

Figure 7-11
Phasing Plan Facilities

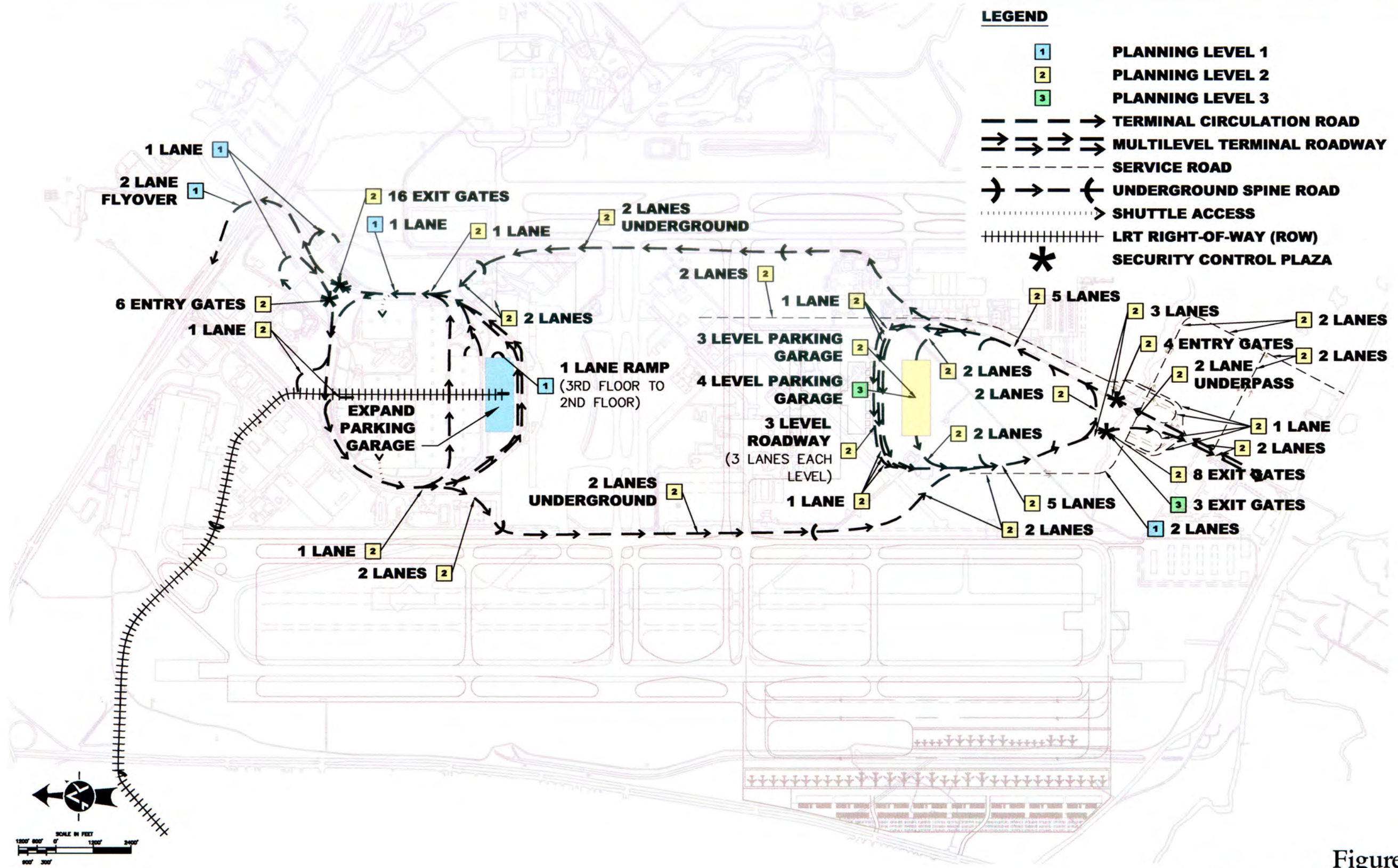


Figure 7-12
Phasing Plan Roadways

Austin-Bergstrom International Airport

Master Plan Update

Runway 17R-35L Exit Taxiways. The high speed exit taxiways for Runway 17R-35L were programmed and scheduled for construction near the end of the Master Plan Update. This project was formerly identified in the DOA CIP as Taxiways E3 and E4, and involved widening of north and south fillets for Taxiway G and the north fillet for Taxiway T.

Runway 35L Departure Pad. Another airfield priority should be the development of departure/deice pads and dual entrance capability for Runway 35L. This project is currently programmed for design in 2003.

Runway 17L-35R Dual Parallel Taxiway. Taxiway A was recently extended along with the development of Taxiway K. This will provide a dual parallel taxiway for approximately half the length of the runway. The complete extension of Taxiway A is recommended for Planning Level 1 to provide full dual taxiway capability.

Runway 17R CAT III ILS. Installation of a CAT III ILS for this runway is planned for Planning Level 1. This is an FAA expenditure.

Runway 17R-35L West Taxiways. Development of the new west side cargo area is proposed in Planning Level 1 and cargo aircraft operating from this area will require airfield access. The design and construction of a parallel taxiway and supporting exit taxiway system on the west side of Runway 17R-35L should be a key component of the overall west side cargo area development. This airfield improvement, therefore, is contingent on the timing of the development of the west cargo area. To minimize runway crossings a full parallel taxiway should be considered for Planning Level 1 but is contingent on funding. It is assumed that the taxiway will be developed in phases with the first stage consisting of a south segment extending from the Runway 35L threshold to Taxiway T.

Runway 17L-35R East Taxiway. Development of an airline maintenance area is also proposed in Planning Level 1 and will be located east of Runway 17L-35R. Aircraft being serviced in this area will require airfield access, and the timing of this improvement is contingent on commitments from airlines or aircraft maintenance vendors to construct maintenance facilities. This improvement can be deferred until commitments are obtained. Likewise, the relocation of RTR-3 is related to the development of the airline maintenance area and will be required only when plans materialize for airline maintenance facilities.

Passenger Terminal

The Planning Level 1 improvements related to the existing passenger terminal and are as follows:

- Retrofit the existing Passenger Terminal Building to meet federally mandated security requirements (EDS equipment for 100 percent check-in baggage screening and additional security equipment to include surveillance and other monitoring devices as well as access control systems to meet all other security requirements that may be considered by the Transportation Security Administration).
- Construct an East Concourse Extension (approximately 6 gate increase).

Austin-Bergstrom International Airport

Master Plan Update

- Maximize the ramp frontage to the east for additional aircraft parking positions.
- Maximize the development of existing Passenger Terminal Building.
- Retrofit and expand the Outbound Baggage areas.

Implementation of the terminal planning program to meet Planning Level 3 objectives requires a series of carefully crafted and well coordinated phasing strategies to ensure maximum airport operational efficiency is maintained at all times while minimizing disruption to existing airport and airline operations. While the original 1994 Passenger Terminal Facility Conceptual Design Report identified the full extension of the East Concourse to the east and the additional development of two complete east and west pier concourses to the south face of the existing terminal structure, the recommended terminal expansion plan in this Master Plan Update calls for a radical shift from the previous Design Report and Master Plan with an emphasis on creating a new south side airport terminal complex and complete elimination of the two pier concourses previously recommended.

Although this Master Plan Update concurs with the 1994 Conceptual Design Report recommendation to extend the East Concourse to its fullest potential to the east and maximize the ramp frontage to yield maximum paved apron space, many parts of the terminal area will require closer scrutiny to ensure a balanced and cost effective development program can be achieved to meet the operational needs of the airlines operating out of the existing terminal at the time. The first step therefore is for the Department of Aviation (DOA) to conduct a Terminal Area Master Plan to go through the various aspects of the development program following the conclusion of the Master Plan Update. This first step is made more urgent and necessary following the tragic events of September 11 that has shifted the priority of passenger processing to airport security screening and terrorist preventive measures.

