

Chapter 6: Alternatives Evaluation

6.1 INTRODUCTION

The purpose of this Chapter is to document and describe the evaluation of the master plan alternatives and the selection process for the Master Plan recommended alternative.

The recommended alternative is selected by Airport Staff and the Airport Commission based on the following criteria:

- Cost and financial feasibility documented in this chapter,
- Technical evaluation documented in this chapter,
- Input received from the Master Plan Technical Committee, and
- Input received from members of the public that commented at two public meetings or in writing.

The recommended alternative was presented to the full Airport Commission on Wednesday, January 13, 2010 for consideration and approval, as noted.

ACTION: Receive draft Airport Master Plan Study as developed and recommended that staff proceed with the Environmental Report phase of the program. Motion Commissioner Doria, presumed seconded by Vice Chairman Hoehn and unanimously carried.

Once the Airport Commission approved the alternative for the Master Plan it will be subjected to environmental analysis per the California Environmental Quality Act (CEQA) guidelines. The Master Plan will remain in draft format and will not reflect official policy until the environmental analysis is concluded and the City of Palm Springs City Council approves the final CEQA analysis and adopts the Airport Master Plan as the official development plan for the airport.

6.2 MASTER PLAN ALTERNATIVES

A total of four alternatives were evaluated for consideration and recommendation. Presented in detail in Chapter 5, they are summarized below:

- Alternative 1 - No-Build - This alternative will be carried forward in the evaluation but has no upfront implementation costs associated with it.
- Alternative 2 - Immediate Action Plan – This alternative is intended to resolve the existing and near-term constraints in the terminal and rental car facilities. It does not meet the long term facility requirements and will be evaluated based on different criteria than the other build alternatives.
- Alternative 3 - Expand-in-Place – This alternative would expand the existing terminal facilities in their existing location expanding bag-claim north and ticketing south in addition to providing landside improvements.

- Alternative 4 - New Processor – This alternative would result in the construction of a new terminal processor south of the existing ticketing lobby with new bag-claim and ticketing facilities in addition to landside improvements.

6.3 ROUGH ORDER OF MAGNITUDE COST ESTIMATES

Rough Order of Magnitude (ROM) cost estimates were prepared for each of the three “build” or master plan development alternatives for Palm Springs International Airport. Each alternative presents an opportunity to construct facilities which meet the airport facility requirements through 2028 as defined during the Airport Master Plan process.

This chapter provides a basis for determining the relative cost of making the improvements in each of the development alternatives. This includes the cost of demolishing, constructing, or relocating facilities included in a given alternative.

Demolition, construction, and relocation unit costs were developed based on the Consultant Team’s expertise with recent project unit costs at other airports within the greater Southern California region. Unit costs, in October 2009 dollars, include the cost of materials (e.g. steel, concrete, asphalt, construction equipment etc...) and labor (to design and build the project) and are estimated based on the best available data.

Unit cost considerations include the type of facility (its function), complexity of construction, and desired level of service. The type of facility determines unit costs in that some functional areas are more costly to build than others. For instance, the same size facility for a terminal serving passenger processing functions would be more costly to build than for a cargo processing facility. The complexity of construction (e.g. phasing complications, extent of utility improvements, etc...) is also factored into the unit costs. Passenger screening areas contain complex processing systems and are more costly to design and construct relative to passenger holdrooms. Finally, the desired level of service may result in different unit costs for facilities with similar functions. The existing facilities at PSP are constructed to a relatively high level of service offering amenities that are above average relative to similarly sized airports. Maintaining PSP’s high level of service may increase the cost of constructing future improvements. The unit costs used for PSP are presented in **Table 6-1**. The costs were calculated by applying the unit costs to the size of each facility, determined using gross area measurements or quantities (e.g. number of baggage claim devices (where applicable)) for each functional component.

Table 6-1: Unit Costs for PSP

| BUILDING INFRASTRUCTURE COMPONENT | UNIT PRICE | UNIT |
|--|----------------|-------------|
| Demolish facility components | \$2 to \$20 | Sq. Feet |
| Construct minor terminal improvements (structural and non-structural) | \$7 to \$35 | Sq. Feet |
| Install terminal canopy / roofing | \$45 to \$70 | Sq. Feet |
| Construct airport operations office areas and counters | \$85 to \$90 | Sq. Feet |
| Construct terminal non-public areas | \$85 to \$90 | Sq. Feet |
| Renovate terminal public areas | \$115 to \$145 | Sq. Feet |
| Construct new building areas | \$175 to \$250 | Sq. Feet |
| Construct rental car fueling and wash facilities | \$60 | Sq. Feet |
| Demolish / Construct CNG station | \$400,000 | Total |
| LANDSIDE INFRASTRUCTURE COMPONENT | UNIT PRICE | UNIT |
| Demolish pavement areas (concrete or asphalt) | \$6 | Sq. Feet |
| Construct non-public surface parking lot (asphalt pavement) | \$8 | Sq. Feet |
| Construct public and rental car surface parking lot (asphalt pavement and landscaping) | \$10 | Sq. Feet |
| Construct parking garage (concrete) | \$43 | Sq. Feet |
| Construct pavement areas (concrete) | \$50 | Sq. Feet |
| Construct terminal curbside (concrete) | \$60 | Sq. Feet |
| Construct pedestrian connector | \$15,000 | Linear Feet |
| Construct utilities tunnel | \$2,750 | Linear Feet |
| TERMINAL EQUIPMENT COMPONENT | UNIT PRICE | UNIT |
| Extend existing bag claim devices | \$3,500 | Linear Feet |
| Demolish existing bag claim devices | \$7,500 | Each |
| Install baggage claim devices , 56' long each | \$250,000 | Each |
| Install baggage make-up devices, 56' long each | \$200,000 | Each |
| Install baggage make-up devices, 80' long each | \$400,000 | Each |
| Install SSCP security devices | \$40,000 | Each |
| Install inbound baggage stripping conveyor | \$2,500 | Linear Feet |
| Install outbound baggage take-off belts | \$3,000 | Linear Feet |

Source: HNTB Corporation

Note: Unit costs presented in 2009 dollars

In addition to the unit costs (materials and labor) of demolishing, constructing, and relocating facilities, total ROM costs also factor in soft costs. Soft costs are typically composed of:

- Planning Costs – The cost associated with concept planning and preliminary layout, environmental analysis, and scheduling
- Program Management Costs – The costs associated with management and execution of the contract by the airport, consultant team, and the program manager, legal, testing and inspection, and other costs
- Design and Engineering Costs – The costs associated with the design and engineering fees to get the project documents from concept to bid and award. The costs also include costs associated with design and engineering support during construction and close out of a project

- Construction Management Costs – Costs associated with the management of the general contractors
- Other Costs – The costs of permits, OCIP, and artwork

Soft costs are generally calculated based on a percentage of the unit costs. The unit costs and the soft costs are added together and a contingency factor applied as a percentage of the unit and general conditions cost.

