

# **“So Much to So Many for So Little”**

**A White Paper by The Rail Passengers Association**

**Outlining the Benefits of  
Daily Passenger Train Service on the I-10 Corridor  
Between Los Angeles and New Orleans**

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# **The Public Interest Demands Daily Train Service On the I-10 Corridor**

## **Chapter #1**

### **Executive Summary**

The Rail Passengers Association (RAIL PASSENGERS) calls on all stakeholders, especially Amtrak to work toward daily operation of the Sunset Limited between Los Angeles and New Orleans. We base this recommendation on seven factors:

- This corridor serves a large and rapidly growing population that is now larger than that of the Northeast Corridor;
- The corridor connects nine Metropolitan Statistical Areas (MSAs) that are, with one exception, within 300 to 400 miles of each other;
- Historic ridership results with Amtrak frequency changes (up or down) show a strong correlation with ridership changes between both urban and rural city pairs for stations 300 to 400 miles of each other;
- Daily service will not require any more equipment than the current tri-weekly service;
- The incremental revenue from daily through service has a reasonable probability of covering most of the incremental cost and of not increasing Amtrak's need for additional federal operating support in any significant way;
- The Amtrak Board of Directors approved daily service eight years ago in 2010;
- The Mayors of cities along the corridor support daily service;

An increase from tri-weekly to daily service is just the first of several steps that Amtrak should take to address the mobility needs of a large and growing section of America. Future action should:

- Add stops to tap growth opportunities;
- Reroute the train between Los Angeles and Riverside via Fullerton rather than through Pomona & Ontario;
- Restore the route through downtown Phoenix;
- Establish multiple daily frequencies between Los Angeles – Phoenix – Tucson and San Antonio – Houston – New Orleans.

The major obstacle to daily service on the I-10 corridor, as well as any additional frequencies on corridor segments in the future, are capacity issues on the Union Pacific Railroad (UP). When Amtrak approached UP about daily operation of the Sunset in 2010, UP demanded substantial infrastructure improvements that it claimed were necessary. The magnitude of the demands deterred Amtrak from even attempting to negotiate a deal.

In order for Amtrak to address the mobility needs of the large and rapidly growing population in the Southwest – with through service between corridor end points and additional frequencies on corridor segments – it must come to an agreement with Union Pacific. While UP’s network capacity constraints are not directly associated with daily operation of the Sunset Limited, they must be addressed to facilitate reliable operation.

To that end, Rail Passengers proposes *capitalized access payments* to UP – similar to those that the State of California negotiated with UP’s predecessor, Southern Pacific, for its the Capitol Corridor service. The Department of Transportation is the best qualified and resourced agency to assess UP’s capacity needs and to coordinate federal, state, local and railroad funding to mitigate UP’s rail network capacity constraints. The partnership that California’s Capital Corridor Joint Powers Authority has built with Union Pacific demonstrates the feasibility of this concept. The agreement funding infrastructure improvements needed to sustain operation of the Southwest Chief route provides further evidence of the feasibility of this strategy for mitigating the limitations and constraints of the nation’s railroad infrastructure.

## Chapter #2

# Introduction

Since its inception, Amtrak has viewed its service in the I-10 corridor as an operation to manage rather than an opportunity to develop. Its route accounting system – Amtrak Performance Tracking (APT) and its predecessor Route Profitability System (RPS) – has consistently ranked the Sunset Limited as its worst performing route. It took a mandate from Congress to force Amtrak to develop ways to improve its performance in serving this market.<sup>1</sup>

Amtrak convened a multi-disciplinary team<sup>2</sup> that produced a Performance Improvement Plan (PIP) for the Sunset Limited/Texas Eagle Routes. The plan contained three core recommendations:

- **Change the schedule** to re-establish connections with the Coast Starlight in each direction, reduce dwell times at San Antonio, and provide attractive daylight service to major cities;
- **Begin daily service** along the entire I-10 corridor between Los Angeles and New Orleans;
- **Change the routing** between Los Angeles and San Bernardino from the Union Pacific line through Pomona and Ontario to the BNSF line through Fullerton in order to serve the much larger market in Orange County.

The plan projected substantial benefits from these changes:

- 133% increase in frequency;
- 102,000 more passenger trips;
- \$9.7 million in incremental revenue;
- \$12.7 million in incremental operating cost;
- Only \$3.0 million in additional federal support;
- No additional equipment.

The Amtrak Board approved the plan in 2010,<sup>3</sup> but nine years later, Amtrak has only implemented the schedule change. It has not followed through on either daily service or re-routing the train through Fullerton.