The Terminal Area Master Plan study should serve to identify, coordinate, and resolve all the divergent issues that may surface related to security requirements and facilities requirements established from the forecast prior to September 11. The DOA could elect to proceed immediately with programming efforts to start the expansion of the East Concourse and probable modification to various functional areas of the existing terminal, without a Terminal Area Master Plan. Although this is possible, and commonly done, it is not recommended at ABIA as many conflicting issues may materialize that may require more time to resolve.

Prior to September 11, it was clearly evident that the key areas in the existing North terminal that will need significant retrofit are the outbound baggage area, and to some extent, the inbound baggage input area and the inbound baggage claim area. Following September 11, the same areas remained as main areas to be modified. However, the major difference is that the entire baggage handling aspects of the airport operation will now require much more careful analysis that may result in even costlier and much more substantive retrofit effort as security considerations take effect. This will require all concerned at the DOA to exercise patience while carefully monitoring potential solutions. Based on our analysis, we recommend taking small measured steps to ensure that unnecessary capital expenditures can be avoided while uncertainties exist as to how best to react to new federal security regulations still evolving.

Austin-Bergstrom International Airport Master Plan Update

One of the first measures under the new federal mandate is the required installation of EDS equipment. Although technically not a part of the Master Plan Update, the introduction of the EDS equipment has and will now have to be, an integral part of the entire terminal facilities program. This implies that the ticketing/check-in lobby area may have to be modified perhaps substantially, as new EDS equipment are positioned in the check-in lobby for screening checked baggage. Hold Baggage procedures will have to be adopted as well that will affect the way outbound baggage conveyance system may have to be modified and areas expanded, secured and protected. Unlike the proposed south terminal development shown for Planning Level 3, the outbound checked baggage handling operation as well as the outbound bag room arrangement and operation will have to be modified only after a more conclusive action plan can be established after the conclusion of a Terminal Area Master Plan when more definitive facilities action plans have been clearly delineated.

Our analysis therefore suggests that the DOA initiate a Terminal Area Master Planning study to include the East concourse extension plan, holdroom area development and/or concourse modification as well as all the other essential terminal function improvements that may be required. Our assessment of the situation at ABIA suggests that as little as possible be done at the existing North Terminal (other than those recommended and deemed mandatory after Terminal Master Plan) as a few existing north terminal air carriers may wish to relocate to the new south terminal instead of staying in the existing north terminal.

Ground Access and Parking

The ground access implementation plan for Planning Level 1 consists of the following components:

- Construct two-lane flyover from northbound Presidential Boulevard to westbound SH 71 (by TxDOT).
- Partially convert the second level of the existing garage to rental car ready/return. This will require construction of a rental car ramp connection between second and third levels.
- Construct fourth and fifth levels on existing garage.
- Relocate shuttle access on the existing long term parking lot and reroute shuttle flow.
- Construct a 24-acre north remote long term parking lot.
- Construct an 18-acre north employee parking lot.
- Reallocate curb spaces on the Arrivals and Departures Roadways.
- Partially construct the south support area service road.
- Widen the existing Cardinal Loop to four lanes to accommodate traffic associated with north remote parking and employee lots.

New SH 71/Presidential Boulevard Flyover. A new two-lane flyover will be constructed connecting the northbound Presidential Boulevard to westbound SH 71. Traffic analysis indicated the need to construct the flyover as early as Planning Level 1 due to a projected operational deficiency at the SH 71/Presidential Boulevard interchange. The traffic analysis showed that the intersection of SH 71 and Presidential Boulevard will reach an unacceptable Level of Service “E” without a flyover to facilitate airport exiting traffic proceeding westbound onto SH 71. The traffic volumes using the flyover by Planning Level 2 (13.2 MAP) is projected to be 21,800 daily vehicles

Austin-Bergstrom International Airport

Master Plan Update

with approximately 1,140 vehicles during the AM peak hour and 2,243 vehicles during the PM peak hour. Furthermore, traffic analysis showed the need for the flyover in Planning Level 3 even though ABIA traffic would be split between the existing and the new south terminals. The analysis results for this intersection were previously summarized in Chapter 4.

Partially Convert Existing Second Floor Garage to Rental Car Ready/Return. To accommodate the rental car ready/return requirement for Planning Level 1 until a new consolidated rental car facility is constructed in Planning Level 2, part of the second floor of the existing garage will be converted to ready/return area. A one-lane semi-helical ramp will be constructed to connect the two floors and provide inbound access to the R/R area on the second floor. Egress from the second floor R/R area will be via the existing garage exit.

Construct Fourth and Fifth Levels on Existing Garage. Expansion of the existing garage is planned this phase to meet public parking requirements on-airport. As an option, a new 3-level parking garage can be constructed over the existing Express Parking Lot A to primarily accommodate medium term (1 to 3 days) parking. The new garage will have a building footprint of approximately 10 acres. Pedestrian connectors will link the existing and new garages. Access to the new garage will be provided from the existing Express Lot A access road. Egress from the new garage will be provided by a two-lane road between the new garage and the existing long term parking lot. This roadway will be used jointly by exiting traffic from both the new garage and the existing long term lots.

Relocate Long Term Parking Shuttle Access. Shuttle access to and from the existing long term parking lot will be relocated to allow shuttle entry east of the lot, and shuttle exit west of the lot.

New North Remote Long Term Parking Lot. A new 24-acre remote lot will be constructed north of SH 71 to provide approximately 2,940 long term parking spaces. Access will be provided by the existing but improved Cardinal Loop (the extension of Presidential Boulevard north of SH 71).

New North Employee Parking Lot. A new 18-acre North Employee Lot will be constructed north of SH 71 to provide approximately 2,200 spaces. This lot is required to be in place before the extension of the East Concourse. Access will be provided by the existing but improved Cardinal Loop.

Terminal Curb Space Reallocation. To meet the projected curb frontage requirements for Planning Level 1, curb spaces on the existing Arrivals and Departures Roadways will be reallocated.

South Support Area Service Road. A segment of the South Support Area Service Road will be constructed to provide access to the new Belly Freight and Field Maintenance facilities to be constructed on the south side of the Airport.

Cardinal Loop Widening. As discussed above, the existing Cardinal Loop (the extension of Presidential Boulevard north of SH 71) will be widened from two to four lanes to accommodate traffic associated with the new employee and remote long term parking lots.

Austin-Bergstrom International Airport

Master Plan Update

Support Facilities

The implementation plan for support facilities for Planning Level 1 includes the following:

- Construct the first phase of the new west side cargo area.
- Construct initial phase of a belly freight facility on the south side of the Airport.
- Begin development of an airline maintenance area.
- Expand the existing GSE Maintenance area.
- Construct an additional aviation fuel storage tank at the existing fuel farm.
- Expand aircraft RON apron.
- Drainage and Utilities.
- Land Acquisition.

Air Cargo. The existing air cargo area requires significant expansion of facilities to meet Planning Level 1 requirements. This development must occur in the new cargo area west of Runway 17R-35L. In this phase the extent of cargo development occupies approximately 41 acres and includes 1.9 million SF of apron area (for 21 aircraft parking positions including taxilanes), 150,000 SF of warehouse facilities, 105 truck docks and 555 auto parking spaces. Apron areas will be developed by DOA and warehouse and associated truck docks and parking will be developed by third parties. The apron area meets the projected requirement for 12 additional jet and three regional aircraft hardstands. Approximately 50,000 SF of apron programmed for the existing cargo area apron is assumed this phase. Realignment of Taxiway C to connect with the expanded apron may also be considered this phase. There is room in the existing cargo area for additional warehouse space, however, since additional aircraft parking cannot be added in the existing area all warehouse is assumed to be added at the new west side facility. As an option, construction of 50,000 SF of warehouse in the existing cargo area may be considered. The development of the west cargo area requires construction of parallel and exit taxiways on the west side of Runway 17R-35L. The development of facilities is contingent upon growth in demand.