Contingency costs account for preliminary drawings / documentation during the design phase and for design changes during the construction phase of the project.

For PSP, the ROM costs were not escalated to determine the costs in future year dollars.

Program management costs (costs associated with management, design, architecture, engineering and related costs) were also not factored in the total costs.

All costs are presented in 2009 dollars. The total project estimated cost of each alternative is calculated in the following manner:

| | |
|--------------------|-------|
| Construction Costs | |
| + Soft Costs | |
| +Contingency | _____ |
| =Project Costs | |

For this Master Plan Update, only terminal and landside alternative improvements were considered. With regards to airfield alternatives, despite their differences in terminal and landside development, all of the alternatives propose the addition of an Engineered Materials Arrestor System (EMAS) at the south end of Runway 13R-31L. Implementation costs of the EMAS are shown separately and the proposed action can be considered independently from the alternatives evaluation.

6.3-1 EMAS Implementation Cost Estimate

Implementation of an EMAS is assumed for all alternatives. EMAS unit costs include \$14 per square feet for site preparation and \$78 per square feet for the EMAS bed. In a space of 34,000 square feet and a 30,000 square feet bed, the total cost in 2009 dollars is \$2,816,000. Factoring in a discount rate of 6%, a lifespan of 10 years, and maintenance every 10 years, the life cycle cost total approximately \$4,650,000. The costs are displayed in **Table 6-2**.

Table 6-2: EMAS Implementation Cost Estimate

| PROJECT COMPONENT | UNIT COST | | AREA | TOTAL COSTS |
|-------------------------|-----------|-------|--------|--------------------|
| Site Preparation | \$14 | /sqft | 34,000 | \$476,000 |
| EMAS Bed | \$78 | /sqft | 30,000 | \$2,340,000 |
| EMAS Total Installation | | | | \$2,816,000 |
| Discount Rate | 0.06 | | | |
| Life Cycle | 20 | | | |
| Replacement | 10 | | | |
| Maintenance /yr. | 50,000 | | | |
| PV Replace | | | | \$1,306,644 |
| Maint. 0-9 years | | | | \$340,085 |
| Maint 11-19 | | | | \$189,901 |
| Life Cycle Cost | | | | \$4,652,630 |

Source: HNTB Corporation

Note: Unit costs presented in 2009 dollars

6.3-2 Terminal and Landside Cost Estimates

The cost estimates for each of the three development alternatives are presented below in **Tables 6-3, 6-4, and 6-5**. Costs are listed by the demolition, construction, or relocation action for each development alternative.

For the purposes of estimating costs, it is assumed that Alternative 2 would be developed in the near term while Alternatives 3 or 4 would be developed in the long term. Therefore, the costs of developing Alternatives 3 and 4 would also require the implementation of Alternative 2.

Table 6-3: Alternative 2 - Rough Order Magnitude Cost Estimates

| PROJECT COMPONENT | TOTAL COSTS |
|--|----------------------|
| Environmental Documentation and Phasing | \$ 500,000 |
| Advanced Planning and Design | \$ 500,000 |
| Construct new Commercial Vehicle Hold Lot | \$ 784,553 |
| Construct new Rental Car Maintenance and Storage Area | \$ 3,616,421 |
| Construct new Employee Parking Lot | \$ 145,180 |
| Construct new Rental Car Quick-Turnaround-Area (QTA) | \$ 2,946,073 |
| Expand Public Parking Facilities | \$ 2,236,933 |
| Close East Baristo Way Entrance | \$ - |
| Demolish old Rental Car QTA & Maintenance Facilities & Prepare for Holiday Economy Parking | \$ 434,837 |
| Construct temporary Customs and Border Protection (CBP) Facility | \$ 653,310 |
| Relocate Rental Car Customer Service Center (CSC) (reservations area) | \$ 1,432,129 |
| Demolish old Signature Hangar and CBP Facility | \$ 195,340 |
| Construct new Rental Car Ready / Return (R/R) Lot | \$ 945,122 |
| Remodel Ticketing Wing of Terminal | \$ 2,274,673 |
| Remodel Baggage Claim Wing of Terminal | \$ 2,786,027 |
| Construct Auxiliary Parking Lot | \$ 1,097,561 |
| Note: Cost estimates assume a maximum reuse of existing facilities. | \$ 19,548,159 |
| Note: Cost estimates are calculated in October 2009 dollars. | |

Table 6-4: Alternative 3 - Rough Order Magnitude Cost Estimates

| PROJECT COMPONENT | TOTAL COSTS |
|---|----------------------|
| Construct new Compressed Natural Gas (CNG) Station | \$ 595,360 |
| Demolish existing Compressed Natural Gas (CNG) Station | \$ 595,360 |
| Expand Rental Car Quick-Turnaround-Area (QTA) | \$ 436,739 |
| Construct Customs and Border Protection (CBP) Facility | \$ 3,348,900 |
| Demolish existing Rental Car Ready / Return (R/R) Lot | \$ 1,498,744 |
| Construct new Rental Car Ready / Return Multi-Level Garage | \$ 19,376,363 |
| Prepare Existing Ticketing Wing of Terminal | \$ 4,961,558 |
| Expand Ticketing Wing of Terminal | \$ 8,853,849 |
| Remodel and Expand Baggage Claim Wing of Terminal | \$ 12,781,601 |
| Remodel Outbound Baggage Make-Up Area of Terminal | \$ 7,207,891 |
| Expand Existing Security Screening Checkpoint (SSCP) | \$ 1,766,351 |
| Relocate TSA and PSP Operations | \$ 1,344,264 |
| Construct Utilities Tunnel | \$ 821,700 |
| Note: Cost estimates assume a maximum reuse of existing facilities. | \$ 63,588,681 |
| Note: Cost estimates are calculated in October 2009 dollars. | |

