

# Preliminary Findings – Baseline and Select Scenarios

- Commercial Passenger Optimization
- General Aviation Optimization
- Air Cargo Optimization

## Regional Aviation Strategic Plan

San Diego County Regional Airport Authority  
RASP Subcommittee

*September 15, 2010*



# Presentation Content

## Objectives

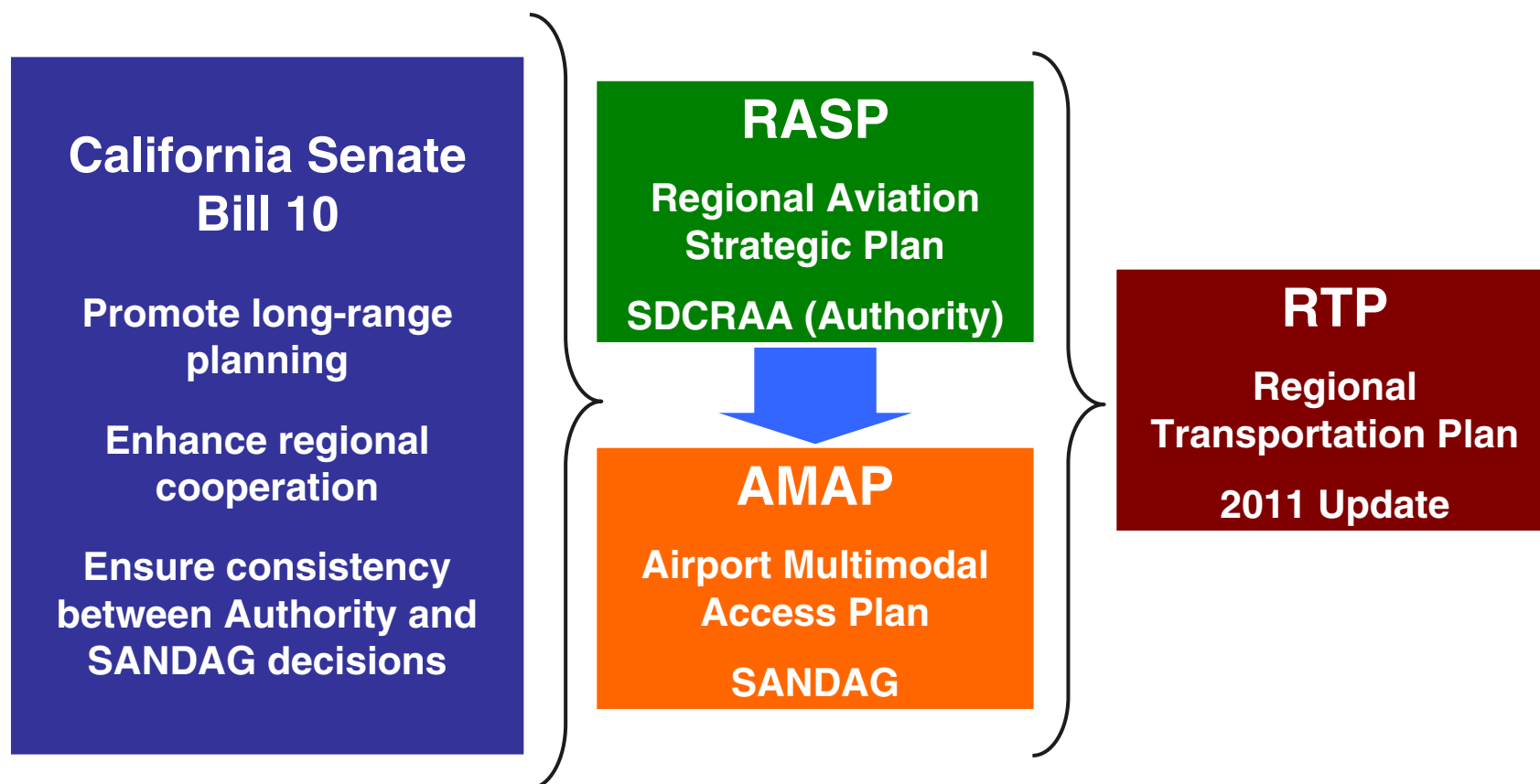
1. Review project progress to date
2. Present Baseline findings
3. Review Alternative scenarios details (cost estimates, specific enhancements, implementation schedules, timelines, and decision points, etc.)
4. Review preliminary findings on select families of scenarios
  1. Commercial Optimization
  2. Enhanced Utilization of Tijuana
  3. California High Speed Rail
  4. General Aviation Optimization
  5. Air Cargo Optimization

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# Regional Aviation Strategic Plan (RASP)

*Senate Bill 10 – Multimodal Planning to be Coordinated by SDCRAA and SANDAG*



# Project Overview

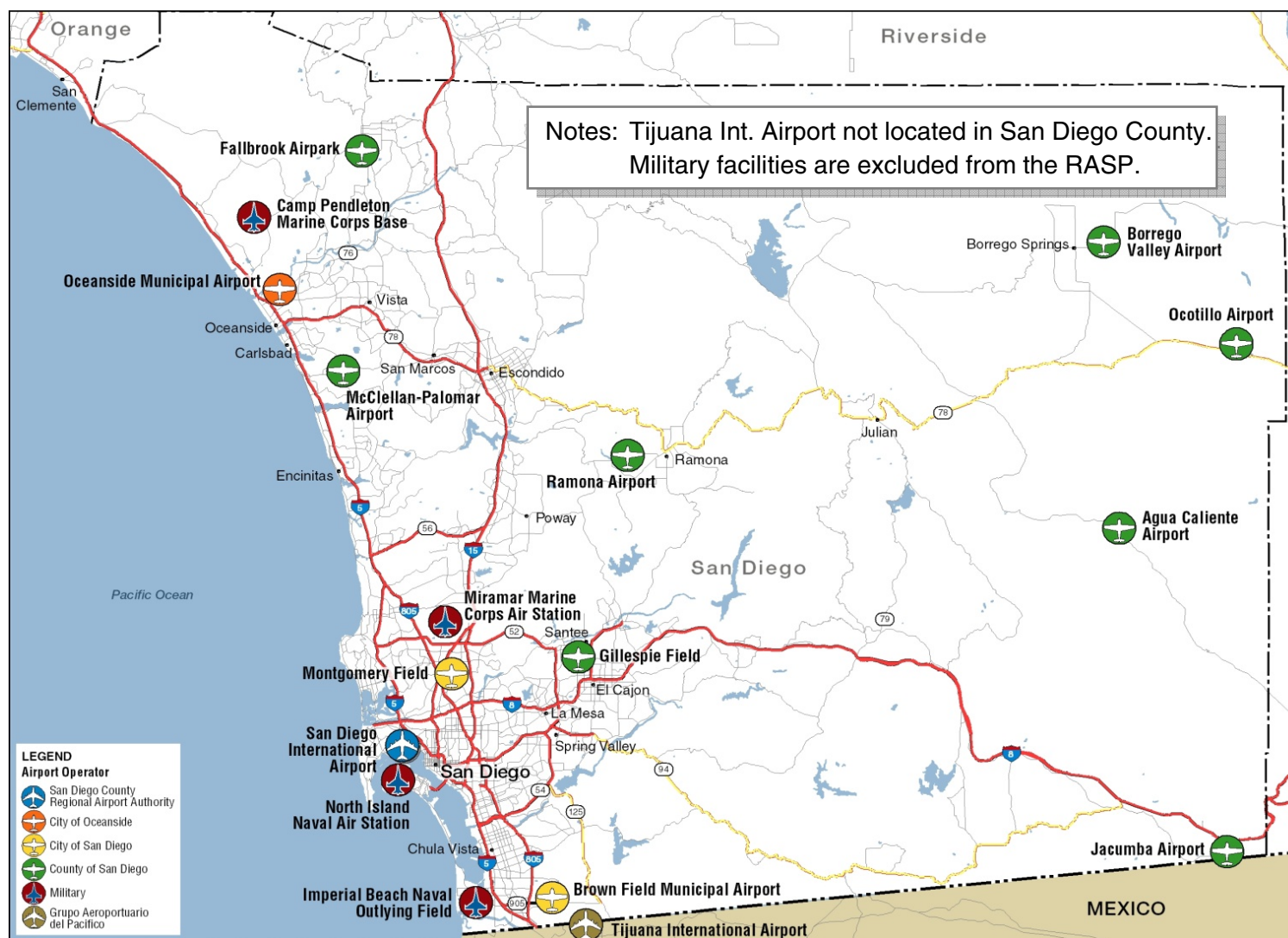
## *3-Phase Work Plan*





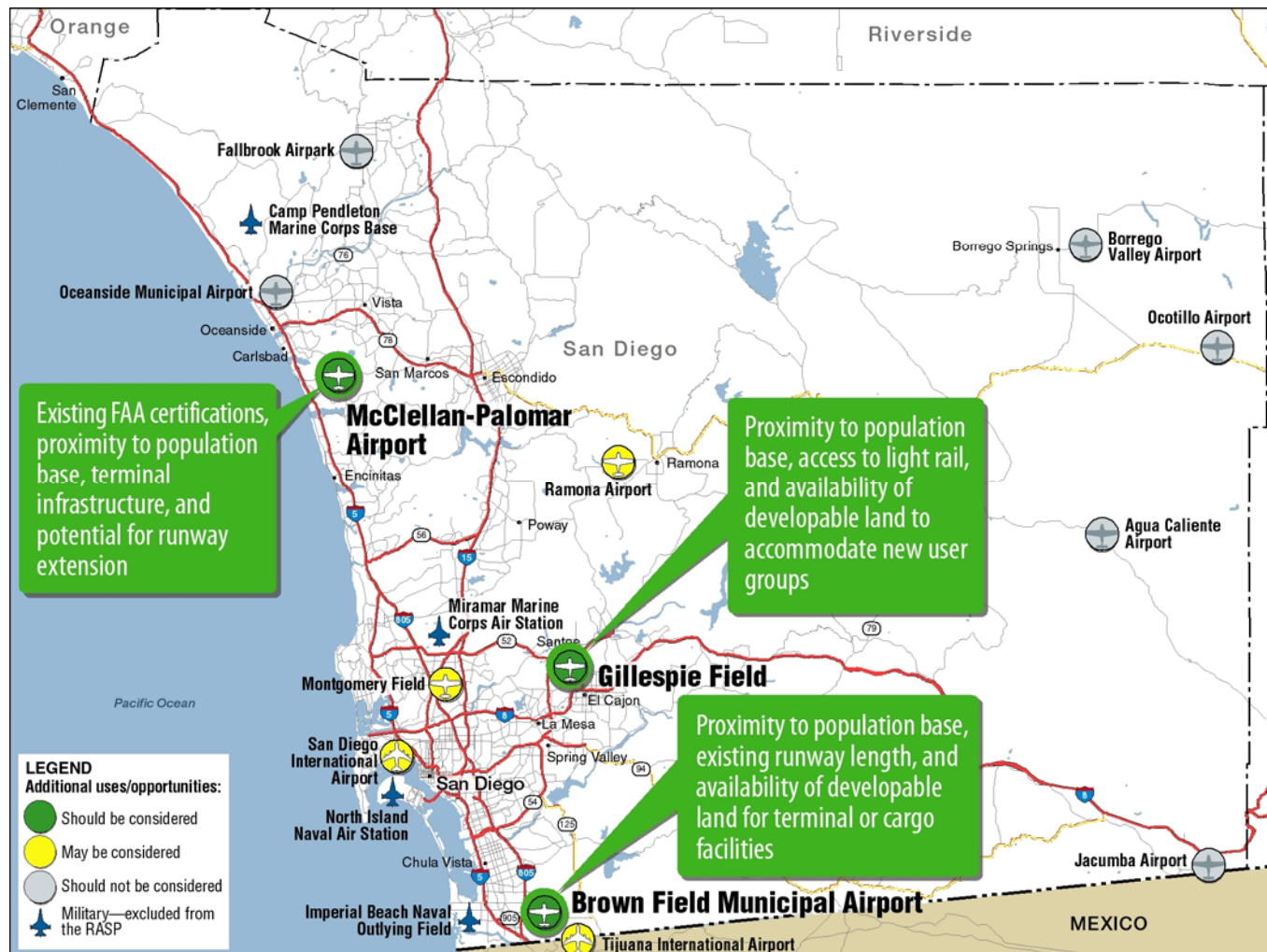
# RASP Study Area

## 12 Public Use Airports Located in a Densely Populated and Developed Region



# Strategic Assessment Findings

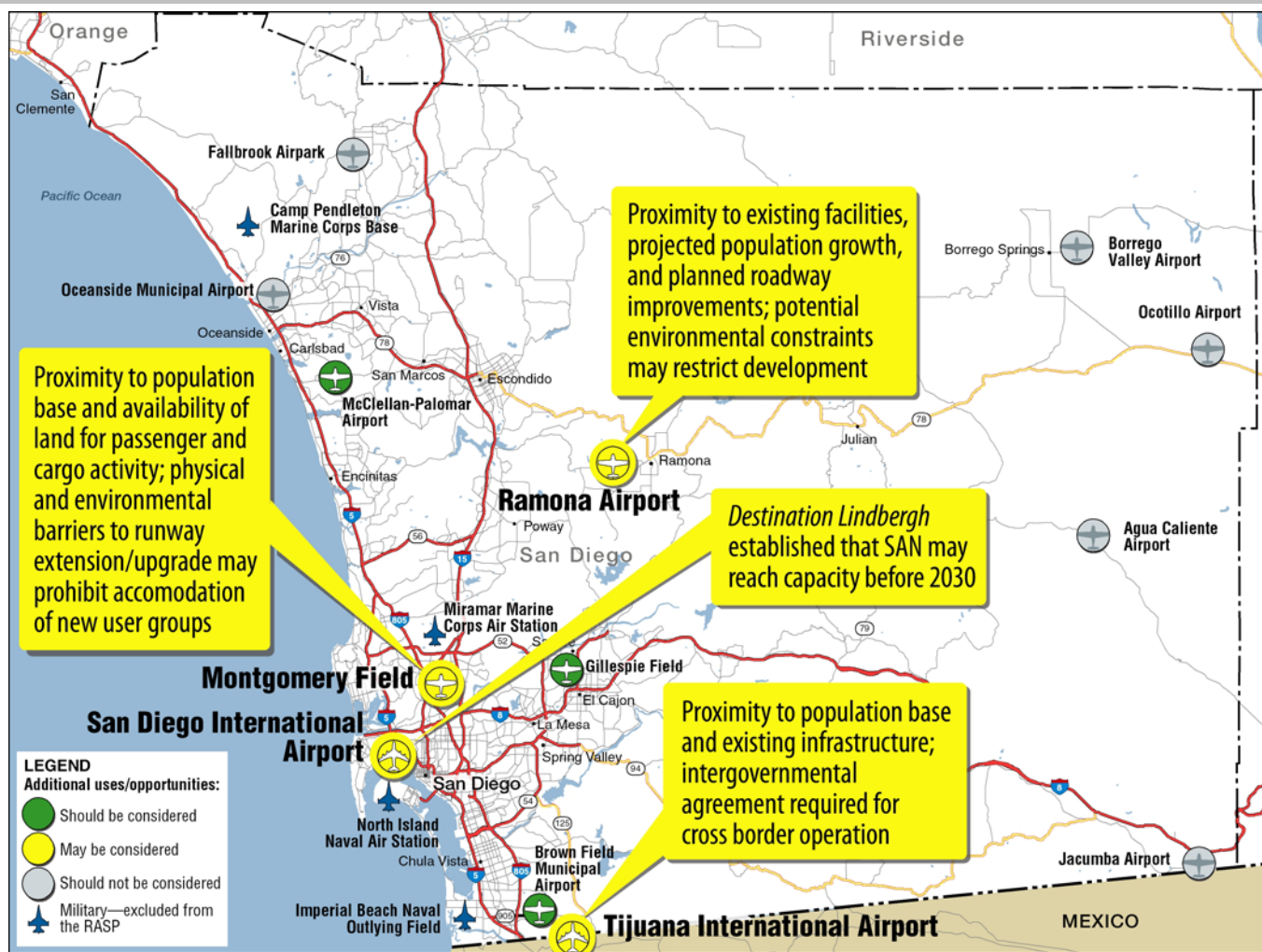
## *Airports That Should be Considered For Additional Uses/Opportunities*



Note: Tijuana International Airport not located in San Diego County.

# Strategic Assessment Findings

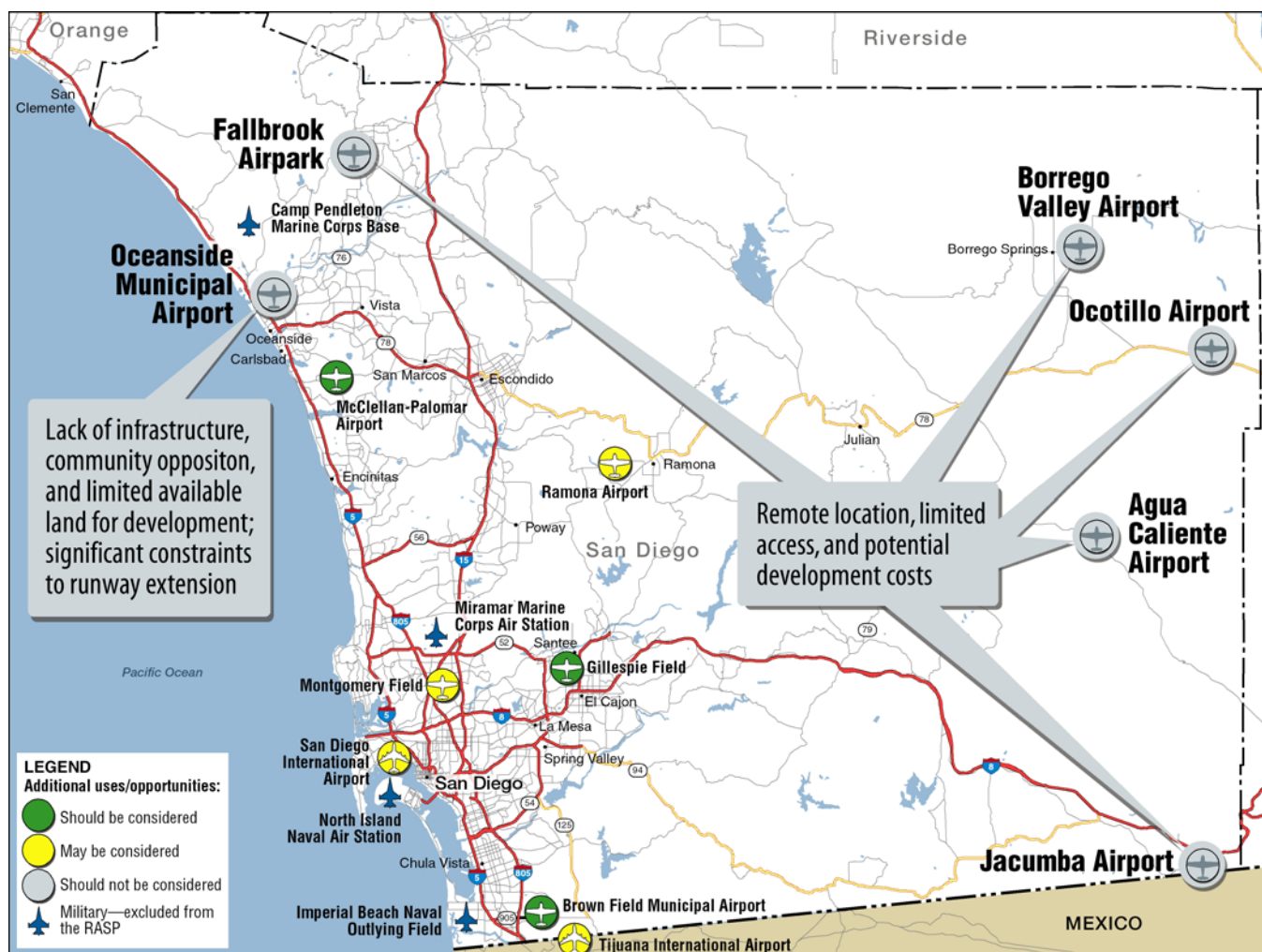
## Airports That May Be Considered For Additional Uses/Opportunities



Note: Tijuana International Airport not located in San Diego County.

# Strategic Assessment Findings

## *Airports That Should Not be Considered For Additional Uses/Opportunities*



Note: Tijuana International Airport not located in San Diego County.



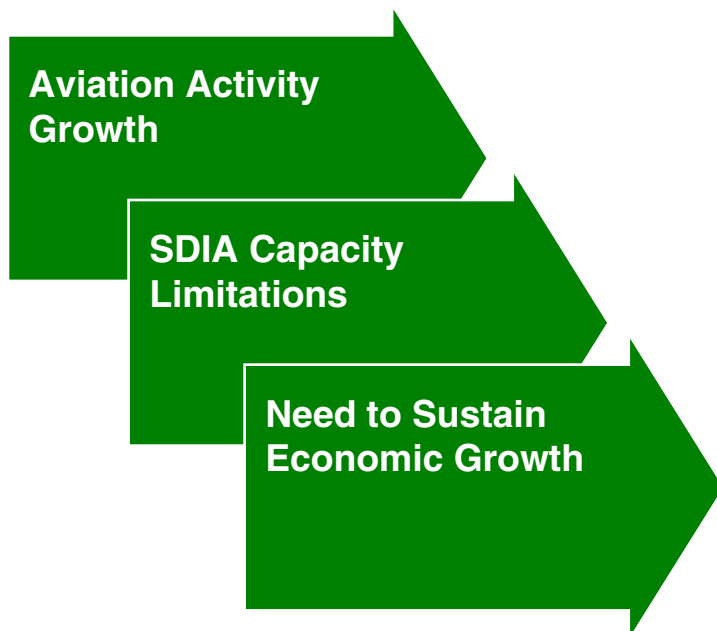
# System Optimization Toolkit

*A Wide Range of Options Were Considered in Fall 2009*

- **Airport capability and/or capacity**
  - Runway upgrade or extension
  - Passenger terminal development
  - Cargo facility development
  - GA facility development
  - On-airport access improvements
- **Airport market – construct facilities to accommodate commercial passenger or cargo activity**
- **Federal, state and/or local aviation initiatives**
  - Congestion management (locally initiated) – promote efficient runway use by optimized pricing (depending on goals)
  - Alter rates/charges by user type
  - Induce traffic to other airports
  - Slot controls
- **Enhance Tijuana international Airport for U.S.-based travelers**
- **Changes to surface infrastructure (in coordination with SANDAG)**
  - Improve access (link) between airports and regional surface system
  - Enhance the regional system
  - Improve transit services

# Complicated Factors Constrain Implementation of Alternatives

## Forces Requiring Preparation of the RASP



RASP Alternative Scenarios

## Factors Working Against Regional Airport System Solutions

### Regulatory Factors

No single controlling entity to implement solutions  
No regulatory mechanisms to relocate activity segments

### Political Factors

NIMBY  
Pre-conceived notions regarding effectiveness (or lack) of solutions  
Consensus among stakeholders is difficult

### Technical Factors

Lack of appropriate existing facilities  
Regional demand characteristics  
Benefit-cost considerations of major capital improvements

# Alternative Scenarios

## *Thirteen Alternative Scenarios for Evaluation of Potential System Changes*

### **1. Commercial Passenger Optimization**

- A. Full build-out of the Intermodal Transit Center and north side passenger terminal at SDIA
- B. Preserve SDIA airfield capacity for commercial passenger service
- C. Enhance commercial passenger service at McClellan-Palomar Airport
- D. Introduce commercial passenger service at Brown Field

### **2. Enhanced Utilization of Tijuana**

- A. Tijuana International Airport focus on commercial service
- B. Aviation passenger cross border facility (currently proposed)
- C. Cross border airport terminal

### **3. California High Speed Rail**

Stations at downtown LA, ONT Airport and:

- A. Station at downtown San Diego
- B. Station at SDIA

### **4. General Aviation Optimization**

- A. Enhance McClellan-Palomar Airport for high-end / corporate general aviation
- B. Enhance Brown Field for high-end / corporate general aviation
- C. Enhance Gillespie Field for mix-use general aviation

### **5. Air Cargo Optimization**

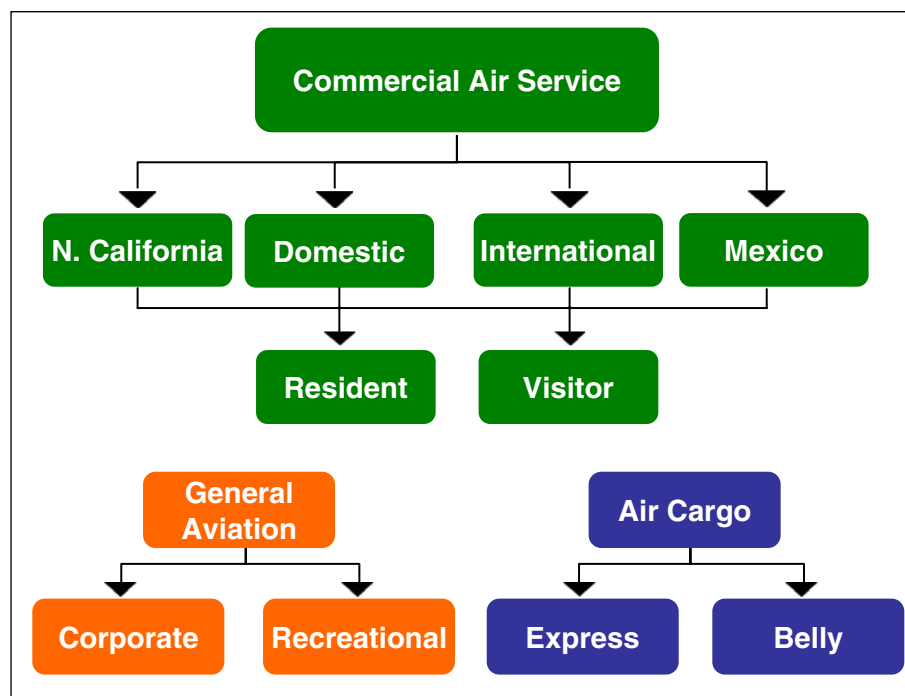
- A. Introduce cargo service at Brown Field

## Econometric Model and Baseline Findings



# Regional Aviation Travel Demand Model

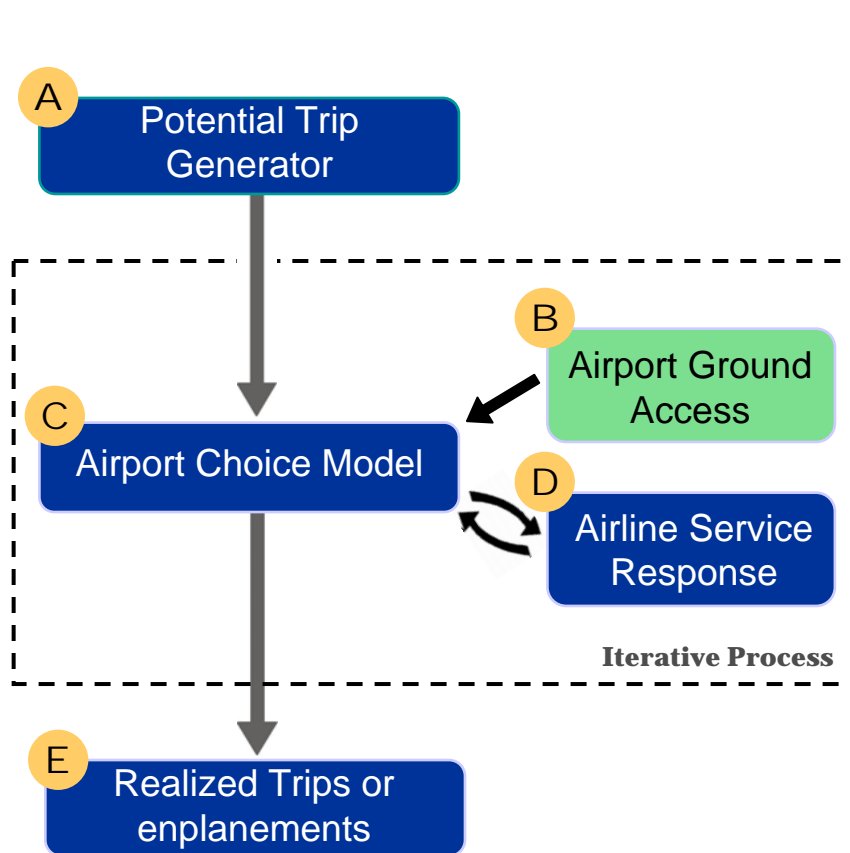
*Decision Support Tool to Assess “What If” Scenarios*



- Estimates demand at each airport from each population / commercial area in the region
- Demand divided among commercial air service, GA activity, and air cargo operations to account for different “demand drivers”
- Categories further differentiated to capture market nuances
- Demand model benefits
  - Leverages SANDAG Regional Travel Demand Model
  - Synchronize RASP results with SANDAG’s regional planning in RTP

