

# **SECTION ONE**

## **CAPITAL DEVELOPMENT PROGRAM (CDP)**

## **OVERVIEW**

Currently the 5<sup>th</sup> busiest airport in the world, Dallas/ Fort Worth International Airport (DFW) is working to bring its Terminal facility capacity into line with its exceptional runway capacity. Scheduled to open in the first quarter of 2005, International Terminal D is the feature component of a \$2.6 billion Capital Development Program that will solidify DFW's competitive position in domestic and international markets. The new Terminal will help manifest DFW's goal of becoming one of the major North American gateways to the world by providing a passenger facility capable of handling 12.8 million annual enplanements, with a dynamic approach to passenger convenience and service. In addition to Terminal D, DFW is building a new Automated People Mover System (APM) to facilitate passenger travel experience and speed between Terminals and is undergoing Terminal Station Renovations (TSR) between existing Terminals and the APM. Urban Design Guidelines are also being developed to communicate a vehicular identity for DFW Airport and convey a sense of orientation that establishes legibility of the street experience.

## **INTERNATIONAL TERMINAL D**

### **VISION**

Working closely with a Design Review Committee consisting of DFW Board Members, DFW Executives and airline representatives, the International Terminal D Design Team was challenged to maintain many of the advantages of the existing DFW design and services framework, while enhancing the new project with an ambitious set of passenger service, architectural expression, and technical goals as befitting a new gateway International Terminal. In response to this mandate, the 29-acre site was comprehensively designed to maximize airside efficiency, to clarify landside vehicular circulation, and to express and enhance the Terminal passenger circulation routes.

### **ARCHITECTURE**

The overall architectural program for the new International Terminal D includes a 2 million square foot building containing two Ticket Halls and a 23 gate Concourse capable of hosting both international and domestic flights at each gate. The Terminal D project also includes an 8100 car parking structure, an integrated 300-room hotel, two airside Automated People Mover (APM) stations and an inter-terminal sky bridge. The complex will be served on the landside by a three level roadway configuration that includes separate departures and arrivals levels, plus a below grade vehicular service level that segregates all building service traffic from passenger traffic.

International Terminal D is the first DFW Terminal to break with the existing horseshoe-building prototype, although numerous attributes of the well-known DFW paradigm are retained in the new design. Similar to the existing DFW paradigm, the new Terminal contains several, horizontally separated Bag Claim Halls. Two distinct Domestic Bag Claim Halls are located to serve separate gates of the Terminal. Centrally located in the building, the International Bag Claim Hall contains eight bag claim devices in a 480' long space. However unlike the existing Terminals, the three distinct Bag Claim Halls are vertically separated from the Ticketing and Concourse Level. A separate roadway featuring segregated commercial and private vehicle curbsides serves them. This configuration allows for a clear distinction between surface

transportation modes serving enplaning and deplaning passengers that are not present at DFW today. It effectively decreases curbside congestion and increases clarity for vehicular traffic and for arriving passengers.

### **PASSENGER EXPERIENCE**

In accordance with the Board's goals, particular attention was paid to the international arriving passenger's experience in moving from plane to Meeter/Greeter Hall. At the perimeter of the Terminal's upper level, the Sterile Corridor is transparent on both sides, allowing arriving passengers views to both the airfield and the Terminal interior. This dramatic path leads arriving passengers to the upper level INS Hall infused with daylight, with a clerestory view of the APM train as it moves between stations. From the INS Hall, passengers move down to the International Bag Claim area with dramatic airside views to the west, before connecting to either the Recheck Hall, or the Meeter/Greeter Hall.

Unique to Terminal D, 65% of the international arriving passengers use the Recheck Hall before reconnecting to domestic flights. Due to this volume, this path is clearly delineated as it leads back up to the Concourse Level. A third security checkpoint is located directly opposite this juncture, affording connecting passengers easy access to the gates of Terminal D. Also available at two adjacent locations on the D Concourse, is easy access to the new integrated, airside, APM stations for direct flight connections in other terminals.

### **OVERALL DESIGN EXPRESSION**

Terminal D breaks from the existing DFW design paradigm in many significant ways. Because of the clear delineation of major spaces within the plan, the processing halls are spacious and have memorable volumetric expressions. Through the extensive use of modern, high-efficiency glazing, the Terminal is highly transparent both from the exterior to the interior, and internally from major space to major space. For example, passengers in the Ticket Halls and Concessions triangles have a view of the trains moving in and out of the APM stations above. These public spaces are also extensively day lit from both direct and indirect sources. The day lighting system is utilized as a directional expression of passenger movement to enhance way finding, guiding passengers from the Ticketing Halls to the Concessions triangles and to the Concourses beyond.

### **EXTERIOR EXPRESSION**

The exterior expression of these volumes is unified beneath a fluid stainless steel roof that both reflects the major passenger movements in the building, and has a conscious landmark quality. In satisfying one of the Board's primary aesthetic goals, the dynamic form expresses the cultural boldness of the Dallas/Ft. Worth Metroplex. The combination roof edge and canopy at curbside presents a consistent building line that unifies the design from the entrance to the Terminal precinct prior to the North Ticket Hall, to the end of the building past the South Ticket Hall. At airside, the roof edge follows the volumes of the Concessions triangles and upper level Airlines Clubs in a sinuous curve that creates a dramatic profile for arriving passengers. At night, the roof edge is lit, reinforcing this continuity and tracing the outline of the public

spaces below. The lower volume of the Concourses rings the large roof edge, grounding the building to the apron.

