not under City ownership or easement. Avigation easements can prevent future development within the RPZs of structures or land uses that don't conform to FAA and Airport Land Use Commission standards. Fee purchase of private RPZ property is not considered practical for the City of Fullerton since that property is in mostly commercial and industrial uses. This project will also include tree trimming and obstruction lights as recommended later in this section.





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***Replace VASI on Runway 24 with PLASI.*** The VASI serving Runway 24 will be replaced with a PLASI unit, which is a current FAA standard for visual approach slope instruments. Runway 6 is currently equipped with a PLASI. The PLASI on Runway 24 will provide pilots with consistent visual approach indicators on both runway ends.

**Phase 2 (2009 to 2013)**

***Develop Corporate Site in Northeast Area.*** The northeast corner of the airport, west of Biggles Aviation, will be developed for corporate and/or FBO use. Plans for this area include two corporate/FBO hangars (with office area), and a vehicle parking lot. The tiedown area to the west would be available for use by the tenant if needed. The new vehicle parking lot would be located outside the area contained within the airport's security fence. Ray's Flying Club could be relocated to this area, which offers good street visibility, prior to removal of the Ray's Flying Club facilities. This area is larger than the existing Ray's lease but would not contain as many tiedowns as Ray's currently rents from the City. Construction will include site preparation and grading, utilities, paving, and hangar construction.

***Construct Approximately 14 Hangars in Ray's Flying Club Area.*** About fourteen T-hangars will be constructed in the area now occupied by Ray's Flying Club. The final hangar design will depend on a market demand assessment to be conducted before this hangar project begins. Groundwater monitoring wells are being placed on the Ray's Flying Club site. It is expected that monitoring will occur for the next five years or longer. No new buildings can be located on the site until monitoring is completed. Construction will include demolition, site preparation and grading, utilities, paving and striping, and hangar construction. New hangars will be equipped with electrical outlets, interior lighting and exterior lighting.

***Rehabilitate Northside Access Road and Provide Turn-Around Area.*** The alleyway that now provides access to the northside hangars, Air Combat, and Ray's Flying Club is approximately 20-foot wide, which meets City standards. In Phase 2, the alleyway will be extended to the eastern edge of the Ray's Flying Club lease area, where a turn-around will be constructed, and a new security gate will be installed. The existing security gates at the northwest corner and Air Combat will remain. At the Air Combat site all vehicle parking will continue to be located outside the security fence. The construction project will include roadway paving and striping and security fence and gate modifications.

***Construct Approximately 22 Hangars To Replace the Two East-West Rows of Wooden Hangars and Relocate Aircraft Maintenance Area.*** The remaining two rows of older T-hangars will be replaced with approximately 22 rectangular junior executive hangars. The final hangar design will depend on a market demand assessment to be conducted before this hangar project begins. This construction project will include demolition of existing structures, site preparation and grading, utilities, paving and striping, and hangar construction. New hangars will be equipped with electrical outlets, interior lighting and exterior lighting. This project will include the relocation of the northside aircraft maintenance area to the east. A washrack, including



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hardstand area, water supply, and sewer connection with and an oil-water separator, will be constructed with this project.

No capital improvements by the City are scheduled beyond 2013. There would be an opportunity in Phase 3 (or sooner) for Air Combat to expand its leasehold to about 1.2 acres.

**BUILDING AREA PLAN**

The Building Area Plan, Sheet 3, details the planned improvements on the north side of the field. The building layout depicted on the plan conveys the general development concept for addressing future airport needs in this area. The type and layout of planned facilities, particularly those in Phase 2, are subject to further design studies and changes in market conditions, and therefore may be modified in the future.