Table 6-5: Alternative 4 - Rough Order Magnitude Cost Estimates

| PROJECT COMPONENT | TOTAL COSTS |
|---|----------------------|
| Demolish Cell Phone Lot | \$ 65,638 |
| Construct new Rental Car Customer Service Center (CSC) (reservations area) | \$ 1,453,423 |
| Construct new Rental Car Ready / Return Lot | \$ 1,732,126 |
| Relocate Employee Parking Lot | \$ 74,420 |
| Construct new Compressed Natural Gas (CNG) Station | \$ 595,360 |
| Demolish Vehicle Inspection Plaza | \$ 100,914 |
| Realign Airport Loop Road | \$ 5,753,249 |
| Demolish existing Compressed Natural Gas (CNG) Station | \$ 595,360 |
| Expand Rental Car Quick-Turnaround-Area (QTA) | \$ 384,872 |
| Expand Public Parking Facilities | \$ 4,198,479 |
| Construct New Processor | \$ 51,921,639 |
| Remodel Baggage Claim Wing of Terminal | \$ 3,310,353 |
| Reconfigure Terminal Curbside | \$ 2,227,242 |
| Relocate Security Screening Checkpoint (SSCP) | \$ 4,438,305 |
| Remodel Existing Ticketing Wing of Terminal | \$ 1,304,996 |
| Note: Cost estimates assume a maximum reuse of existing facilities. | \$ 80,005,199 |
| Note: Cost estimates are calculated in October 2009 dollars. | |

In October 2009 dollars, the total cost of Alternative 2 - Immediate Action Plan is \$19,548,159.

In October 2009 dollars, the total cost of Alternative 3 - Expand-in-Place Plan is \$63,588,681, and excludes the implementation costs of Alternative 2.

In October 2009 dollars, the total cost of Alternative 4 - New Processor Plan is \$80,005,199, and excludes the implementation costs of Alternative 2.

The higher cost of Alternative 4, relative to Alternative 3, is driven primarily due to the additional terminal building square footage that would be constructed.

6.4 FINANCIAL FEASIBILITY

Goal No. 4 of the overall Goals of the master planning process is to plan a development and implementation plan that is fiscally responsible. Fiscally responsible is defined by:

- Looking at the availability of funding sources,
- Calculating the resulting charges to airport users including airlines, and

- Determining if the resulting use of sources of funding reflects the financial objectives and priorities of the Airport and maintains charges to its users within ranges acceptable to the Airport's overall objectives.

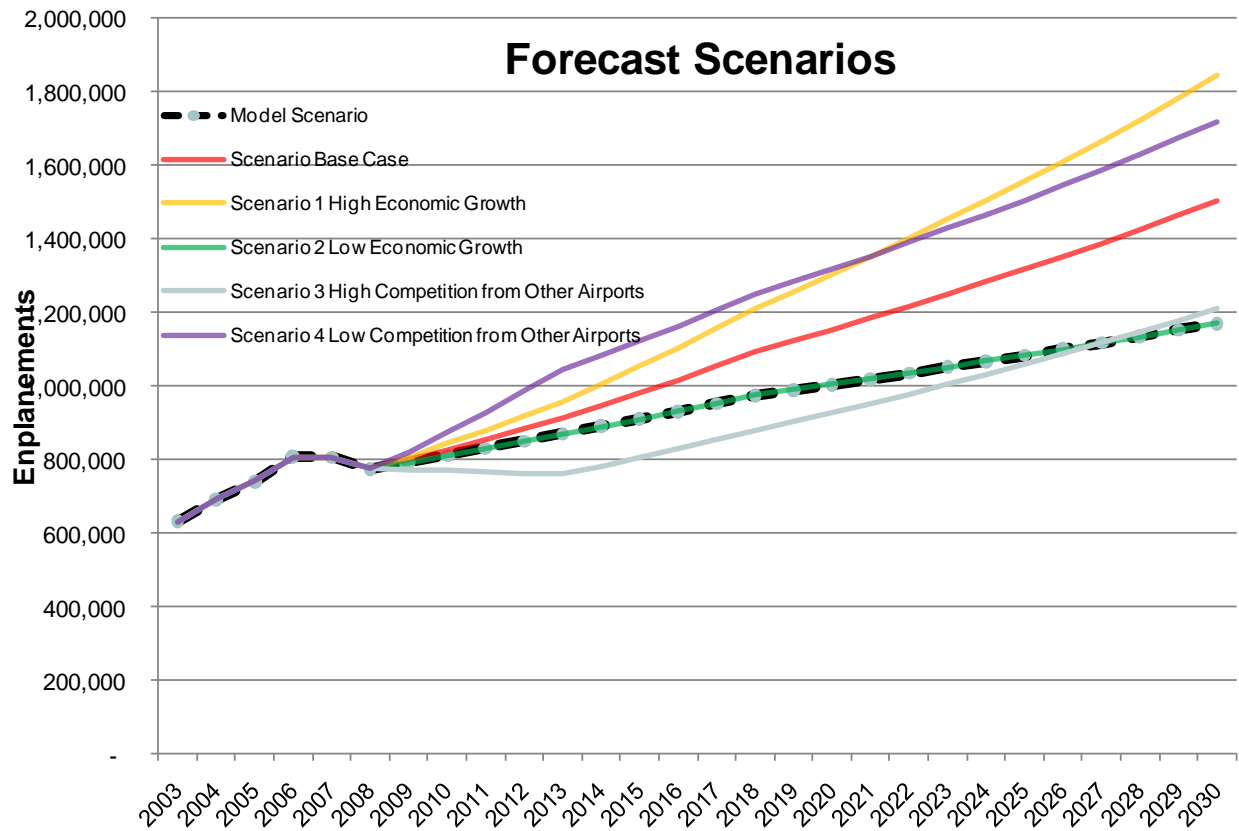
The purpose of this section is to demonstrate the Airport's financial capacity to deliver the capital improvement projects in this Master Plan Update and to outline the strategies for making future funding decisions. This analysis is not intended to determine the feasibility of bond issuance or other forms of debt financing, which would require a more extensive due diligence process. Rather, it is intended to show whether there are sufficient sources of capital (e.g. Federal and/or State grants, local funds, etc.) available to fund the projects recommended during the planning period. Capital projects were prioritized based on necessity and the urgency to resolve specific operational, safety / security and customer service issues. Funding availability was then assessed for each development alternative.