# Demand Model Framework

## Passenger Model Framework



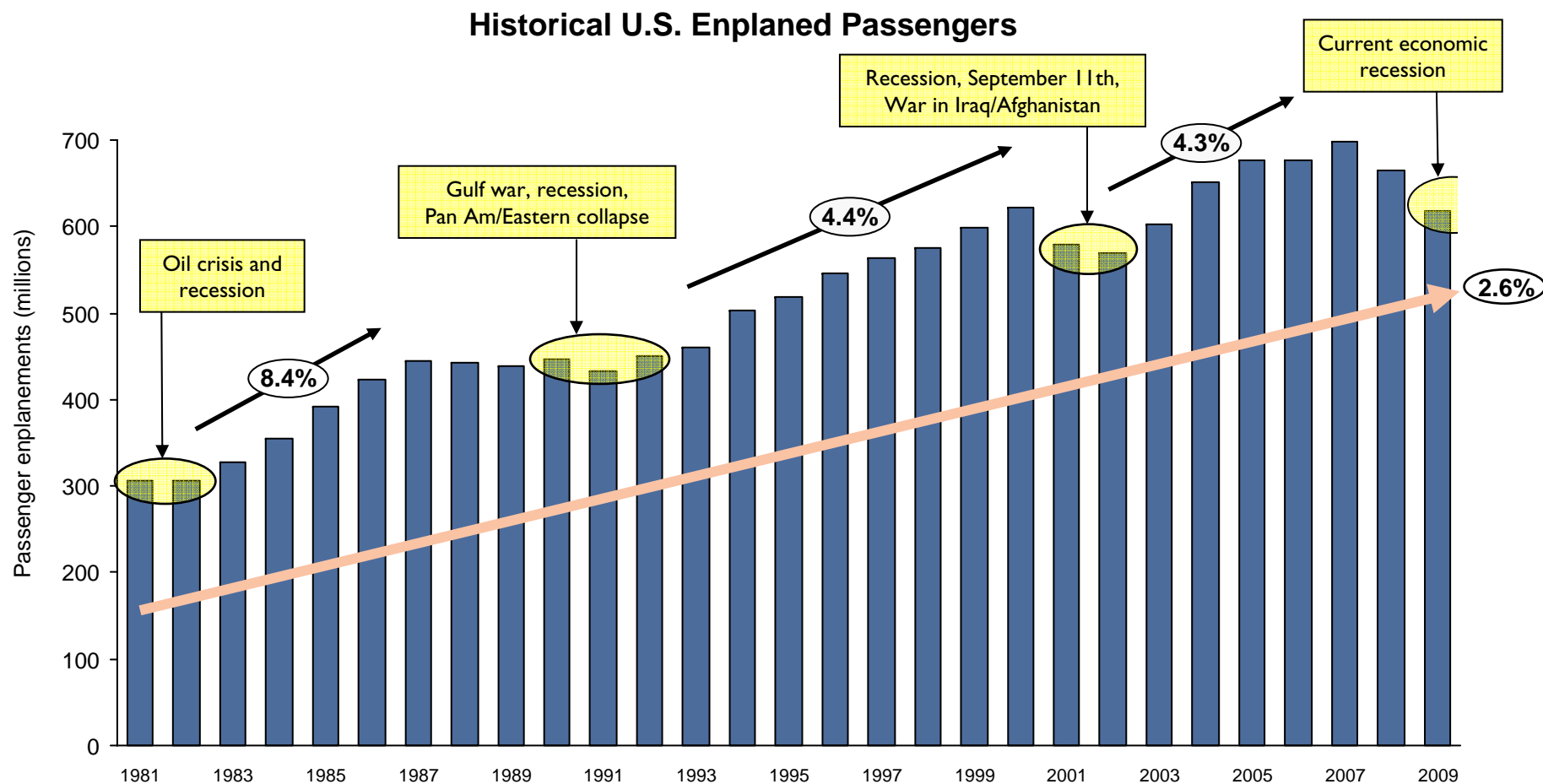
- A Potential Trip Generator** – Generates potential trips from each population/commercial area within the San Diego region
- B Airport Ground Access** – Identifies the mode, travel time, and cost to get from a population/commercial area to an airport
- C Airport Choice Model** – Determines the airport to which each a generated trip is assigned
- D Airline Service Response** – Predicts airlines' air fare and service response due to changing demand



- E Realized Trips** – Quantified as the number of trips (translated to enplanements) once equilibrium between demand and supply is reached (*RASP Model Projection*)

# Historical Trends in Commercial Aviation Activity

*Following Each Crisis, Aviation Activity Has Historically Recovered Quickly*



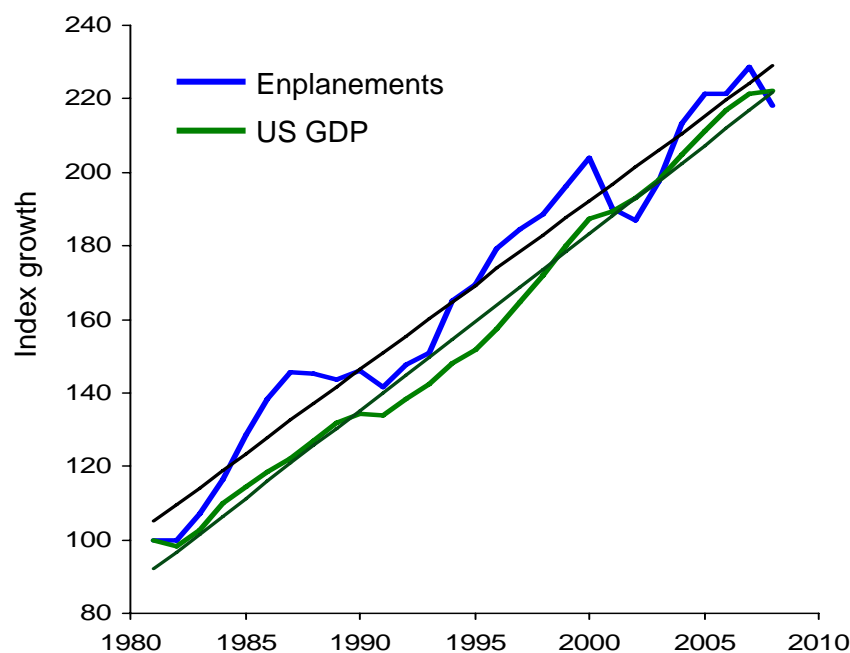
Source: Jacobs Consultancy Analysis, based on T100 Database, Department of Transportation, February 2010.

Note: Year 2009 enplanement is estimated; Database reports only through the 3rd quarter of the year 2009.

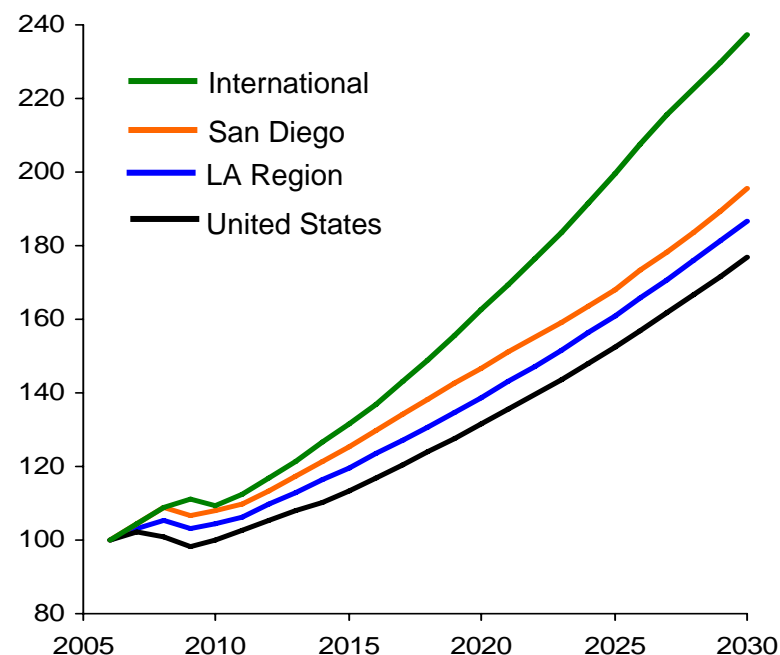
# Passenger Enplanements and GDP Growth

*A Strong Recovery From the Current Recession is Predicted for the San Diego Region*

**Historical Enplanements vs. Gross Domestic Product**  
(indexed to 1981)



**Forecast Growth in Real Gross Domestic Product**  
(indexed to 2006)



Sources: IMF World Economic Outlook data, October 2009; Los Angeles Economic Development Corporation; Bureau of Economic Analysis data, 2009; SANDAG RTP update, June 2009; and SCAG RTP, 2009.

Notes: GDP growth from 2014 to 2030 estimated based on historical and forecast data available through 2014  
International GDP represents an aggregated GDP of countries that influence international traffic to/from the study region.

# Baseline Scenario Overview

*The “Do–Nothing” Scenario Against Which Other Scenarios Will Be Evaluated*

- A** Airfield facility constraints “cap” activity at SDIA at around 28M annual passengers (14M enplanements)
- B** Airfield capacity constraint results in higher fares and lower levels of service
- C** Accommodation of some San Diego demand at LA region airports
- D** Accommodation of some regional demand at Tijuana International Airport
- E** Increased commercial service at McClellan-Palomar



# Baseline Scenario

*Includes Current SDIA Policies and Planned Near-term Improvements*

- Accommodation of existing user groups – commercial, cargo, corporate/GA
- Continued nighttime departure curfew
- Destination Linidbergh “Opening Day” recommendations for North Side
- Includes other “approved” or already funded improvements, such as completion of T-2 West 10 gate addition (ongoing; not included in cost estimate)
- Assumes SANDAG transit ridership goal for 2015 of 6% of airport passengers
- Surface improvements per SANDAG’s 2007 RTP – “*Revenue Constrained Scenario*” (not included in cost estimate)

## Evaluation Factors

### Facility requirements

- Property acquisition
- Intermodal Transit Center (ITC) sized to accommodate 400-600K annual transit passengers
- Linkage to trolleys (Blue and Orange lines), Coaster/Amtrak, and MTS (
- Consolidated rental car facility and ground transportation plaza
- Dedicated on-airport roadway connecting ITC and south side terminals via dedicated buses

### Cost estimate

**Approximately \$535M**  
(per *Destination Lindbergh* report)

# Baseline Scenario

## Order of Magnitude Cost Estimates and Potential Funding Sources

Component	Cost Estimate	Potential Funding Source
Property Acquisition	\$11 M	PFC/Bonds
Rail Improvements	\$ 50 M	SANDAG/Bonds
Intermodal Transportation Center	\$ 39 M	PFC/Bonds
Dedicated Roadway	\$ 50 M	Bonds
Consolidated Rental Car Facility	\$300 M	CFC
Auto Parking	\$ 85 M	Private/Bonds
<b>TOTAL</b>	<b>\$535 M</b>	

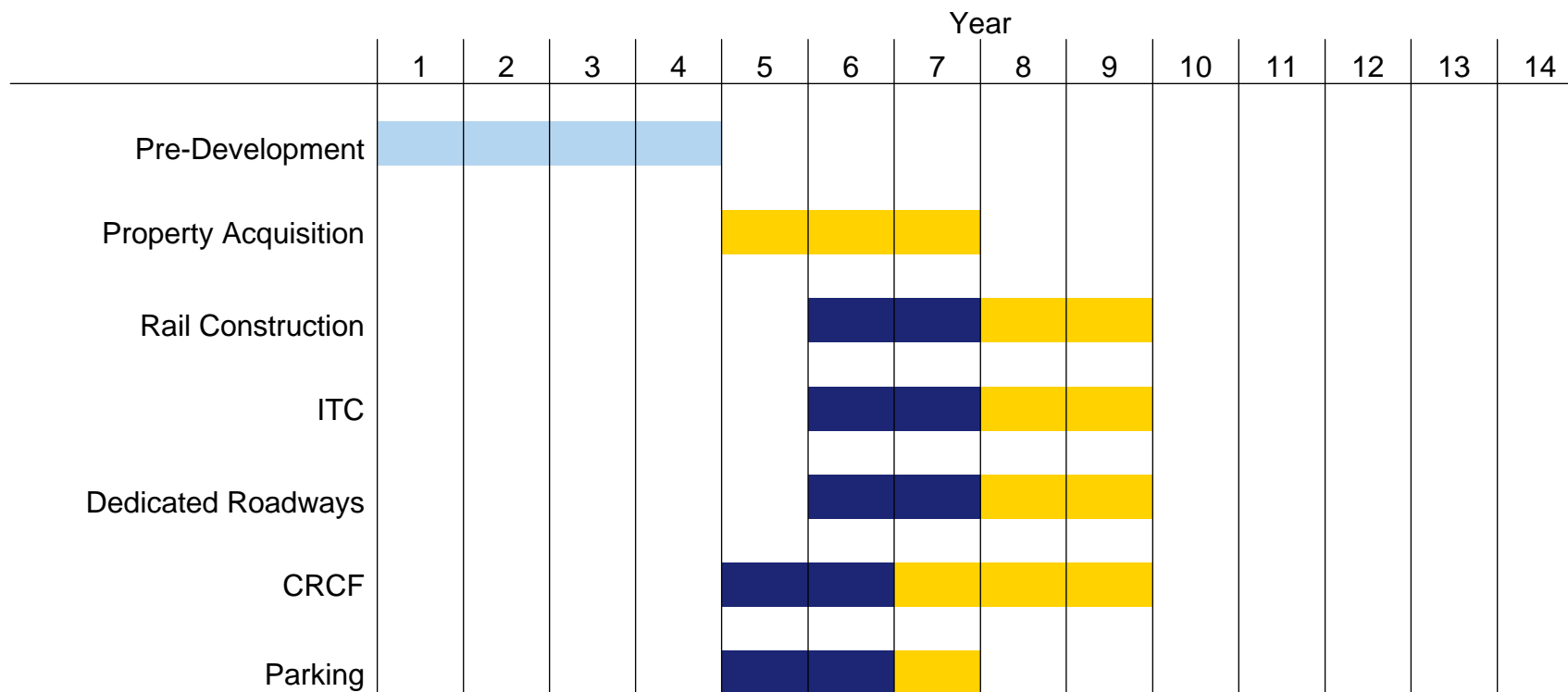
Mix of agencies

SDCRAA

Notes: Various agencies are responsible for funding and implementing the above projects; not all are the responsibility of the SDCRAA.  
 All costs were taken from Destination Lindbergh and include soft costs and contingency.  
 Costs associated with T2-West Expansion are not included as the project is ongoing.

# Baseline Scenario

## Implementation Schedule

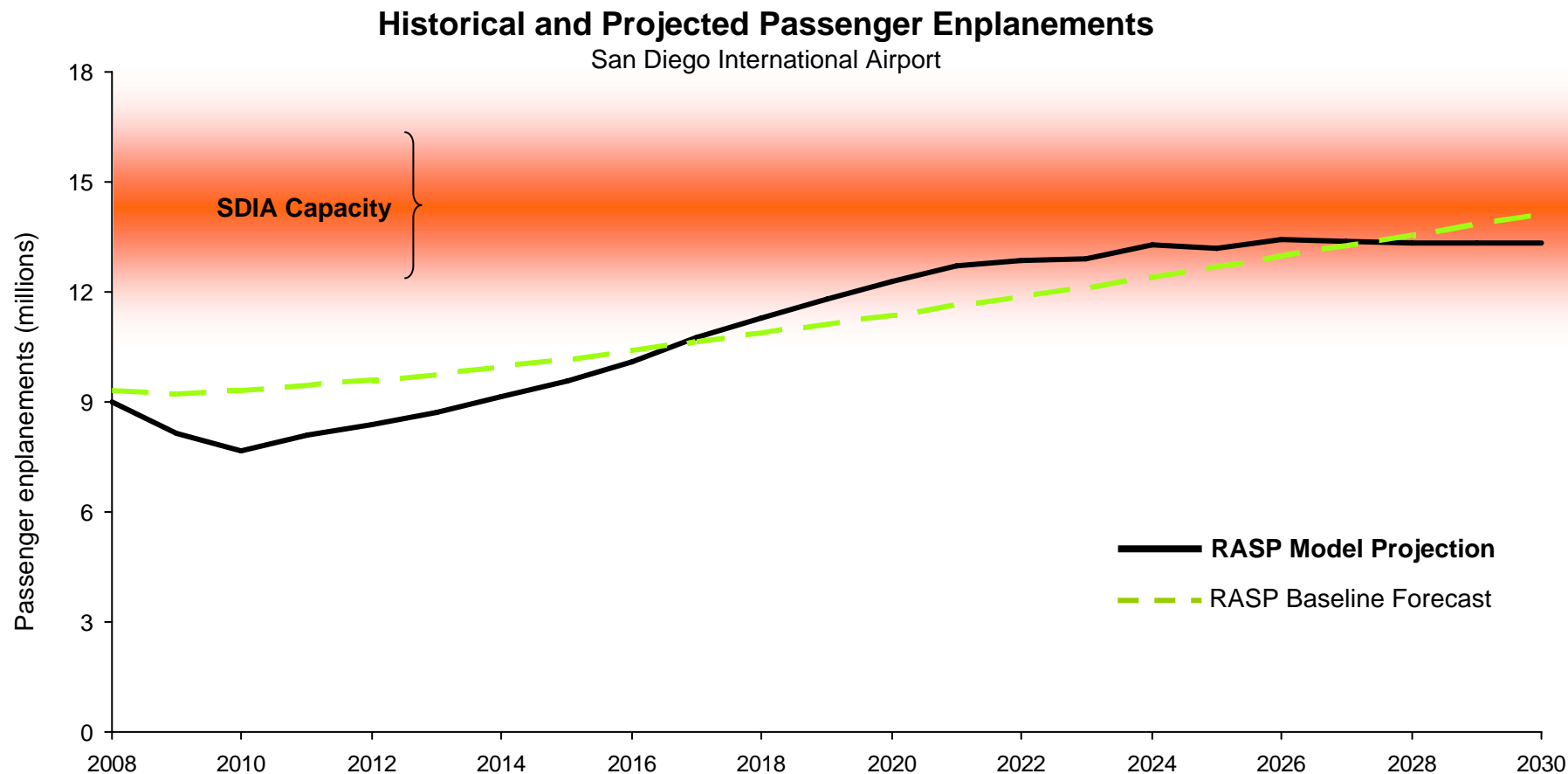


Planning/Environmental  
 Design/Procurement  
 Construction



# Forecast Comparisons and Model Calibration

***Demand Model Indicates Capacity Constraint at SDIA Begins in Early 2020s***

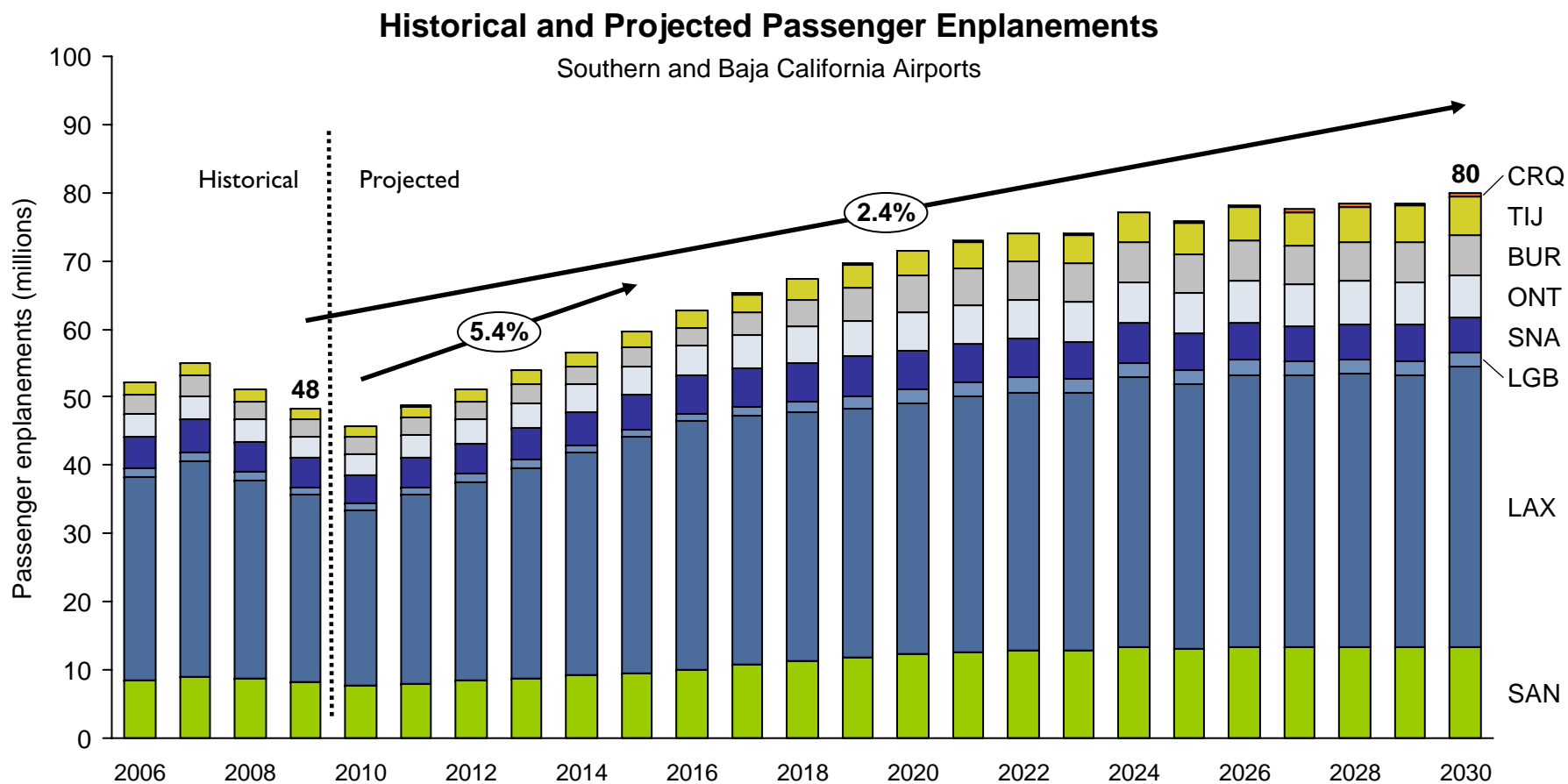


Sources: RASP Forecasts and Financial Forecast Update, Landrum & Brown, Inc. December 2008 and June 2009, respectively.

Note: Model calibrated to actual enplanements from 2006 to 2009; projections may be different from actual.

# Projected Passenger Enplanements

*Enplaned Passengers in the Region are Projected to Increase 50% Between 2009 and 2030*

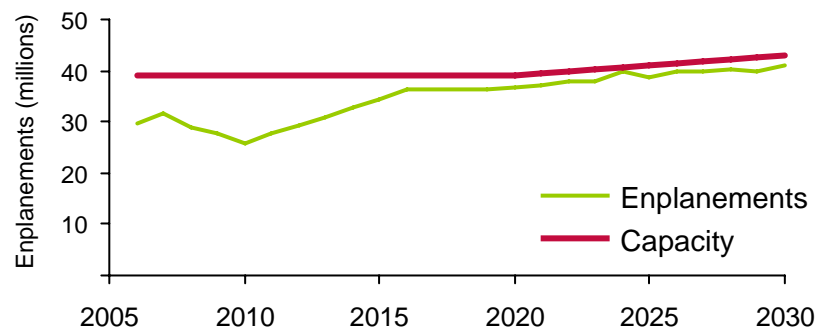


Notes: Passenger enplanements based on forecast demographic data from International Monetary Fund (IMF), LA Economic Development Corporation (LAEDC), and SANDAG Model calibrated to actual enplanements from 2006 to 2009; projections may be different from actual.  
Results generally correspond to FAA TAF data for 2025.  
SAN CAGR = 4.7% in the "recovery"; 2.5% for the forecast period.

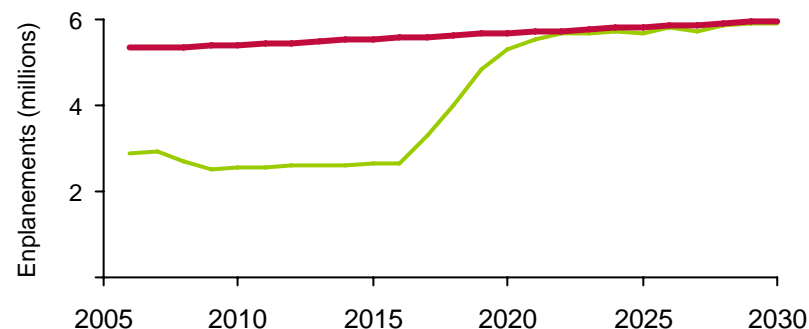
# Regional Demand / Capacity Analyses

***Many Southern Californian Airports Will Also Reach Capacity During the Study Period***

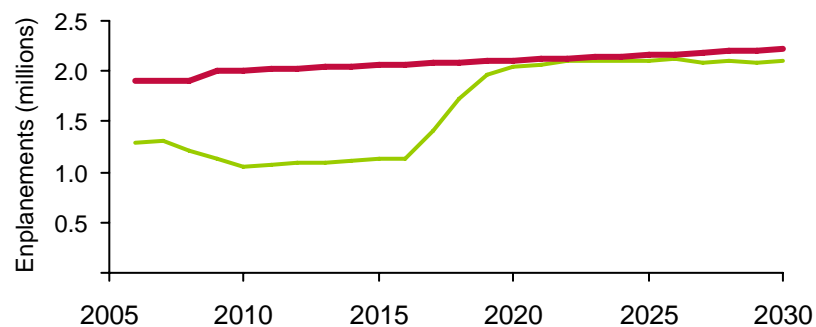
**Los Angeles International (LAX)**



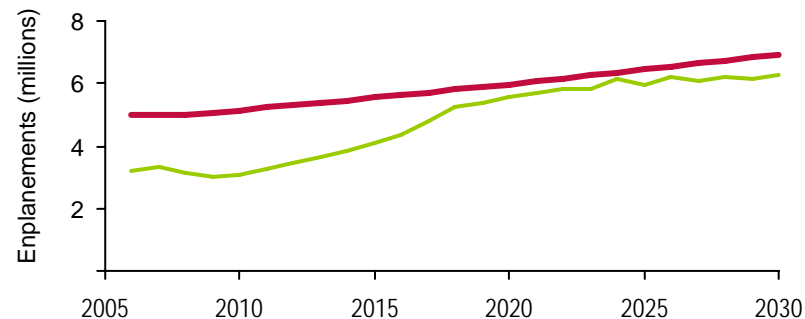
**Burbank Airport (BUR)**



**Long Beach Airport (LGB)**



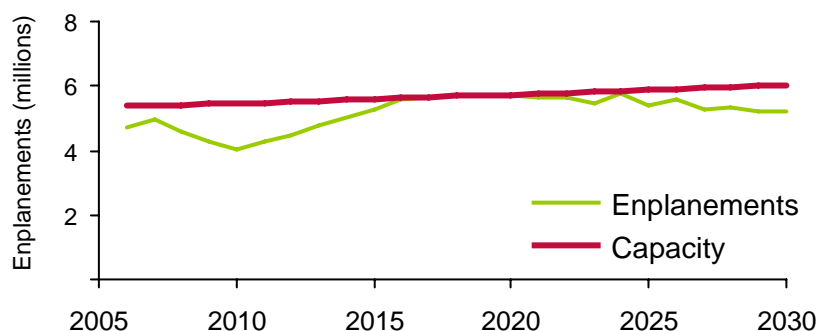
**Ontario Airport (ONT)**



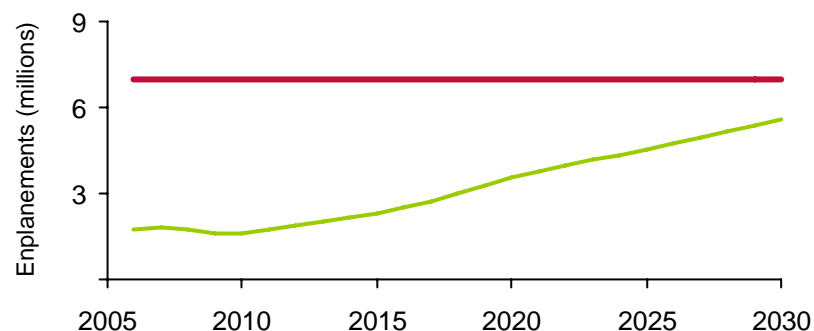
# Regional Demand / Capacity Analyses

***Tijuana and Palomar Will Accommodate More Demand as LA Airports Reach Capacity***

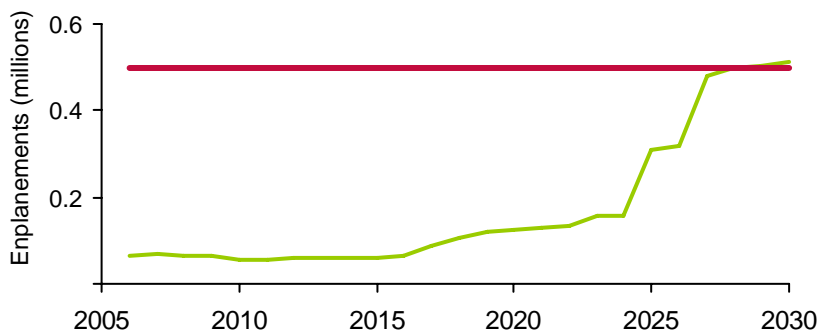
**John Wayne Orange County Airport (SNA)**



**Tijuana Rodriguez International Airport (TIJ)**



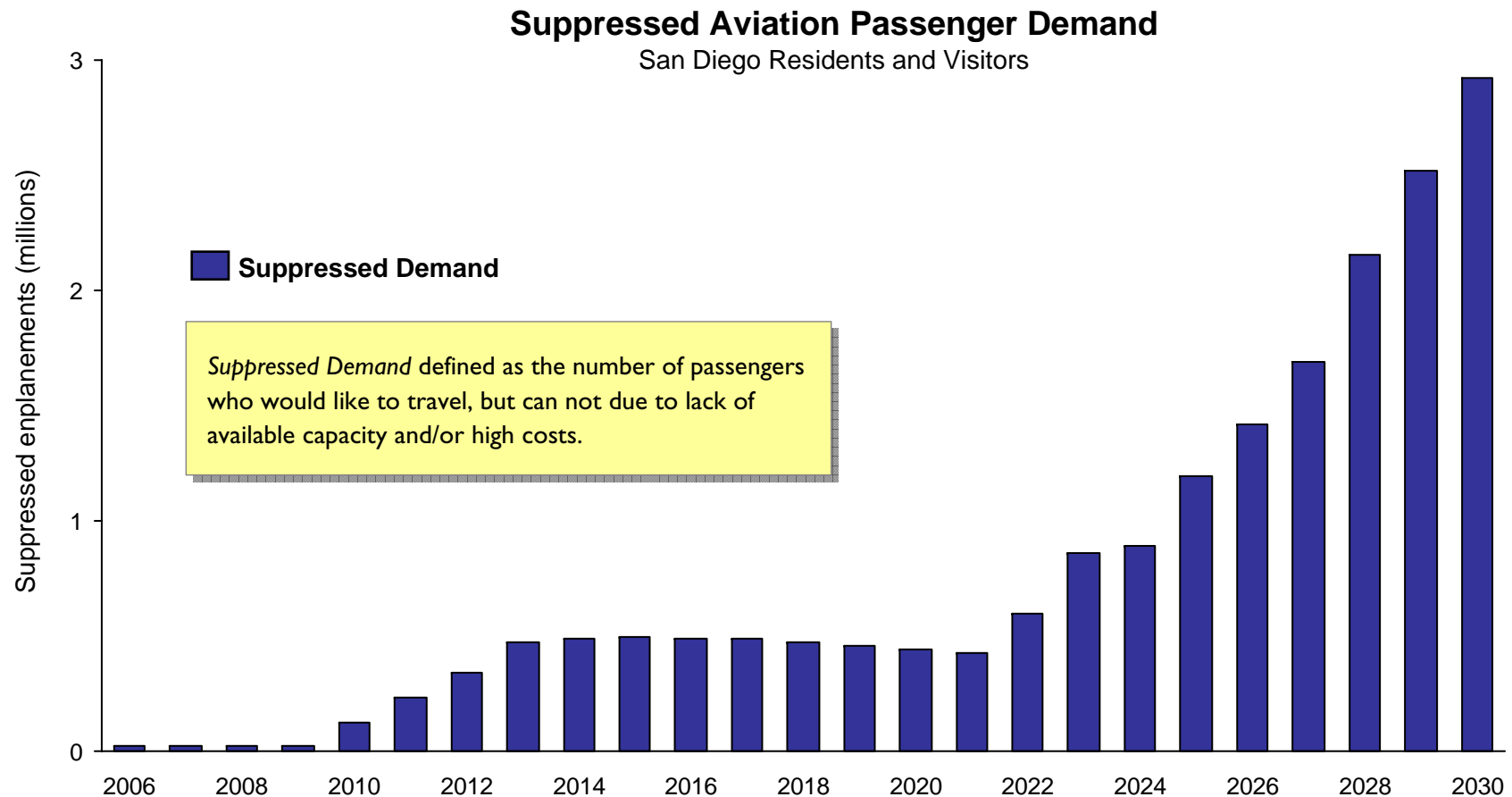
**McClellan-Palomar Airport (CRQ)**



Airport capacities determined individually based on the latest publicly available documents on each airport's website. Capacity increases based on aircraft up-gauging, planned and documented facility improvements, and/or removal of policy restrictions.