Principal features of the Building Area Plan are the following improvements to the north side:

- The reconstruction and rehabilitation of existing aircraft parking ramps at the northwest corner and in the northeast area.
- The construction of 86 new individual hangar units over the next 10 years and the demolition of 37 old wooden hangar units, resulting in a net addition of 49 individual hangar units. The new hangars will be built in a variety of sizes to accommodate demand, including T-hangars and junior executive hangars.
- Improvements to the northside access road, including a turn-around area at the end.
- The development of an FBO / corporate site in the northeast area, containing two large hangars, vehicle parking, and a reconfigured tiedown area. Ray's Flying Club could potentially be relocated to this site.
- Public restrooms in the individual hangar areas.
- An aircraft wash rack at the west end of the existing newer northside T-hangar building.

Development to 2023 is shown in Sheet 3 to occur in phases. Actual construction will be timed to be responsive to market demand and availability of funds, particularly FAA construction grants.

**PART 77 AIRSPACE PLAN AND PART 77 INNER APPROACH SURFACES**

The Part 77 Airspace Plan, shown in Sheet 4, and Part 77 Inner Approach Surfaces, Sheet 5, depict the Part 77 imaginary surfaces on and around Fullerton Municipal Airport. The





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dimensions and criteria employed in determining these surfaces are those contained in Federal Aviation Regulations (FAR), Part 77, Objects Affecting Navigable Airspace (Section 77.25). These surfaces are defined for the purpose of identifying natural (terrain or trees) or man-made objects that could affect air navigation at an airport. The surfaces can be penetrated, but any penetrations must be reviewed by the FAA, as described below, to evaluate the possible effects on the visual and instrument approach and departure procedures. For example, tall objects can affect the minimum approach slope and/or minimum weather conditions for instrument landings. The general configuration of FAR Part 77 surfaces is illustrated in Figure 7-1.

**FAR Part 77.25 Criteria**

The dimensions of the Part 77.25 imaginary surfaces depend on the size of aircraft using the airport and the type of instrument approach procedures. The FAR Part 77 criteria applied were for: (1) runways serving aircraft with maximum gross takeoff weights not exceeding 12,500 pounds, (2) non-precision (straight-in) instrument approach procedures on Runway 24, and (3) no straight-in instrument approach procedures on Runway 6. The descriptions of the surfaces and their dimensions for Fullerton Municipal Airport follow, with a description of how to determine the height of the surface at any point.