6.4-1 Forecast Passenger Demand

The Aviation Activity Forecasts presents the aviation activity forecast for this Master Plan. Given the ever present dynamics in the aviation industry, four activity demand forecast scenarios were developed in addition to a baseline forecast. Each assumes varying foreseeable conditions that could materialize within the 20-year analysis period. The Base Case was used as a basis for the facility requirements analysis. Funding sources have been analyzed under each of the scenarios to determine the range of funding that could be available for airport improvements. However, the financial capacity to implement Alternative 2 was confirmed under the low economic growth scenario to provide a more conservative outlook.

The Base Case and four activity scenarios are depicted below. The more cautious Model Scenario was used to confirm the financial feasibility of Alternative 2.

Figure 6-1: Base Case and Forecast Scenarios



6.4-2 Funding Sources

The Airport has four potential sources of funding for the capital projects as contained in this Master Plan:

- FAA Airport Improvement Program (AIP)
- FAA Passenger Facility Charge (PFC)
- Customer Facility Charges (CFC)
- Airline Rates & Charges

A description of those sources and estimates of future funding availability follows.

FAA AIP Funds

Funding is provided to airports through the Airport Improvement Program (“AIP”) as awarded by the FAA. AIP funds are divided into two categories: discretionary funds and entitlement funds. Discretionary funds are awarded at the discretion of the FAA based on certain eligibility criteria, while entitlement funds are distributed to airports on a per enplanement basis, subject to an annual minimum. As a primary airport, PSP is entitled to a share of annual AIP entitlement funding.

Entitlement funds are distributed to airports on a per enplanement basis using the formula below:

- \$7.80 per enplanement for the first 50,000
- \$5.20 per enplanement for the next 50,000
- \$2.60 per enplanement for the next 400,000
- \$0.65 per enplanement for the next 500,000
- \$0.50 per enplanement thereafter

In 2003, in accordance with federal law, the figure resulting from this formula has been doubled in any year where the total national AIP appropriation has been at least \$3.2 billion. The total appropriation has been at least this large since 2003, and it is expected to be in the future. It is assumed that AIP will be funded at a level equal to or greater than the \$3.2 billion threshold and that the above described formula will remain in effect to determine AIP entitlement distributions. Available AIP entitlement funds are expected to total nearly \$75 million from FY 2011 through FY 2028, with a range from \$72 million to \$78 under the alternative forecast scenarios.

The Airport has received discretionary funding in the past to fund various airfield projects. Future discretionary funding will depend on the nature of the future projects and their ranking within the FAA's priority ranking system for discretionary funds. Due to the nature of the projects included in the alternatives, no discretionary funding has been assumed as part of this financial analysis.

Passenger Facility Charges

Passenger Facility Charges (PFCs) represent an important source of capital funding for airports. The FAA currently authorizes the collection of \$4.50 per passenger enplanement to fund certain approved projects for a defined collection period. Based on on-going legislative efforts, it is expected that the federal government will increase the PFC cap from \$4.50 to \$6.00 or higher but in an undefined time period. This analysis assumes that PFC collections will be at \$4.50 for evaluation of Alternative 2 - Immediate Action Plan but are increased to the \$6.00 level for evaluation of Alternative 3 - Expand-in-Place and Alternative 4 - New Processor due to their later anticipated implementation of approximately 2021.

Eligible projects for PFC use include those projects which:

- Preserve or enhance safety, security, or capacity,
- Reduce or mitigate noise, and/or
- Enhance competition among air carriers.

Based on past historical collection rates, for this master plan it was assumed that 80% of enplanements are subject to PFC collection. Further it was assumed that the portion of PFC necessary to compensate carriers for the administrative burden or remittance will remain at the current \$0.11 per PFC collected.

Annual PFC collections at a \$4.50 level are projected to gradually increase from \$2.7 million in FY 2011 to \$5 million in FY 2028 based on projected passenger enplanements during this time period.

Collections of PFCs at the \$4.50 level are committed to the payment of Outstanding Bonds including 1998 PFC Bonds, 2006 PFC Bonds and 2008 Bonds. There is currently approximately \$29 million in outstanding principal amount on those bonds with a total estimated debt service of approximately \$49 million.

If the PFC level is increased above \$4.50, the City has the option to use the incremental collections for the payment of PFC-eligible costs rather than the payment of debt service.

It is projected that PSP will collect \$62 million in PFCs between FY 2011 and FY 2021 at a \$4.50 level, with \$49 million applied to the payment of debt service on the outstanding bonds and \$13 million available to assist in paying for project costs associated with Alternative 3 or Alternative 4. In the event that the PFC level was increased to \$6.00, by FY2011, approximately \$24 million of additional collection would be available for PFC eligible projects and \$40 million of additional collections if the PFC level was increased to \$7.00.

Customer Facility Charges (CFCs)

Costs related to the consolidated rental car facilities can be funded through the customer facility charge (CFC) charged to rental car customers pursuant to a resolution adopted by City Council in 2007. The CFC is a separate charge of \$10 per transaction. The CFC collections can be used on a pay-as-you go basis for capital development or used to repay debt service on consolidated rental car facilities financed through special facility taxable bond funding.

PSP began collecting a CFC in 2007. Through June 2009, \$4.4 million in CFCs have been collected with \$ 2.1 million applied to rental car facility projects. CFC collections are forecast to continue at approximately \$1.5 million per year gradually increasing to \$2.7 for an aggregate collection of \$39 million under the base passenger forecast, and ranging from \$34 to \$45 million under the range of scenarios. Historically, California law limits the CFC level to a maximum \$10 per rental transaction. However, in October of 2010, the Governor signed into law S.B. 1192 which allows airports to increase the CFC collection amount, project specific to a per day fee instead of a single rental transaction fee. This feasibility analysis does not assume the airport will have any increases. In the event that limit is lifted, the Airport could choose to increase its collection rate and increase use of pay-as-you go funding or additional bond funding for rental car facility costs.