# Suppressed Passenger Demand

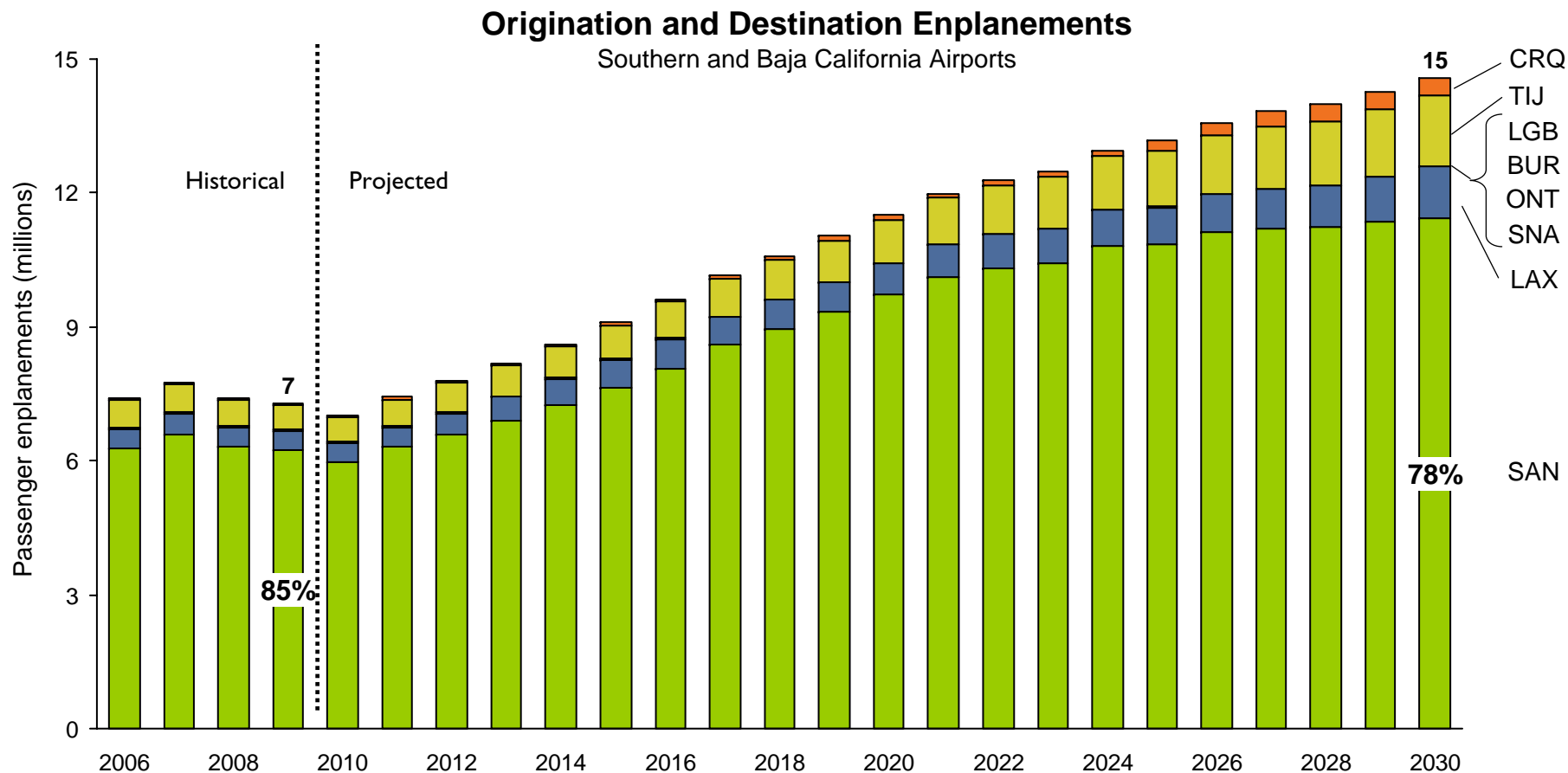
*As Capacity is Reached, the Number of Suppressed Passengers in the County Increases*



Note: Suppressed demand presented above relative to 2006; some suppressed demand already exists.

# Projected Passengers To / From San Diego Region

*San Diego Residents and Visitors Will Increasingly Use Airports Outside the County*



# Summary of Baseline Findings

- **SDIA is expected to reach its airfield capacity earlier than previously forecasted; this is a result of model projections that incorporate numerous econometric variables as well as facility constraints**
  - **LAX will continue to serve as the region's international gateway, but will reach its capacity sometime around 2015; this action will cause other airports in the LA region to reach capacity soon after**
  - **McClellan-Palomar will attract additional passenger demand as SDIA nears capacity; but this is not projected to occur until approximately 2025**
- **Tijuana International Airport will continue to experience strong growth driven by domestic Mexican traffic, and will become the largest gateway for US-Mexico traffic in the region**
  - **Region-wide capacity constraints will result in:**
    - Fare increases
    - Diminished service levels
    - Slight changes in traffic mix
    - “Suppressed” aviation passenger demand

## Alternative Scenario Findings



# Alternative Scenarios

*Findings for Highlighted Scenarios are Presented Herein*

## 1. Commercial Passenger Optimization

- A. Full build-out of the ITC and north side terminal at SDIA
- B. Preserve SDIA airfield capacity for commercial passenger service
- C. Enhance commercial passenger service at McClellan-Palomar Airport
- D. Introduce commercial passenger service at Brown Field

## 2. Enhanced Utilization of Tijuana

- A. Tijuana International Airport focus on commercial service
- B. Aviation passenger cross border facility (currently proposed)
- C. Cross border airport terminal

## 3. California High Speed Rail

Stations at downtown LA, ONT Airport and:

- A. Station at downtown San Diego
- B. Station at SDIA

## 4. General Aviation Optimization

- A. Enhance McClellan-Palomar Airport for high-end / corporate general aviation
- B. Enhance Brown Field for high-end / corporate general aviation
- C. Enhance Gillespie Field for mix-use general aviation

## 5. Air Cargo Optimization

- A. Introduce cargo service at Brown Field

# 1. Commercial Passenger Optimization Scenario

## A. Full Build-out of the ITC and North Side Passenger Terminal at SDIA

### Scenario Description

- ITC expanded to accommodate 1.2 - 1.8M passengers
- North side terminal with passenger processing facilities (ticketing, baggage claim, security, etc.)
- Automated People Mover (APM) connecting north side facilities with south concourses
- Key model assumptions
  - Ground access time/cost estimated as the time/cost required to arrive at the airport terminal, not the actual gate
  - Ground access costs to SDIA assumed to decrease over the planning period due to higher transit ridership and improved access
  - Ground access time to SDIA assumed to remain unchanged (decrease in average ground access time due to roadway access improvements is offset by the increase in average ground access time due to higher transit ridership)

### Evaluation Factors

#### Facility requirements

- Property acquisition
- APM with secure access between ITC/south concourses
- Rail modifications associated with ITC service
- Expansion of parking facilities
- Expansion of consolidated rental car facility (CONRAC)
- Modifications to I-5 ramps

#### Cost and implementation timeline

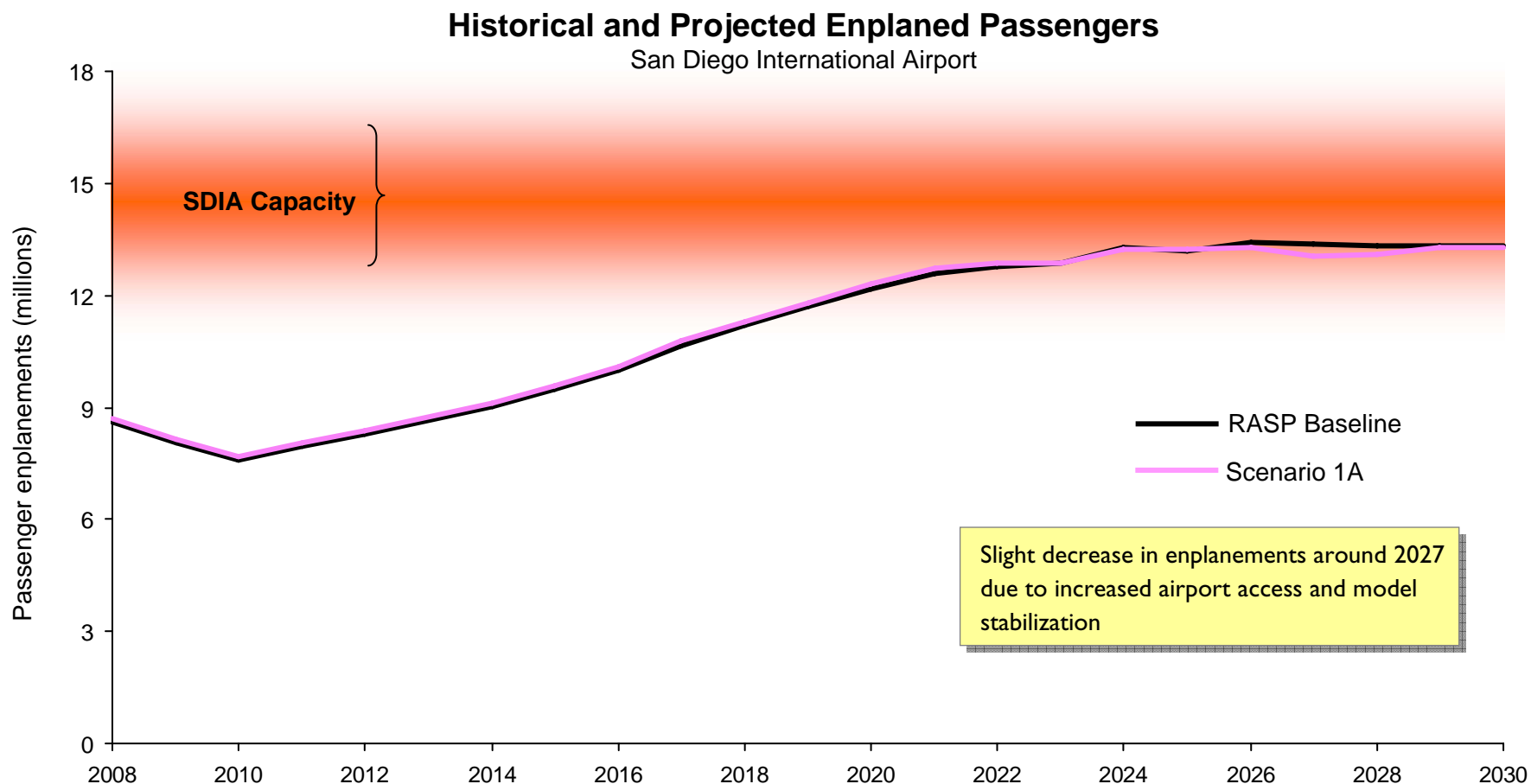
Cost estimate: \$1.2B  
Implementation timeline: 13-14 years

#### Other considerations

- Requires commitment by transit agencies to serve ITC
- Funding non-aviation elements of the ITC requires additional consideration
- Airline funding support unlikely given cost and limited affect on capacity

# Scenario 1A: Full Build-out of the ITC and North Side Terminal Comparison to Baseline

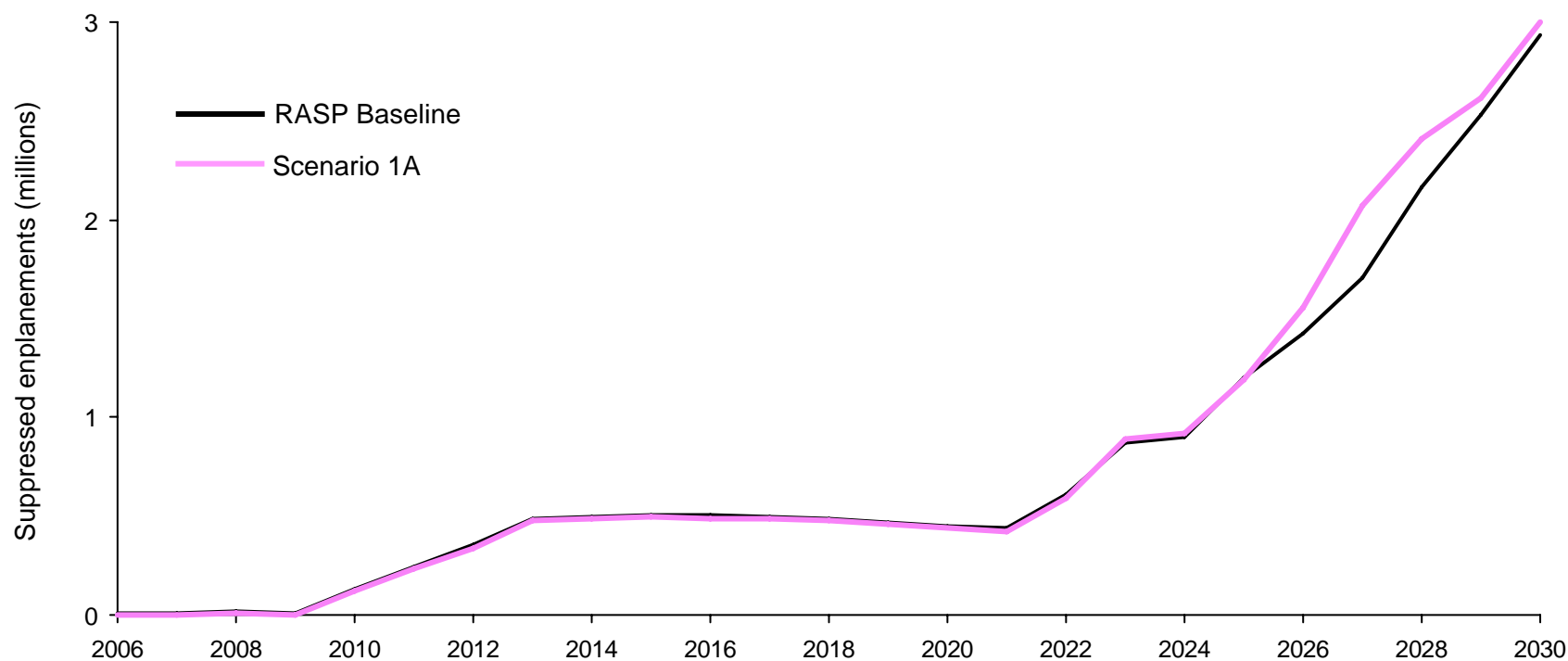
*Full Build-out of the ITC Has Marginal Impacts to the Capacity Constraints at SDIA*



# Scenario 1A: Full Build-out of the ITC and North Side Terminal Comparison to Baseline

*Full Build-out of the ITC Has Marginal Impacts to the Capacity Constraints at SDIA*

**Suppressed Aviation Passenger Demand**  
San Diego County Residents and Visitors



# 1. Commercial Passenger Optimization Scenarios

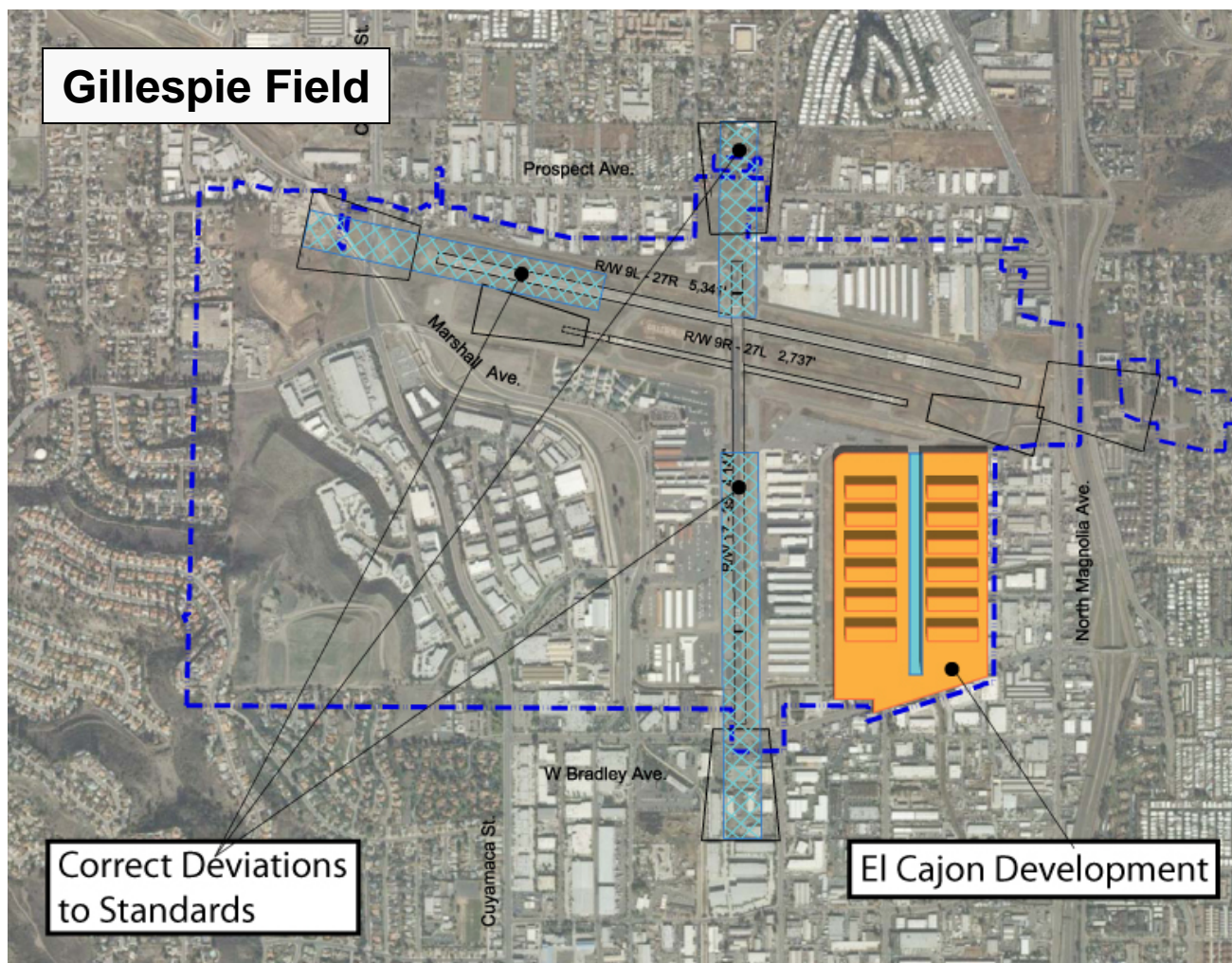
## B. Preserve SDIA Airfield Capacity for Commercial Passenger Service

Scenario Description	Evaluation Factors						
<ul style="list-style-type: none"> <li>▪ Encourage non-commercial and GA activity to use alternative facilities</li> <li>▪ Facilitated via leasing and pricing strategy; would require “coordinated” FBO policy with SDCRAA and other airport sponsors</li> <li>▪ Requires SDIA-similar and/or higher level of service facilities at surrounding airports               <ul style="list-style-type: none"> <li>– Gillespie: Additional corporate/general aviation facilities (El Cajon development)</li> <li>– Montgomery: New FBO, corporate hangars</li> <li>– Brown: Elements of proposed private development, including new FBO(s)</li> </ul> </li> <li>▪ Key model assumptions               <ul style="list-style-type: none"> <li>– All forecasted GA and cargo operations at SDIA replaced with commercial operations</li> <li>– SDIA capacity limit would increase from 14M to 15.8M enplanements (based on average seat capacity and load factors provided in <i>Destination Lindbergh</i> report)</li> </ul> </li> </ul>	<table> <tr> <td>Facility requirements</td><td> <p><b>Gillespie Field:</b> Construction of FBO/corporate hangars (El Cajon Development); correct deviations from FAA design standard</p> <p><b>Montgomery Field:</b> Construction of FBO/corporate hangars</p> <p><b>Brown Field:</b> Construction of FBO/corporate hangars, T-hangars, helicopter FBO/ARFF (phase 1 of proposed development)</p> </td></tr> <tr> <td>Cost and implementation timeline</td><td> <p>Cost estimate: \$188M; mostly private funding sources</p> <p>Implementation timeline: 4-5 years</p> </td></tr> <tr> <td>Other considerations</td><td> <ul style="list-style-type: none"> <li>• Potential legal scrutiny based on perceived access restrictions</li> <li>• No legal mechanism to require GA or cargo users to vacate SDIA</li> <li>• Runway length at Montgomery and Gillespie Field not capable of handling many high-end corporate GA aircraft</li> </ul> </td></tr> </table>	Facility requirements	<p><b>Gillespie Field:</b> Construction of FBO/corporate hangars (El Cajon Development); correct deviations from FAA design standard</p> <p><b>Montgomery Field:</b> Construction of FBO/corporate hangars</p> <p><b>Brown Field:</b> Construction of FBO/corporate hangars, T-hangars, helicopter FBO/ARFF (phase 1 of proposed development)</p>	Cost and implementation timeline	<p>Cost estimate: \$188M; mostly private funding sources</p> <p>Implementation timeline: 4-5 years</p>	Other considerations	<ul style="list-style-type: none"> <li>• Potential legal scrutiny based on perceived access restrictions</li> <li>• No legal mechanism to require GA or cargo users to vacate SDIA</li> <li>• Runway length at Montgomery and Gillespie Field not capable of handling many high-end corporate GA aircraft</li> </ul>
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# Scenario 1B: Preserve SDIA Airfield Capacity for Commercial Service

## Graphic Depiction and Facility Requirements



# Scenario 1B: Preserve SDIA Airfield Capacity for Commercial Service

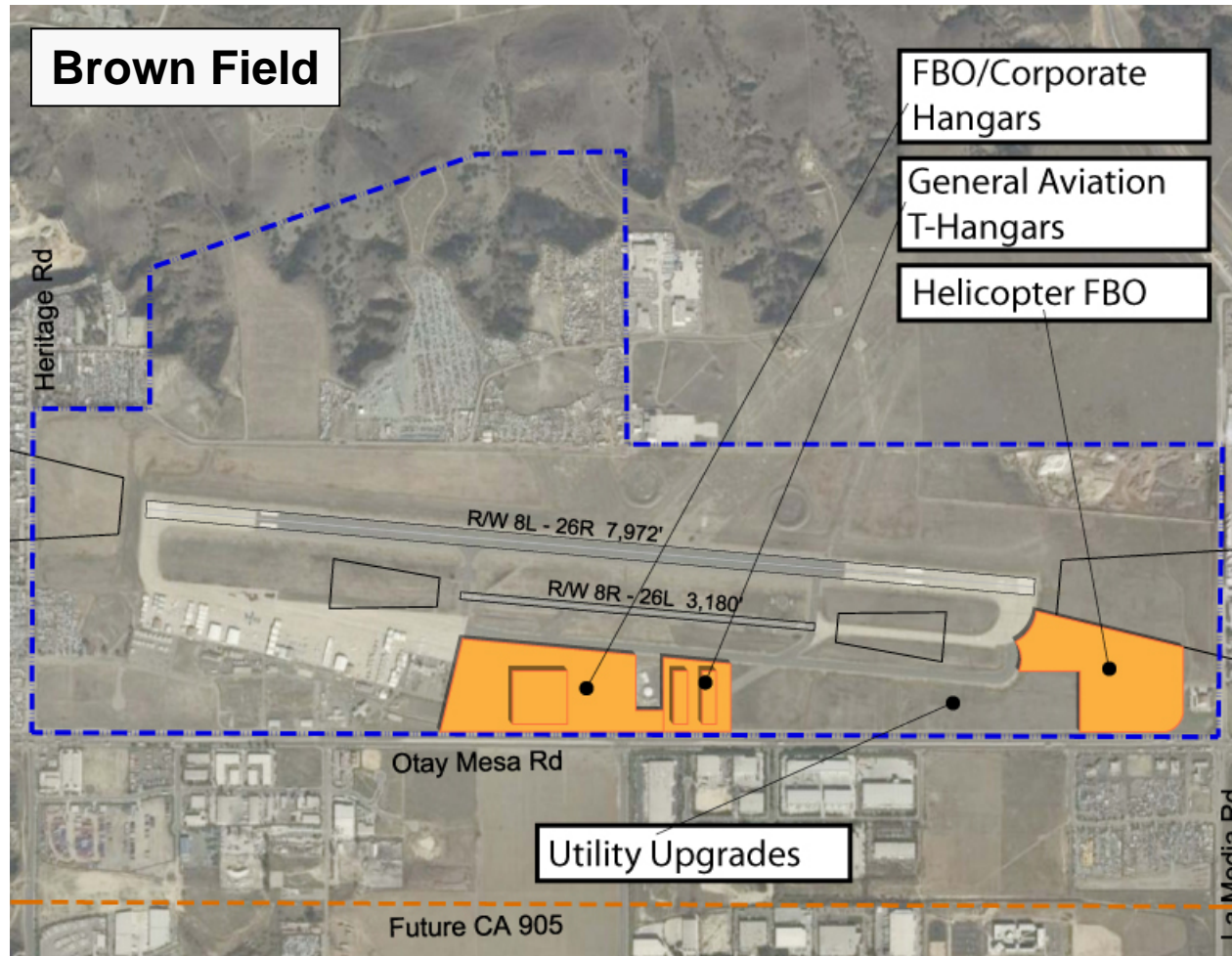
## Graphic Depiction and Facility Requirements