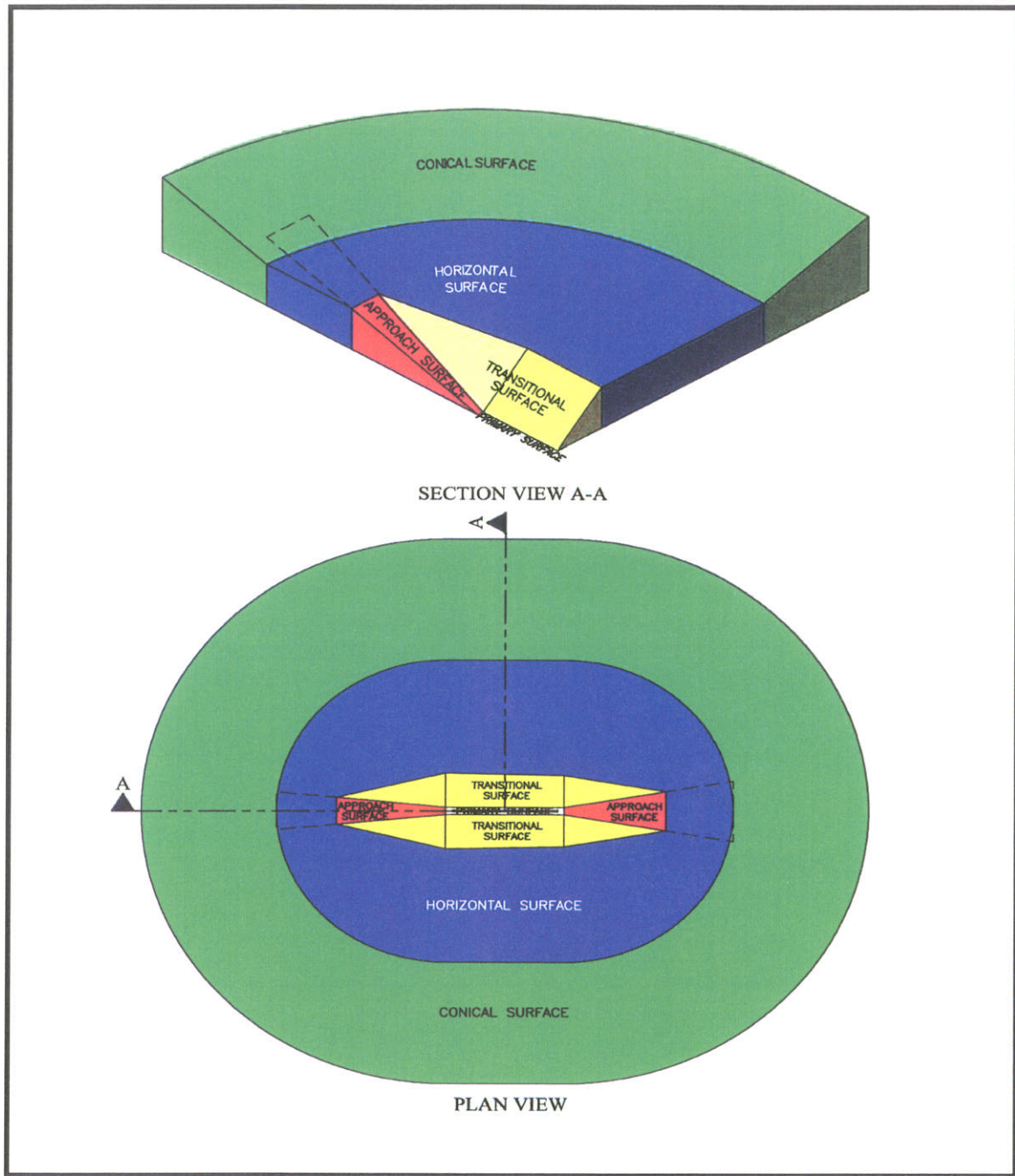
- Horizontal Surface. The horizontal surface is a horizontal plane 150 feet above the established airport elevation. The airport elevation, measured at the highest point along the runway, is 95.65 feet above mean sea level (MSL). Therefore, the elevation of the horizontal surface at Fullerton Municipal is approximately 246 feet MSL. The perimeter of the horizontal surface is delineated by arcs with radii of 5,000 feet from the center of the ends of the runway. Adjacent arcs are connected by lines that are tangent to these arcs. All points on the horizontal surface have an elevation of approximately 246 feet MSL.
  
- Conical Surface. The conical surface extends outward and upward from the edge of the horizontal surface at a slope of 20:1 for a horizontal distance of 4,000 feet. The elevation of the conical surface at its outermost edge is approximately 446 feet MSL.

The elevation of any point on the conical surface is found by starting at the intersection of the horizontal and conical surfaces (where the elevation is approximately 246 feet MSL) and increasing one foot in elevation for every 20 feet measured laterally from the intersection.

- Primary Surfaces. The primary surface is defined as being longitudinally centered on the runway, with a width dependent on the type of runway, and extending 200 feet beyond each end of the runway. The width of the primary surface at Fullerton Municipal has historically been established at 250 feet. This dimension has been retained, which is a deviation from the standard of 500 feet. The elevation of any point on the primary surface is the same as the closest point on the runway centerline.







**Figure 7-1**  
**FAR Part 77 Surfaces**



- **Approach Surfaces.** The slope and configuration of a runway approach surface varies as a function of the type of aircraft served and availability of instrument approach procedures. Approach surfaces terminate at the primary surface, where their width is equal to the width of the primary surface. The Runway 6 approach surface is 1,250 feet wide at its beginning point, 5,200 feet from the runway end. The approach surface for Runway 24, which has non-precision instrument approaches, is 2,000 feet wide at its beginning point, 5,200 feet from the runway end. Both approach surfaces have a slope of 20:1.