Airline Rates and Charges

Costs that are not eligible for funding through AIP grants, PFCs or CFCs must be paid through airport operating revenues or unrestricted cash balances.

The City collects fees and charges from airlines operating at the Airport based on a cost-recovery basis. The City has Airport Use and Lease Agreements with seven airlines serving PSP (Alaska Airlines, American Airlines, Horizon Air, Mesa Air Group / US Airways, SkyWest / Delta Connection, SkyWest / United Express, and WestJet). Under the agreements that were effective July 1, 2004, the Signatory Airlines have agreed to pay rates and charges under a residual rate structure which means that the airlines have agreed to pay all operating costs and debt service requirements not covered by PFCs and net of all

other airport operating revenues. The non-signatory airlines operating at PSP pay rates and charges at 1.25 times the signatory rate. The current Airport Use and Lease Agreement (AULA) continues until its expiration on June 30, 2014. For the purposes of this analysis it is assumed that future versions of the AULA (beyond 2014) will continue to calculate airline fees on a residual basis and any future capital developments requiring funding from airline rates would require signatory approval. The Airport has a Special Capital Fund for which the airlines contribute up to \$350,000 annually based on the schedule defined in the AULA. The Airport may expend no more than \$250,000 of the fund annually without the consent or approval of the Signatory Airlines.

6.4.3 Development Alternatives

There are four development alternatives presented in the PSP Master Plan:

- Alternative 1 - No Action
- Alternative 2 - Immediate Action Plan
- Alternative 3 - Expand-in-Place Plan
- Alternative 4 - New Processor Plan

The four development alternatives were presented in detail in Chapter 5 and are briefly described in Section 6.2.

6.4.4 Funding Strategies

Alternative 2 - Immediate Action Plan

This financial funding analysis looks at the Master Plan projects only and does not incorporate other projects within PSP's capital program. Based on the nature of the projects and the available sources of funding, the projects relating to the consolidated rental car facilities are expected to be funded through Customer Facility Charges through a combined pay-as-you go basis and special facility taxable debt which is repaid through CFC collections. The remaining projects under Alternatives 2 would be financed through a combination of short-term GARB financing and incremental PFC collections in the event that the PFC level is increased above \$4.50.

Based on the projected CFC collections through 2028, there is sufficient financial capacity for the \$10 million in rental car projects in Alternative 2. The CFC would also provide financial capacity to implement further improvement to rental car facilities as envisioned in Alternatives 3 & 4.

However, the remaining portion of the projects in Alternative 2 will require additional evaluation and discussion with the airline stakeholders. With the current PFC collections pledged to the payment of outstanding PFC debt service, the \$9 million in additional cost would result in a 20 – 30% increase in the airline charges measured on an enplaned passenger basis. While these projects provided significant improvements in passenger service levels, the airport staff and airline stakeholders will need to make a collective evaluation of where there is sufficient value for the improvements until additional passenger growth is demonstrated. Further, it may be possible to implement more limited improvements than those described within Alternative 2 in order to demonstrate improved value. Another alternative funding

source includes the increases in revenues from non-aeronautical sources like airport concessions and vehicle parking rates.

Long-Term Funding Strategies for Alternatives 3 & 4

Alternative 3 – Expand-in-Place or Alternative 4 - New Processor both represent substantial capital investments that are planned to accommodate long-term growth in passenger volumes forecast over the next 20 years. Neither Alternative 3 nor Alternative 4 could be implemented in an effective piece-mail manner. Each alternative would require substantial up-front investment in construction and implementation. These challenges were anticipated during the planning of these alternatives and were the primary factors in the development of Alternative 2 - Immediate Action Plan. As described previously, the implementation of Alternative 2 would not prevent the Airport from efficiently implementing either Alternative 3 or 4 at a later date. Therefore, the Master Plan does not call for the implementation of one of these alternatives until approximately 2021. However, even at that later date, it is anticipated that implementation of Alternative 3 or 4 would substantially increase the cost per enplaned passenger above a range for considered reasonable for the carriers and markets served at PSP, based on the conservative analysis utilized in this study. Some of this increase in costs may be mitigated by future increases in PFC levels however, the timing and the amount of increase is still too uncertain to project at this time.

It is anticipated that the PSP Master Plan would be updated within five to ten years and that if the level of enplanements has grown as anticipated in this master plan and the Airport's financial strength has remained steady or improved, the timing may then be right to consider implementing one of these terminal development alternatives and to conduct the necessary financial capacity analysis with better information.

6.5 EVALUATION OF ALTERNATIVES

The alternatives evaluation criteria are based on four general sources:

- Airport Mater Plan Update Goals and Objectives,
- The “best planning tenets and other factors” set forth in FAA Advisory Circular 150/5070-6B,
- Environmental criteria, and
- Fiscal factors.

The following analysis evaluates the alternatives on the basis of the four general sources and recommends an alternative(s). Alternatives considered for development are the consolidated landside and terminal alternatives previously defined:

1. No-Build
2. Immediate Action Plan
3. Expand-in-Place
4. New Processor

6.5-1 Goals and Objectives

At the outset of the master plan process, the Planning Team developed a series of goals and objectives intended to guide the development of master plan alternatives by providing criteria for evaluation. The FAA’s “best planning tenets and other factors” were instrumental in the development of the Master Plan Goals and Objectives. Chapter 1 presented the following seven overarching goals:

1. Maintain and strengthen Airport safety and security
2. Enhance the Airport user experience through the efficient handling of passengers, aircraft operations, and commercial activity
3. Promote and help grow the tourism industry with facilities that reflect a high quality of customer experience consistent with this world class destination
4. Plan a development and improvement program that is fiscally responsible
5. Maximize the utilization of Airport facilities and land and promote sustainability in planning and design
6. Preserve and promote general aviation
7. Promote land use compatibility surrounding the Airport

The Planning Team utilized a rating system for each goal and each alternative consisting of a negative, neutral, or a positive indicator rating. A negative rating indicates that the specific alternative detracts from the goal. A neutral rating indicates that the specific alternative is neutral; it does not detract from nor does it meet the goal. A positive rating indicates that the specific alternative largely meets or exceeds the goal. A matrix, as depicted in **Table 6-6** was set up to evaluate and compare each alternative to each goal. Alternatives 1, 3, and 4 are considered as potential long-range alternatives and are measured against 2028 facility requirements. The evaluation criteria for Alternative 2, however, is different as the alternative is planned as a near term alternative and is measured against 2018 facility requirements. The following narrative analysis describes the ratings decision for each alternative.