# Scenario 1B: Preserve SDIA Airfield Capacity for Commercial Service

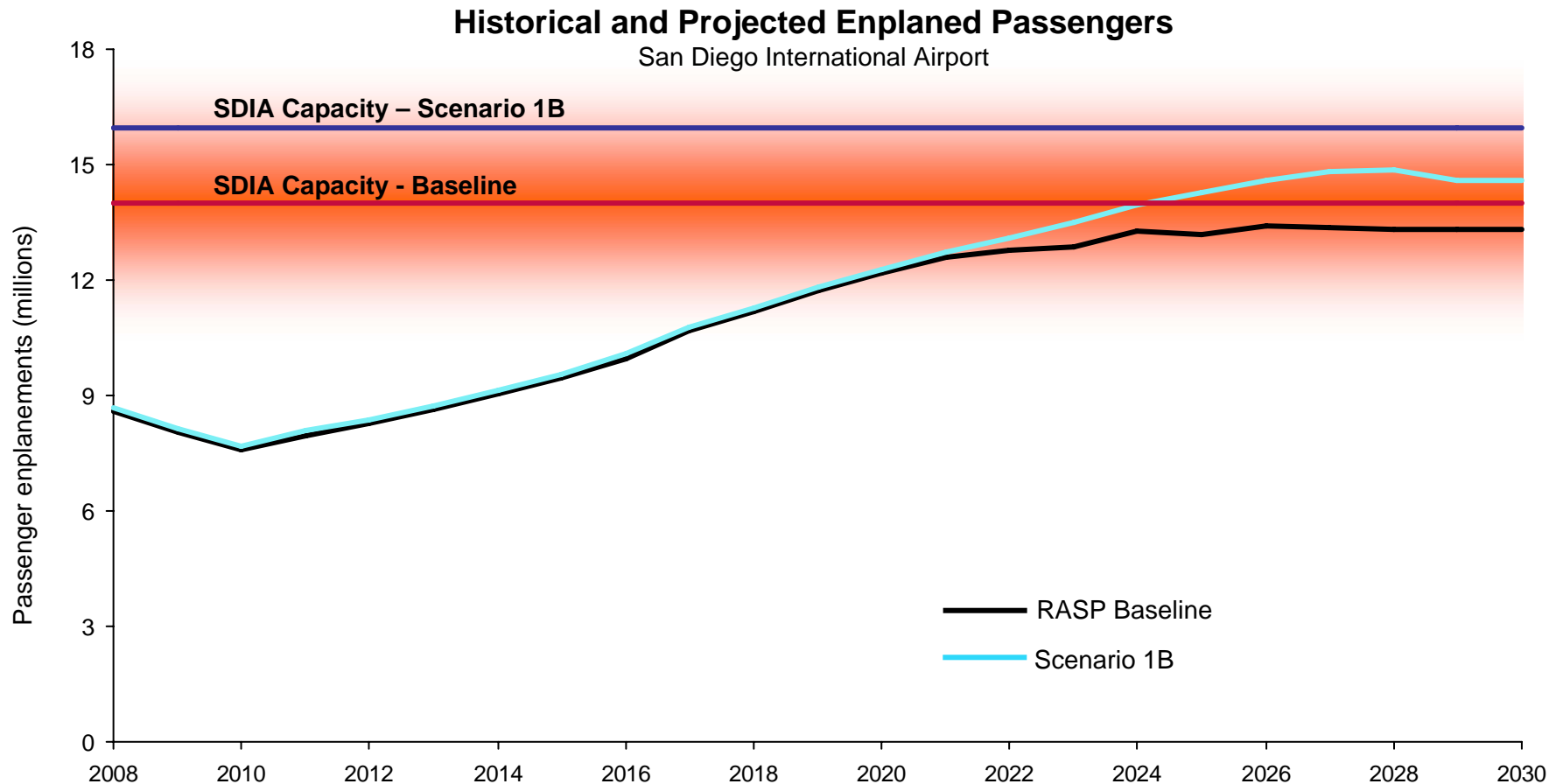
## Graphic Depiction and Facility Requirements





# Scenario 1B: Preserve SDIA Airfield Capacity for Commercial Service Comparison to Baseline

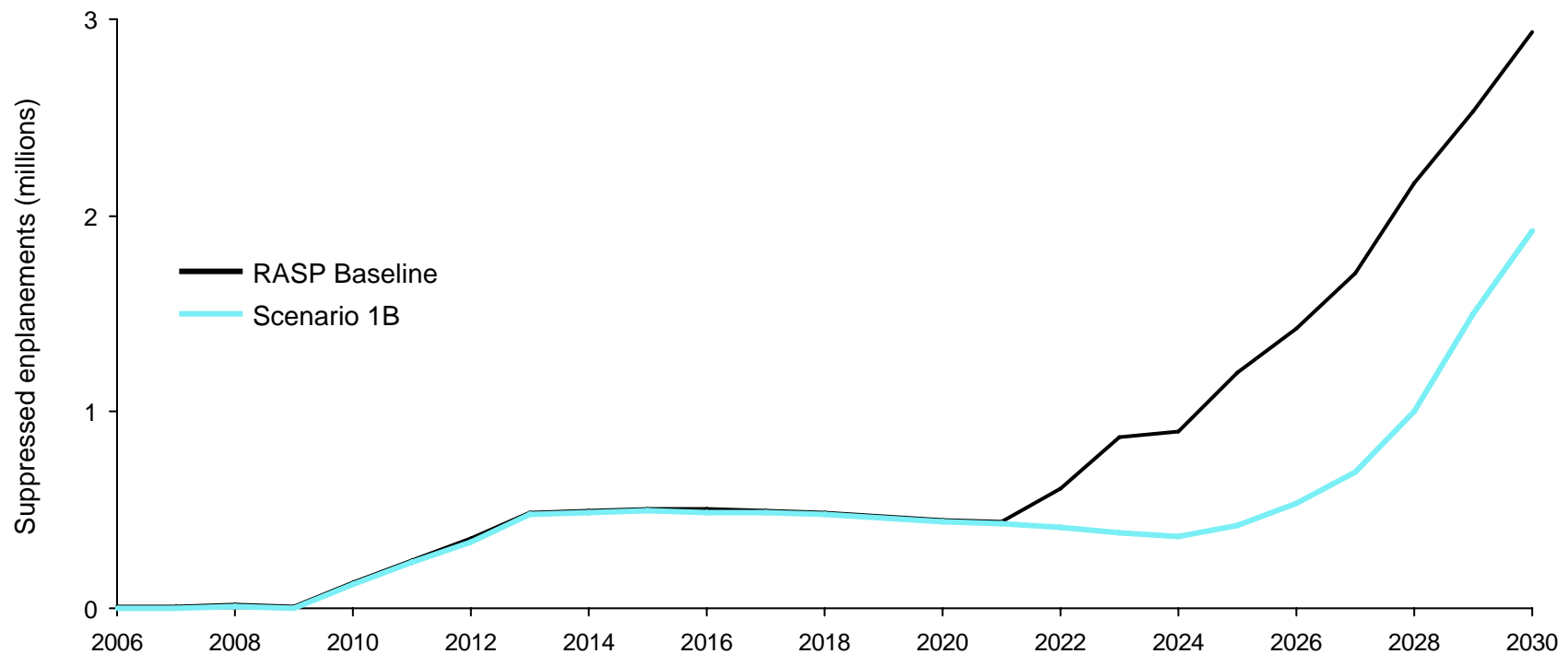
*Removing GA and Cargo Operations Delays Capacity Constraint from Approximately 2025 to 2030*



## Scenario 1B: Preserve SDIA Airfield Capacity for Commercial Service Comparison to Baseline

*Trend in Suppressed Passenger Demand is Also Delayed Approximately 5 Years*

**Suppressed Aviation Passenger Demand**  
San Diego County Residents and Visitors



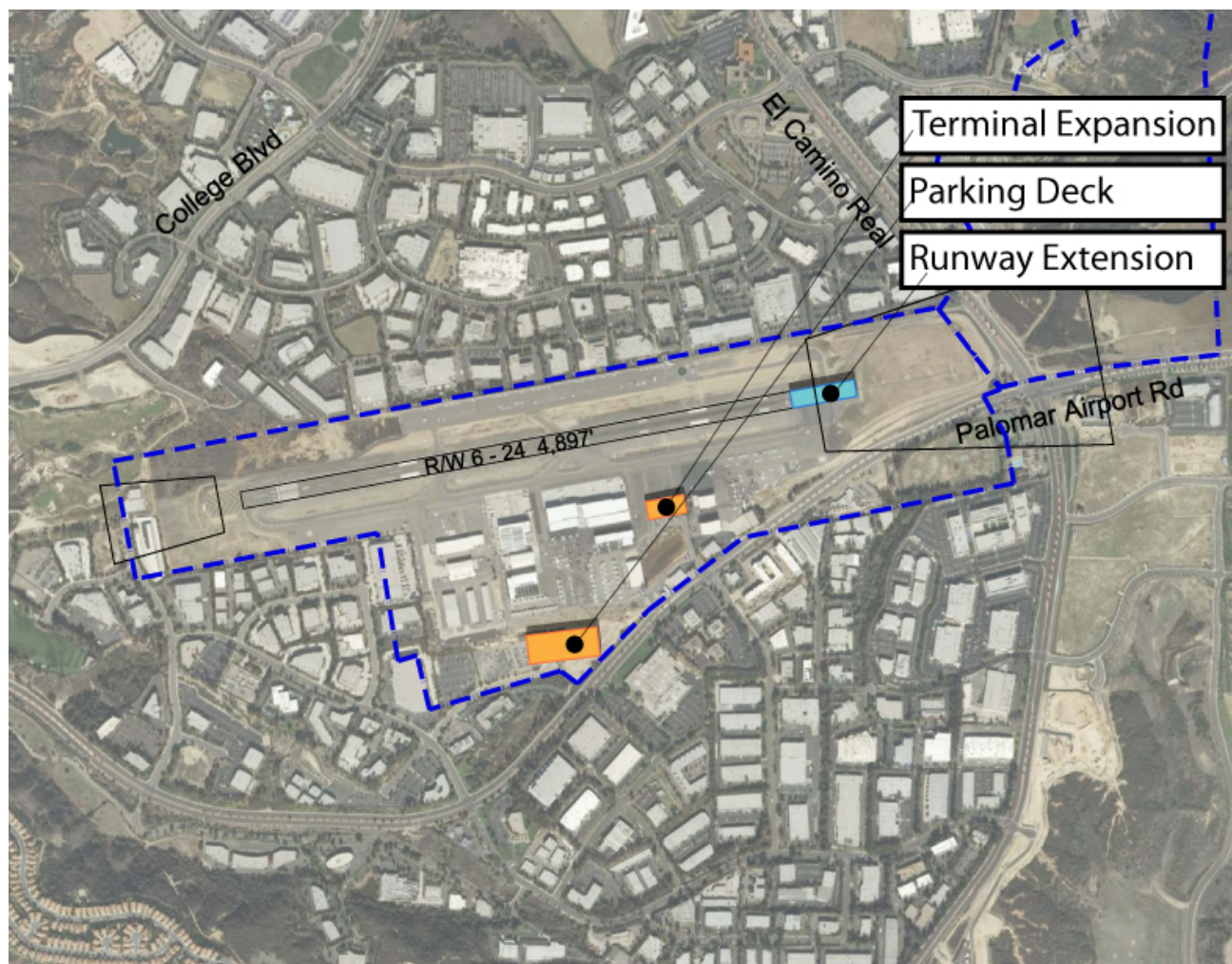
# 1. Commercial Passenger Optimization Scenarios

## C. Enhance Commercial Passenger Service at McClellan-Palomar Airport

Scenario Description	Evaluation Factors						
<ul style="list-style-type: none"><li>▪ <b>Provide facilities for multi-carrier commercial service</b></li><li>▪ <b>Facilitation enhanced via lease incentives and pricing strategies, etc.</b></li><li>▪ <b>Key model assumptions</b><ul style="list-style-type: none"><li>– Airport capacity would be increased from approximately 500K to 750K annual enplanements</li><li>– Non-stop/direct services would be offered to markets within 1,500 mile radius</li><li>– Two subsets of air service “drivers” considered:<ul style="list-style-type: none"><li>i. CRQ infrastructure enhancement</li><li>ii. SDIA capacity limits</li></ul></li></ul></li></ul>	<table><tr><td>Facility requirements</td><td><ul style="list-style-type: none"><li>• 1,000-foot runway extension to 6,000 total feet; requires a bridge foundation due to landfill location</li><li>• 8,000 SF terminal expansion for a total of 27,000 SF</li><li>• 2,800 space parking deck</li><li>• Additional roadway modifications (additional study required)</li></ul></td></tr><tr><td>Cost and implementation timeline</td><td>Cost estimate: \$160M; driven by runway ext. and parking garage Implementation timeline: 6-8 years; with 4-5 addl. years for approvals</td></tr><tr><td>Other considerations</td><td><ul style="list-style-type: none"><li>• Fleet restricted to regional jets (C-II); no mainline jets</li><li>• Extensive environmental review and approvals required</li><li>• Existing SDIA airlines unlikely to support split operation between SDIA and CRQ</li></ul></td></tr></table>	Facility requirements	<ul style="list-style-type: none"><li>• 1,000-foot runway extension to 6,000 total feet; requires a bridge foundation due to landfill location</li><li>• 8,000 SF terminal expansion for a total of 27,000 SF</li><li>• 2,800 space parking deck</li><li>• Additional roadway modifications (additional study required)</li></ul>	Cost and implementation timeline	Cost estimate: \$160M; driven by runway ext. and parking garage Implementation timeline: 6-8 years; with 4-5 addl. years for approvals	Other considerations	<ul style="list-style-type: none"><li>• Fleet restricted to regional jets (C-II); no mainline jets</li><li>• Extensive environmental review and approvals required</li><li>• Existing SDIA airlines unlikely to support split operation between SDIA and CRQ</li></ul>
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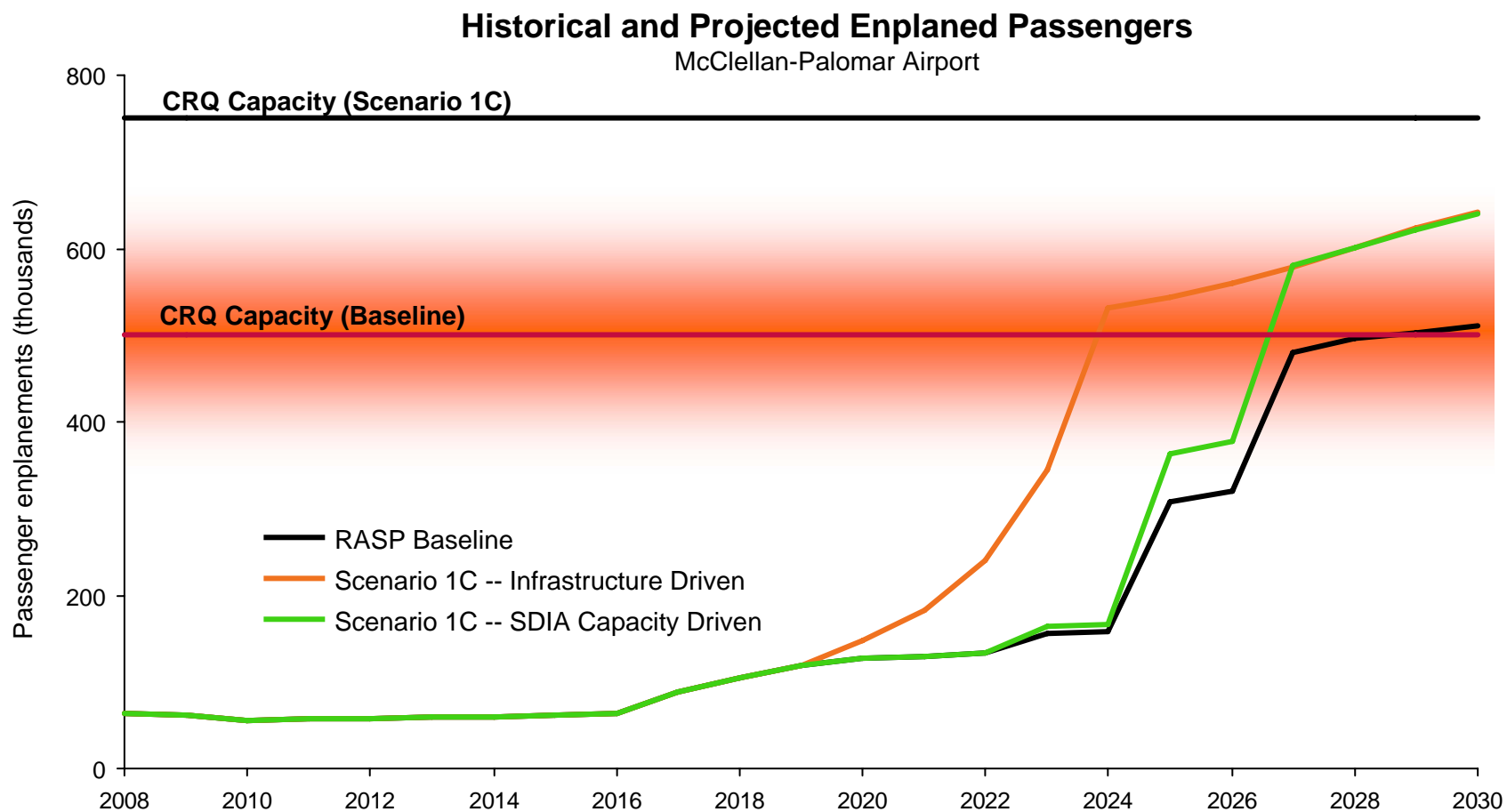
# Scenario 1C: Enhance Commercial Passenger Service at CRQ

## Graphic Depiction and Facility Requirements



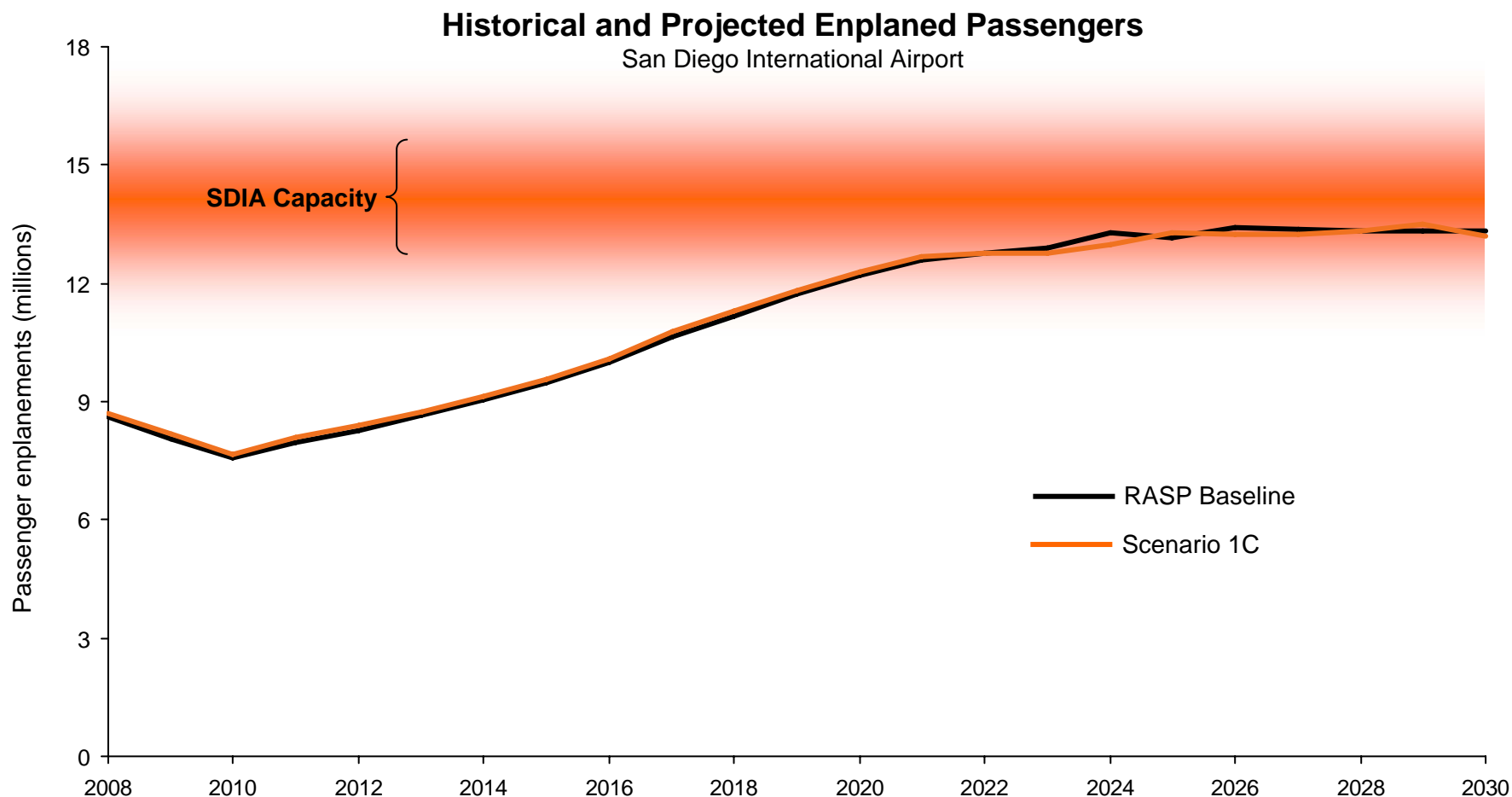
# Scenario 1C: Enhance Commercial Passenger Service at CRQ Comparison to Baseline

*Infrastructure Enhancement Stimulates Traffic Growth at McClellan-Palomar*



# Scenario 1C: Enhance Commercial Passenger Service at CRQ Comparison to Baseline

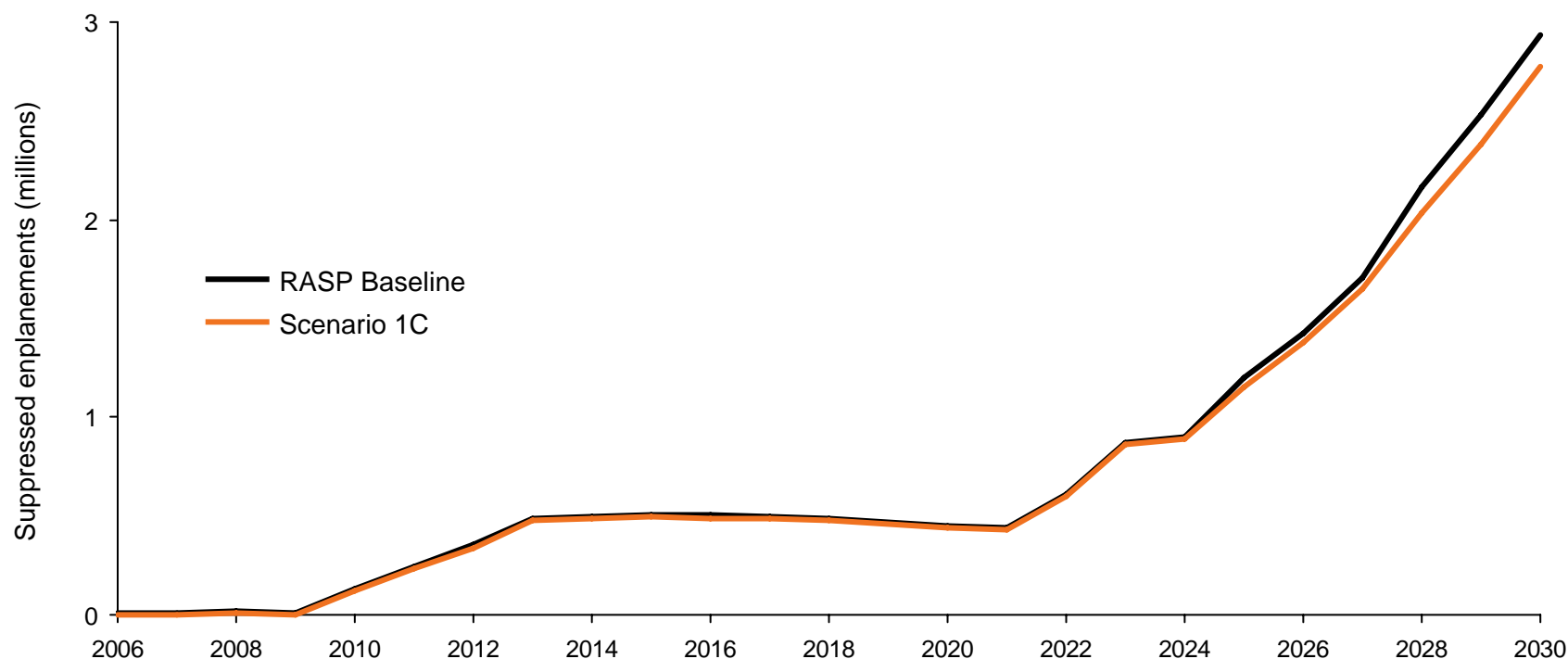
*Increased Commercial Passenger Service Does Not Alleviate Capacity Constraints at SDIA*



# Scenario 1C: Enhance Commercial Passenger Service at CRQ Comparison to Baseline

*Enhancement Allows More Passenger to Travel With Increased Total Regional Capacity*

**Suppressed Aviation Passenger Demand**  
San Diego County Residents and Visitors





# 1. Commercial Passenger Optimization Scenarios

## D. Introduce Commercial Passenger Service at Brown Field

### Scenario Description

- Provide facilities for multi-carrier commercial jet service to destinations within 1,500 miles of San Diego
- Facilitated via incentives and pricing strategy; would require “coordinated” policy with SDCRAA and City of San Diego

### Implementation Context

1. Airlines unlikely to support split operation between SDIA and SDM; AIP funding predicated on airline agreements
2. Remote location in southern portion of the County is not desirable for commercial passenger operators
3. Limited runway approach capability significantly affects viability
4. Significant public and political opposition anticipated

### Evaluation Factors

#### Facility requirements

- New passenger terminal building
- Access/entrance roadway improvements, including connection to highway
- 2,800 surface parking spaces
- Facilities for FAR Part 139 certification (e.g., security fencing, fire fighting facilities, etc.)
- Utility upgrades

#### Cost and implementation timeline

Cost estimate: \$100M; driven by utility upgrades and terminal development  
Implementation timeline: 6-8 years

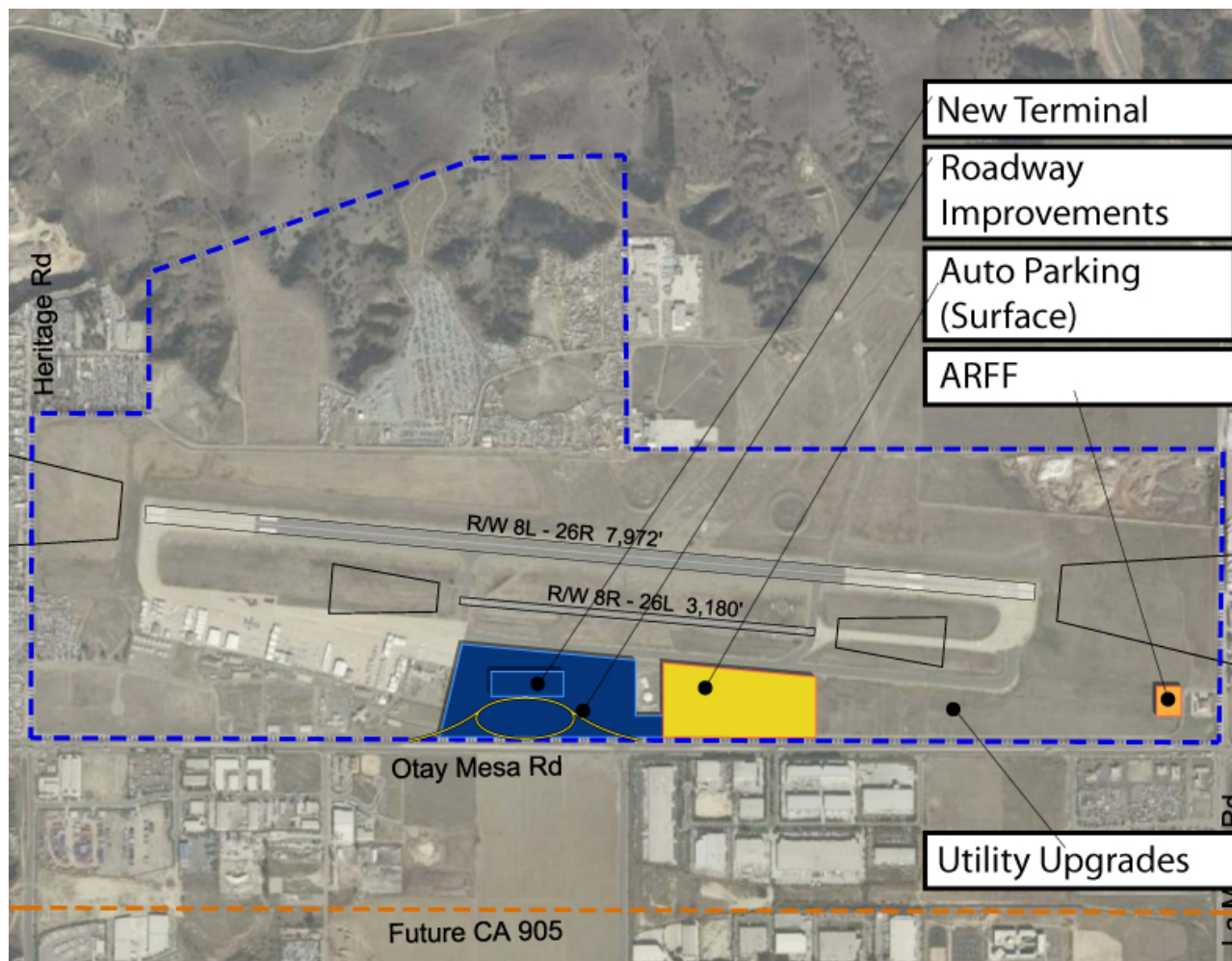
#### Other considerations

- Fleet unrestricted, but most likely regional jet service (<70 seat aircraft)
- Proximity to commercial service airports negatively impacts viability
- Terrain and implementation of precision approach



# Scenario 1D: Introduce Commercial Service at Brown Field

## Graphic Depiction and Facility Requirements



# Scenario 1D: Introduce Commercial Service at Brown Field

## Scenario Is “Fatally” Flawed

- Precision instrument approaches are infeasible per two FAA determinations (2009 and 2010)
- Precision approach into runway 26R not feasible
  - Extremely high terrain to the north and east
  - Location of the Mexican border
- Precision approach into runway 8L not feasible either
  - Rapidly rising high terrain to the northeast
  - Location of the Mexican boarder restricts missed approach procedure
- Commercial service is unlikely without an instrument approach; AIP funding is predicated on user agreements
- Recommendation – Scenario should be omitted from additional consideration



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

WESTERN FLIGHT PROCEDURES OFFICE  
AJW-327B  
1601 Lind Ave., SW., Room 200  
Renton, WA 98057

June 29, 2009

Mr. M.C. Tussey  
Deputy Director of Airports  
3750 John J Montgomery Dr  
San Diego, CA 92123



Dear Mr. Tussey,

I am writing this letter to follow-up our conversation over the telephone call on 6/26/09 regarding your request to explore the possibilities of developing of a vertically guided Instrument Approach Procedure (IAP) into Runway 8L at Brown Field Municipal, San Diego, CA.