Belly Freight. A belly freight area is proposed for the south terminal area and the south building in the existing belly freight area requires relocation due to the eventual construction of the inter-terminal spine road that connects north and south terminals. Initial development of belly freight facilities in the south support area is included this phase. This involves construction of 50,000 SF of warehouse which accounts for the relocation of the existing facilities and Planning Level 1 requirements. Development of the belly freight area in this phase also requires construction of a portion of the south support area service road. Construction of belly freight facilities is a third party development and is also contingent on commitments from the airlines.

Airline Maintenance. It is assumed that airline maintenance facilities are developed by third parties in Planning Level 1. The development assumed this phase includes three hangars (75,000 SF each) with associated apron (150,000 SF for each hangar). As previously noted the timing of this development is contingent on commitments by airlines or airline maintenance vendors to construct facilities. Airfield (taxiway) access will be required to the airline maintenance area.

Austin-Bergstrom International Airport Master Plan Update

GSE Maintenance. A planned expansion by Aviation Facilities Company, Inc. involving the construction of 16,000 to 20,000 SF of additional building area in the existing area is assumed to occur this phase but is contingent on tenant participation. This expansion will satisfy the long-term needs of the north terminal area. Construction of a deice vehicle and fluid storage area (6,000 SF) in the existing GSE area is also planned for Planning Level 1. While the existing area and option area are sufficient for long term requirements, it is recommended that the area north of the existing area (approximately one acre) be considered for potential GSE uses. However, the use of this area must also consider the planned location of the alternative fuel facility.

Fuel Storage. Construction of a 600,000 gallon Jet A tank in the existing fuel farm is planned in Planning Level 1. This will utilize the last remaining area for storage tanks in the existing fuel farm. The timing of this development is contingent on participation by the tenants.

RON Parking. Six additional RON parking spaces are required in Planning Level 1 and should be located in proximity to the existing terminal building. It is proposed to provide this area by constructing apron on the west side of Taxiway G3. Approximately 306,000 SF of apron is constructed this phase. It is possible to extend the new RON apron farther west to the building restriction line if needed, however, this is not required to meet the Planning Level 1 requirement. This area could also be used for remote parking while the east concourse is expanded and should be in place prior to the terminal expansion.

Drainage and Utilities. Drainage improvements identified in the Airport Drainage Master Plan are assumed to commence in Planning Level 1. The extension of utilities to serve the facilities developed this phase also occurs.

Land Acquisition. As previously explained, land acquisition is required and involves acquisition of property north of SH 71 and two properties on the south part of the Airport. The exact locations of properties north of SH 71 remains to be determined. The property acquisition program is assumed to begin in this phase.

Planning Level 2

Planning Level 2 corresponds with the high growth forecast for the year 2010 and reflects 13.2 MAP, 204,600 annual tons of enplaned cargo and approximately 301,000 aircraft operations. The Planning Level 2 development includes the following major elements which are indicated in yellow on Figure 7-11 and identified by a yellow symbol on Figure 7-12.

Airfield

The airfield improvements expected for Planning Level 2 are primarily tied to the development of passenger or other support facilities. The airfield improvements for Planning Level 2 are listed below.

Austin-Bergstrom International Airport

Master Plan Update

- Construct a south midfield cross taxiway system for the new south passenger terminal.
- Extend Taxiway H to Runway 17R-35L.
- Construct a high speed exit for Runway 35R.
- Construct second phase of parallel taxiway on west side of Runway 17R-35L.
- Construct a second set of high-speed exit taxiways for Runways 17R-35L.
- Rehabilitate Runway 17R-35L.
- Extend access taxiway to the new east side general aviation area.

South Midfield Cross Taxiways. Operations of passenger aircraft from both the existing and new south passenger terminal will be enhanced with the development of a second pair of midfield cross taxiways. This improvement should be an integral part of programming for the new south passenger terminal. As such, the timing of the south cross taxiways is dependent on the development of the south passenger terminal. The southern cross taxiway will be aligned with Taxiway T. The northern cross taxiway will extend to Runway 17R-35L.

Taxiway H. As part of the development of the south cross taxiway system the extension of Taxiway H to Runway 17R-35L is also proposed.

Runway 35R Exit Taxiway. A high speed exit is planned in this phase and has been located to connect with Taxiway J and the northern cross taxiway developed this phase. This exit taxiway is a counterpart of Taxiway K (which is planned for construction in 2002).

Runway 17R-35L West Taxiway. This project involves extension of the partial parallel taxiway developed in Planning Level 1 serving the west side cargo area. Development this phase includes extension of the taxiway to the north from Taxiway T to Taxiway G.

Runway 17R-35L Exit Taxiways. With the extension of the midfield cross taxiways to Runway 17R-35L being completed this phase, construction of enhanced exits should also be considered. This is in the form of widened fillets, similar to the recent project for Taxiways G and T. The improvements this phase include the widening of the south fillet of Taxiway H and the north fillet of the northern cross taxiway constructed this phase. These improvements may be included as part of the extension of cross taxiways to the west runway, but are not essential to the cross taxiway extensions.

Runway 17R-35L Rehabilitation. It is assumed that Runway 17R-35L will require rehabilitation and that a pavement rehabilitation program occurs this phase.

Runway 17L-35R East Taxiway. A general aviation area is identified on the east side of Runway 17L-35R to be developed for Planning Level 2. General aviation aircraft based in this area will require airfield access, and extension to the south of the access taxiway developed for Planning Level 1 (serving the airline maintenance area) will be required. This airfield improvement is contingent on the timing of the development of the new general aviation area.

Austin-Bergstrom International Airport Master Plan Update

Passenger Terminal

The passenger terminal building implementation plan for Planning Level 2 consists of the following components:

- Construct New Unit Passenger Terminal on the south side of the Airport (522,500 SF terminal building with 11 gates - 240,000 SF concourse and 1.9 million SF of terminal apron).
- Construct passenger connector to new south Parking Garage.
- Possible build-out shell structure for Planning Level 3 terminal requirements.
- Possible build-out shell structure for Planning Level 3 concourse gate requirements.

The trigger point for initiating the planning to meet Planning Level 2 requirements while unchanged, needs to seriously consider an earlier development on the south side of the Airport to include new access road system as well as all other supporting elements of the airport complex as identified in the airport layout plan. Verification of the trigger points for the planning levels can best be accomplished in a Terminal Area Master Plan study as new information including traffic data, new airline flight activities and services, goals and objectives, as well as new security measures and procedures become available and are adopted.

Terminal requirements to meet Phase 2 Planning Level should focus on the modular building system recommended in order to allow for the incremental growth and expansion of the new facility to meet changing demands. While Phase 2 planning gets underway at the appropriate trigger point as earlier projected, flexibility should be maintained in order to react quickly to changing events that may occur prior to or during the second implementation phase. For example, while the aircraft gate and ramp frontage requirements will show only an 11-gate development as projected on the new south terminal with a concourse no greater than approximately 750 feet in length and a main terminal approximately 650 feet in length, it is conceivable that additional gates and terminal space may be warranted at that particular time that may trigger greater than expected expansion requirements. As such, the option remains and should be evaluated again at that stage on whether skeletal structure be built during Phase 2 to meet Planning Level 3 requirements both in the main terminal area and the new south concourse area.