Table 6-6: Alternatives Evaluation Matrix

| | Alternative 1 – No-Build Alternative | Alternative 2 – Immediate Action Plan | Alternative 3 – Expand-in- Place | Alternative 4 – New Processor |
|----------------------------------|---|--|---|--|
| Goal #1: Safety and Security | 0 | 0 | 0 | 0 |
| Goal #2: Airport User Experience | - | + | + | + |
| Goal #3: Tourist Industry | - | + | + | + |
| Goal #4: Fiscal Soundness | - | 0 | - | - |
| Goal #5: Facility Efficiency | - | + | + | + |
| Goal #6: General Aviation | + | + | + | + |
| Goal #7: Land Use Compatibility | - | + | + | + |
| Total | -4 | +5 | +4 | +4 |

Source: HNTB Analysis

Goal #1: Safety and Security

This goal was mainly intended to guide applicable airfield development. As discussed earlier in this Chapter, airfield expansion is not proposed in this Master Plan. None of the alternatives detract or enhance the safety and security of the Airport. All of the Alternatives are rated zero for this goal. It is important to note that the existing airport meets or exceeds all established safety and security criteria and each of the proposed alternatives maintain the airport's existing safe, secure environment.

Goal #2: Airport User Experience

This goal pertains to planning facilities that meet a high caliber of service, relieve congestion, improve access, and accommodate demand. Alternative 1 proposes no action with regard to constructing additional facilities to improve user experience. The existing terminal and landside facilities do not accommodate the 2028 forecast activity level. The alternative would result in an extremely low level of service for Airport users. Alternative 1 is rated as a negative for this goal. Alternative 2 provides a short-term solution for the most significant problems that are currently being experienced (passenger processor and rental car facility deficiencies), and as a result, Alternative 2 earned a positive rating. Alternative 3 and Alternative 4 both meet the terminal and landside forecast facility requirements. Both alternatives relieve congestion. Furthermore, pedestrian and vehicular access to ground transportation facilities is improved in both alternatives. As a result, Alternatives 3 and 4 are both rated as positives for this goal.

Goal #3: Tourist Industry

This goal pertains to elevating the experience of tourists and the potential for accommodating international traffic. Alternative 1 fails to consider the unique needs of tourists. It does not improve the U.S. Customs and Border Protection facility to potentially allow the airport to accommodate expanded international service, nor does it propose rental car facilities that provide a high user and community experience. Therefore, Alternative 1 has a negative rating for this goal. Alternative 2 proposes a remodel of the ticketing and baggage claim halls to better accommodate the unique needs of tourism and visitor activity. The alternative also allows for the potential of accommodating increased international service with an expansion of the U.S. Customs and Border Protection facility. Alternatives 3 and 4 both address the unique needs and demands of tourism and visitor activity. Reconstructed ticketing and baggage facilities address the need to accommodate oversized baggage. Both alternatives do not preclude the possibility of accommodating a non pre-cleared commercial international flight. Alternative 4 provides a very high level of service for rental car users. A garage directly across from the baggage claim and ticketing area provide superior customer service for users. The garage proposed in Alternative 3 results in a longer walking distance for passengers returning their car than Alternative 4. Alternatives 2, 3, and 4 all propose to relocate the rental car vehicle service facilities southward to a location to improve noise compatibility in the surrounding area. Overall, Alternatives 2, 3 and 4 all earn a positive rating.

Goal #4: Fiscal Soundness

This goal pertains to the development of alternatives that consider cost in their development, allow the Airport to generate additional revenue, maximize eligibility for FAA funding, and consider alternate

funding sources for capital improvements. Alternative 1 is cost effective as it does not require a capital program to implement, but the physical constraints of the facility could prevent the airport from maximizing its potential revenue. Alternative 1 also prevents the Airport from capitalizing on eligibility for FAA funding. Alternative 1 earns a negative rating for this goal. Alternative 2 addresses the most critical near-term constraints at the Airport. Though Alternative 2 does not maximize opportunities to generate additional revenue, it is intended to have the lowest feasible cost of implementation. Alternative 2 earns a positive rating for this goal because it is a financially feasible, near-term solution that makes maximum use of the airport's existing Customer Facility Charge (CFC). Of the full build alternatives, Alternative 3 is estimated to be less expensive than Alternative 4. Both alternatives maximize the Airport's eligibility to receive FAA funding and potentially allow the Airport to generate additional revenue. However, these alternatives are not financially feasible for development at the current time based on the airport's financial capacity. Because Alternatives 3 and 4 would require a substantial debt financing, both earn a negative rating for this goal.

Goal #5: Facility Efficiency

This goal pertains to planning facilities that maximize the utilization of Airport facilities. Alternative 1 does not develop facilities that will minimize terminal area congestion and address forecast demand. Alternative 2 provides additional meaningful capacity until approximately 2018. The terminal processor remodel would allow for a greater utilization of existing area. Alternatives 1 earned a negative rating for this goal, while Alternative 2 earned a positive rating for this goal. Alternatives 3 and 4 consider reducing terminal area congestion and improve ground transportation access. The parking and roadway systems contained in these alternatives minimize congestion and address the forecast demand. Alternatives 3 and 4 both earn a positive rating for this goal.

Goal #6: General Aviation

This goal pertains to planning facilities that accommodate the needs of general aviation users and maximize opportunities for general aviation development. The proposed airport-wide land use plan provides ample opportunity for general aviation development with minimal disruption to existing facilities. All alternatives earn a positive rating for this goal.