The elevation of any point on either approach surface is found by starting at the intersection of the approach and primary surface (where the elevation is approximately 85 feet MSL at the Runway 6 end and approximately 96 feet at the Runway 24 end) and increasing one foot in elevation for every 20 feet measured laterally from the intersection. Once the approach surface elevation reaches the horizontal surface elevation, the horizontal surface is controlling.

- **Transitional Surfaces.** The transitional surfaces extend outward and upward at right angles to the runway centerline (and runway centerline extended) at a slope of 7:1 from the edges of the primary and approach surfaces.

The elevation of any point on a transitional surface is found by starting at the intersection of the transitional surface with the approach or primary surface and increasing one foot in elevation for every 7 feet measured laterally from the intersection. Once the transitional surface elevation reaches the horizontal surface elevation, the horizontal surface is controlling.

### **Measurement of Penetrations to Part 77 Surfaces**

Within the Part 77 imaginary surfaces area, ALUC standards provide that buildings and other structures not exceed the Federal Aviation Regulations (FAR) Part 77 height restrictions without FAA approval. Buildings or other structures that exceed the Part 77 height restrictions are termed “penetrations” herein. Penetrations to Part 77 surfaces are measured by subtracting the height of the Part 77 surface at the object measured in MSL from the height of the object measured in MSL. The difference is the amount of penetration. Consider the following example.

**Object:** A tree along Commonwealth Avenue, located in the approach surface to Runway 6

**Elevation of object:** 147 feet MSL

**Elevation of approach surface at object:**

Elevation of approach surface at intersection with primary surface:

85 feet MSL

Lateral distance of tree from intersection of surfaces:





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1,180 feet

Elevation of approach surface at object:

144 feet MSL (calculated as: 85 feet + (1,180 feet / 20 = 59))

***Penetration of object:***

Elevation of object:

147 feet MSL

Elevation of approach surface at object:

144 feet MSL

Penetration:

3 feet (calculated as: 147 feet MSL – 144 feet MSL)

**Existing Penetrations to FAR Part 77 Surfaces at Fullerton**

The airport imaginary surfaces shown on Sheets 4 and 5 are superimposed on United States Geological Survey (USGS) topographic maps. Review of the USGS topographic maps indicates there are terrain and urban development penetrations to the Part 77 horizontal and conical surfaces in a small area northeast of the airport.

The Fullerton Municipal Airport Obstruction Chart, published by the U.S. National Oceanic and Atmospheric Administration<sup>1</sup> and plans for improvements to the railroad tracks east of the airport were also reviewed. The following penetrations are identified from these sources. Object numbers given below reference Sheets 4 and 5.

***Penetrations to the Horizontal Surface***

- Terrain to the northeast (Approximately 14-foot penetration)

This terrain penetration will remain.

***Penetrations to the Conical Surface***

- Terrain to the northeast (Approximately 24-foot penetration)
- Tree to the north (Object 19, 10-foot penetration)
- Pole to the northeast (Object 20, 44-foot penetration)
- Pole to the northeast (Object 21, 12-foot penetration)

These penetrations will remain, and no actions are proposed to be taken by the City with respect to them due to their distances from the runway.

***Penetrations to the Primary Surface***

- Dale Street (Object 26, 14-foot penetration allowing 15 feet above the road surface)
- Artesia Avenue (Object 31, estimated 13-foot penetration allowing 15 feet above the road surface)

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<sup>1</sup> U.S. National Oceanic and Atmospheric Administration, Fullerton Municipal Airport Obstruction Chart, July 1990.



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- Obstruction-lighted pole along Artesia Avenue (Object 32, 21-foot penetration)
- Railroad Tracks (Object 33, 25-foot penetration allowing 23 feet above the tracks)
- Airport perimeter fence south of Artesia Avenue (Object 46, estimated 7-foot penetration)

The obstruction-lighted pole (Object 32) is one of five poles along the northside of Artesia Avenue that provide obstruction-lighted marking for the railroad tracks and road. These five poles will be moved to the north side of the railroad tracks as part of a railroad improvement project.