It should be noted that specific elements including area requirements should be addressed at the next stages of planning particularly in the beginning phase of a Terminal Area Master Plan Study. The aftermath of September 11, 2001, continue to reverberate throughout the aviation industry. As a great majority of the airlines struggle to survive, a major restructuring of the industry may result that will require a rethinking of how the next phases of development at ABIA may occur. Many airlines, including those serving ABIA, may be significantly affected that may change air service in Austin. Potentially, a few more start-up airlines may begin service and Austin may be a City in which point-to-point service can be initiated successfully. It is therefore important for the Department of Aviation to consider a Terminal Area Master Plan as recommended by the Peer Review to analyze the various scenarios and possibilities for ABIA.

In Phase 2 of the effort to meet Planning Level 2 requirements, the three level roadways should be built concurrently. While there may be overcapacity at the conclusion of construction in Phase 2, the

Austin-Bergstrom International Airport Master Plan Update

benefits of not disrupting operation during the implementation of Phase 3 will be significantly greater than the added cost of “overbuilding” in Phase 2.

Ground Access and Parking

The ground access implementation plan for Planning Level 2 consists of the following components:

- Construct the south terminal access system, including loop and three-level curbside roadways.
- Construct north security/control plaza (6 entry and 16 exit gates). Associated with the centralized security and parking control are the following changes to the existing facilities:
 - Close existing New Airport Drive on- and off-ramps at Presidential Boulevard and relocate to the north of New Airport Drive.
 - Use existing GTSA entrance but an option is to construct a new entrance off Presidential Boulevard.
 - Close existing entry ramp at Rental Car Lane.
 - Close existing North and South Parking Toll Plazas.
 - Convert existing parking ticket spitters to ticket validating machines.
- Construct the south terminal access security/control plaza (4 entry and 8 exit gates).
- Construct the south terminal three-level parking garage and access roads.
- Construct the south terminal long term surface parking lot and access roads.
- Construct the south employee parking lot.
- Construct the south support area service roads and connecting ramps to south access road.
- Construct the inter-terminal spine road.
 - Close the existing Service Avenue and construct along new alignment.
 - Cul-de-sac Spirit of Texas Drive near existing Belly Freight.
- Construct the consolidated rental car facility and relocate existing facilities.
- Convert the second and third floors of existing garage to public parking.

New South Terminal Roadways. The roadway system for the new south terminal will be constructed in Planning Level 2. This roadway system will consist of:

- Four-lane south access road from Burleson Road to the new south security/control plaza. The intersection of Burleson Road and the new south access road will be widened and signalized to accommodate airport related traffic.
- South terminal loop road consisting of five lanes between the new south security/control plaza and the Spine Roads, and two-lane recirculation road.
- Three-level terminal curbside roadways with one-lane access/egress ramps for each level. The curbside roadway configurations for each level was discussed previously.

New North Security/Control Plaza. A new security/control plaza will be constructed on Presidential Boulevard between New Airport Drive and the existing recirculation road. The plaza will consist of six entry and sixteen exit gates. The entry gates will be equipped with parking ticket dispensers. The exit gates will have cashier booths. The plaza will also be equipped with vehicle

Austin-Bergstrom International Airport

Master Plan Update

surveillance instruments. The construction and proper operation of the plaza will require the following related improvements:

- *Relocate New Airport Drive Ramps.* The new security/control plaza will impact the existing on- and off-ramps connecting Presidential Boulevard and New Airport Drive. In lieu of these ramps, new semi-circular ramps will be constructed north of New Airport Drive.
- *GTSA Entrance.* The existing GTSA entrance will be retained. As an option to direct all terminal related traffic (including shuttles and commercial vehicles) through the new security/control plaza, the existing GTSA entrance at Spirit of Texas Drive may be closed and a new access off Presidential Boulevard constructed.
- *Close Rental Car Lane On-Ramp.* The existing on-ramp from Rental Car Lane to Presidential Boulevard will be closed. However, the existing on-ramp from GTSA to Presidential Boulevard will be maintained.
- *Demolish North and South Parking Toll Plazas.* Due to the centralized parking control at the new plaza, the existing North and South Parking Toll Plazas will be demolished. The existing POV exit at the South Parking Toll Plaza will be closed.
- *Convert Parking Ticket Dispensers.* Since parking tickets will be issued at the new plaza, the existing parking ticket dispensers at the garage, express and long term parking entrances will be converted to validating machines to identify the parking location used by the vehicle.

New South Security/Control Plaza. A new south security/control plaza will be constructed on the new south access road prior to the recirculation road. Initially, the plaza will provide four entry gates and eight exit gates. Ultimately, the plaza will have four entry and eleven exit gates.

New South Terminal Parking. The parking system for the new south terminal will consist of the following components:

- A new parking garage will accommodate short and medium term parking. The new south garage will have the same footprint as the existing garage. Initially, three levels of the garage will be constructed in Planning Level 2. Ultimately, a fourth level will be added in Planning Level 3. Access and egress will be provided by two-lane roads. The access road will be equipped with ticket validating machines.
- A new 54-acre surface lot will accommodate long term parking. Approximately 40 acres providing 4,860 spaces is developed this phase. Access and egress will be provided by one-lane roads. The access road will be equipped with ticket validating machines. Shuttle entrance/exit will also be provided and oriented to allow entry on the west and exit on the east.
- A new 12-acre employee lot serving the south terminal will be constructed east of the south access road. In Planning Level 2, 1,060 spaces covering approximately nine acres is constructed. Access will be provided by two-lane two-way service roads. The entry/exit gate will be equipped with two card readers and a security guard booth.

Austin-Bergstrom International Airport

Master Plan Update

New South Support Area Service Roads. Service roads for the south support area will be constructed. These are two-lane two-way roads and consist of the following segments:

- One segment for general aviation east of the south terminal loop road.
- One segment for ancillary uses west of the south terminal loop road. A part of this segment was initially constructed in Planning Level 1.
- Several segments east of the south access roads to provide access to the south employee lot and potential remote overflow parking lot.
- Ramps connecting the south access road to the south service road.
- An underpass segment at the south access road.
- One segment from the south end of the east spine road to the airport traffic control tower area between the cross-taxiways. This segment will be partially underground across the new cross-taxiway.

New Inter-Terminal Spine Roads. The two spine roads connecting the existing terminal to the new south terminal will be constructed with two-lanes each and operated as one-way roads. The major portion of the spine roads will be in tunnels.

New Consolidated Rental Car Facility. A new consolidated rental car facility will be constructed north of SH 71. Initially, 61 acres will be developed, providing 2,240 ready/return spaces. All existing rental car ready/return areas in the existing garage as well as existing rental car service areas along Rental Car Lane will be relocated to the new consolidated facility. Separate dedicated shuttles will transport customers to the existing and the new south terminals. Appropriate signage will be provided along SH 71 to direct rental car return vehicles to the new facility.

Conversion of Existing Garage Ready/Return to Public Parking. The spaces vacated by the rental car ready/return in the existing garage will be converted to public parking. The existing garage will accommodate both short and medium term parking.

Support Facilities

The implementation plan for support facilities for Planning Level 2 is as follows:

- Expand the west side cargo area.
- Expand the south side belly freight facility.
- Expand the airline maintenance area.
- Construct south side GSE Maintenance area.
- Develop facilities for Building and Field Maintenance.
- Construct south side fuel farm.
- Relocate flight kitchen.
- Construct east side general aviation area.
- Construct central plant for south passenger terminal.
- Construct RON parking.