I have conducted a feasibility study for you request and unfortunately your request at the present time is not practical for the following reasons:

- a.) Procedure development criteria require the aircraft to climb straight ahead if a missed approach is executed for a certain distance prior to turning. The distance for the straight ahead climb is determined based on the amount of turn. In this particular instance a left turn of more than 120 degrees is required. This amount of turn would require the aircraft to fly a minimum of 7.3 (NM) from the Runway 8L threshold prior to turning. Due to rapidly rising high terrain, northeast of the airport, it makes this option not possible.
- b.) Secondly and most important, is the close proximity of the airport to the Mexican boarder. Due to the location of the airport in relationship to the Mexican boarder, the direction of the missed approach is restricted to a left turn only, again restricting capabilities due to the high terrain northeast of the field.
- c.) Finally, a procedure into Runway 26R is also not possible due to limited airspace for the procedure and the same problems as mentioned above.

Unfortunately, it would appear that your best option is the minimums published on the current (IAP).

Should you need you have any questions, please do not hesitate to contact Mr. George Reese at (425) 917-6749.

Sincerely,

Jason E. Pitts  
Manager

# Alternative Scenarios

*Findings for Highlighted Scenarios are Presented Herein*



## 1. Commercial Passenger Optimization

- A. Full build-out of the ITC and north side terminal at SDIA
- B. Preserve SDIA airfield capacity for commercial passenger service
- C. Enhance commercial passenger service at McClellan-Palomar Airport
- ~~D. Introduce commercial passenger service at Brown Field~~

## 2. Enhanced Utilization of Tijuana

- A. Tijuana International Airport focus on commercial service
- B. Aviation passenger cross border facility (currently proposed)
- C. Cross border airport terminal

## 3. California High Speed Rail

Stations at downtown LA, ONT Airport and:

- A. Station at downtown San Diego
- B. Station at SDIA



## 4. General Aviation Optimization

- A. Enhance McClellan-Palomar Airport for high-end / corporate general aviation
- B. Enhance Brown Field for high-end / corporate general aviation
- C. Enhance Gillespie Field for mix-use general aviation

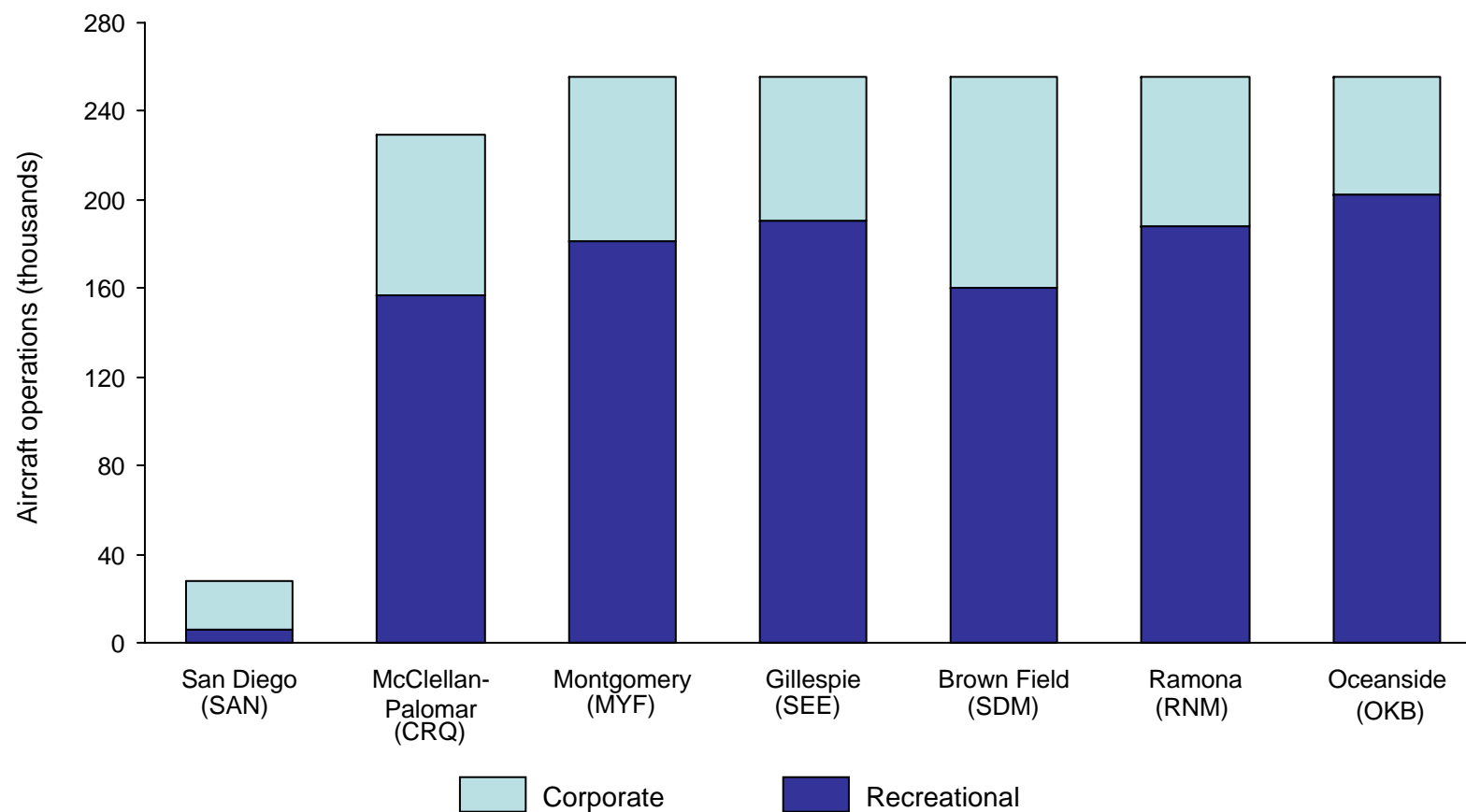


## 5. Air Cargo Optimization

- A. Introduce cargo service at Brown Field

## 4. General Aviation Optimization Scenarios

### 2020 Forecast Aircraft Operations and Demand Break-down



Sources: Landrum & Brown, Inc., December 2008, and General Aviation Manufacturers Association (GAMA) data, 2009.

Note: Operational frequency of corporate aircraft is assumed to be 2X recreational aircrafts.

## 4. General Aviation Optimization Scenarios

### A. Enhance McClellan-Palomar for High-end / Corporate GA

#### Scenario Description

- Construct new and convert existing commercial facilities for corporate GA uses (existing terminal would be converted to high-end FBO facility)
- Assumes the Airport would no longer accommodate commercial passenger activity and no additional passenger facilities would be provided
- Facilitated via leasing and pricing strategies; would also require “coordinated” FBO policy with SDCRAA and County of San Diego

The G-V (corporate jet aircraft) requires 5,910 feet of runway at a max takeoff weight (MTOW) of 91,000 lbs.

#### Evaluation Factors

##### Facility requirements

- 1,000-foot runway extension to provide 6,000 feet of departure length
- Convert existing terminal building into FBO facility

##### Cost and implementation timeline

Cost estimate: \$82M; driven primarily by runway extension  
Implementation timeline: 5-6 years

##### Other considerations

- Eliminates need/costs associated with maintaining Part 139 certification
- Extensive environmental review and approvals required for runway extension



## Scenario 4A: Enhance CRQ for High-end / Corporate GA

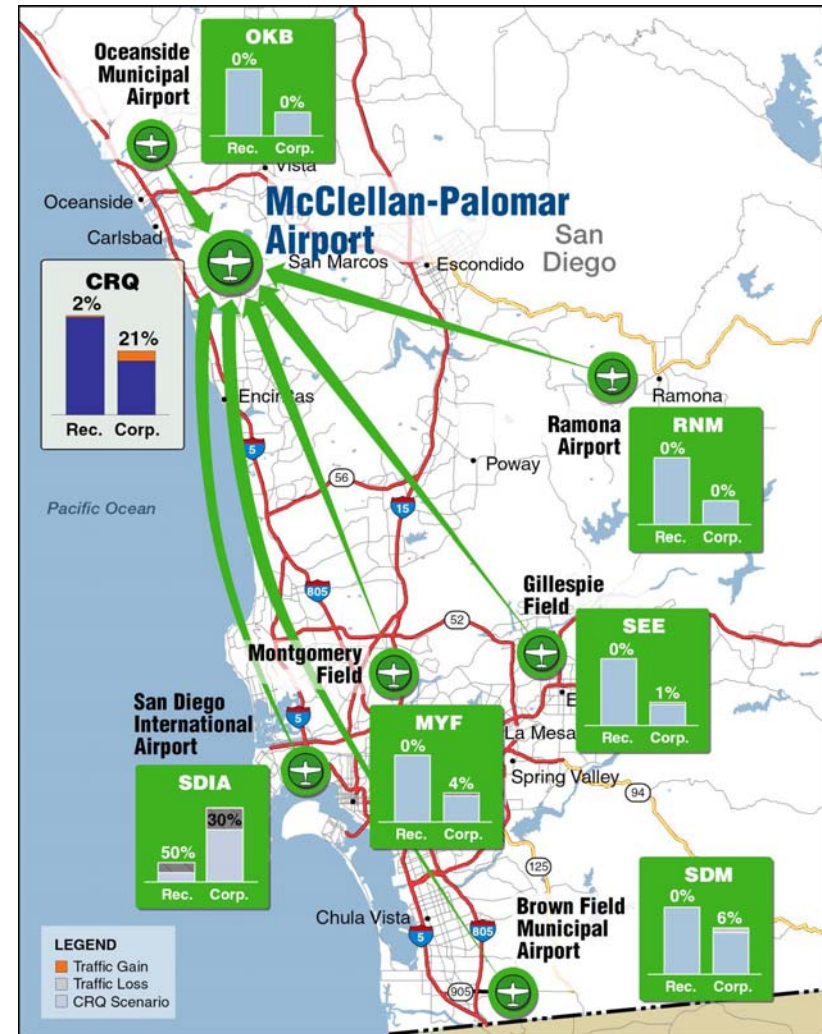
### *Graphic Depiction and Facility Requirements*



## Scenario 4A: Enhance CRQ for High-end / Corporate GA Traffic Shift from Baseline

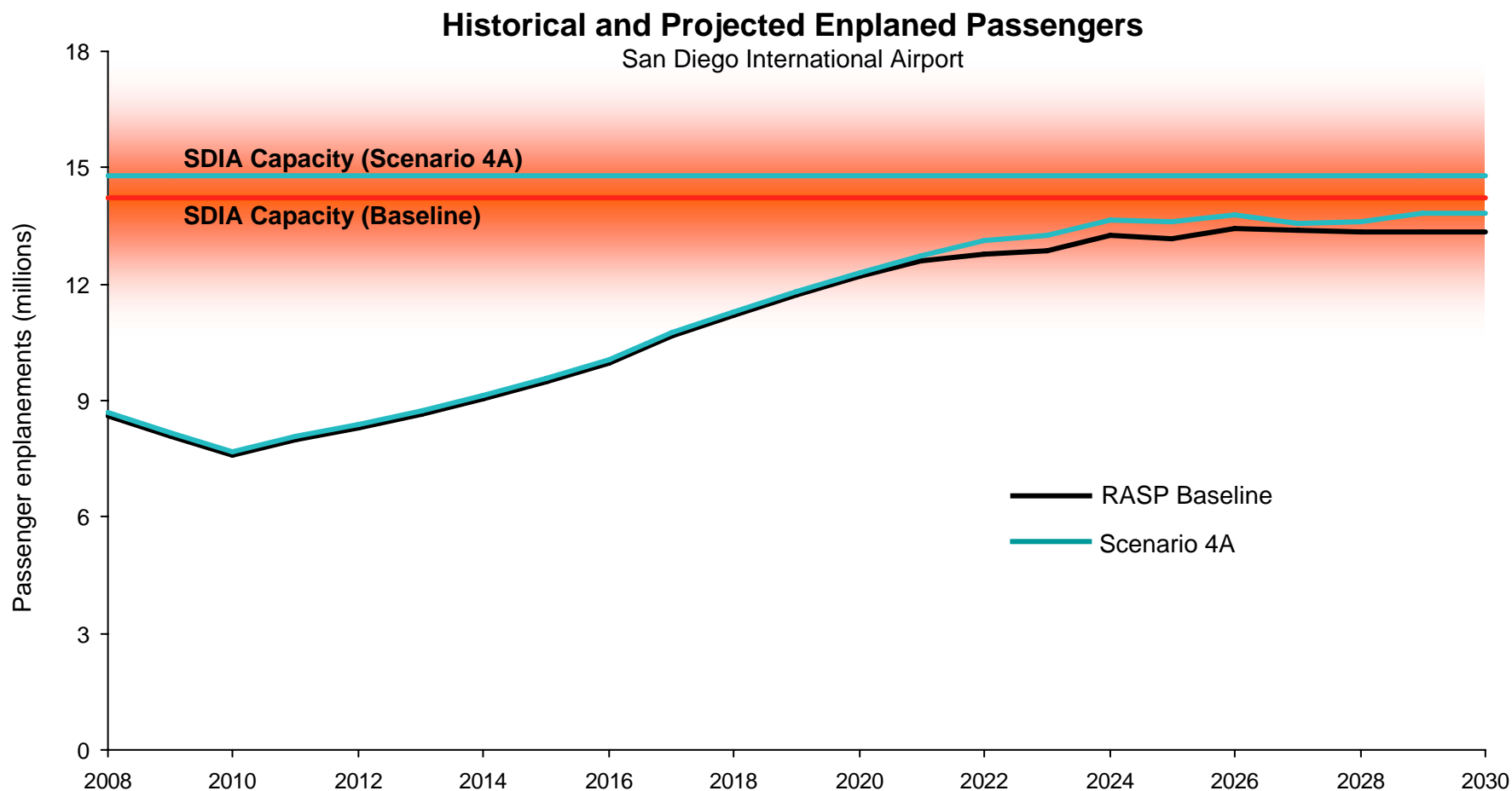
### Potential GA traffic shift to CRQ

San Diego (SDIA)	Substantial traffic shift due to high congestion at SDIA; significant number of corporate operations would remain due to downtown proximity
Gillespie (SEE)	Some high-end GA traffic may shift due to FBO facility, increased runway length, and ILS
Montgomery Field (MYF)	Some corporate traffic may shift due to FBO facility and ILS
Oceanside (OKB)	No traffic shift since current demand at OKB would not benefit from ILS or longer runway
Brown Field (SDM)	Some corporate traffic may shift due to FBO facility and ILS; however shift likely to be low given 50 mile distance between SDM and CRQ
Ramona (RNM)	No traffic shift since current demand at RNM would not benefit from ILS or longer runway



# Scenario 4A: Enhance CRQ for High-end / Corporate GA Comparison to Baseline

*Diversion of High-end GA Traffic to CRQ Delays Capacity Constraint at SDIA*

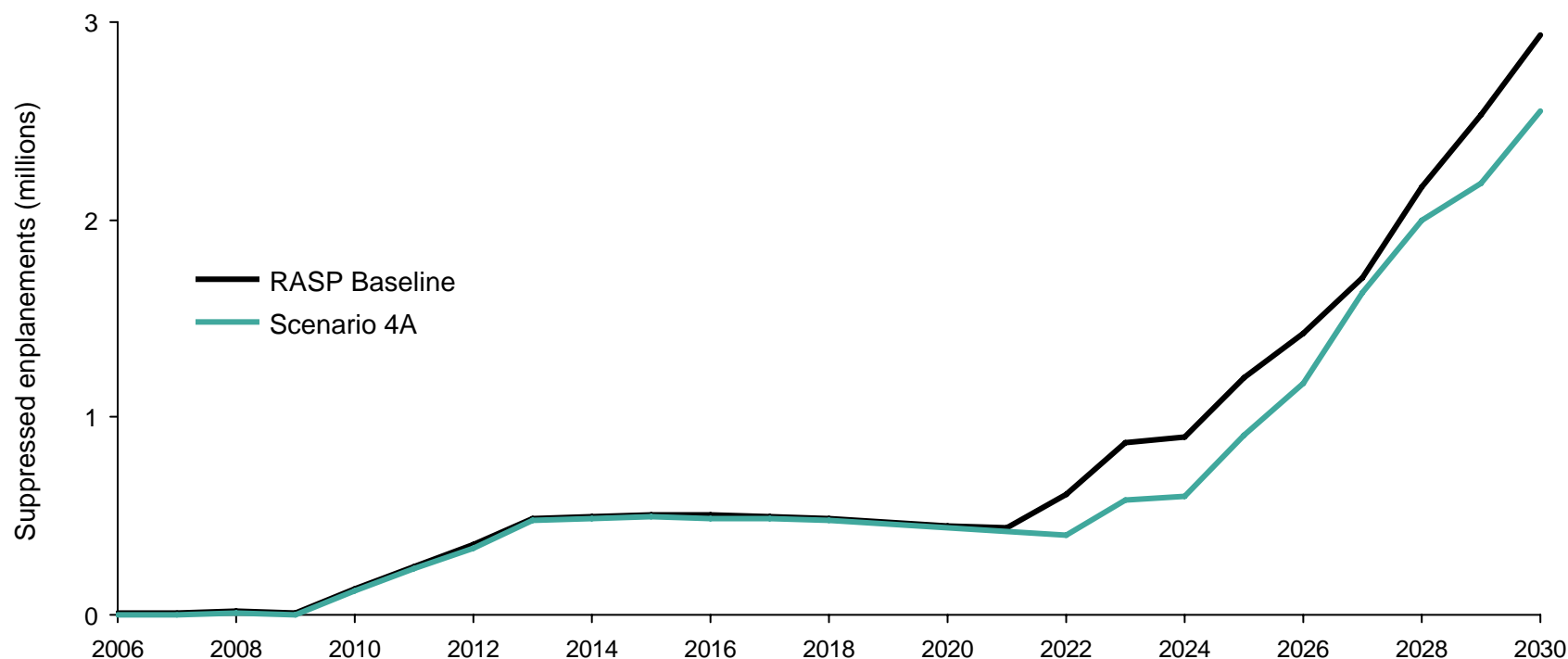




# Scenario 4A: Enhance CRQ for High-end / Corporate GA Comparison to Baseline

*Enhancement Allows More Passenger to Travel as Total Regional Capacity Increases*

**Suppressed Aviation Passenger Demand**  
San Diego County Residents and Visitors



## 4. General Aviation Optimization Scenarios

### *B. Enhance Brown Field for High-end / Corporate GA*

#### Scenario Description

- Construct new and build-out existing facilities exclusively for corporate GA
- Consistent with ALP and proposed private development plans
- Facilitated via leasing and pricing strategies; would also require “coordinated” FBO policy with SDCRAA and City of San Diego

#### Evaluation Factors

##### Facility requirements

- Phase 1 of the private developer's plan, including construction of FBO/corporate hangar, additional T-hangars, and helicopter FBO
- Utility upgrades

##### Cost and implementation timeline

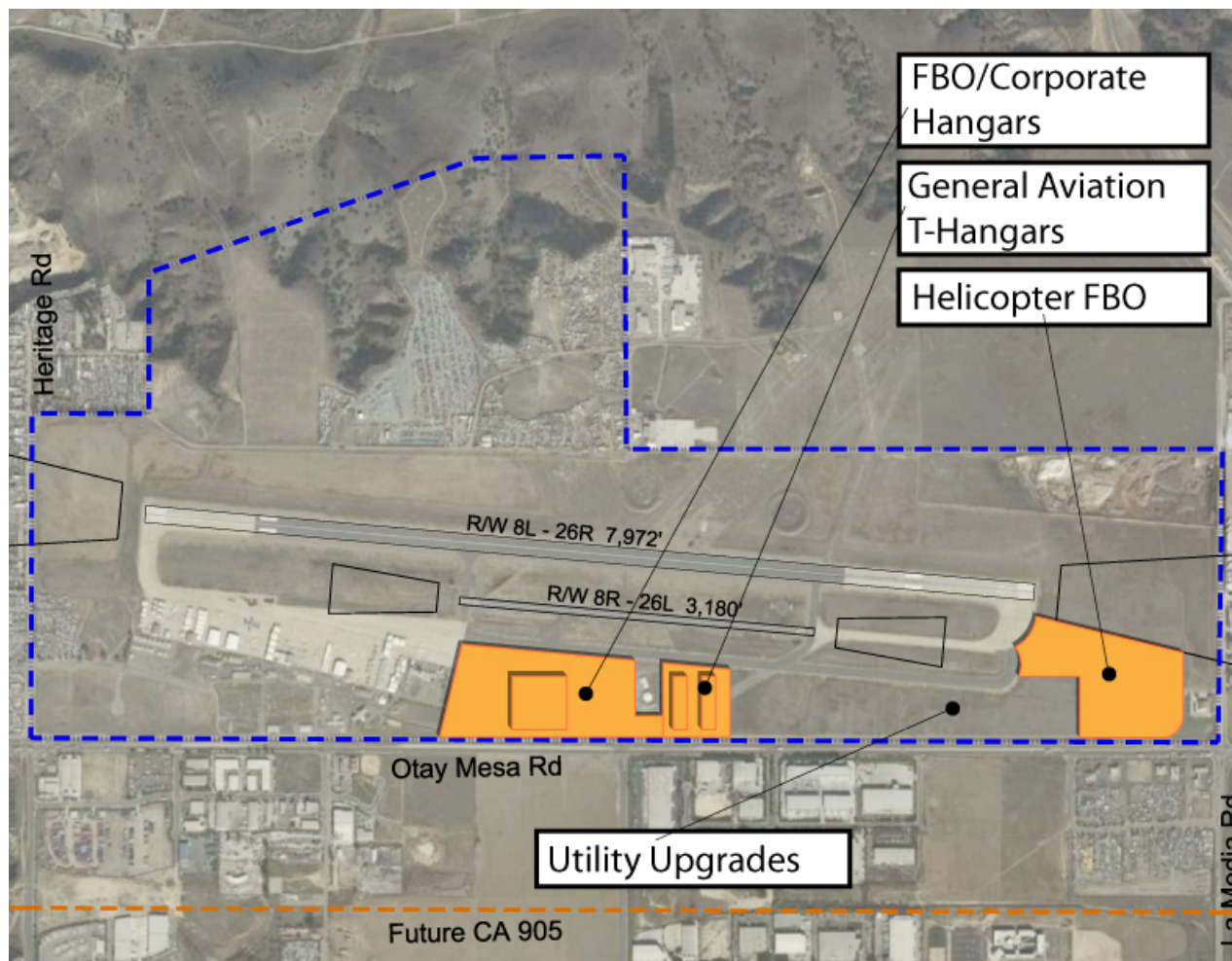
Cost estimate: \$63M; mostly funding with private sources  
Implementation timeline: 3-4 years

##### Other considerations

- Existing runway length is adequate, but may require reconstruction for additional strength
- Planning for certain facilities already underway
- Appears to have community and political support

## Scenario 4B: Enhance Brown Field for High-end / Corporate GA

### Graphic Depiction and Facility Requirements



# Scenario 4B: Enhance Brown Field for High-end / Corporate GA Traffic Shift from Baseline

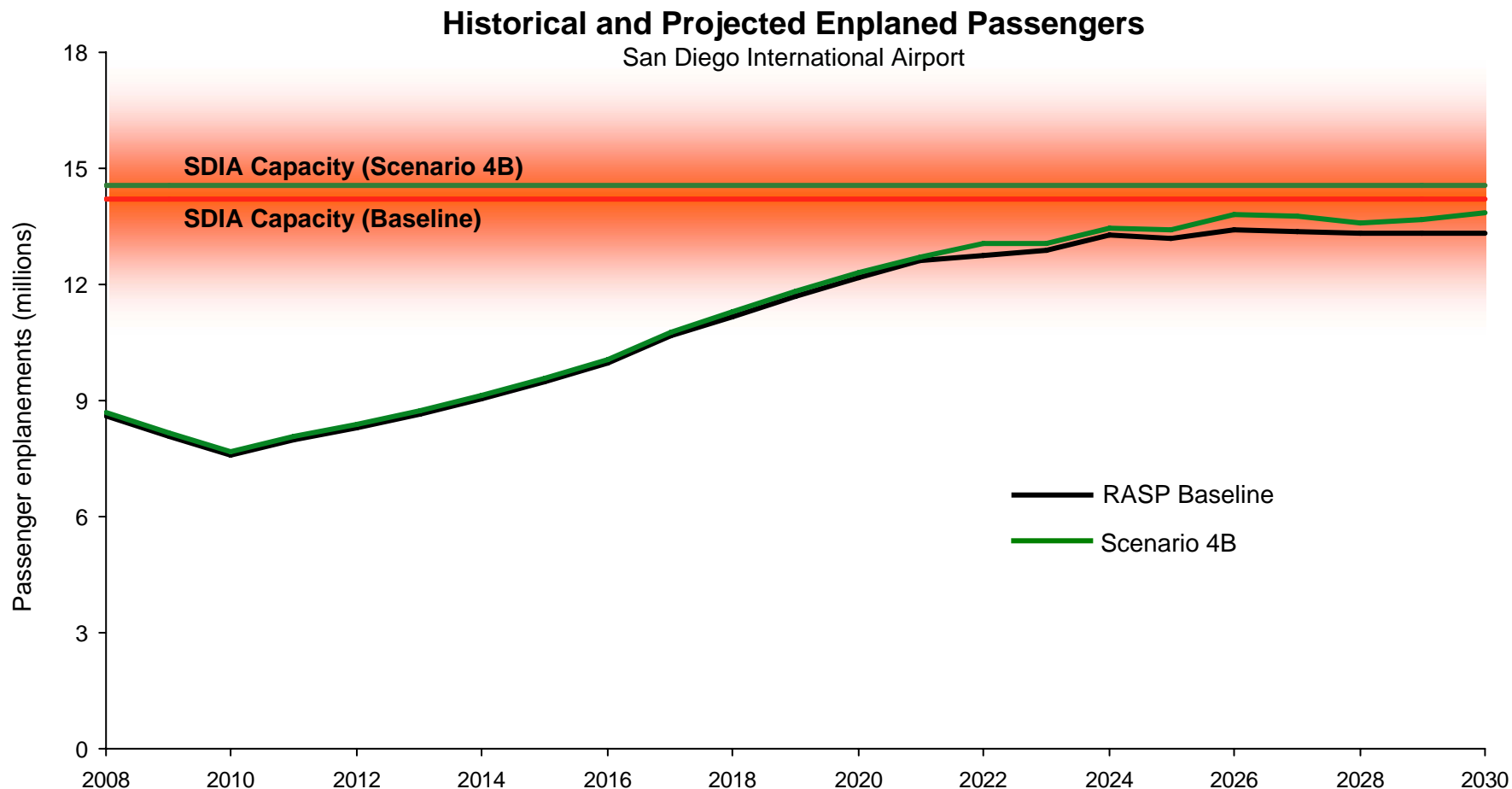
## Potential GA Traffic Shift to SDM

San Diego (SDIA)	Moderate traffic shift due to high congestion at SDIA; significant number of corporate operations would remain due to proximity to downtown and ILS
Gillespie (SEE)	Some high-end GA traffic may be shifted due to FBO facility, but overall shift expected to be minor
Montgomery Field (MYF)	Some corporate traffic may shift due to FBO facility
Oceanside (OKB)	No traffic shift since existing demand at OKB would not benefit from the enhancements at SDM
McClellan-Palomar (CRQ)	Very limited traffic shift for high-end FBO facility
Ramona (RNM)	No traffic shift since existing demand at RNM would not benefit from the enhancement at SDM



# Scenario 4B: Enhance Brown Field for High-end / Corporate GA Traffic Shift from Baseline

*Diversion of High-end Corporate GA Traffic to SDM Delays Capacity Constraints at SDIA*