Goal #7: Land Use Compatibility

This goal pertains to enhancing the land use compatibility of the Airport with the surrounding community. Alternative 1 fails to enhance the land use compatibility of the Airport. Alternative 1 does not reduce neighborhood noise concerns due to rental car vehicle servicing, nor does it improve energy efficiency of facilities. Alternative 1 earns a negative rating for this goal. Alternatives 2, 3, and 4 all address the noise compatibility issues with rental car vehicle servicing. These alternatives also complement the Airport Land Use Compatibility Plan (ALUCP). Alternatives 2, 3, and 4 all earn a positive rating for this goal.

Evaluation Results

The evaluation results are presented in **Table 6-6**. Alternative 1 yields the lowest rating with a total rating of negative four because it does not address the current and projected deficiencies at the Airport. Alternative 2's rating is positive 5, because it provides a feasible plan for near-term improvements. Alternatives 3 and 4 both total a rating of positive 4. The three build alternatives largely meet the criteria set forth in the Master Plan Goals and Objectives.

6.6 ENVIRONMENTAL DISCUSSION

To supplement the evaluation of alternatives based on the Master Plan Goals and Objectives, a preliminary environmental discussion is included. The discussion serves as a basis for any subsequent NEPA / CEQA environmental documentation following this Master Plan Update. The below environmental discussion applies to all build alternatives and is tiered off previous master plan updates and their respective environmental review documents from 1994¹⁵ and 2003.¹⁶ The discussion also considers the Palm Springs General Plan for City/Airport interface environmental issues.¹⁷

- 1. Environmental Justice/Socioeconomic and Community Effects:** This potential project impact (Environmental Justice) was added as a NEPA topic in 1994 and was not specifically addressed in prior Master Plan Updates. Given that 1) environmental justice populations (if any) are located off airport property, and 2) the off-site impacts of the project do not vary between any of the alternatives, including the no-build alternative, no impacts to environmental justice resources are anticipated, and this topic does not need to be addressed in the NEPA environmental document. Note: This conclusion is based upon the fact that none of the proposed alternatives directly impacts existing off-site housing.
- 2. Section 4(f) Resources and Parks/Recreation:** A windshield survey, document research and prior environmental analysis found no publicly-owned parks, recreation areas, or wildlife or waterfowl refuges in the project area. Therefore, impacts to Section 4(f) resources are not anticipated. Because the number of operations will be the same regardless of the alternative selected, there will be no difference in impacts to off-site Section 4(f) resources under NEPA.¹⁸ Therefore, no Section 4(f) analysis will be required, based upon the current proposed Master Plan Alternatives.
- 3. Visual Effects:** The NEPA document for the 2009 Master Plan should address visual effects per FAA NEPA requirements.

¹⁵ Palm Springs Regional Airport F.A.R. Part 150 Noise Compatibility Program, Coffman Associates, Inc., June 1994
Palm Springs Regional Airport Environmental Impact Report/Environmental Assessment for Implementation of Airport Master Plan and F.A.R. Part 150 Study, Coffman Associates, Inc., January 1995.

¹⁶ Airport Master Plan for Palm Springs International Airport, Coffman Associates, Inc., June 2003.
Airport Master Plan Initial Study, City of Palm Springs, June 2003

¹⁷ City of Palm Springs General Plan, Planning Center, October 2007.

¹⁸ Note: The impacts to off-site parks and recreation sites may be different under CEQA.

4. **Water Quality and Erosion:** Construction of the project is subject to the requirements of the National Pollutant Discharge Elimination System (NPDES) Permit and any statewide permit in effect at the time of plan implementation. Permit compliance is likely to be sufficient to minimize erosion and construction-related water quality impacts. Although hazardous waste sites were previously identified within the project area, infiltration into groundwater was not anticipated because the water table was determined to be a minimum 210 feet below ground surface and hazardous waste was shown to be no greater than five feet below ground surface. The Palm Springs General Plan Update EIR (2007) supports these findings by indicating water levels at greater than 50 feet below ground surface in the general area of the airport.

Consistent with the NPDES permits, construction site, design pollution prevention, and treatment best management practices (BMPs) will be implemented to minimize potential water pollution during construction and future operation of the proposed project. Feasibility of various treatments, design pollution prevention, and temporary construction BMPs will be documented in a Storm Water Data Report for the project. Construction site BMPs will be detailed in and implemented via a Storm Water Pollution Prevention Plan (SWPPP). Any new NEPA documentation would provide necessary supporting analysis.

5. **Hydrology/Floodplain:** The 2007 Palm Springs General Plan flood zone map indicates a limited area of floodplain near the airport, with only small areas between the limits of 100-year and 500-year or 100-year with-flood depths of less than a foot at the southeast and northeast corners of the airport. Alterations to impervious surfaces within the project area also must be addressed in terms of effects to local hydrology.
6. **Air Quality:** An updated Air Quality Analysis at both regional and project levels will be necessary, as will a determination of federal air quality conformity.
7. **Noise:** A Noise Impact Analysis will be required to determine current and projected CNEL noise levels at sensitive receptor locations within the project area, along with any need for additional mitigation measures. The most recent noise analysis was conducted for the 1994 Master Plan, which identified extensive mitigation measures that have been implemented. In addition, the current aircraft fleet is substantially quieter than the 1994 fleet. With the completed phase-out of Stage 2 aircraft, and the general trend toward quieter Stage 3 aircraft, CNEL noise levels likely have declined. Also, ground transportation activity, both on and off airport property, and other potential noise-generating activities need to be addressed. NEPA analysis should estimate airport related noise levels.
8. **Wild and Scenic Rivers:** The project area contains no Wild and Scenic Rivers, so the proposed project will have no effect on such resources.
9. **Cultural Resources:** Prior environmental analysis determined that archaeological resources within the project area were likely to be minimal. However, the presence of unknown buried

resources cannot be ruled out. The NEPA document should contain potential mitigation measures to address unknown buried resources.

With respect to historic resources, the NEPA environmental document should conduct an assessment of resources eligible for historic designation. In April 2009, the Palm Springs City Council designated the west façade of the airport terminal a Class 1 historic resource. The environmental review of the 2009 Master Plan Update must address the ramifications of this designation; however, the findings for the designation acknowledge the potential for FAA requirements that could supersede the City's authority to evaluate airport alterations.