Austin-Bergstrom International Airport Master Plan Update

- Drainage and Utilities
- Land Acquisition
- Construct hotel.

Air Cargo. The west side cargo area is expanded this phase to meet Planning Level 2 requirements. This involves construction of approximately 842,000 SF of apron providing nine additional aircraft parking positions, 100,000 SF of warehouse, 49 truck docks and 231 auto parking spaces. DOA will be responsible for the construction of apron and warehouse, truck dock and parking facilities developed by third parties. The timing of development will be contingent upon tenant involvement and demand.

Belly Freight. The south side belly freight facility constructed in Phase 1 is expanded in this phase. The additional facilities constructed for Planning Level 2 involves 16,000 SF of warehouse. The timing of development will be contingent upon tenant involvement and demand.

Airline Maintenance. It is assumed that one hangar (75,000 SF) and associated apron (150,000 SF) is developed in Planning Level 2. As previously indicated, the timing of this development will be dependent on demand and commitments from third parties and tenants.

GSE Maintenance. A south side GSE facility is planned this phase to support the new south passenger terminal developed in Planning Level 2. The development assumes replication of existing facilities on the south side, namely approximately 13,000 SF of building area. DOA is not responsible for this development cost and the timing is contingent upon tenant participation.

Airport Maintenance. A new Field Maintenance facility located on the south part of the Airport, immediately north of the TANG is included this phase. The initial development will occupy approximately three acres and includes 70,000 SF of inside storage, 20,000 SF of motor pool area, 53,000 SF of fenced outside storage, and 7,000 SF of office space. This also requires initial development of a portion of the south support area service road.

A new Building Maintenance facility (including storage) should be constructed and located near the existing terminal and operational prior to the commencement of the new south unit terminal expansion. The development this phase involves 70,000 SF of maintenance building area and 48,000 SF of warehouse space, which meets the long-term requirement.

Fuel Farm. The Planning Level 2 requirements call for the construction of one 600,000 gallon storage tank. This occurs at the new fuel farm located on the south side of the Airport. DOA is not responsible for this development cost and the timing is contingent upon tenant participation.

Flight Kitchen. The existing flight kitchen must be relocated due to the construction of the east side inter-terminal spine road. The relocation involves the replacement of existing facilities, approximately 28,800 SF of building and associated parking and loading docks.

Austin-Bergstrom International Airport

Master Plan Update

General Aviation. It is assumed that a new general aviation area located east of Runway 17L-35R will be developed this phase. The timing and extent of development is contingent upon commitments and plans of general aviation operators.

Central Plant. This involves construction of a central plant to support the south passenger terminal developed in Planning Level 2. A facility similar to the existing central plant is anticipated.

RON Parking. The requirements for Planning Level 2 call for two additional RON spaces. With the construction of the south passenger terminal in this phase, RON parking is provided along the edge of the south passenger terminal apron. While the requirements indicate a need for two spaces, four RON spaces are planned this phase to serve the south terminal. The existing “D Ramp” may be an alternate location in this phase, or used for overflow RON parking if needed.

Drainage and Utilities. Recommended improvements contained in the Airport Drainage Master Plan are assumed to be completed this phase. Extension of utilities to serve new development in this phase, primarily the south unit terminal, also occurs this phase. Demolition of facilities for south unit terminal development also occurs this phase.

Land Acquisition. It is assumed that the property acquisition program in Planning Level 1 continues in Planning Level 2.

Hotel. It is assumed that a second on-airport hotel is constructed this phase to serve the south passenger terminal. The timing and planning are contingent on commitments from a hotel operator.

Planning Level 3

Planning Level 3 corresponds with the high growth forecast for the year 2020 and reflects 18.4 MAP, 322,700 annual tons of enplaned cargo and over 372,000 annual aircraft operations. The Planning Level 3 development is shown in green on Figure 7-11 and identified by a green symbol on Figure 7-12.

Airfield

The airfield improvements proposed for Planning Level 3 are as follows:

- Construct a dual parallel taxiway for Runway 17R-35L.
- Construct right angle exits for Runway 17R-35L.
- Construct third phase of parallel taxiway on west side of Runway 17R-35L.
- Implementation planning for a third parallel runway (Runway 17C-35C).

Runway 17R-35L Dual Parallel Taxiway. The dual parallel taxiway for Runway 17R-35L consists of the extension of Taxiway C to the north to the existing cargo area and construction of Taxiway D. The extension of Taxiway C involves the demolition of the dog-legged segment of the taxiway. This portion of the project may be developed initially. Accelerated development of the realignment of

Austin-Bergstrom International Airport

Master Plan Update

Taxiway C in an earlier phase may also be considered. Development of Taxiway D will be contingent on the amount of opposite direction taxiing traffic encountered on the west side of the airfield.

Runway 17R-35L Exit Taxiways. The right angle exits for Runway 17R-35L will be constructed approximately 3,300 and 9,000 feet from the threshold of Runway 17R.

Runway 17R-35L West Taxiway. This project involves completion of the west side parallel taxiway developed in Planning Levels 1 and 2 and includes extension of the taxiway from Taxiway G to the Runway 17R threshold.

Runway 17C-35C. Implementation planning for the eventual development of the third parallel runway and supporting taxiway system should occur in this phase. This will involve environmental clearance and justification through an FAA Benefit/Cost Analysis. While the implementation planning for the runway occurs this phase, the construction of the runway is assumed to occur sometime beyond the twenty-year master planning period.

Passenger Terminal

The passenger terminal implementation plan for Planning Level 3 involves the following:

- Complete build-out of terminal facilities (add 372,500 SF terminal building).
- Complete build-out of concourse gate facilities (add 10 gates - 157,500 SF).
- Begin initiating inter-terminal connection.

Our review of the trigger points suggests maintaining them as it was first envisioned. Once the physical development to meet Planning Level 2 requirements gets underway, efforts should be undertaken to conduct a study on inter-terminal connection so as to begin the review of a wide range of options for future growth beyond Planning Level 3.

The inter-terminal connection should include the analysis of four possible options:

- An overhead people-mover system to connect all the future concourses without an enclosed walkway for pedestrians.
- An overhead people-mover system to connect all the future concourses with an enclosed walkway equipped with moving sidewalks for pedestrians.
- A below-grade connector with people-mover system to connect all the future concourses without moving sidewalks for pedestrians.
- A below-grade connector with people-mover system to connect all the future concourses with moving sidewalks for pedestrians.

In addition a design aircraft should also be considered at the beginning phase of planning for Planning Level 3 to identify and determine the necessary headroom clearance required should an overhead connector be selected as the preferred connector concept. It should also be noted that in

Austin-Bergstrom International Airport Master Plan Update

the event a Terminal Area Master Plan is initiated, all the terminal complex elements located between the north and south apron should be analyzed and reviewed to determine their future sites and location that will maximize the operational efficiency for ABIA.

Ground Access and Parking

The ground access implementation plan for Planning Level 3 consists of the following components:

- Construct a fourth level of the south terminal parking garage.
- Expand long term parking.
- Expand employee parking.
- Construct three additional exit gates at the south security/control plaza.
- Expand the consolidated rental car facility.

Additional 4th Level at the South Terminal Garage. A fourth level will be added to the south terminal garage to accommodate projected short and medium term parking demand for Planning Level 3. This provides approximately 1,220 spaces.

Expand Long Term Parking. Planning Level 3 requirements call for an additional 1,900 spaces which are provided by expanding the south long term parking lot constructed for Planning Level 2.

Expand Employee Parking. An additional 430 employee parking spaces are required in Planning Level 3 and are provided by expanding the south employee parking lot.

Additional Gates at the South Security/Control Plaza. Three additional exit gates will be constructed at the south security/control plaza, for a total of eleven exit gates. No additional gates will be added to the four entry gates.