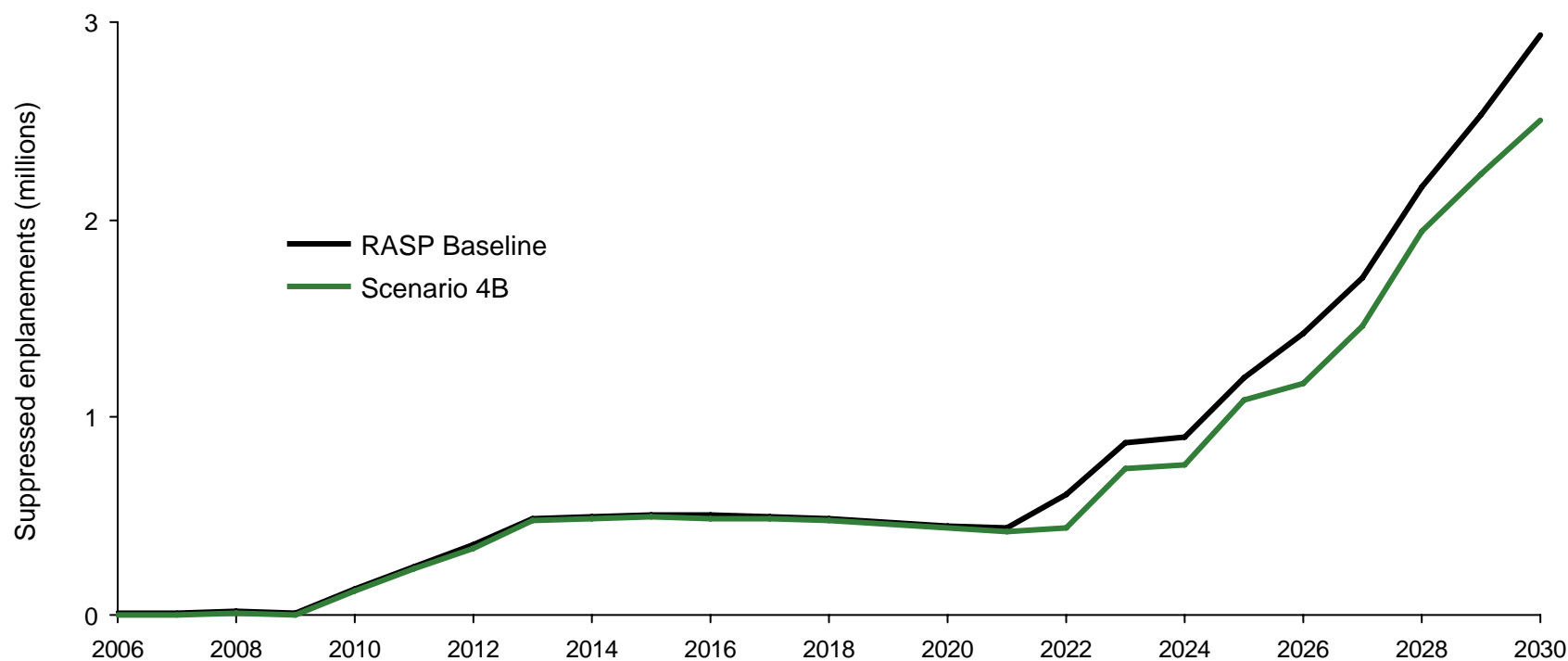


## Scenario 4B: Enhance Brown Field for High-end / Corporate GA Traffic Shift from Baseline

*Enhancement Allows More Passenger to Travel as Total Regional Capacity Increases*

### Suppressed Aviation Passenger Demand

San Diego County Residents and Visitors



## 4. General Aviation Optimization Scenarios

### C. Enhance Gillespie Field for Mix-use General Aviation

#### Scenario Description

- Build-out of facilities to support corporate and recreational GA activity
- Assumes implementation of El Cajon Development
- Facilitated via leasing and pricing strategy; would require “coordinated” FBO policy with SDCRAA and County of San Diego

#### Factors Toward Implementation

1. Orange and Green Trolley lines provide public transportation between the Airport and downtown San Diego
2. Parallel runways allow segregation of training and itinerant operations
3. Completion of CA 52 extension and interchange with CA 67 improve accessibility

#### Evaluation Factors

##### Facility requirements

- “El Cajon Plaza” a planned 70-acre development including FBO site, indoor storage hangars, and tie-down space
- Correct FAA design standard deficiencies
- Utility upgrades and drainage improvements

##### Cost and implementation timeline

Cost estimate: \$90M  
Implementation timeline: 3-4 years

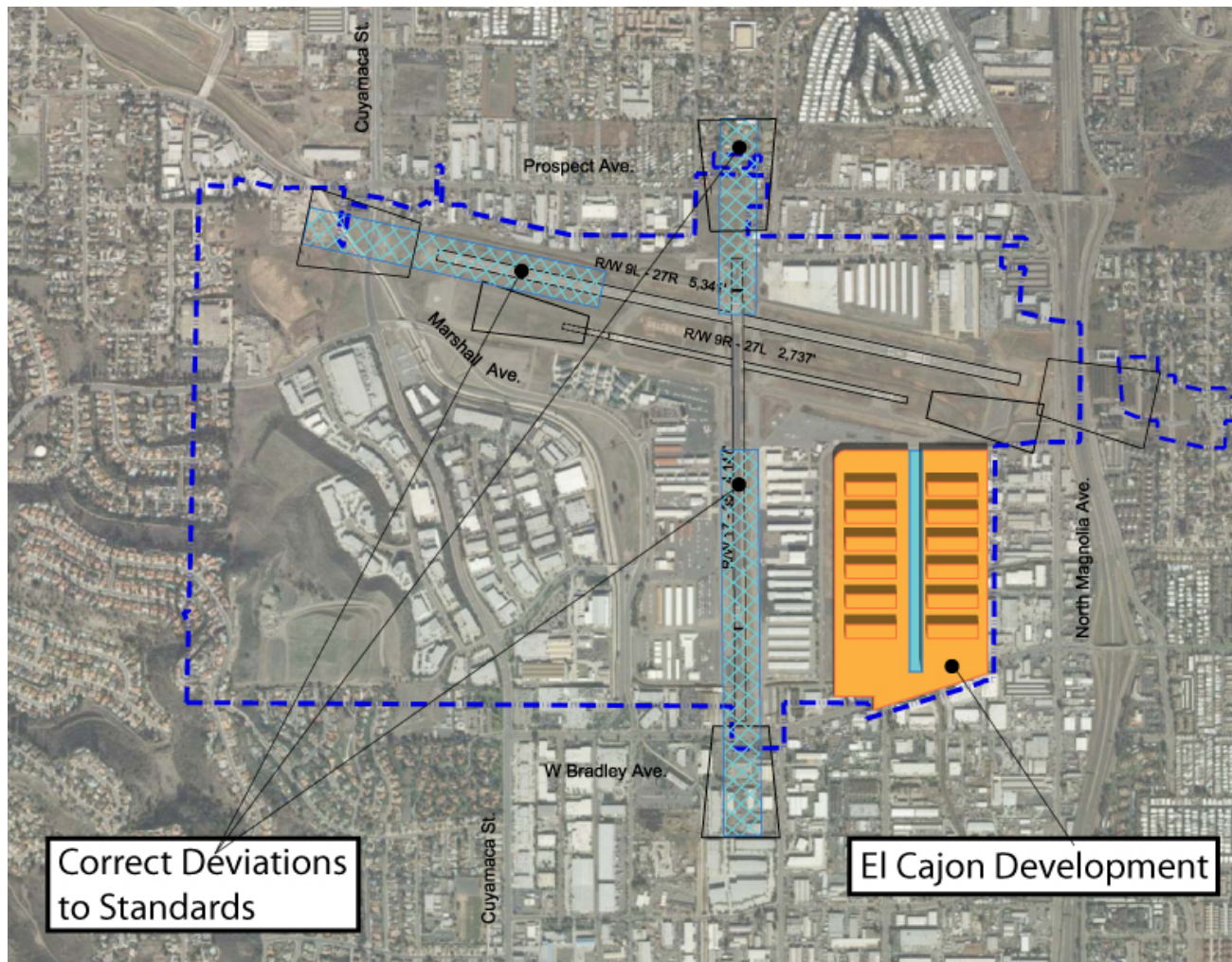
##### Other considerations

- Some planning underway
- Sub-standard airfield separations may be addressed as leaseholds expire or are relocated; no set schedule
- Environmental approval needed for various projects



# Scenario 4C: Enhance Gillespie Field for Mix-use General Aviation

## Graphic Depiction and Facility Requirements

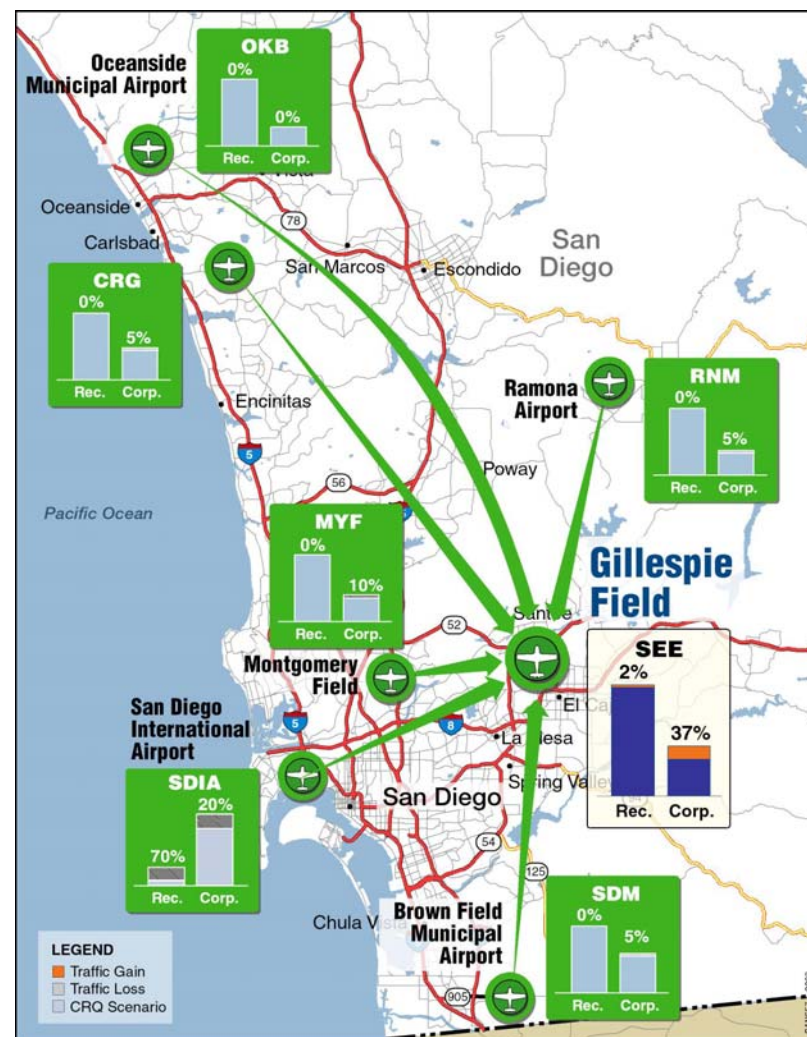




## Scenario 4C: Enhance Gillespie Field for Mix-use General Aviation Traffic Shift from Baseline

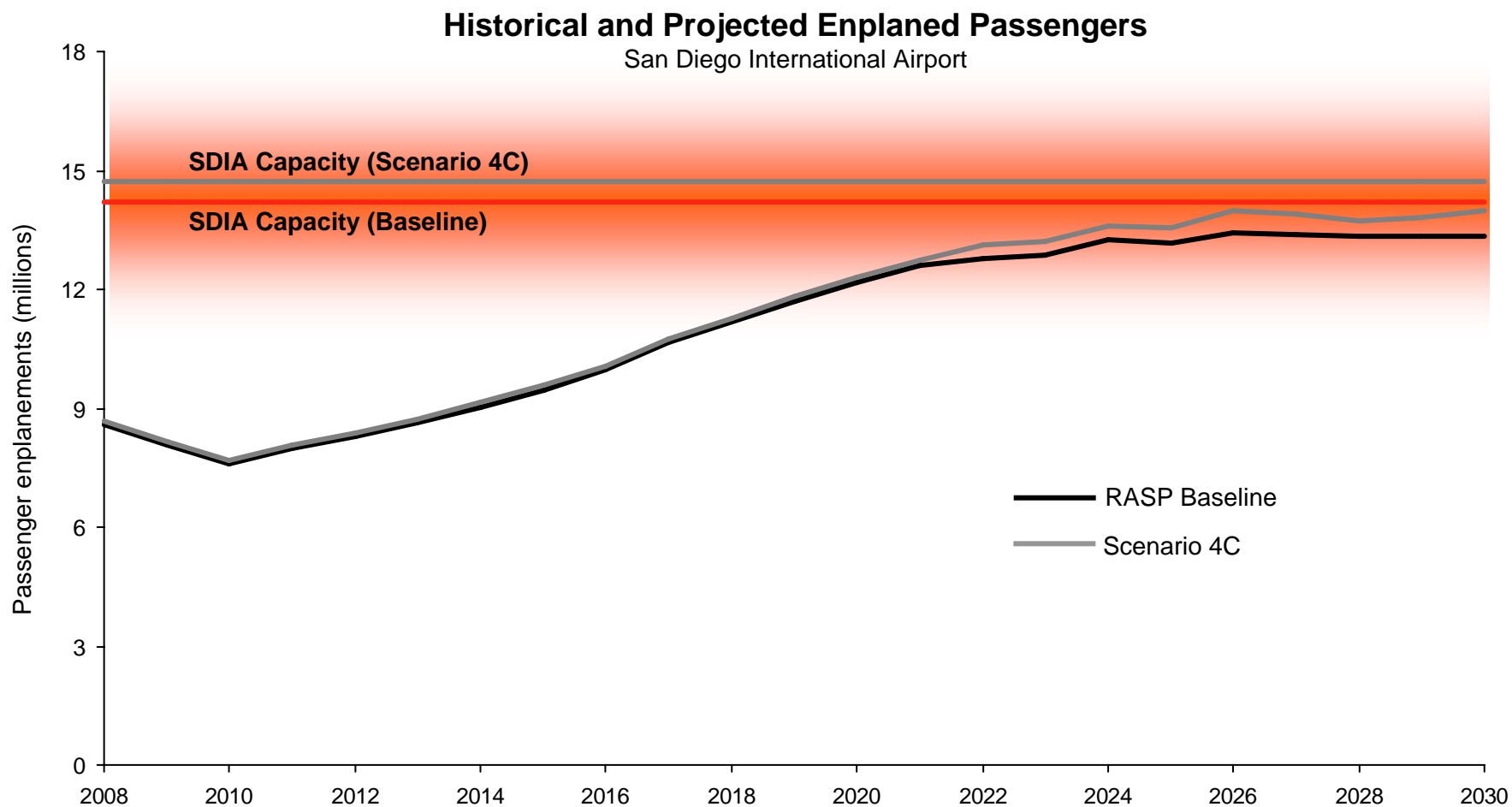
### Potential GA Traffic Shift to SEE

San Diego (SDIA)	Moderate traffic shift due to high congestion at SDIA; significant number of corporate operations would remain due to close proximity to downtown
McClellan-Palomar (CRQ)	Some high-end GA traffic shift expected for FBO facility.
Montgomery Field (MYF)	Some corporate traffic shift expected for FBO facility
Oceanside (OKB)	No traffic shift since the existing demand at OKB would not benefit from the enhancement at SEE
Brown Field (SDM)	Some corporate traffic shift expected due to FBO facility
Ramona (RNM)	Some corporate traffic shift expected due to FBO facility



# Scenario 4C: Enhance Gillespie Field for Mix-use General Aviation Comparison to Baseline

*Diversion of GA Traffic to Gillespie Delays Capacity Constraints at SDIA*

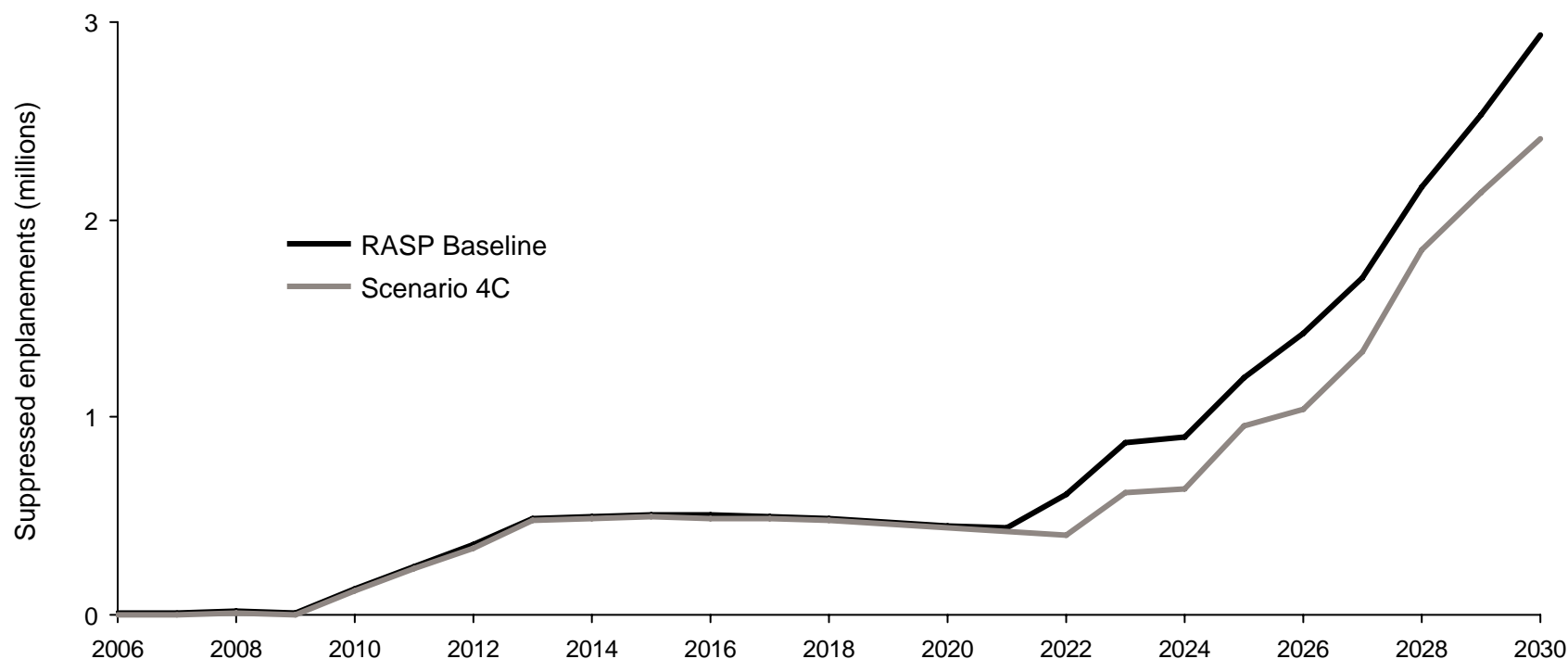


# Scenario 4C: Enhance Gillespie Field for Mix-use General Aviation Comparison to Baseline

*Enhancement Allows More Passengers to Travel as Total Regional Capacity Increases*

## Suppressed Aviation Passenger Demand

San Diego County Residents and Visitors



# Alternative Scenarios

*Findings for Highlighted Scenarios are Presented Herein*



## 1. Commercial Passenger Optimization

- A. Full build-out of the ITC and north side terminal at SDIA
- B. Preserve SDIA airfield capacity for commercial passenger service
- C. Enhance commercial passenger service at McClellan-Palomar Airport
- ~~D. Introduce commercial passenger service at Brown Field~~

## 2. Enhanced Utilization of Tijuana

- A. Tijuana International Airport focus on commercial service
- B. Aviation passenger cross border facility (currently proposed)
- C. Cross border airport terminal

## 3. California High Speed Rail

Stations at downtown LA, ONT Airport and:

- A. Station at downtown San Diego
- B. Station at SDIA



## 4. General Aviation Optimization

- A. Enhance McClellan-Palomar Airport for high-end / corporate general aviation
- B. Enhance Brown Field for high-end / corporate general aviation
- C. Enhance Gillespie Field for mix-use general aviation



## 5. Air Cargo Optimization

- A. Introduce cargo service at Brown Field

## 5. Air Cargo Optimization Scenario

### A. Introduce Cargo Service at Brown Field

#### Scenario Description

- Construction of facilities at Brown Field to accommodate cargo service
- Facilitated via incentives and pricing strategies

#### Implementation Context

1. Carriers unwilling to operate from facilities south of SDIA due to proximity to sort infrastructure; AIP funding predicated on airline agreements
2. Majority of SDIA cargo is accommodated on integrated / express carriers (90%) and originates in or is destined for downtown San Diego
3. Limited runway approach capability significantly affects viability
4. Lack of nearby cargo infrastructure (e.g., freight forwarders)
5. Significant public and political opposition (historic and anticipated)

#### Evaluation Factors

##### Facility requirements

- New cargo buildings and apron
- Upgrade runway pavement for heavier aircraft associated with cargo flights
- Improve access roads around airport (many improvements already scheduled through SANDAG)
- Utility improvements

##### Cost and implementation timeline

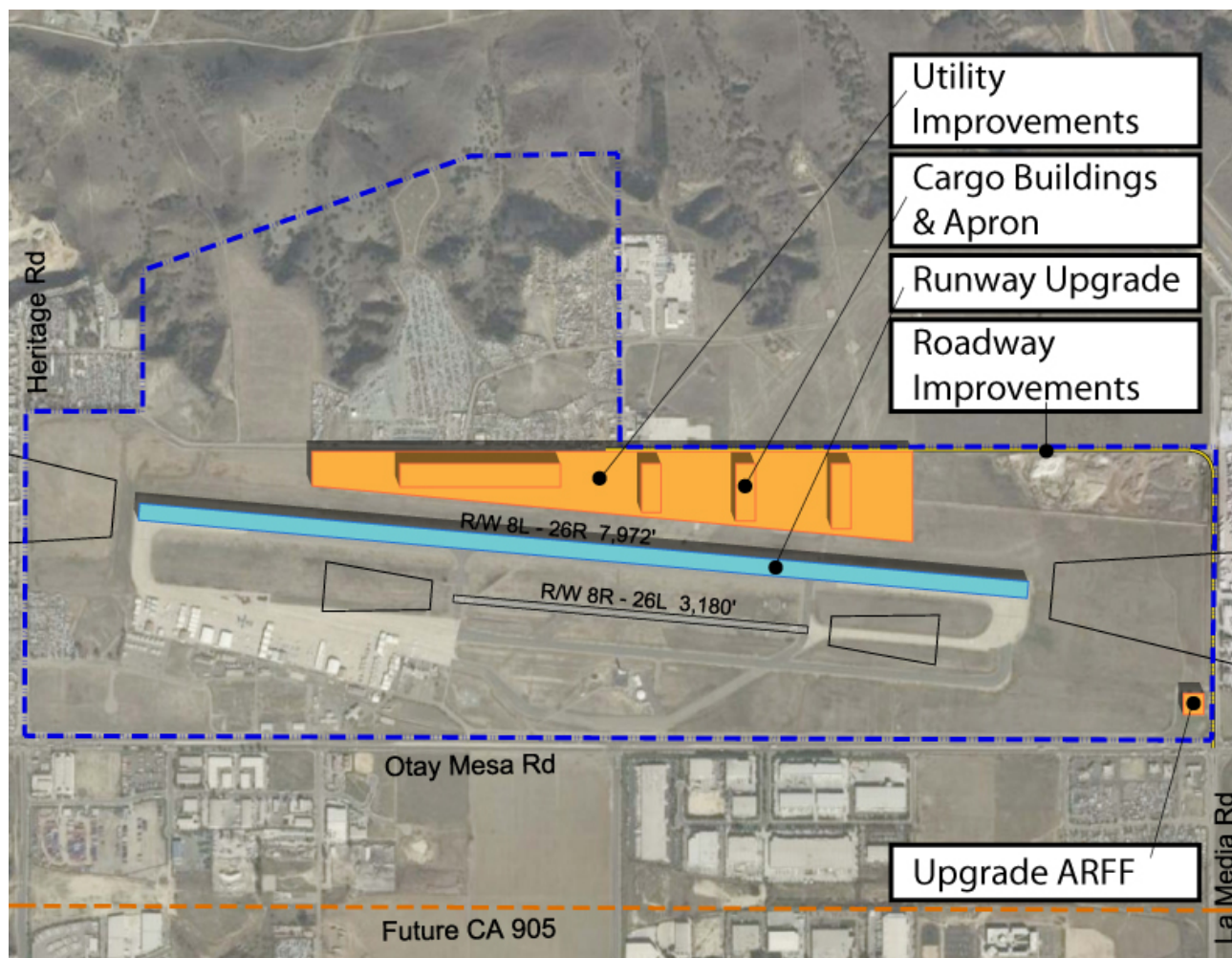
Cost estimate: \$235M  
Implementation timeline: 6-10 years

##### Other considerations

- Some planning underway
- Environmental approval needed for various projects
- Terrain and implementation of precision approach

# Scenario 5A: Introduce Cargo Service at Brown Field

## Graphic Depiction and Facility Requirements





# Scenario 5A: Introduce Cargo Service at Brown Field

## Scenario Is “Fatally” Flawed

- Carriers unwilling to operate from facilities south of SDIA due to proximity to sort infrastructure; AIP funding predicated on airline / user agreements
- Lack of nearby cargo infrastructure (e.g., freight forwarders)
- Precision instrument approaches are infeasible per two FAA determinations (2009 and 2010)
- Significant local public and political opposition (historic and anticipated)
- **Recommendation – Scenario should be omitted from additional consideration**



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

WESTERN FLIGHT PROCEDURES OFFICE  
AJW-327B  
1601 Lind Ave., SW., Room 200  
Renton, WA 98057

June 29, 2009

Mr. M.C. Tussey  
Deputy Director of Airports  
3750 John J Montgomery Dr  
San Diego, CA 92123



Dear Mr. Tussey,

I am writing this letter to follow-up our conversation over the telephone call on 6/26/09 regarding your request to explore the possibilities of developing of a vertically guided Instrument Approach Procedure (IAP) into Runway 8L at Brown Field Municipal, San Diego, CA.

I have conducted a feasibility study for you request and unfortunately your request at the present time is not practical for the following reasons:

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- b.) Secondly and most important, is the close proximity of the airport to the Mexican boarder. Due to the location of the airport in relationship to the Mexican boarder, the direction of the missed approach is restricted to a left turn only, again restricting capabilities due to the high terrain northeast of the field.
- c.) Finally, a procedure into Runway 26R is also not possible due to limited airspace for the procedure and the same problems as mentioned above.

Unfortunately, it would appear that your best option is the minimums published on the current (IAP).

Should you need you have any questions, please do not hesitate to contact Mr. George Reese at (425) 917-6749.

Sincerely,

Jason E. Pitts  
Manager



# Alternative Scenarios

*Findings for Highlighted Scenarios are Presented Herein*



## 1. Commercial Passenger Optimization

- A. Full build-out of the ITC and north side terminal at SDIA
- B. Preserve SDIA airfield capacity for commercial passenger service
- C. Enhance commercial passenger service at McClellan-Palomar Airport
- ~~D. Introduce commercial passenger service at Brown Field~~

## 2. Enhanced Utilization of Tijuana

- A. Tijuana International Airport focus on commercial service
- B. Aviation passenger cross border facility (currently proposed)
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## 3. California High Speed Rail

Stations at downtown LA, ONT Airport and:

- A. Station at downtown San Diego
- B. Station at SDIA



## 4. General Aviation Optimization

- A. Enhance McClellan-Palomar Airport for high-end / corporate general aviation
- B. Enhance Brown Field for high-end / corporate general aviation
- C. Enhance Gillespie Field for mix-use general aviation

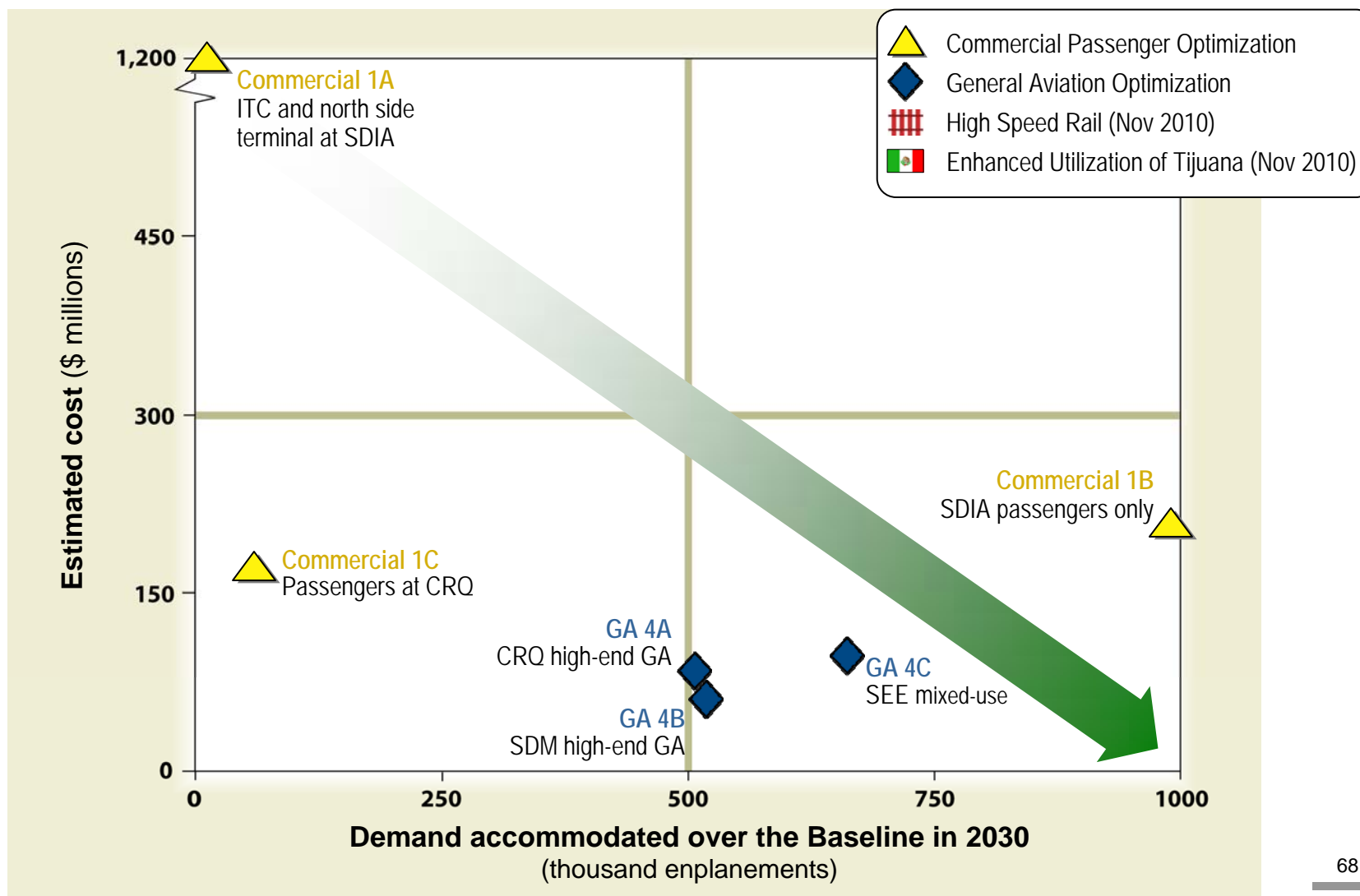


## 5. Air Cargo Optimization

- ~~A. Introduce cargo service at Brown Field~~

# Summary of Findings to Date

## Evaluation Matrix Compares Relative Costs and Benefits



# Summary of Findings to Date

## *There is No “Silver Bullet” in the Scenarios Modeled to Date*

- Analyses confirm previous thinking that Scenario 1A: Full build-out of the ITC and north side terminal at SDIA – has little effect on suppressed demand relative to the Baseline; although the scenario provides regional access and other benefits not captured by the model
- Of the scenarios modeled to date, Scenario 1B: Preserve SDIA airfield capacity for commercial passenger service – provided the best performance relative to demand; however, implementation of this scenario would be difficult, at best
- Scenario 1C: Enhance commercial passenger service at CRQ – has little effect on suppressed demand relative to the Baseline
- Both Brown Field alternatives (1D and 5A) are “fatally” flawed and should be omitted from additional consideration
- The GA optimization scenarios (4A, 4B, and 4C) have similar costs and provide nearly the same, but nominal, impact on demand relative to the Baseline
- California HSR and Tijuana utilization scenarios are still under consideration; findings will be presented in the October / November timeframe