***Penetrations to the Approach Surface to Runway 6***

- Tree west of Indiana (Object 24, 1-foot penetration)
- Obstruction-lighted localizer west of Dale Street (Object 25, 8-foot penetration)
- Tree near Commonwealth and Indiana (Object 44, 3-foot penetration)

These penetrations are proposed to remain.

***Penetrations to the Approach Surface to Runway 24***

- Obstruction-lighted poles along Artesia Avenue (Object 34, 14-foot penetration and Object 23, 20-foot penetration)
- Tree east of railroad tracks (Object 36, 10-foot penetration)
- Light standard south of Artesia Avenue (Object 38, 13-foot penetration)
- Airport perimeter fence south of Artesia Avenue (Object 39, 3-foot penetration)

It is recommended that the tree be trimmed to meet Part 77 standards, subject to obtaining permission from the property owner. It is recommended that the light standard south of Artesia Avenue be obstruction-lighted.

***Penetrations to Transitional Surfaces***

- Tree south of 4th Street (Object 1, 37-foot penetration)
- Tree south of 4th Street (Object 2, 24-foot penetration)
- Light standard at Dale Street and 4th Street (Object 3, 5-foot penetration)
- Obstruction-lighted poles (Object 6, 6-foot penetration and Object 7, 15-foot penetration)
- Pole near the north end of Pritchard Avenue (Object 10, 19-foot penetration)
- Light standard at Dale Street and Commonwealth Boulevard (Object 16, 10-foot penetration)
- Obstruction-lighted anemometer (Object 29, 8-foot penetration)
- Obstruction-lighted windsock (Object 42, 5-foot penetration)
- Antenna on air traffic control tower (Object 43, 9-foot penetration)

The obstruction-lighted poles (Objects 6 and 7) will be moved to the north side of the railroad tracks as part of the railroad improvement project. It is recommended that trees in the area of the east end of 4<sup>th</sup> Street be trimmed to meet Part 77 standards, subject to obtaining permission from the property owners. It is recommended that this pole (Object 10) be obstruction-lighted.





### **Implementation of Height Restrictions**

Persons proposing to construct a structure that is greater in height than an imaginary surface extending outward and upward at a slope of 50 feet horizontally to one foot vertically for a horizontal distance of 10,000 feet from the nearest point of the Fullerton Municipal Airport runway must file Form 7460-1, Notice of Proposed Construction or Alteration, with the FAA. Since the 50:1 surface for Fullerton Municipal Airport is below all Part 77.25 imaginary surfaces for the Airport, as described above, any proposed construction that would penetrate a Part 77.25 imaginary surface would require the filing of Form 7460-1.

Additionally, persons proposing to construct a structure that is more than 200 feet above ground level, regardless of location, must file Form 7460-1 with the FAA.

From the information supplied on Form 7460-1, the FAA will determine whether the proposed construction would be a hazard to air navigation.

### **Conclusions**

The existing penetrations to FAR Part 77 surfaces described above and identified on Sheets 4 and 5, with the exception of possible recent growth in trees, have been considered by the FAA in the development of instrument procedures for the airport. Therefore, it is not expected that the objects impact the capability to conduct aircraft operations, including the published non-precision instrument approach procedures, at the airport.

To control the future construction of obstacles which may affect the safe operation of aircraft at Fullerton Municipal Airport and/or restrict instrument operating conditions, it is recommended that the Part 77 Airspace Plan depicted on Sheet 4 be adopted by the Orange County Airport Land Use Commission and incorporated into the Airport Environs Land Use Plan for Fullerton Municipal Airport. It is further recommended that the General Plans of affected jurisdictions be modified to incorporate height limitations reflected in the Part 77 Airspace Plan. Affected jurisdictions include the Cities of Fullerton, Buena Park, and Anaheim; the County of Orange for unincorporated areas; and the City of La Mirada in Los Angeles County.