Expand Consolidated Rental Car Facility. An additional 24 acres is developed at the consolidated rental car facility to meet Planning Level 3 requirements. These include 880 ready return spaces and associated storage spaces to support operations.

Support Facilities

The planned support facilities developed for Planning Level 3 include the following:

- Expand the west cargo area.
- Expand the south side belly freight.
- Construct airline maintenance hangars and apron.
- Expand the Field Maintenance facilities.
- Expand the flight kitchen.
- Expand the deice vehicle and fluid storage area.
- Construct a fuel storage tank.
- Expand RON parking.

Austin-Bergstrom International Airport Master Plan Update

- Construct a DOA administrative complex.
- Land Acquisition.

Air Cargo. The facilities developed for Planning Level 3 encompass approximately 75 acres and involve construction of 2.3 million SF of apron area (16 jet hardstands and 3 regional aircraft parking positions), 200,000 SF of warehouse, 107 truck docks and 506 auto parking spaces. At Planning Level 3 there will be space available to construct additional apron within the west cargo area. Also, it will be possible to extend warehouse facilities to the east to provide additional warehouse space for requirements beyond Planning Level 3. The timing of development will be contingent upon tenant involvement and demand.

Belly Freight. Expansion of belly freight facilities for Planning Level 3 involve construction of 42,000 SF of building at the south belly freight area. Construction of belly freight facilities are a third party development and is also contingent on commitments from the airlines.

Airline Maintenance. Airline maintenance development for Planning Level 3 involves construction of two hangars (75,000 SF each) and apron (150,000 SF for each hangar). This development is contingent on commitment and plans of airlines or aircraft maintenance service companies.

Field Maintenance. The Field Maintenance facility constructed in Planning Level 2 is expanded this phase to meet Planning Level 3 requirements. This includes 20,000 SF of enclosed material storage, 22,000 SF of fenced storage, 10,000 SF of motor pool and 2,000 SF of office space.

Flight Kitchen. The flight kitchen developed in Planning Level 2 is expanded this phase to meet long term requirements. This includes construction of an additional 12,250 SF of kitchen facilities.

GSE Maintenance. GSE Maintenance development in this phase includes expansion of deicing vehicle and fluid storage areas constructed for Planning Level 1. This involves construction of 2,400 SF of storage space for these functions in the existing GSE area.

Fuel Storage. Planning Level 3 requirements call for the construction of one 600,000 gallon Jet A tank which will be added at the south fuel farm.

RON Parking. Four RON spaces are constructed this phase along the west edge of the south terminal apron. Together with the four spaces developed for Planning Level 2, the requirements for Planning Level 3 are satisfied. As previously mentioned, use of the existing D Ramp may be used for RON overflow as a substantial portion of this ramp may be retained under the recommended plan.

Airport Administration. A new DOA administration complex is planned for Planning Level 3 and involves redevelopment of existing DOA facilities. A total of 80,000 SF of administrative offices is planned.

Land Acquisition. Property acquisition is also assumed to occur in this phase.

Austin-Bergstrom International Airport Master Plan Update

PHASED DEVELOPMENT COSTS

The three stage development program described in the previous subsection will be implemented over a twenty-year period. The timing of the need to implement the second and third planning levels will be dependent on the actual growth of air traffic.

A detailed construction cost estimate, reflecting 2002 dollars, was prepared based on the cost analysis of Concept A-07A contained in Evaluation Workbook 2. Refinements for unit costs and quantity takeoffs from the recommended plan were incorporated. The costs have been broken down by planning level.

The construction costs are summarized in this subsection with more detail provided in Appendix C. Table 7-2 presents a summary of the estimated construction costs by major functional area or cost item. In addition to a breakdown of cost by planning level (PL), Table 7-2 also indicates costs that are the responsibility of DOA and costs that can be expected to be the responsibility of third parties.

The total cost of the recommended development plan is estimated at approximately \$2.0 billion, of which \$1.5 billion is estimated to be a cost of DOA. Of the DOA share of the total development program, approximately 18 percent is required for Planning Level 1, 61 percent for Planning Level 2, and 21 percent for Planning Level 3.

The construction cost estimates provide a major input to the financial feasibility analysis presented in Appendix D.

**Table 7-2
SUMMARY OF ESTIMATED CONSTRUCTION
COSTS BY PLANNING LEVEL
(\$ millions)**

Cost Item	DOA PL 1	DOA PL 2	DOA PL 3	3rd Party PL 1	3rd Party PL 2	3rd Party PL 3
Airfield	\$39 M	\$45 M	\$59 M	\$23 M	\$12 M	\$14 M
Passenger Terminal (incl. apron & RON)	\$76 M	\$335 M	\$198 M	\$0	\$0	\$0
Roads & Parking	\$68 M	\$328 M	\$31 M	\$18 M	\$0 M	\$12 M
Air Cargo	\$0 M	\$0 M	\$0 M	\$74 M	\$36 M	\$84 M
Other Support Facilities	\$2 M	\$112 M	\$20 M	\$137 M	\$31 M	\$46 M
Utilities	\$55 M	\$48 M	\$0	\$9 M	\$9 M	\$0
Other Demolition	\$0	\$19 M	\$0	\$0	\$0	\$0
Land Acquisition	\$15 M	\$15 M	\$15 M	\$0	\$0	\$0
Allowances	\$19 M	\$19 M	\$0	\$0	\$0	\$0
Total	\$273 M	\$921 M	\$323 M	\$259 M	\$88 M	\$156 M

Source: P&D Aviation, Ben Lao & Associates, Martinez Wright & Mendez, Inc.

Austin-Bergstrom International Airport Master Plan Update

CONTINUOUS PLANNING PROCESS

No plan can be permanent in all of its aspects or precise in all of its elements. The definition and characteristics of airport master planning suggests that a plan such as the ABIA Master Plan Update, to be viable and of use to local, regional and federal agencies and private interests, must be continually adjusted through formal amendments, extensions, additions and refinements to reflect changing conditions. Therefore, there is a need for a continuing planning process.

Revisions to the Master Plan Update will be forthcoming not only from the work of DOA under a continuing planning program but also from local and regional agencies as they prepare and refine comprehensive plans and from federal agencies as new policies are established and modified, as new programs are created, or as existing programs are expanded or curtailed.

Two basic ingredients of a continuing planning process are monitoring and amending the plan.

Monitoring

In order to provide a basis for ensuring that the Master Plan Update is implemented and from time to time adjusted and updated, a monitoring program should be followed as a part of the continuing planning program. This would include items such as:

- Appraise demographic/economic trends to ascertain any deviations from values used to forecast aviation demand.
- Periodically review actual traffic volumes for deviation from forecast values.
- Periodically update airport and airspace inventory to account for changes in facilities over time.
- Monitor innovations and improvement in air traffic control that may affect the estimated capacity of the Airport.
- Periodically monitor the aircraft mix and enplaning load factors to ascertain the effect on average seat capacity and the forecast of aircraft operations.
- Periodically review the unit construction costs of airport development work and adjust and update the estimated construction costs.