## Public/Stakeholder Coordination

# Public/Stakeholder Outreach

## *Accomplishments in the First Half of 2010*

### ▪ **Stakeholder presentations**

- Airport advisory groups
- SANDAG
  - Transportation Committee, March 19, 2010
- Business/community organizations
  - San Diego Concierge Association, February 10, 2010
  - San Diego Regional Economic Development Corporation Investor Breakfast, July 23, 2010

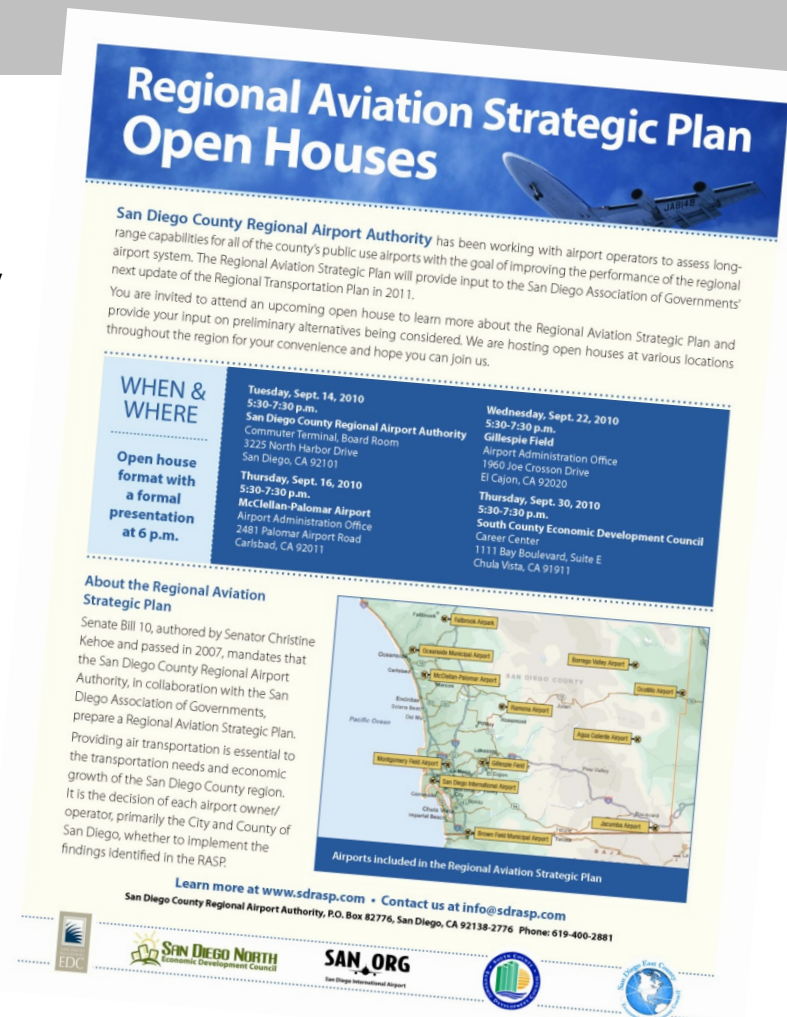
### ▪ **Elected officials outreach**

### ▪ **Web Page: [www.sdrasp.com](http://www.sdrasp.com)**

# Public/Stakeholder Outreach

## Upcoming RASP Open Houses

- **Downtown**
  - Tuesday, Sept. 14, 2010, 5:30-7:30 p.m.
  - San Diego County Regional Airport Authority
- **North**
  - Thursday, Sept. 16, 2010, 5:30-7:30 p.m.
  - McClellan-Palomar Airport
- **East**
  - Wednesday, Sept. 22, 2010, 5:30-7:30 p.m.
  - Gillespie Field
- **South**
  - Thursday, Sept. 30, 2010, 5:30-7:30 p.m.
  - South County Economic Development Council



**Regional Aviation Strategic Plan Open Houses**

San Diego County Regional Airport Authority has been working with airport operators to assess long-range capabilities for all of the county's public use airports with the goal of improving the performance of the regional airport system. The Regional Aviation Strategic Plan will provide input to the San Diego Association of Governments' next update of the Regional Transportation Plan in 2011.

You are invited to attend an upcoming open house to learn more about the Regional Aviation Strategic Plan and provide your input on preliminary alternatives being considered. We are hosting open houses at various locations throughout the region for your convenience and hope you can join us.

**WHEN & WHERE**

**Tuesday, Sept. 14, 2010**  
5:30-7:30 p.m.  
San Diego County Regional Airport Authority  
Commuter Terminal, Board Room  
3225 North Harbor Drive  
San Diego, CA 92101

**Thursday, Sept. 16, 2010**  
5:30-7:30 p.m.  
McClellan-Palomar Airport  
Airport Administration Office  
2481 Palomar Airport Road  
Carlsbad, CA 92011

**Wednesday, Sept. 22, 2010**  
5:30-7:30 p.m.  
Gillespie Field  
Airport Administration Office  
1960 Joe Crosson Drive  
El Cajon, CA 92020

**Thursday, Sept. 30, 2010**  
5:30-7:30 p.m.  
South County Economic Development Council  
Career Center  
1111 Bay Boulevard, Suite E  
Chula Vista, CA 91911

**About the Regional Aviation Strategic Plan**

Senate Bill 10, authored by Senator Christine Kehoe and passed in 2007, mandates that the San Diego County Regional Airport Authority, in collaboration with the San Diego Association of Governments, prepare a Regional Aviation Strategic Plan. Providing air transportation is essential to the transportation needs and economic growth of the San Diego County region. It is the decision of each airport owner/operator, primarily the City and County of San Diego, whether to implement the findings identified in the RASP.

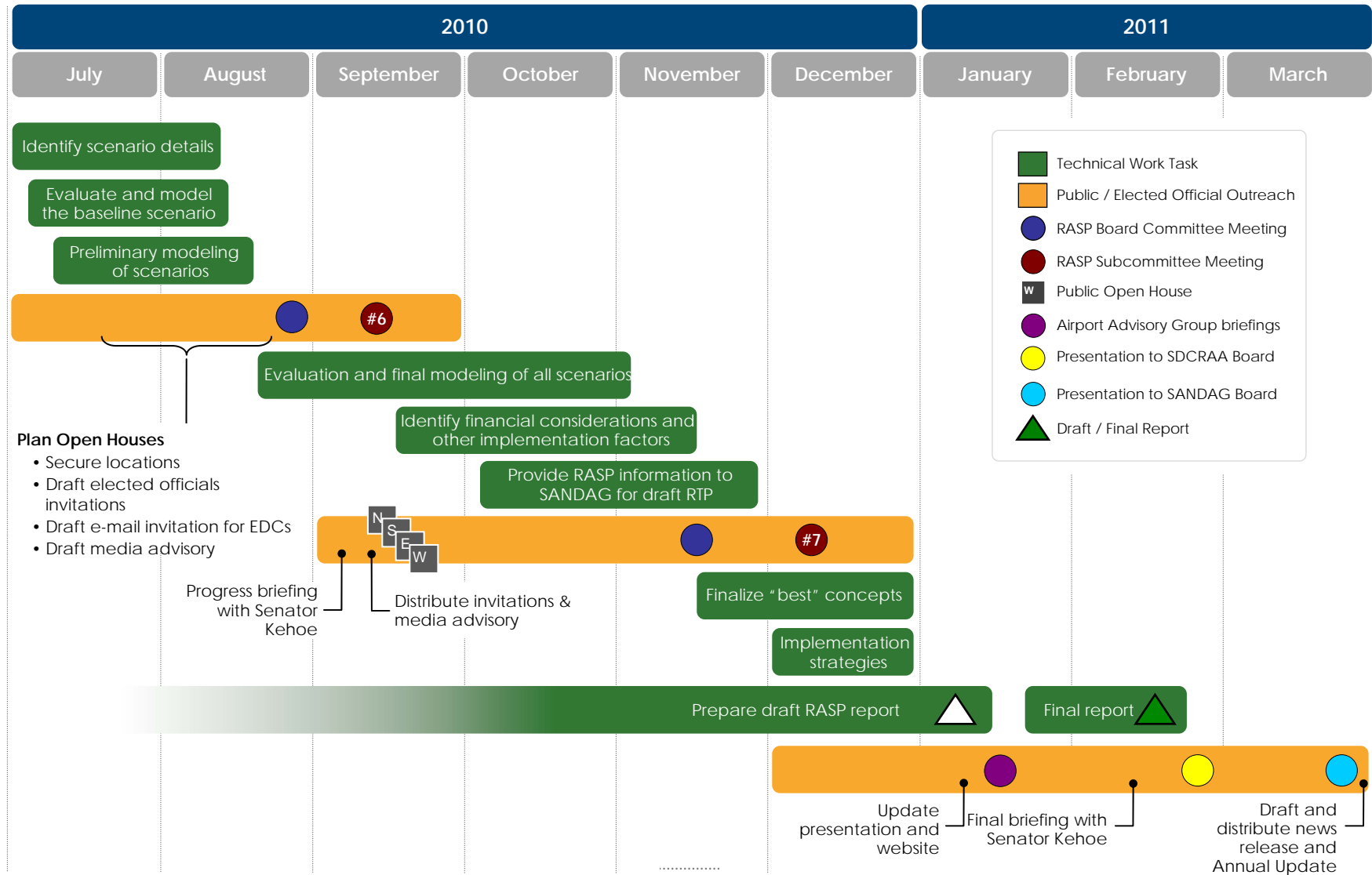
**Airports included in the Regional Aviation Strategic Plan**

Learn more at [www.sdrasp.com](http://www.sdrasp.com) • Contact us at [info@sd rasp.com](mailto:info@sd rasp.com)

San Diego County Regional Airport Authority, P.O. Box 82776, San Diego, CA 92138-2776 Phone: 619-400-2881

Logos: EDC, San Diego North Economic Development Council, SAN.ORG, San Diego International Airport, and others.

# Schedule and Work Plan





Scenario Details:  
Cost Estimates, Funding Sources and Implementation  
Schedules

# Scenario 1A: Full Build-out of the ITC and North Side Terminal at SDIA

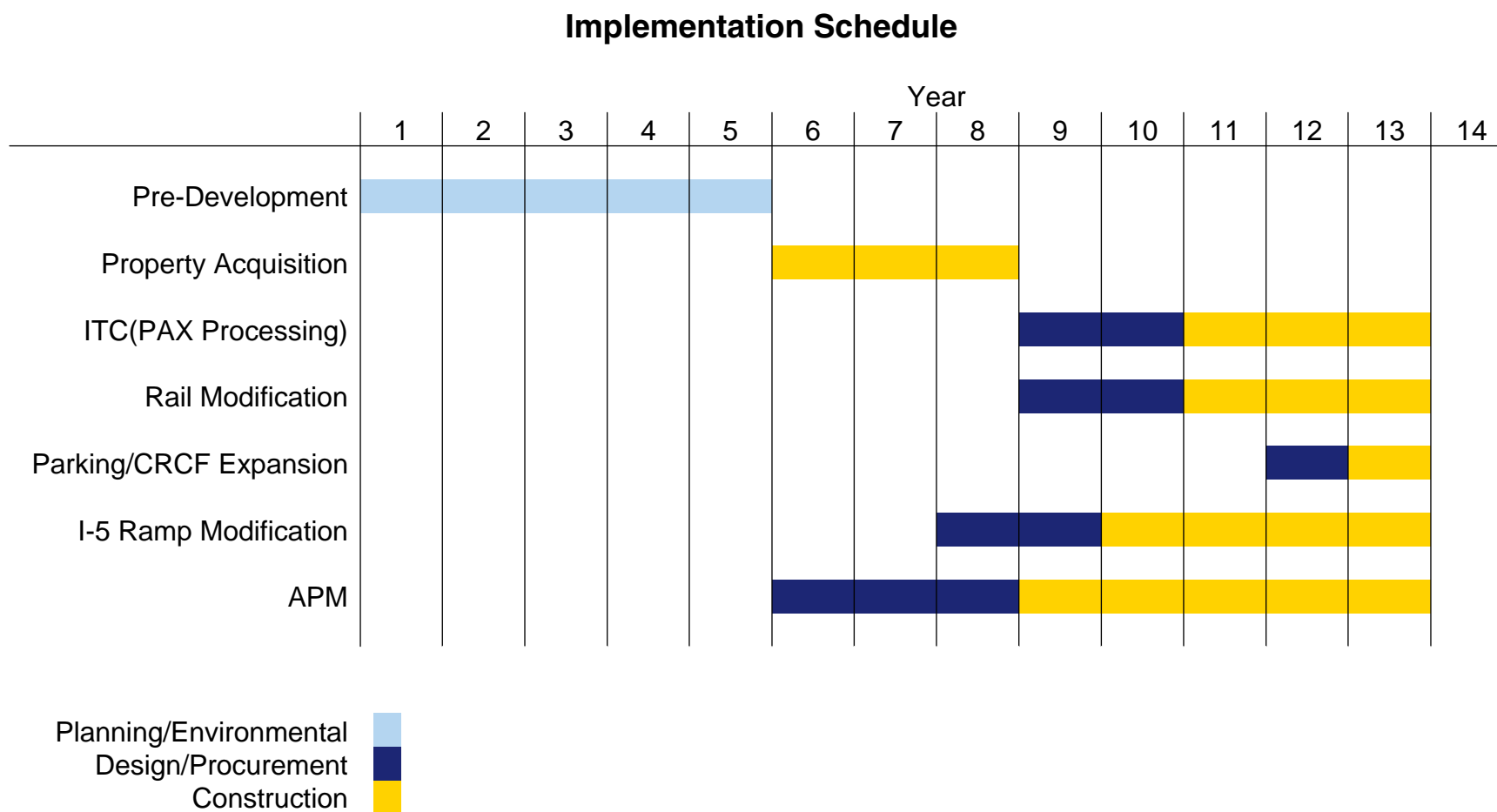
## Order of Magnitude Cost Estimates and Potential Funding Sources

Component	Cost Estimate	Potential Funding Source
Property Acquisition	\$13 M	PFC/Bonds
ITC (Passenger Processing)	\$311 M	SANDAG/Bonds/PFC
Rail Modifications	\$13 M	SANDAG/PFC/Bonds
Auto Parking Expansion	\$224 M	Private/Bonds
CRCF Expansion	\$24 M	CFC/Bonds
I-5 Ramps	\$43 M	SANDAG/Bonds
APM	\$611 M	PFC/Private/Bonds
<b>TOTAL</b>	<b>\$1,239 M</b>	

Notes: All costs were taken from Destination Lindbergh and include soft costs and contingency.  
Construction costs for the APM may be less depending on alignment and grade.  
Ancillary and enabling projects included.

# Scenario 1A: Full Build-out of the ITC and North Side Terminal at SDIA

## Implementation Schedule



# Scenario 1B: Preserve SDIA Airfield Capacity for Commercial Service

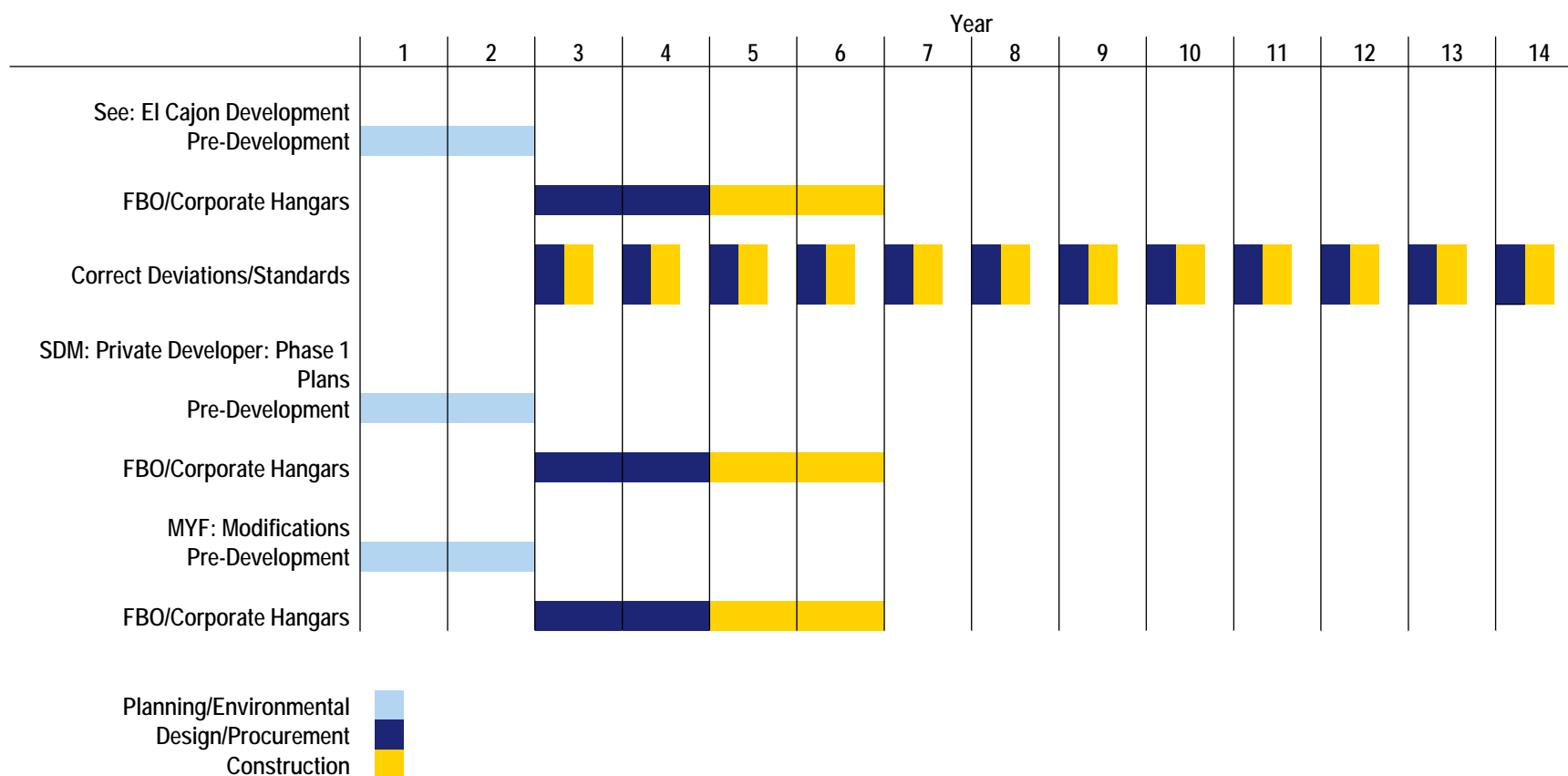
## Order of Magnitude Cost Estimates and Potential Funding Sources

Component	Cost Estimate	Potential Funding Source
SEE: El Cajon development	\$65 M	Private/Bonds
Deviations to standards	\$50 M	Private/Bonds/AIP
Subtotal	\$115 M	
MFY: FBO at Gibbs/Hotel Locations	\$25 M	Private/Bonds
Subtotal	\$25 M	
SDM: FBO	\$39 M	Private/Bonds
SDM: T-Hangars	\$3 M	Private/Bonds
SDM: Helicopter FBO and ARFF	\$6 M	Private/Bonds
Subtotal	\$48 M	
<b>Grand Total</b>	<b>\$188 M</b>	

Notes: FBO cost estimates based on a range of values provided by SDCRAA.  
 Private development costs provided by City of San Diego.  
 Includes utilities and infrastructure improvements for all development.  
 Bonds would be issued by local municipalities or airport sponsors, not SDCRAA.

# Scenario 1B: Preserve SDIA Airfield Capacity for Commercial Service

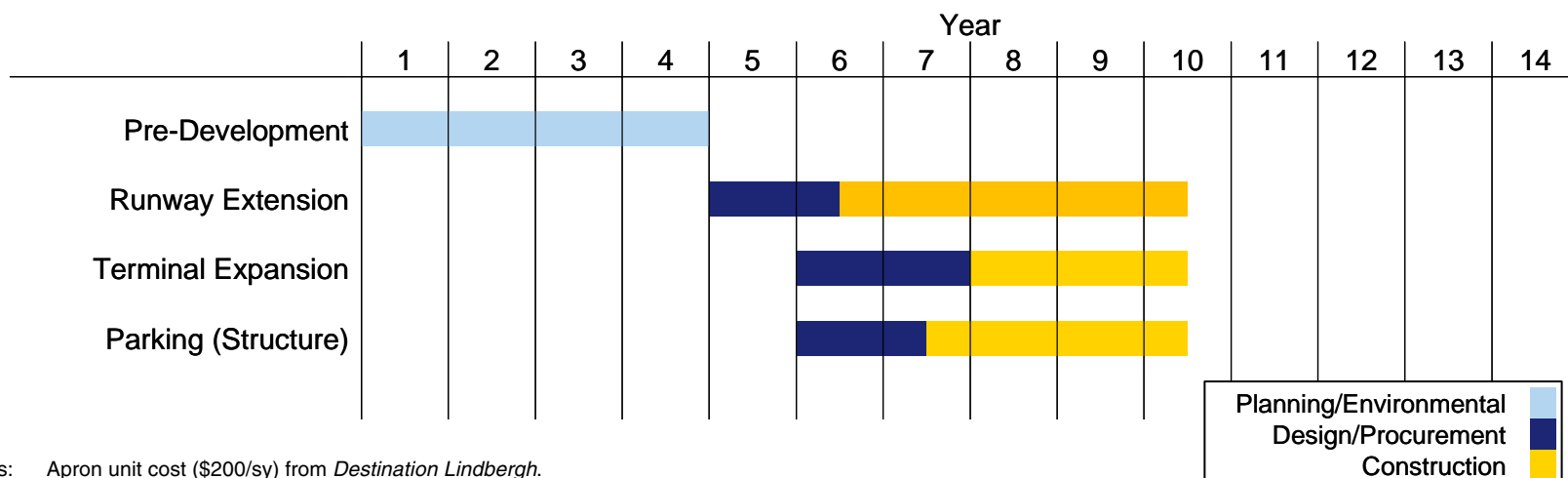
## Implementation Schedule



# Scenario 1C: Enhance Commercial Passenger Service at CRQ

## Cost Estimates, Potential Funding Sources, and Implementation Schedule

Component	Cost Estimate	Potential Funding Source
Runway Extension	\$80 M	AIP/PFC
Terminal Expansion	\$4 M	PFC/Bonds
Parking Garage	\$76 M	Private/Bonds
<b>Total</b>	<b>\$160 M</b>	



Notes: Apron unit cost (\$200/sy) from *Destination Lindbergh*.  
 Cost estimate for runway extension provided by San Diego County.  
 Terminal building expansion cost (\$350/sf) from *Destination Lindbergh*.  
 Structured parking estimated at \$24,000/structured parking stall.

# Scenario 1D: Introduce Commercial Service at Brown Field

## Order of Magnitude Cost Estimates and Potential Funding Sources

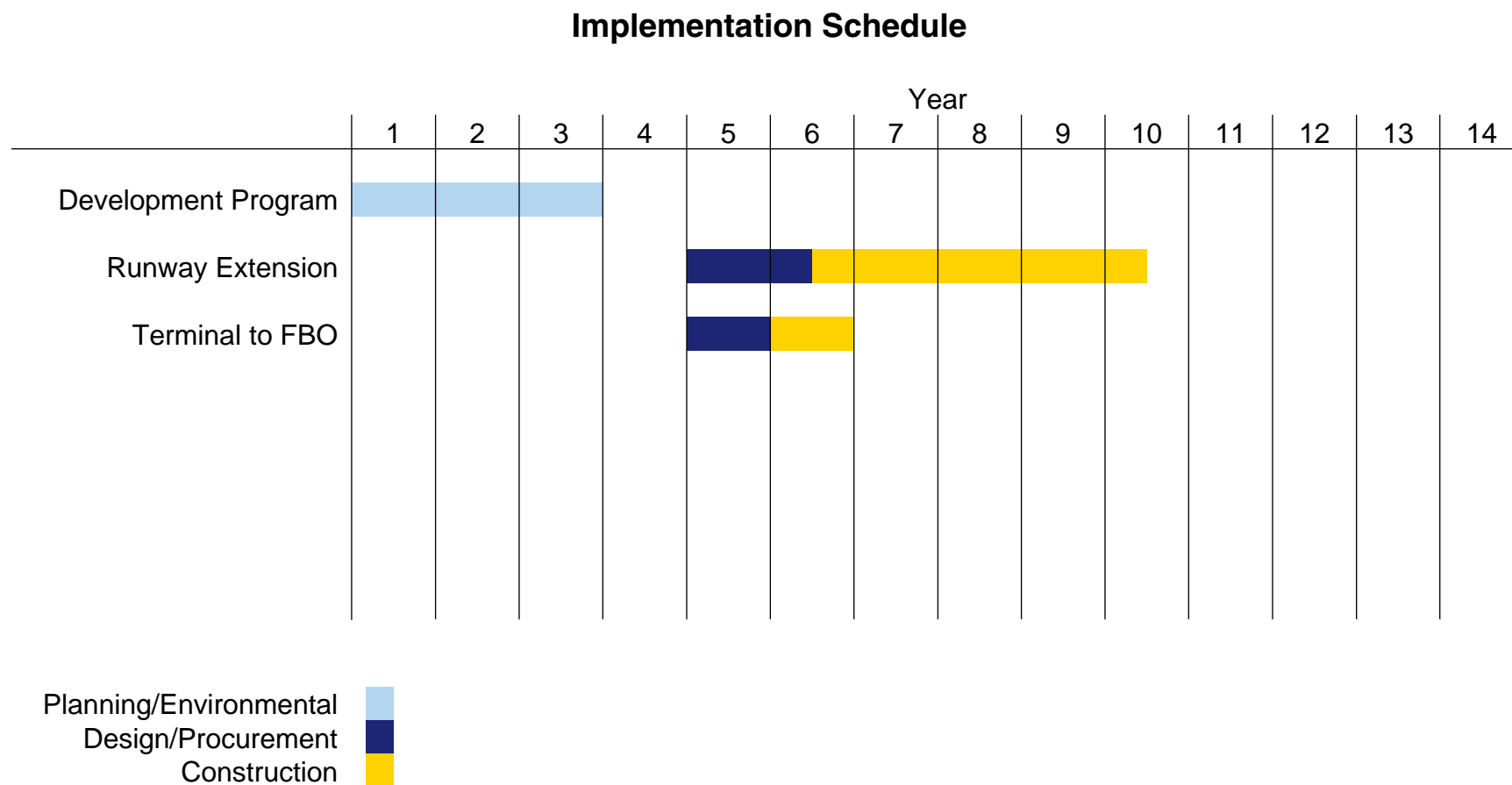
Component	Cost Estimate	Potential Funding Source
Part 139 Certification (Facilities)	\$9 M	AIP/PFC/Bonds
Passenger Terminal	\$19 M	PFC/Bonds
Roadway Improvements	\$10 M	CalDOT/FHWA/PFC/Bonds
Auto Parking	\$11 M	Private/Bonds
Utilities	\$50 M	AIP/PFC/Bonds
<b>Total</b>	<b>\$101 M</b>	

Notes: Apron unit cost (\$200/sy) from *Destination Lindbergh*.  
Terminal Building Expansion cost (\$350/sf) from *Destination Lindbergh* / approximately 28,500 sf per CRQ terminal.  
Part 139 costs estimated based on upgrades and expenses at CRQ and recent cost at other airports.  
Surface parking cost (\$4,000/surface stall) from JDA / 2,800 parking spaces based on full build-out for CRQ parking.  
The 15,500 SY of apron space needed is approximately equal to the space needed to park 6 B737s.  
Utility costs from City of San Diego (\$50M).