- 10. Native American Coordination:** Native American consultation must be coordinated in order to determine consistency with conclusions made during consultation for the 1994 Master Plan Update, which indicated that tribal resources have a low likelihood of presence in the project area because it was not regarded as a settlement site or location for overnight stays. No additional analysis is required.
- 11. Paleontological Resources:** The NEPA document for the 2009 Master Plan should assess the potential for paleontological resources on the site.
- 12. Hazardous Waste/Materials:** Hazardous waste/materials sites were previously identified in the 1994 Master Plan Update environmental review process and in the 2007 Palm Springs General Plan. A former landfill to the east of the airport but within the area of analysis was identified (the site of the Springs Shopping Center).

Among potential leaking underground fuel tanks in or near the airport per the 2007 Palm Springs General Plan is the existing Dollar Rent-a-Car facility. Its current status is unknown.

There are no Superfund sites in the City of Palm Springs.¹⁹

- 13. Biological Resources:** Prior biological analysis for the 1994 Master Plan Update indicated the presence within the project area of sensitive fauna (fringe-toed lizard) and habitat for sensitive flora such as Coachella Valley milkvetch. The Coachella Valley Multiple Species Habitat Conservation Plan (September 2007) developed conservation plans for the fringe-toad lizard and the Coachella Valley milkvetch; these conservation plans do not include airport properties. The NEPA environmental document for the Airport Master Plan should review the status of these species and other potential conservation requirements.

¹⁹ Palm Springs General Plan Update Draft Environmental Impact Report, State Clearinghouse Number 2006071060; the Planning Center, March 2007.

Bird species covered by the Migratory Bird Treaty Act (MBTA) may be present within the project area. The NEPA environmental document should include appropriate avoidance and minimization measures.

- 14. Wetlands:** As noted in the environmental analysis for the 1994 Master Plan Update, there are no blue-line wetlands within the project area. Given the desert conditions, no wetlands are expected.
- 15. Invasive Plant Species:** The NEPA document for the 2009 airport master plan should address project compliance with Executive Order 13112 regarding Invasive Species, which was implemented in 1999 after environmental review of prior biological analysis for the 1994 Master Plan Update.
- 16. Right-of-Way Relocation or Staging Area:** Current understanding of project alternatives does not indicate a need for construction easements or right-of-way relocation. Therefore, no additional NEPA review is required.
- 17. Coastal Zone:** Palm Springs International Airport is not located in a coastal zone. No coastal zone considerations are necessary in a NEPA document.
- 18. Consistency with State, Regional, and Local Plans:** Available Alternatives information indicates no inconsistencies with any state or regional plans. However, when finalized, the proposed 2009 Master Plan Alternatives should be reviewed for their consistency with the City of Palm Springs General Plan and Municipal codes.
- 19. Growth:** The proposed 2009 Master Plan accommodates forecast growth; under NEPA baseline criteria, the proposed project is not considered growth-inducing.
- 20. Cumulative Impacts:** Because development in the project area was consistent with local and Coachella Valley Association of Government projections under the 1994 Master Plan, no cumulative impacts were noted or foreseen. A similar scenario is anticipated for the 2009 Master Plan Update.
- 21. Community Impacts (Community Character and Cohesion):** None of the alternatives proposed for the 2009 Master Plan Update currently proposes altering the boundaries of the airport; therefore, the proposed project would not physically divide an established community. Under the Build alternatives of the Master Plan, alteration to the scale of the built environment at the airport could affect visual cohesiveness of the project area.
- 22. Energy/Utilities/Emergency Services:** The 1994 Master Plan Update noted a large anticipated increase in water consumption, wastewater generation, solid waste generation, and electricity consumption associated with airport development. Further analysis would be necessary to determine whether projections were met, and whether similar projections for the current endeavor will be made and the demand met. The 2007 Palm Springs General Plan Update

Environmental Impact Report (EIR) indicated that upon project buildout, stormwater quality standards and wastewater treatment capacity for the City will be exceeded. NEPA analysis for the new airport master plan will have to address these water quality issues.

- 23. Traffic and Transportation/Pedestrian and Bicycle Facilities:** The traffic setting has changed since development of the 1994 Master Plan Update. Several scenarios for surface transportation development were considered, but not all were implemented. Most notably absent is an extension of the Mid-Valley Parkway as a freeway through the Whitewater Wash from Mesquite Avenue to Interstate 10. Similarly, a tunnel under the airport along the Alejo Road corridor was removed from future consideration. Updated traffic analysis should address the existing and revised projected street development as well as pedestrian and bicycle circulation in the project area.
- 24. Geology/Soils/Seismic:** As noted in previous environmental review, the project area is subject to strong seismic shaking but does not lie within a fault zone and is thus not subject to fault rupture.

6.7 CONCLUSION

Following review of the alternatives evaluation, input of technical committee, and public input, and financial feasibility analysis, the recommended alternative selected for this Master Plan Update is Alternative 2 - Immediate Action Plan. A phasing and implementation plan is presented in Chapter 7.

The alternatives development and evaluation process for PSP was unique. This Master Plan Update was initiated in October 2008, at the cusp of the worst economic recession in the United States in eight decades. Further, the impacts of the recession and the volatility of fuel prices have taxed the airline industry. These challenges were, however, accounted for within the PSP Master Plan Update. The forecast of aviation activity assumes that the economy and the airline industry will recover and that Palm Springs and the Coachella Valley have a healthy future of growth in tourism that will be reflected in passengers and operations at PSP. However, the Master Plan Update must be concluded in early 2010 when there are positive signs for economic recovery but a degree of uncertainty remains. It is for this reason, primarily, that the recommended approach is one of restraint. There is no doubt that PSP is in need of improvements to its ticketing facilities, bag-claim facilities, and rental car facilities. Further, there is support among the technical committee and airport staff for pursuing these improvements. Thus, a refined development plan was prepared that would allow PSP an opportunity to make further improvements in a cautious manner responsive to the current uncertain economy. These improvements will allow PSP to upgrade its “front door” ticketing and bag-claim facilities, improve the user experience for rental car customers, and help alleviate the noise impacts faced by residents that live near the current rental car maintenance facilities.

Finally, implementation of Alternative 2 - Immediate Action Plan will provide improvements that will accommodate growth for the next five to ten years and may make the implementation of large scale terminal improvements more feasible in the future. It will be essential to evaluate the market in another master plan before 2018 and re-consider Alternatives 3 and 4 at that time.