BUSINESS PLAN FOR THE NEW TERMINAL
AT THE KALAMAZOO INTERNATIONAL AIRPORT

I. Introduction

a. The project that reflects this business plan is the new design of the airport terminal at Kalamazoo Airport in Kalamazoo, Michigan. Our group is working on this project to examine all aspects of the current design and determine if there is anything that could be modified or changed.

II. Objectives:

a. The goal of this project is to determine the future needs and capacity for operations, passengers, and the entire city in use of the new terminal building. The expected outcome of this project is a terminal building that reflects the ideas and needs of travelers in and out of Southwest Michigan. The new terminal will also meet the objective to replace the outdated, smaller existing terminal building that is currently located on the airport site.

III. Existing Conditions (Situation)

a. Airport setting
    i. Locale: The locale of the city is of a population of 238,544 as of 2001. The city is located in Southwest Michigan approximately 35 miles from Lake Michigan.
    ii. Climate: The climate of Kalamazoo is a moderate climate of temperatures ranging from an average of 31 degrees F in the winter to 85 degrees F in the summertime. The rainfall also varies depending on the months, but there is an average liquid precipitation of 3.03 inches. The annual snowfall averages around 69.7 inches.
    iii. Air Traffic Activity: Approximately 464,434 enplanements per year. There is a mix of aircraft including: CRJ, Sab340, DC9 and future plans include A320's and A319
b. Airspace: The airspace at Kalamazoo is class D
c. Airport facilities
    i. Airfield: The airfield includes 3 runways, a ramp area, along with the Kalamazoo Airzoo, T-Hangars, and local FBO's.
    ii. Landside: Landside area includes the terminal, parking, and car rental area
d. Socioeconomic profile
    i. Population: The population of the city as of 2001 was 238,544
    ii. Local Area Economy: Due to the recent recession Kalamazoo like most of Michigan cities is recovering at a slower pace than the rest of the country.

IV. Forecasts

a. Techniques: In the forecast of the demand of the new terminal it is not enough to project past trends into the future. Adjustments have to be made. Factors that have to be considered are a variety of local and market area socioeconomic factors, fluctuations in population growth, and changes in employment and income. In general, transitions in a community stand in close relationship to aviation activity. Some of the techniques used in the determination of the future demand are time series projection, multiple regression analysis, and market share analysis[1]. All these factors assume that the historical trends will prevail into the future, but as mentioned earlier, adjustments based on the experience and proficiency of the management still have to be made. These unpredictable paradigm shifts can occur in technology, business philosophies, and regulatory principles.

b. Methodology

c. Commercial Service Forecasts

   i. Origin / destination: Kalamazoo International airport currently offers non-stop flights to Chicago, Cincinnati, Cleveland, Detroit, and Minneapolis and direct flight to 20 other cities. Through these major hubs and the major carriers located there, a network of other worldwide destinations is accessible.

   ii. Enplanements

   iii. Aircraft Fleet mix: Airplanes that service Kalamazoo include the ATR-42, the BAE-ATP, the Dash 8, CRJs, and the Avro RJ85[2]. In the future, a new generation of regional 20 to 40 passenger seat aircraft will be introduced to our market. These planes provide higher comfort and speed. Among them are the Jetstream 41, the Embraer 120 Brasilia, the Fokker 50, the Saab-Fairchild 340, and the Dornier 328[3]. In the 40 to 70 seat category new airplane like the ATR-42, the ATR-72, the Saab 2000, the British Aerospace Advanced Turbo Prop (ATP), and the DeHavilland Dash 8 are already in use and some of them, as mentioned above, already operate in Kalamazoo[4]. The biggest plane used in AZO is the DC-9 utilized by Northwest. NW predicts to switch to the Airbus A320 in the future and retire the DC-9.

   iv. Annual Airline operations

   v. General Aviation Forecasts

   vi. Commercial Service Fleet mix: Several airlines provide their services to our airport. Most of them are “feeder” for the major airlines. Among these regionals are American Eagle, United Express, Comair, Northwest, Mesaba, Atlantic Coast Airline, and

[1] Airport Master Plan June 1999 page:3-9
[2] Airport Master Plan June 1999 page:3-13
[3] Airport Master Plan June 1999 page:3-13
[4] Airport Master Plan June 1999 page:3-13

Pinnacle[5]. Unless major bankruptcies occur, it is forecasted that the majority of these airlines will also serve our market in the future.

vii. Annual GA operations
viii. Air Taxi
ix. Military
x. Air Cargo
xi. Peaking Characteristics: These characteristics can be viewed from different perspectives. The peak month constitutes the month in which the highest amount on enplanements occurred in the year. For Kalamazoo Airport this is usually the case in the summer months between May and August. Analysis has shown that peak months account for approximately 9.5% of the annual traffic for commercial and around 11% for the general aviation activities[6].
xii. General Aviation
xiii. Annual Instrument Approaches
xiv. Summary

V. Facility Requirements

a. Airfield Requirements: Requirement for future capacity for the A320's and A319
b. Runways: Extension or displacement of runways to comply with FAA for safety zones over Kilgore Road and rail road tracks.
c. Terminal Area Requirements: To meet the requirements of the FAA, general public, code enforcers, and future capacity requirements.
d. Gates and Boarding Devices: Take into consideration the future devices to be used.
e. Departure Lounges: Enough space to meet codes per passenger along with bathroom facilities, and concessions.
f. Ticket and waiting lobby: Future technological changes for electronic ticketing as well as accommodation for future capacity and the handicap.
g. Airline Ticket Counter/Support: Office space requirements as well as space to transfer into e-ticketing. Enough counter space to accommodate capacity.
h. Security: Provide safety considering future capacity and unplanned terrorist acts.
i. Baggage Claim: Enough space and quick transition from ramp to terminal.
j. Terminal Services: Concession, child areas, security, comfort, accessibility, car rental, restrooms, possibility of current or future curbside check in.
k. Ground Access Requirements: Meeting the codes of the security and safety regulations.
l. Terminal Curb Frontage
m. Terminal Area Vehicle Parking
n. Air Cargo

[5] http://www.kalcounty.com/azo/azoflts.asp
[6] Airport Master Plan June 1999 pages: 3-31 & 3-32

o. GA Requirements
p. GA Terminal Facilities
q. Support Facilities
r. Summary

VI. Airport Alternatives

a. Introduction
    i. Airport Development Alternatives
        1. Modernizing and upgrading the existing airport.
        2. Another consideration is to build a new terminal between the old airport and the fire rescue building to the North.
    ii. Airfield considerations
        1. Constructing a new tower to replace the existing one that was built in the 1960's.
        2. Larger aprons to accommodate larger aircraft
        3. New road access and a wider road in front of the terminal
        4. Blast protection for the terminal entrance
    iii. Refined Alternatives
        1. New jet bridges will be constructed to accommodate for the added capacity.
        2. Reduction of child areas so the extra space can be utilized.
        3. Concession areas on both sides of the security gates.
        4. New baggage handling services
            a. Curb-side baggage check-in
            b. New baggage carousels
        5. Alternative uses for old terminal
            a. Rented space
            b. Administration offices
            c. Meeting and training rooms
        6. Newer screening equipment
        7. Added space for e-ticketing machines

VII. Financial Plan

a. Estimated Project Costs
b. Estimated Funding Sources

Estimated Funding Sources:

Airport Improvement Plans - $11.7
Airport Funds - $3 million
State Grants - $0.6 million
Revenue Bonds - $15 - $20 million
Other Private Sources
Passenger Facility Charges for Bonds (up from $3 to $4.50)
Rents
*No General Funds or Local Taxes will be needed