# Scenario 1D: Introduce Commercial Service at Brown Field

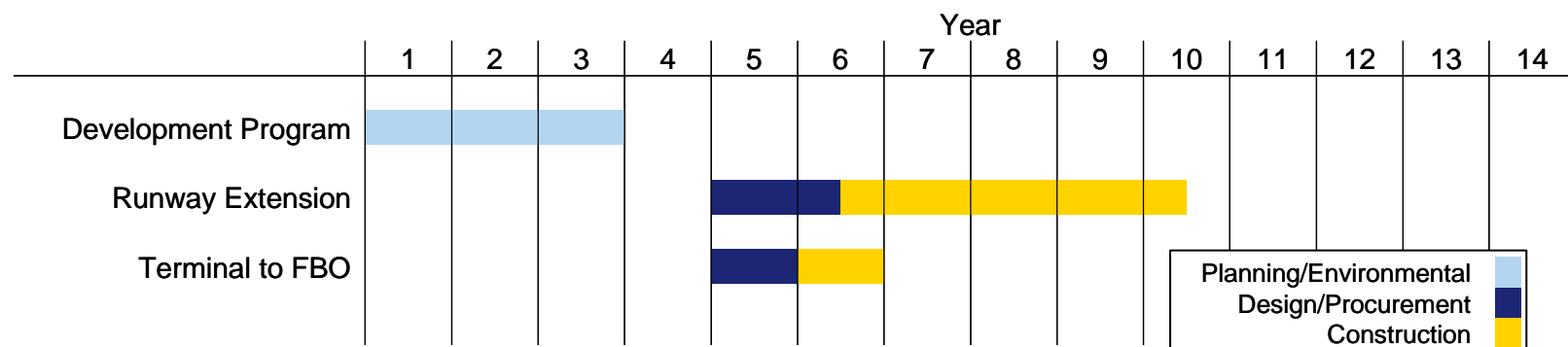
## Implementation Schedule



## Scenario 4A: Enhance CRQ for High-end / Corporate GA

### *Cost Estimates, Potential Funding Sources, and Implementation Schedule*

Component	Cost Estimate	Potential Funding Source
Runway Extension	\$80 M	AIP/Bonds
Conversion of Terminal to FBO	\$2 M	Private/Bonds
<b>Total</b>	<b>\$82 M</b>	

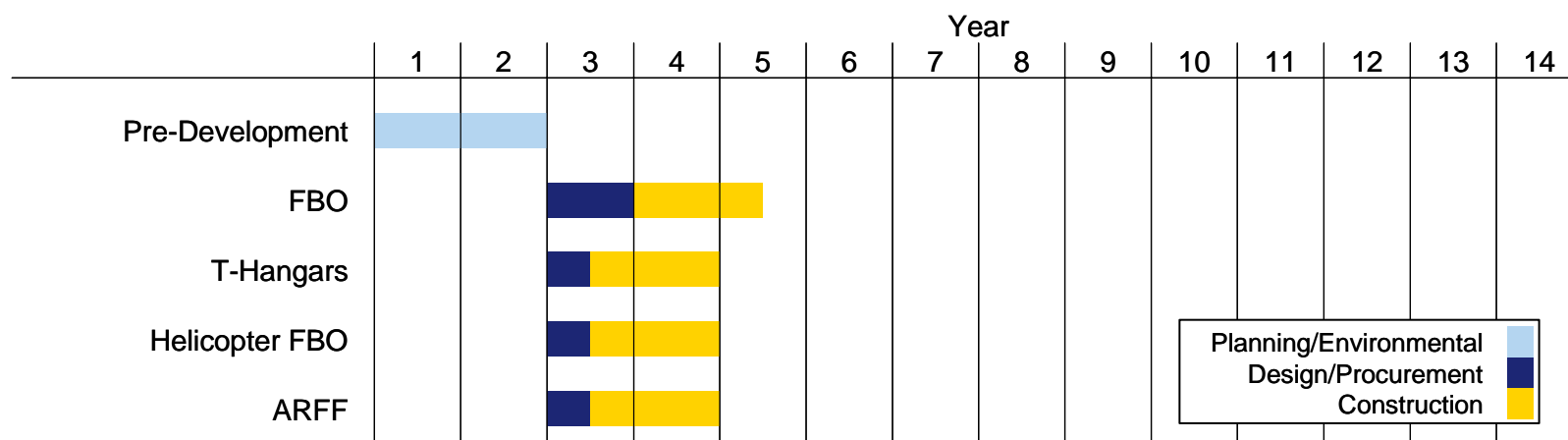


Notes: Cost estimate for runway extension provided by SDCAA.  
Terminal building conversion cost based on recent projects at other airports.

## Scenario 4B: Enhance Brown Field for High-end / Corporate GA

### Cost Estimates, Potential Funding Sources, and Implementation Schedule

Component	Cost Estimate	Potential Funding Source
Utility Upgrade	\$15 M	Private/Bonds
FBO/Corporate Hangars	\$39 M	Private
GA T-Hangars	\$3 M	Private
Helicopter FBO/ARFF	\$6 M	Private/AIP
<b>Total</b>	<b>\$63 M</b>	

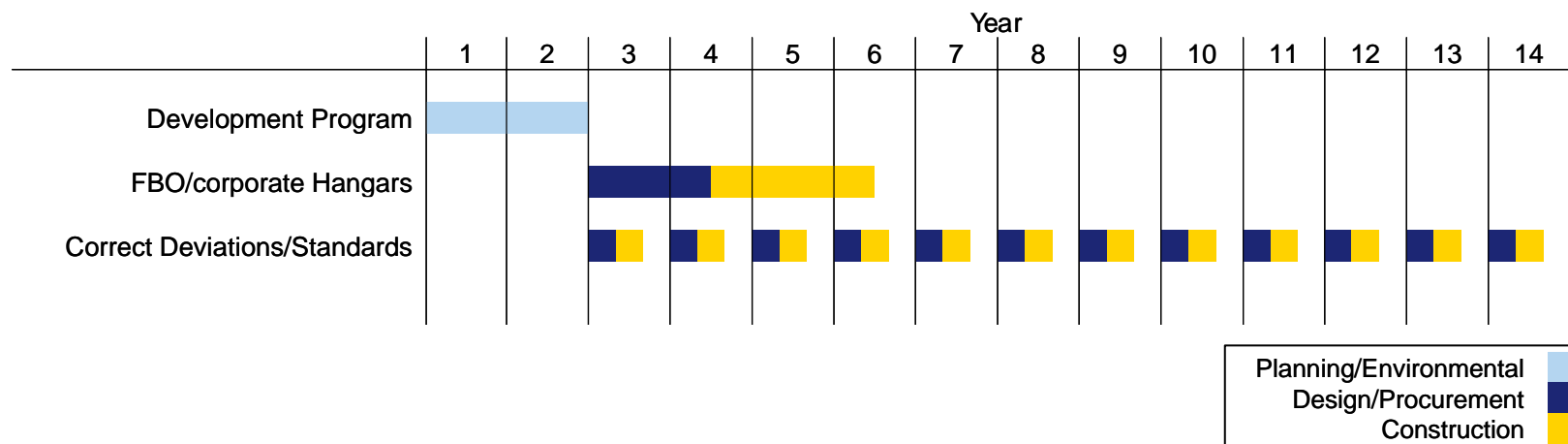


Notes: FBO costs assumed to be between \$25M and \$40M based on recent and planned development costs at local airports.  
Utility costs from City of San Diego and applied based on 25% development in this scenario

## Scenario 4C: Enhance Gillespie Field for Mix-use General Aviation

### *Cost Estimates, Potential Funding Sources, and Implementation Schedule*

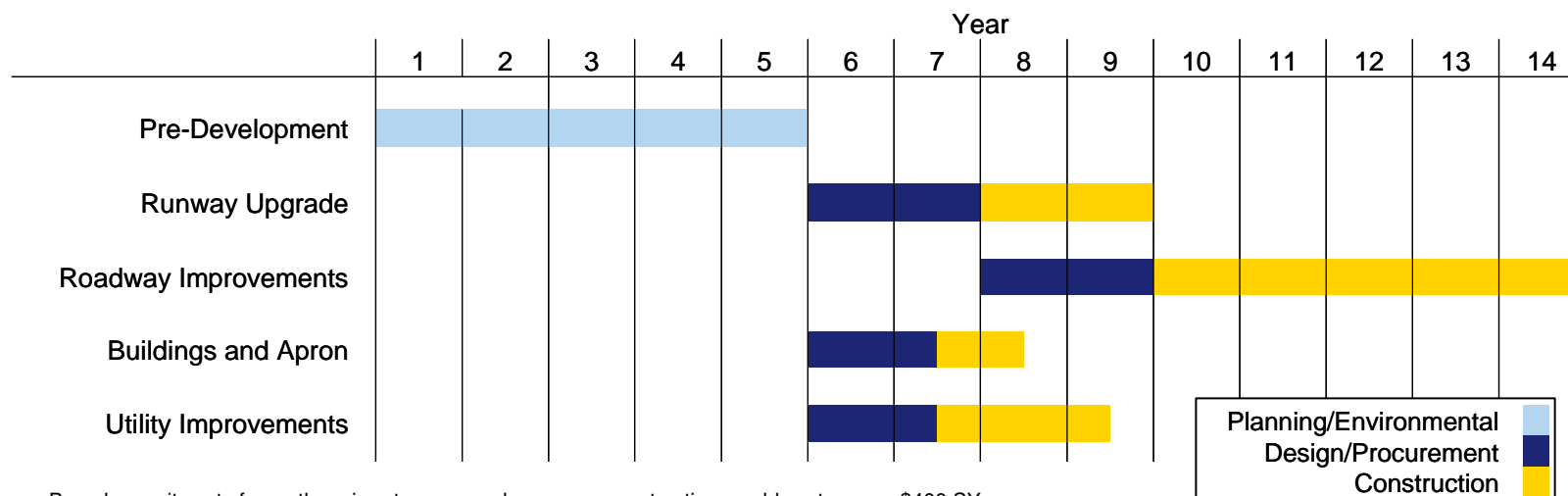
Component	Cost Estimate	Potential Funding Source
El Cajon development	\$40 M	AIP/Private/Local
Correct Deviations to Standards	\$50 M	AIP/Bonds
<b>Total</b>	<b>\$90 M</b>	



# Scenario 5A: Introduce Cargo Service at Brown Field

## Cost Estimates, Potential Funding Sources, and Implementation Schedule

Component	Cost Estimate	Potential Funding Source
Runway Upgrade	\$80 M	AIP/Bonds
Roadway Improvements	\$10 M	SANDAG/FHWA/Bonds
Cargo Buildings and Apron	\$94 M	Private/Bonds
Utilities	\$50 M	Bonds
<b>Total</b>	<b>\$234 M</b>	



Notes: Based on unit costs from other airports; assumed runway reconstruction would cost approx \$400 SY.  
 Cargo apron area was based on existing SF of cargo area at SDIA.  
 Utility costs provided by City of San Diego.

## Supplemental Information



# Baseline Facilities and Operations Data

	San Diego International SAN			McClellan-Palomar CRQ			Montgomery Field MYF			Brown Field Municipal SDM			Gillespie Field SEE			Ramona RNM			Tijuana-Rodriguez TIJ					
Airport Activity Statistics																			Historical 2007			Forecast 2030		
Annual Enplanements Annual Operations	Historical 2007	Forecast 2030 (Baseline) (High)		Historical 2007	Forecast 2030 (Baseline) (High)		Historical 2007	Forecast 2030 (Baseline) (High)		Historical 2007	Forecast 2030 (Baseline) (High)		Historical 2007	Forecast 2030 (Baseline) (High)		Historical 2007	Forecast 2030 (Baseline) (High)		Historical 2007	Forecast 2030 (Baseline) (High)				
	9.2 Million 229,486	14.1 Million 309,800	15.5 Million 363,400	46,909 212,023	50,000 268,700	426,200 279,900	N/A 222,492	N/A 271,800	N/A --	N/A 145,661	N/A 175,900	N/A 281,500	N/A 295,652	N/A 461,000	N/A 489,600	N/A 164,699	N/A 193,000	N/A 242,100	2.3 Million 56,200	4.4 Million Approx. 70,000	6.9 Million --			
Regional Forecast Facility Improvement and Operational Assumptions	Baseline Scenario assumes construction of new gates, airfield improvements, auto parking, and roadway improvements beginning in 2009. Continued deployment of narrow body jets; replacement of small regional jets to larger regional jets; increased use of wide body jets as international activity grows; projected increase of load factors. High Scenario enplanement forecast reflects lower fuel prices more than Baseline Scenario.			Baseline Scenario assumes SkyWest will continue to serve LAX and replace EMB120 aircraft with CRJ200 (or similar) aircraft in 2013. Planned 38,000 square feet of new hangar space developed in 2009. High Scenario assumes Runway extension to accommodate CRJ200, EMB170, EMB190 and 72-seat Q400 or similar aircraft without restrictions (no indication of length required). Markets potentially served in addition to LAX include: LAS, PHX, DEN, and SFO.			None Identified			High Scenario assumes planned 340 acre development in association with Distinctive Projects Company is implemented. Development includes additional hangar capacity to accommodate 290 additional based aircraft; full occupancy realized.			High Scenario assumes planned 70 acre Cajon Air Center development is implemented with 55 acres of new aircraft storage hangars; full occupancy realized. Majority of additional based aircraft would originate from outside San Diego County (as opposed to other County airports). Forecasts represent unconstrained conditions, and activity levels may exceed current capacity.			High Scenario assumes planned development of the Ramona Air Center in 2017-2019, including 56 private hangars and 40 public hangars; full occupancy realized.			Not Included in the regional forecast					
Airport Facilities																								
FAA NPIAS Designation	Large Hub Primary Commercial			Non-Hub Primary Commercial			Reliever			Reliever			Reliever			Reliever			N/A					
California Aviation System Plan Designation	Primary Commercial Hub			Primary Commercial Non-Hub			Metropolitan GA			Regional GA			Regional GA			Regional GA			N/A					
Total Airport Acreage	661			487			456			880			775			378			1,112					
FAA Airport Reference Code	D-V			B-II			B-II			D-IV			B-II			B-II			ICAO 4E					
Runway Data	9/27 - 9,401			6/24 - 4,897			5/23 - 3,400 10L/28R - 4,577 10R/28L - 3,400 Runway strength limited to aircraft weighing less than 20K lbs.			8L/26R - 7,972 8R/26L - 3,180			9L/27R - 5,341 9R/27L - 2,737 17/35 - 4,147			9/27 - 5,000 (Paved)			9/27 - 9,711 10/28 - 8,200 CLOSED					
Instrument Approach	Runway 9: ILS CAT I Runway 27: Non-precision			Runway 24: ILS CAT I			Runway 28R: ILS CAT I			Non-precision			Non-precision			Non-precision			Runway 9: ILS					
	Oceanside Municipal OKB			Fallbrook Community L18			Borrego Valley L08			Ocotillo L90			Agua Caliente L54			Jacumba L78								
Airport Activity Statistics																			Historical 2007			Forecast 2030		
Annual Enplanements Annual Operations	Historical 2007	Forecast 2030 (Baseline) (High)		Historical 2007	Forecast 2030 (Baseline) (High)		Historical 2007	Forecast 2030 (Baseline) (High)		Historical 2007	Forecast 2030 (Baseline) (High)		Historical 2007	Forecast 2030 (Baseline) (High)		Historical 2007	Forecast 2030 (Baseline) (High)		Historical 2007	Forecast 2030 (Baseline) (High)				
	N/A 14,128	N/A 18,200	N/A 36,500	N/A 33,286	N/A 43,200	N/A --	N/A 26,251	N/A 22,400	N/A --	N/A 800	N/A 800	N/A --	N/A 4,400	N/A 4,400	N/A --	N/A 325	N/A 325	N/A --						
Regional Forecast Facility Improvement and Operational Assumptions	High Scenario assumes Airport Property Ventures will take over management of airport; 100 new hangars developed for additional based aircraft.			None Identified			None Identified			None Identified			None Identified			None Identified								
Airport Facilities																								
FAA NPIAS Designation	General Aviation			General Aviation			General Aviation			Not in NPIAS			Not in NPIAS			Not in NPIAS								
California Aviation System Plan Designation	Regional GA			General Aviation			General Aviation			General Aviation			General Aviation			General Aviation								
Total Airport Acreage	236			290			246			351			160			131								
FAA Airport Reference Code	B-I			B-I			B-II			B-I			B-I			B-I								
Runway Data	6/24 - 2,712 Runway strength limited to aircraft weighing less than 12K lbs.			18/36 - 2,160 Runway strength limited to aircraft weighing less than 12K lbs.			8/26 - 5,011			9/27 - 2,475 (Dirt) 13/31 - 4,210 (Dirt)			11/29 - 2,500 Runway strength limited to aircraft weighing less than 12K lbs.			7/25 - 2,510 (Gravel) Runway strength limited to aircraft weighing less than 12K lbs.								
Instrument Approach	Non-precision			Non-precision			Non-precision			None (visual only)			None (visual only)			None (visual only)								
																			Notes: NPIAS = National Plan of Integrated Airport Systems N/A = Not Applicable					
																			Sources: Forecast data—San Diego County Regional Aviation System Aviation Demand Forecasts, Brown, Inc., December 2000 Airport facility data—National Integrated Airport Systems, Tijuana-Rodriguez data—C-Terminal - Market Demand Infrastructure Management 2006.					

Notes: NPIAS = National Plan of Integrated Airport Systems  
N/A = Not Applicable

Sources: Forecast data—San Diego County Regional Aviation Strategic Plan—Aviation Demand Forecasts, Landrum & Brown, Inc., December 2008.  
Airport facility data—National Plan of Integrated Airport Systems, FAA, 2008.  
Tijuana-Rodriguez data—Cross Border Terminal - Market Demand Study, Infrastructure Management Group, Inc. 2006.

# Strategic Assessment Summary Matrix

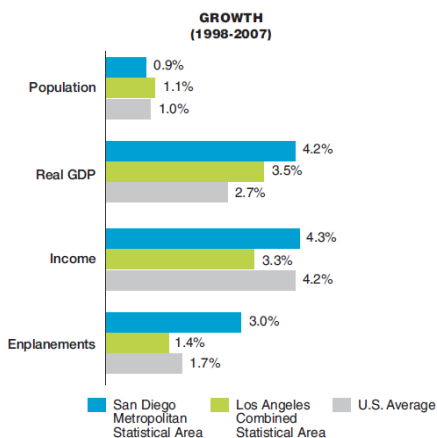
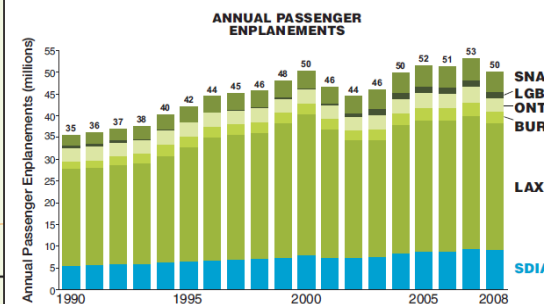
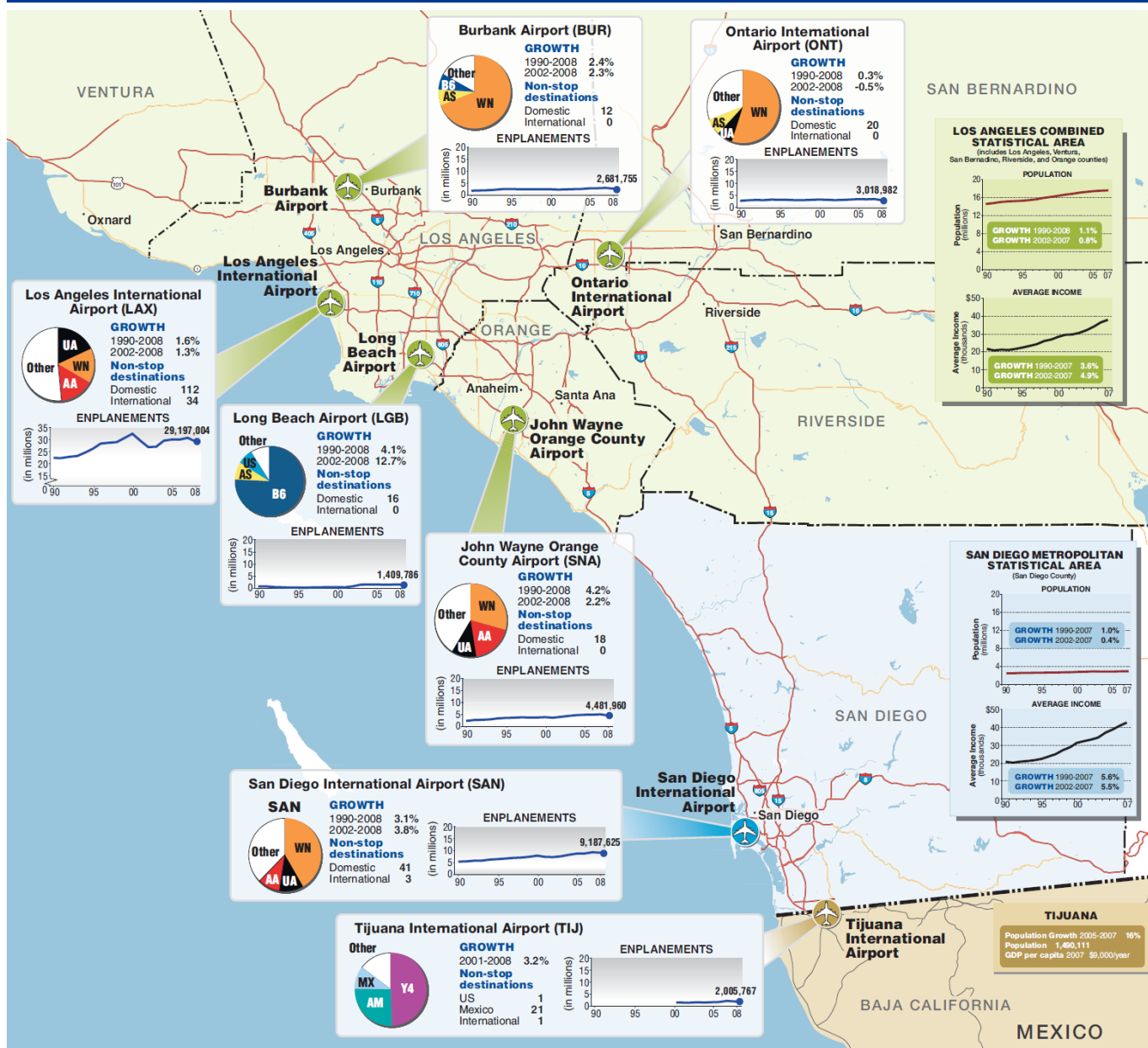
	Commercial Service		FAA Designated Reliever				General Aviation			Not in FAA NPIAS			
	San Diego International <b>SAN</b>	McClellan-Palomar <b>CRQ</b>	Montgomery Field <b>MYF</b>	Brown Field Municipal <b>SDM</b>	Gillespie Field <b>SEE</b>	Ramona <b>RNM</b>	Oceanside Municipal <b>OKB</b>	Fallbrook Community <b>L18</b>	Borrego Valley <b>L08</b>	Ocotillo <b>L90</b>	Agua Caliente <b>L54</b>	Jacumba <b>L78</b>	Tijuana-Rodriguez <b>TIJ</b>
<b>Current Market/Role</b>													
<b>Ownership/Control</b>	San Diego Regional Airport Authority	San Diego County	City of San Diego	City of San Diego	San Diego County	San Diego County	City of Oceanside	San Diego County	San Diego County	San Diego County	San Diego County	San Diego County	U.S./Mexico partnership
<b>GA - Small/Recreational and Training</b>	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
<b>GA - Large/Corporate Jet and Air Taxi</b>	✓	✓	✓	✓	✓	✓	—	—	—	—	—	—	✓
<b>Air Carrier - Commuter</b>	✓	✓	—	—	—	—	—	—	—	—	—	—	✓
<b>Air Carrier - Mainline</b>	✓	—	—	—	—	—	—	—	—	—	—	—	✓
<b>Air Cargo</b>	✓	—	✓	—	—	—	—	—	—	—	—	—	✓
<b>Facility Assessment/Accommodation of Current Users</b>													
<b>Primary Regional Access</b>	1.5 mi from I-5	2 mi from I-5	2 mi from CA 163	3 mi from I-805	1 mi from CA 67	20 mi from I-15	2 mi from I-15	10 mi from I-15	14 mi from CA 78	<1 mi from CA 78	37 mi from I-8	2 mi from I-8	3 mi from I-5
<b>Airfield - Runway Length</b>	9,491' Paved	4,897' Paved	4,577' Paved 3,400' Paved	7,972' Paved 3,169' Paved	5,341' Paved 3,147' Paved	5,000' Paved	2,712' Paved	2,160' Paved	5,811' Paved	4,210' Dirt 2,475' Dirt	2,500' Paved	2,510' Gravel	9,711' Paved
<b>Instrument Approach</b>	R/W 5-ILS/CAT I R/W 20R - Localizer	R/W 24-ILS/CAT I	R/W 20R-ILS/CAT I	Non precision	Non precision	Non precision	GPS	Non precision	GPS	None	None	None	R/W 9-ILS/CAT I 20R Localizer
<b>Passenger Terminal Building</b>	41 gates; 18M annual passengers	New terminal w/ 4 gates; 50K annual passengers	None	None	None	None	None	None	None	None	None	None	16 gates; 4M annual passengers
<b>FBO/Corporate Terminal</b>	Existing	Modern	Existing	Planned	Existing	Existing	None	Existing	Existing	None	None	None	Existing
<b>Cargo Facilities</b>	Existing	None	Limited	None	None	None	None	None	None	None	None	None	Existing
<b>Possible Change In Role?</b>													
<b>Development Potential</b>													
<b>Proximity to Users/Market Base (a)</b>	2 mi from downtown San Diego	22 mi from downtown San Diego	8 mi from downtown San Diego	20 mi from downtown San Diego	22 mi from downtown San Diego	36 mi from downtown San Diego	40 mi from downtown San Diego	56 mi from downtown San Diego	90 mi from downtown San Diego	95 mi from downtown San Diego	75 mi from downtown San Diego	74 mi from downtown San Diego	25 mi from downtown San Diego
<b>Runway Upgrade</b>	Physical constraints	Runway extension to 6,000' possible	Physical and environmental constraints	On- and off-airport land available	Physical constraints	Environmental constraints	Physical constraints	On-Airport land available	Off-Airport land available	Off-Airport land available	Off-Airport land available	Off-Airport land available	Land available
<b>On-Airport Land Available for Development</b>	40 acres	Terminal upgrade possible; 10 acres	17 acres	257 acres	191 acres	130 acres	17 acres	45 acres	70 acres	238 acres	N/A	56 acres	166 acres
<b>Proximity to Highway/Mass Transit</b>	Close to I-5; bus service	Close to I-5; bus service	Close to I-805 and I-15; bus service	Close to I-805 and I-15; CA 905 ext. planned	CA 52 extension; link to 2 trolley lines	Planned improvements	Close to I-5; bus service	Access difficult; no mass transit	Access difficult; no mass transit	Access difficult; no mass transit	Access difficult; no mass transit	Access difficult; no mass transit	CA 905 extension; bus service
<b>Environmental Concerns/On-Airport</b>	Some contaminated sites; habitat protection	Environmental contamination	Vernal pools; habitat protection	Vernal pools; habitat protection	No known	Extensive vernal pools	No known	No known	No known	No known	No known	No known	Unknown
<b>Community Concerns</b>	Noise and traffic congestion	Potential noise and development	Aircraft noise	Aircraft noise	Noise and community redevelopment	Potential future residential development	No known	No known	No known	No known	No known	No known	Social and inter-governmental issues
<b>Summary</b>													
<b>Consideration in the RASP</b>													
<b>Should the airport be considered for additional uses/opportunities to optimize the region's aviation system?</b>	Consideration for additional uses/opportunities not expected. Destination Lindbergh established that SAs will reach capacity before 2020	Consideration for additional uses/opportunities should be considered in the RASP because of proximity to certifications, population base, terminal infrastructure, and potential for runway extension	Consideration for additional uses/opportunities may be considered in the RASP because of proximity to population base and availability of land for passenger and cargo activity; physical and environmental barriers to runway extension/upgrade may prohibit accommodation of new user groups	Consideration for additional uses/opportunities should be considered in the RASP because of proximity to population base, existing runway length, and availability of developable land for terminal or cargo facilities	Consideration for additional uses/opportunities should be considered in the RASP because of proximity to population base, access to light rail, and availability of developable land to accommodate new user groups	Consideration for additional uses/opportunities may be considered in the RASP because of proximity to existing facilities, projected population growth, and planned roadway improvements; potential environmental constraints may restrict development	Consideration for additional uses/opportunities should not be considered in the RASP because of lack of infrastructure, community opposition, and limited available land for development; significant constraints to runway extension	Consideration for additional uses/opportunities should not be considered in the RASP because of remote location, access, and potential development costs	Consideration for additional uses/opportunities should not be considered in the RASP because of remote location, access, and potential development costs	Consideration for additional uses/opportunities should not be considered in the RASP because of remote location, access, and potential development costs	Consideration for additional uses/opportunities should not be considered in the RASP because of remote location, access, and potential development costs	Consideration for additional uses/opportunities should not be considered in the RASP because of remote location, access, and potential development costs	Consideration for additional uses/opportunities may be considered in the RASP because of proximity to population base and existing infrastructure; intergovernmental agreement required for cross border operation

(a) Proximity to downtown San Diego used as criterion in this matrix.  
Note: NPIAS = National Plan of Integrated Airport Systems

LEGEND ■ Compatible ■ Marginal ■ Incompatible

Regional Aviation Strategic Plan  
DRAFT

# Historical Region-wide Aviation Demand



Notes: Airports with fewer than 1 million annual enplanements are not listed.  
GROWTH = Compound Annual Growth Rate.  
US airports airline market share is based on seat capacity in 2008.  
Tijuana International Airport airline market share is based on seat capacity 2009 to date.  
All airports nonstop destinations are from Quarter 1 2009.  
Income figures are real (1999) dollars.

Sources: Jacobs Consultancy, based on T100, census, Bureau of Economic Analysis, Cross Border Terminal Study, August 2009.

AVIATION TRAFFIC AND DEMOGRAPHICS  
SOUTHERN CALIFORNIA/BAJA CALIFORNIA REGION  
San Diego County Regional Airport Authority



# Existing and Projected Region-wide Aviation Demand