### **PENETRATIONS TO THRESHOLD SITING SURFACES**

As described in Section 5, Threshold Siting Surfaces are imaginary inclined planes extending outward and upward from the ends of the runways that are used to establish the location of runway thresholds (the beginning of the portion of runway used for landing). The Runway 6 threshold is displaced 427 feet, and the Runway 24 threshold is displaced 253 feet from the runway end.

Threshold siting standards are applied for the following runway uses:

- Runway 6: runways that support instrument night circling operations.



- Runway 24: runways that support instrument straight-in night operations.

Penetrations to the Threshold Siting Surfaces applicable to these standards must be lighted. The following are penetrations to the Threshold Siting Surfaces.

### **Penetration to the Runway 6 Threshold Siting Surface**

There is one penetration of the Runway 6 Threshold Siting Surface:

- Tree south of 4<sup>th</sup> Street (Object 1, 28-foot penetration)

It is recommended that trees in the area at the east end of 4<sup>th</sup> Street be trimmed to meet Threshold Siting Surface standards, subject to obtaining permission from the property owners.

### **Penetrations to the Runway 24 Threshold Siting Surface**

The following are penetrations to the Runway 24 Threshold Siting Surface:

- Pole near the north end of Pritchard Avenue (Object 10, 21-foot penetration)
- Buildings southeast of the Runway 24 end (Object 11, estimated 10-foot penetration)
- Pole near the north end of Pritchard Avenue (Object 13, 27-foot penetration)
- Artesia Avenue (Object 31, estimated 15-foot penetration allowing 15 feet above road surface)
- Obstruction-lighted pole north of Artesia Avenue (Object 32, 16-foot penetration)
- Railroad Tracks (Object 33, 14-foot penetration allowing 23 feet above the tracks)
- Obstruction-lighted pole north of Artesia Avenue (Object 34, estimated 3-foot penetration)
- Light standard south of Artesia Avenue (Object 38, 2-foot penetration)
- Aircraft Hangar south of Runway 24 end (Object 40, approximate 14-foot penetration)
- Airport perimeter fence (Object 46, estimated 9-foot penetration)

All the above objects except Objects 11, 13 and 40 were discussed under Part 77 penetrations. It is proposed that obstruction lighting be provided on the two poles near the north end of Pritchard Avenue (Objects 10 and 13), the light standard south of Artesia Avenue (Object 38), and the hangar (Object 40). The obstruction-lighted poles (Objects 32 and 34) along the northside of Artesia Avenue provide obstruction-lighted marking for the railroad tracks, road, and airport perimeter fence. These poles will be moved to the north side of the railroad tracks. The buildings southeast of the Runway 24 end (Object 11) will not be obstruction-lighted because they are in the vicinity of and lower than the poles to be obstruction-lighted (Objects 10 and 13).

With these actions relative to the Runway 6 and 24 Threshold Siting Surfaces, compliance with the FAA standards for the Threshold Siting Surfaces contained in FAA Advisory Circular 150-5300-13, Appendix 2 will be met.





## **RUNWAY PROTECTION ZONE PLAN**

The Runway Protection Zone Plan, Sheet 6, shows land uses within the Runway Protection Zones (RPZs). The RPZ-Part 77 and RPZ-Land Use have the same dimensions. RPZs are 1,000 feet long, have an inner width of 250 feet, have an outer width of 450 feet, and contain approximately 8.0 acres. These RPZ dimensions are the same for a runway with straight-in instrument approach visibility minimums not lower than one mile (Runway 24) and a runway with a circling approach only (Runway 6). Section 9 discusses the conformance of land uses in the RPZs with applicable standards.

### **Runway 6 RPZs**

The RPZs for Runway 6 lies on the west side of Dale Street. The portion of the RPZs immediately west of Dale contains airport property, where the FAA localizer equipment is located. A small portion of the RPZ-Land Use contains rear yards of privately-owned residential property along 4<sup>th</sup> Street. No homes are in the RPZ-Land Use. The majority of the RPZ area is privately-owned industrial property.