Table 7-3 presents a matrix that is provided as an aid for monitoring activities as part of the continuous planning process. A master plan provides an indication of the extent of facilities required at a certain activity level. The matrix provides trigger points and actions that should commence implementation activities for each recommendation in order that facilities are in place when required for a planning level. In many cases, the lead times for various types of projects identified in Chapter

*Austin-Bergstrom International Airport
Master Plan Update*

Table 7-3
CONTINUOUS PLANNING MONITORING MATRIX

PLANNING LEVEL 1 – 11 MAP, 147,200 TONS ENPLANED CARGO (INCLUDING BELLY FREIGHT), 268,825 AIRCRAFT OPERATIONS.		
PROGRAM ELEMENT	PROGRAM REQUIREMENT	TRIGGER POINT OR ACTION
Airfield		
Runway 17R-35L high speed exits	Enhance runway exit capability.	Improvement implemented.
Runway 35L departure/deice pad	Provide deice pad and hold apron for departures.	Recommended as immediate improvement.
Runway 17L-35R dual parallel taxiway	Provide dual parallel taxiway capability.	235,000 annual operations (associated with 9 MAP). Confirm trigger point through airfield computer simulation.
Runway 17R CAT III ILS	Provide CAT III redundancy and simultaneous CAT III capability.	CAT III upgrade included in DOA CIP.
Runway 17R-35L west side taxiways - first phase	Provide airfield access to aircraft operating at west side cargo area.	83,600 annual enplaned tons of cargo. Contingent on development of west side cargo area.
Airline Maintenance area access taxiway	Provide airfield access to airline maintenance area.	Contingent on commitments from airlines or aircraft maintenance vendors. Allow 3 years for implementation.
Relocate RTR-3	Provide space for airline maintenance area.	Required for development of airline maintenance area.
Passenger Terminal		
Security Upgrade of Existing Building	Pending development of security requirements to meet new security mandates.	Immediate.
East Concourse Extension	35 gates total.	7.7 MAP. Planning and implementation may require 5 years or more.
Maximize Development of Existing Building	1.1 million SF gross terminal area.	7.7 MAP. Terminal Area Master Plan to identify improvements to maximize building capacity. Planning and implementation may require 5 years or more.
Ground Access and Parking		
2-lane Flyover to SH71	Avoid Level of Service (LOS) E at SH 71 interchanges.	7.7 MAP. Allow 5-year lead time for off-airport roads.
Convert Part of 2 nd Floor of Existing Garage to Rental Car R/R	1,860 total spaces that require an additional 740 spaces this planning level.	9 MAP.
Construct 4 th and 5 th Floors of Existing Cargo	2,450 parking spaces.	9 MAP.
Relocate Shuttle Access in Long-Term Parking Lot	Provide shuttle entry east of the long term parking lot and a shuttle exit west of the lot.	Recommended as immediate improvement.
North Remote Long Term Parking Lot	2,940 parking spaces on 24 acres.	9 MAP.
North Employee Parking Lot	2,200 parking spaces on 18 acres.	Required prior to East Concourse extension.
Reallocate Terminal Curbs. Relocate commercial curb spaces on Arrivals Roadway to Departures Roadway. Convert 300 ft. of unassigned curb spaces on Departures Roadway to POV use. Move charter bus area to median curb.	3,505 LF Arrival Curb; 1655 LF Departure Curb.	7.7 MAP.
South Support Area Service Road	2 lanes.	Required for new Field Maintenance and south side Belly Freight areas.
Widen Cardinal Loop	4 lanes.	Required for North Remote Long Term and North Employee Parking Lots.
Support Facilities		
West Side Cargo Area	150,000 SF of additional warehouse area. Additional 12 jet and 3 regional cargo parking positions. 41 acres.	83,600 annual enplaned tons of cargo.
Belly Freight South Side	Replace existing 33,000 SF building; 17,300 SF of additional warehouse area.	8.9 MAP. Associated with South Passenger Terminal and West Side Inter-terminal Spine Road.
Airline Maintenance	3 hangars and apron. 22 acres.	Contingent on commitment of airlines or aircraft maintenance vendors. Allow 3 years for implementation.
GSE Maintenance	Minimum 3,000 SF building assumed met by planned tenant expansion.	Immediate.
Fuel Storage Tank	600,000 additional gallons of storage.	115,000 annual commercial air carrier operations associated with 9 MAP.
RON Apron	6 additional RON parking positions.	9 MAP.

*Austin-Bergstrom International Airport
Master Plan Update*

**Table 7-3 (continued)
CONTINUOUS PLANNING MONITORING MATRIX**

PLANNING LEVEL 2 – 13.2 MAP, 204,600 TONS ENPLANED CARGO (INCLUDING BELLY FREIGHT), 300,989 AIRCRAFT OEPRATIONS.		
PROGRAM ELEMENT	PROGRAM REQUIREMENT	TRIGGER POINT OR ACTION
Airfield		
Construct south midfield cross taxiway system	Provide cross airfield connection for South Passenger Terminal.	8.9 MAP. Associated with South Passenger Terminal.
Extend Taxiway H to Runway 17R-35L	Parallel midfield cross taxiway connection to Runway 17R-35L.	282,000 annual operations. Confirm trigger point through airfield computer simulation.
Runway 35R high speed exit	Enhance runway exit capability.	8.9 MAP. Associated with development of south MCT and South Passenger Terminal.
Runway 17R-35L west side taxiways - second phase	Provide airfield access to aircraft operating at west side cargo area.	Extension of development initiated in Planning Level 1.
Runway 17R-35L high speed exits	Enhance runway exit capability.	8.9 MAP. Associated with development of south MCT and South Passenger Terminal.
Rehabilitate Runway 17R-35L	Satisfactory pavement condition.	Contingent on Pavement Management System and/or airfield pavement evaluation. Assumed required by 2012.
Extend access taxiway to new general aviation area	Provide airfield access to new general aviation.	Contingent on commitments from GA tenants. Allow 3 years for implementation.
Passenger Terminal		
Construct South Passenger Terminal	40 gates total, 1.2 million SF gross terminal area. 11 gates provided at South Passenger Terminal.	8.9 MAP. Confirm trigger point through Terminal Area Master Plan.
Ground Access and Parking		
South Terminal Access System/Roadways	Provide access to terminal area.	8.9 MAP. Associated with South Passenger Terminal.
North Security/Control Plaza and Associated Ground Access Improvements	A response to heightened airport security requirements. Six entry and 16 exit gates.	11.9 MAP.
South Terminal Security/Control Plaza	A response to heightened airport security requirements. 4 entry and 11 exit gates.	8.9 MAP. Associated with South Passenger Terminal.
South 3-level Parking Garage	3,100 short and medium term parking spaces for South Terminal.	8.9 MAP. Associated with South Passenger Terminal.
South Long Term Parking Lot	4,860 spaces on 40 acres.	8.9 MAP. Associated with South Passenger Terminal.
South Employee Parking Lot	1,060 spaces on 9 acres.	8.9 MAP. Associated with South Passenger Terminal.
South Support Area Service Roads	Provide access to south airport support area facilities.	8.9 MAP. Associated with South Passenger Terminal.
Inter-terminal Spine Road	Connect north and south terminal areas.	8.9 MAP. Associated with South Passenger Terminal.
Consolidated Rental Car Facility	2,240 Ready/Return spaces on 61 acres.	11.9 MAP.
Convert 2 nd and 3 rd Floors of Existing Garage to Public Parking	Reuse 1,860 parking spaces that result from relocation of Ready/Return to Consolidated RAC.	13.2 MAP.
Support Facilities		
West Side Cargo Area	100,000 SF of additional warehouse area. Additional 6 jet and 2 regional cargo parking positions. 29 acres.	153,600 enplaned tons of cargo.
Belly Freight South Side	16,000 SF of additional warehouse area.	16,200 enplaned tons of belly hold cargo.
Airline Maintenance	1 hangar and apron. 5 acres.	Contingent on commitment of airlines or aircraft maintenance vendors. Allow 3 years for implementation.
GSE Maintenance South Side	13,000 SF building. 5 acres.	8.9 MAP. Associated with South Passenger Terminal.
Building and Field Maintenance Facilities	73,000 SF enclosed storage, 70,000 SF fenced storage, 7,000 SF office, 20,000 SF motorpool – Field Maintenance. 3.5 acres. 70,000 SF building, 48,000 SF warehouse – Building Maintenance. 4 acres.	11.9 MAP.
Fuel Farm South Side	600,000 additional gallons of storage.	148,000 annual commercial air carrier operations associated with 11.9 MAP.
Relocate Flight Kitchen	Impacted by East Side Inter-terminal Spine Road.	8.9 MAP. Associated with South Passenger Terminal. Contingent on design and alignment of East Side Inter-terminal Spine Road.
East General Aviation Area	Provide additional accommodations due to Inter-terminal Spine Road impacts on existing general aviation area.	Contingent on commitments from general aviation operators. Allow 3 years for implementation.
South Terminal Central Plant	Replicate existing facility on south side of Airport.	8.9 MAP. Associated with South Passenger Terminal.
RON apron	2 additional RON parking positions. (4 provided this phase).	8.9 MAP. Associated with South Passenger Terminal.
Hotel	Two hotels assumed by Planning Level 2.	8.9 MAP. Associated with South Passenger Terminal. Contingent upon commitment by hotel operator.