## **INTERIOR EXPRESSION**

The Terminal interior design is a reflection of the smooth fluidity of the roof, with a conscious expression of surfaces, as opposed to construction components. Finish materials are carefully chosen for distinct purposes within both large and intimate spaces. At the large public volumes, materials are smooth and consistent to reflect the fluidity of the overriding building form. At more intimate transitional spaces such as the security checkpoints and passages from large volume to large volume, the finishes are consciously richer to provide a warmer texture. Wall finishes at these areas are stone, with directional wood ceiling panels oriented to reinforce passenger movement and enhanced with special lighting. In the Concourses, the wood ceiling panels are also used to provide a richer environment in the areas that contain the bulk of passenger movement.

## **CONCESSIONS PROGRAM**

In order to respond to multiple passenger profiles and the unique bipartite nature of the plan, the Concessions program was designed to feature two major “Villages” at each end of the Terminal airside. Utilizing urban design techniques rarely applied to interior architecture, the Villages were designed as three-dimensional environments to include a variety of solid and void components, public and private spaces, and one, two and three story elements. Encompassing over 40,000 SF each, plus an additional 20,000 square feet of storage, the Villages fill the triangular spaces under the volume of the main roof, past the security checkpoints and front on two Concourses. Like the other public spaces, extensive skylights and clerestories illuminate the spaces naturally during daylight hours, reinforcing the urban Village approach and providing a continual connection to the outside environment.

The Concessions Design Team’s major challenge was to create consistency within the framework of the overall Terminal design, while reflecting a unique character for each Village and allowing creative tenant flexibility in the design of individual stores. This was accomplished through the adoption of a consistent, freestanding, 30’ x 30’ Concessions frame, or “cube”, containing the basic retail module. These modules were located within a 12’ circulation grid based on the buildings structural, planning, and service module. Extensive tenant guidelines and retail exemplars, encourage a dynamic interpretation of the 900 S.F. space within the frame boundaries. Distinct materials palettes for both the frame and the allowable tenant infill distinguish the Villages. There are also tenants located at a Mezzanine Level within the large volume. The Villages are further enlivened by public spaces that serve a continuing program of performance stages and locations for active craftwork and art display.

## **SCULPTURE PLAZA**

In order to enhance the experience of the arriving international passenger, the Meeter/Greeter Hall and the Departures Level curbside fronts onto a 35,000 S.F. public Sculpture Plaza adjacent to the Garage. On the tightly utilized site, the Plaza fulfills the role of an urban park, providing physical and visual breathing room for the masses of the Terminal and Garage. It also provides a unique passenger amenity as an open zone

that uses a combination of landscaping and art for expression of the region. As a part of the Airport Art Program, the Plaza will host visiting sculpture from Dallas and Ft. Worth museums, as well as from the Metroplex's well-known private collections. The Plaza provides a horticultural and cultural introduction to Texas, as well as facilitating direct access from Terminal and Garage and organizing the space between the Garage and Terminal heavily utilized by arriving international passengers and their meeters/greeters.

## **HOTEL**

Making way for the Garage, the existing 700-room West Tower of the DFW Hyatt Hotel on the site was demolished. Replacing it will be a 300 room, high service, fully integrated, luxury Hotel with direct access to the Terminal public spaces for both departing and arriving passengers. This connectivity, and services such as bag check and flight monitoring, will provide integrated passenger amenities rare in an airport environment. The Hotel will also feature a comprehensive business center, spa, meeting facilities and ballrooms to serve business and social functions for airport users.

## **AUTOMATED PEOPLE MOVER SYSTEM (APM)**

The \$846 Million APM component of the Capital Development Program will open at the same time as the new International Terminal D, affording swift connect times between all of the DFW Terminal facilities. The initiative involves the development of a People Mover, or "Train", that will transport people between the four existing Terminals (A, B, C, and E) and the new International Terminal D and the development of two Station Platforms at each of the five Terminals. Station design at Terminal D is consistent with the new International Terminal D design. Station design at existing Terminals includes the development of a prototypical station design and subsequent site-adaptations at a total of eight locations. All locations are on the airside of existing terminals within the Central Terminal Area. The APM Station is a four level structure with a center platform providing access to the Automated People Mover. The platform is accessed from the Concourse Level via escalators, elevators, and stairs.

## **TERMINAL STATION RENOVATIONS (TSR)**

The APM Station design includes approximately 30,000 square feet of shell expansion to the Concourse Level at each station. The expansions will facilitate integration with existing Terminals.

## **URBAN DESIGN/LANDSCAPE**

DFW is currently engaged in the development of Urban Design Guidelines that are intended to ease the vehicular experience of the Airport. The fundamental goal of the Urban Design Guidelines is to create a cognitive structure, which clearly communicates an identity for DFW Airport and conveys a sense of orientation that establishes legibility in the street experience. To achieve this goal, the Urban Design Guidelines are built upon a framework of street and environmental conditions, which comprise the DFW development zone. Of particular interest, gateway features present an opportunity to establish an identity for each development zone around the airport.