### **Runway 24 RPZs**

The RPZs for Runway 24 extend across the railroad tracks northeast of the airport. These RPZs are intersected by the Burlington Northern and Santa Fe (BNSF) railroad tracks, Artesia Avenue, and a small part of Pritchard Avenue. The City has easements covering a portion of the RPZs north of the tracks. Runway Alignment Indicator Lights (RAILs) are located in these RPZs. A small portion of the RPZs on both sides of Prichard Avenue is airport property. The portion of land at the far end of the RPZs is privately held industrial property.

The Airport Master Plan provides for the purchase of avigation easements by the City for RPZ areas not now controlled by the City. Easement rights would be purchased by the City, upon the availability of FAA funding, from property owners willing to sell them.

## **OFF-AIRPORT LAND USE PLAN**

The Off-Airport Land Use Plan, Sheet 7, shows planned land uses surrounding the airport in relation to future aircraft noise contours, Runway Protection Zones-Land Use, the Accident Potential Zone II, and the Planning Area Boundary for the Orange County Airport Land Use Commission (ALUC). Land use designations are from the Fullerton and Buena Park General Plans.

The Planning Area Boundary, also called the Airport Influence Area, and Accident Potential Zone II have been taken from the [Airport Environs Land Use Plan for Fullerton Municipal Airport](#), December 19, 2002. The Planning Area Boundary (Airport Influence Area) for Fullerton



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Municipal extends 10,000 feet from the nearest point of the runway, an area of 13.5 square miles. This defines the area within which proposed land use projects are to be referred to the ALUC for review. As of January 1, 2004, State law requires that any person who intends to offer land for sale or lease within an Airport Influence Area is required to disclose the fact that the land is within an Airport Influence Area to the person buying or leasing the property.

The ALUC previously examined the accident history of the airport and concluded that the designation of Accident Potential Zone "CZ"/Runway Protection Zone (called Runway Protection Zone-Land Use in this report)<sup>2</sup> and an Accident Potential Zone "II" are justified. Within the CZ/Runway Protection Zone-Land Use area, the ALUC would find unacceptable any new land uses other than aviation-related uses and open space, including transportation facilities. As described earlier, existing industrial land uses in the RPZs pre-date the ALUC standards. The pre-existing uses do not conform to the ALUC standards, although they conform to FAA land use standards.

The Accident Potential Zone II extends 500 feet from the runway centerline in every direction. Within the Accident Potential Zone II area, the ALUC would find unacceptable any new land uses where lot coverage exceeds 75 percent or where more than 200 persons were placed for long periods of time in an open assembly area or in a structure. Most forms of open space, industrial, commercial, and airport-related uses are acceptable, whereas residential and public facilities (such as schools and churches) are not. There are some residential properties that are partially or wholly within the Accident Potential Zone II area that pre-date the ALUC standards.

There are no proposed modifications to the airport that would suggest changes to the Planning Area Boundary, Accident Potential Zone II, or the Runway Protection Zone-Land Use. It is recommended that the Airport Environs Land Use Plan for Fullerton Municipal Airport be revised by the Orange County Airport Land Use Commission to incorporate the updated noise contours shown in Section 9.

See Section 9 for a discussion of the compatibility of existing land uses within the accident risk zones and aircraft noise zones.

### **EXHIBIT "A" (AIRPORT PROPERTY MAP)**

The Exhibit "A" (Airport Property Map), Sheet 8, identifies each parcel of airport property and indicates how each was acquired. Easement interests are also shown. No fee title acquisition of additional property for airport use is recommended. The Airport Master Plan provides for the City to obtain aviation easements for property in the RPZs not currently under City control.

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<sup>2</sup> The Clear Zone (CZ) is now called the Runway Protection Zone (RPZ) by the FAA.





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