*Austin-Bergstrom International Airport
Master Plan Update*

Table 7-3 (continued)
CONTINUOUS PLANNING MONITORING MATRIX

PLANNING LEVEL 3 – 18.4 MAP, 322,700 TONS ENPLANED CARGO (INCLUDING BELLY FREIGHT), 372,670 AIRCRAFT OPERATIONS.		
PROGRAM ELEMENT	PROGRAM REQUIREMENT	TRIGGER POINT OR ACTION
Airfield		
Runway 17R-35L dual parallel taxiway	Provide dual parallel taxiway capability.	351,000 annual operations. Confirm trigger point through airfield computer simulation.
Runway 17R-35L right angle exits	Enhance runway exit capability.	351,000 annual operations. Confirm trigger point through airfield computer simulation.
Runway 17R-35L west side taxiways - third phase	Provide airfield access to aircraft operating at west side cargo area.	Extension of development completed in Planning Levels 1 and 2.
Implementation planning for Runway 17C-35C	Begin implementation planning and environmental clearance.	Confirm trigger points through airfield computer simulation and benefit-cost analysis.
Passenger Terminal		
Expand South Passenger Terminal	52 gates total, 1.6 million SF gross terminal area. 10 additional gates provided at South Passenger Terminal.	13.4 MAP. Confirm trigger point through Terminal Area Master Plan.
Ground Access and Parking		
South Parking Garage 4 th Level	1,220 parking spaces.	16.8 MAP.
Expand South Long Term Parking Lot	1,900 spaces on 14 acres.	16.8 MAP.
Expand South Employee Parking Lot	430 spaces on 3 acres.	16.8 MAP.
Additional Exit Gates at South Security/Control Plaza	A response to heightened airport security requirements. Three exit gates.	16.8 MAP.
Expand Consolidated Rental Car Facility	880 Ready/Return spaces on 24 acres.	16.8 MAP.
Support Facilities		
West Side Cargo Area	200,000 SF of additional warehouse area. Additional 20 jet and 4 regional cargo parking positions. 75 acres.	263,000 enplaned tons of cargo.
Belly Freight South Side	42,000 SF of additional warehouse area.	24,300 enplaned tons of belly hold cargo.
Airline Maintenance	2 hangars and apron. 10 acres.	Contingent on commitment of airlines or aircraft maintenance vendors. Allow 3 years for implementation.
Expand Field Maintenance Facility	20,000 SF enclosed storage, 22,000 SF fenced storage, 10,000 SF motor pool, 2,000 SF office. 1.5 acres.	16.8 MAP.
Expand Flight Kitchen	12,250 SF and associated parking and loading docks.	16.8 MAP.
Expand Deice Vehicle and Fluid Storage Area	2,400 SF.	16.8 MAP.
Fuel Storage Tank	600,000 additional gallons of storage.	205,000 annual commercial air carrier operations associated with 16.8 MAP.
RON Apron	6 additional RON parking positions. (4 provided this phase).	16.8 MAP.
Airport Administration	DOA complex including 80,000 SF office and 500 parking spaces.	16.8 MAP.

Austin-Bergstrom International Airport Master Plan Update

4 are applied to planning levels to define a trigger point value in terms of MAP, operations or other parameter. Not every project can be clearly tied to an activity level, and many are connected with other development. For example, development of the south access system will be tied to the development of the south passenger terminal. Trigger points for certain airfield projects have been identified based on the phasing plan previously discussed. The timing of these airfield improvements should be examined more closely through the use of computer simulation.

The general process and guidelines applied for estimating trigger points are explained below.

Airfield. The trigger point for airfield improvements is three years prior to the time when the number of aircraft operations associated with a planning level is expected to be reached. Exceptions to this guideline are airfield improvements required to serve passenger or support facilities. As stated above, timing of major runway and taxiway improvements should be confirmed through computer simulation analysis.

Passenger Terminal. The trigger point for passenger terminal development occurs a minimum of five years, and up to eight to ten years, prior to the expected time of reaching the annual passenger traffic (MAP) associated with a planning level. Implementation activities for Planning Level 1 terminal improvements should commence immediately. The trigger points for Planning Levels 2 and 3 should be confirmed through a Terminal Area Master Plan.

Roads and Parking. The trigger point for on-airport roads and parking occurs three years prior to the time the MAP level associated with a planning level is expected to be reached, unless required sooner to serve passenger terminal development. Trigger points for off-airport road improvements occur five years prior to reaching a planning level.

Support Facilities. Trigger points for support facilities occur three years prior to the applicable tracking factor associated with a planning level, unless required sooner or associated with terminal expansion. Tracking factors include enplaned tons of cargo (for air cargo), enplaned tons of belly freight (for belly freight), and annual commercial air carrier operations (for fuel farm).

Table 7-4 presents suggested trigger points to be referred to for implementation planning.

**Table 7-4
PLANNING TRIGGER POINTS**

Demand Forecast	Actual Year 2000	Planning Levels		
		Level 1	Level 2	Level 3
Passenger Enplanements	7.7 MAP	11.0 MAP	13.2 MAP	18.4 MAP
Air Cargo	72,000 Tons	132,000 Tons	186,000 Tons	296,000 Tons
Planning Trigger Points	N/A	7.7 MAP	8.9 MAP	13.1 MAP

Austin-Bergstrom International Airport Master Plan Update

Amending the Plan

The forecast of aviation demand, planning levels and associated facility requirements are based on historical patterns for passenger and cargo volumes that existed in the base year of 2000. The revision of any forecast assumptions as suggested by the monitoring program procedure, could have a substantial effect on facility requirements and financial elements.

Obviously, there are many opportunities for modification of future aviation demand. The forecast itself may require adjustment as socio-economic factors deviate from their expected patterns. In the continuing planning process, the planner must maintain an awareness of the impact that changes in these variables or assumptions will create. The planner must choose the starting point of revisions in the planning process with care, for changes at one point will surely cause changes in programs and analyses that follow. DOA may consider periodic updates to the forecasts for comparison with the Master Plan Update.

The process used in the development of this Master Plan Update is summarized in this final report and documented in detail in the technical reports and working papers prepared during the course of the study. It is suggested that the reader refer to these documents for guidance when amending the plan.

A Terminal Area Master Plan was suggested by the Peer Review and is recommended as the next step for future terminal development. This will generate new information and requirements to be considered as part of a continuing planning program. It will be important that the planners in this project understand the approach and assumptions taken in the Master Plan Update and documented in the various study reports.