The Rail Passengers Association has revisited this report and updated it. In preparing the original PIP report, the Amtrak team based its revenue, ridership and cost projections on 12-month actuals for FY 2009. In updating this report, Rail Passengers has based its projections on the 12-month actuals for FY 2017.

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<sup>1</sup> Section 210 of the Passenger Rail Investment and Improvement Act of 2008 (PRIIA).

<sup>2</sup> Marketing & Product Development, Operations, Policy & Development, Finance and Government Affairs.

<sup>3</sup> PRIIA Section 210 Performance Improvement Program, Sunset Limited/Texas Eagle, Amtrak, September 2010.

We concluded that:

- A 125% increase in Ridership & Revenue could cover most incremental costs;
- A 133% increase in frequency thus had a high probability of producing such a near-breakeven in incremental revenue;
- The operating plan would not require additional equipment;
- Switching in San Antonio could be simplified without eliminating through car service between New Orleans and Los Angeles;
- Daily service had strong support from public officials along the route.

To paraphrase Winston Churchill, a daily Sunset Limited would provide:

***“So much to so many for so little.”***

We call on Congress, Amtrak’s senior management and stakeholders to make the original plan (and our update) a reality. The improvement of Amtrak’s service to the people in the Southwest should be a significant priority for “America’s Railroad.” Daily service represents a long overdue first step in what should be a longer-range, multi-phase program<sup>4</sup> to address the mobility needs of the millions of taxpayers who travel along the I-10 transportation artery between Los Angeles and New Orleans each day.

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<sup>4</sup> Other steps include: (1) Re-rerouting through Fullerton; (2) Adding additional station stops such as Sugarland, Flatonia and Marfa TX; and Wilcox, AZ; (3) In conjunction with Arizona, restoring service to downtown Phoenix; (4) Increasing service frequencies on high volume corridor segments: LAX-PSN-PHX-TUC and SAS-HOS-NOL.

## Chapter #3

### Market Size and Growth

In the 46 years between 1970 and 2016, the population of the five states connected by the I-10 Corridor between Los Angeles and New Orleans has grown 115%, from 37.6 to 80.8 million. These states are now home for one of every four Americans. During the same period, the population of the counties closest to the corridor has grown from 13.1 million to 27.0 million, a 106% increase.

#### **I-10 Corridor Population & Growth<sup>5</sup>**

	<b>1970</b>	<b>2017</b>	<b>Change</b>	<b>% Change</b>	<b>% of US</b>
<b>State</b>	37,606,819	80,806,365	43,199,546	115%	25.0%
<b>County</b>	13,145,190	27,027,311	13,882,044	106%	8.7%
<b>United States</b>	203,302,037	309,300,000	105,997,963	52%	100.0%

To provide context, we've compared these statistics to those for the I-95 corridor between Boston and Washington. In the same 46-year time span, the population of the eight states and the District of Columbia has grown from 52.1 million to 60.6 million, a 16% increase. These states are now home to fewer than one in five Americans compared to more than one in four in 1970. The population of the counties closest to corridor stations has grown from 13.2 million to 13.8 million, an increase of only 4%.

#### **I-95 Corridor Population & Growth<sup>6</sup>**

	<b>1970</b>	<b>2017</b>	<b>Change</b>	<b>% Change</b>	<b>% of US</b>
<b>State</b>	52,113,047	60,568,324	8,455,277	16%	18.7%
<b>County</b>	13,208,336	14,359,781	1,151,445	4%	4.6%
<b>United States</b>	203,302,037	309,300,000	105,997,963	52%	100.0%

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<sup>5</sup> State population as of 2016; county population as of 2017.

<sup>6</sup> State population as of 2016; country population as of 2017.

The I-10 corridor is more than four times longer than the I-95 corridor, so its population density is correspondingly lower.

**Population Density by Corridor**

<b>Corridor</b>	<b>Miles</b>	<b>State Population</b>	<b>County Population</b>
<b>I-10</b>	1,995	40,504	12,544
<b>I-95</b>	457	114,033	30,184
<b>I-10 % of I-95</b>	437%	36%	42%

The fact remains, however, that the counties along the I-10 corridor are today home to 80% more people than those along the I-95 corridor, yet Amtrak has ignored this area of the country for its entire history. The difference in density does not justify the difference in service.

We make the comparison to the Northeast not to diminish its importance but to highlight the fact that the people of the Southwest deserve far more for their tax dollars than the less-than-daily “token service” that Amtrak has provided since it assumed operation of Southern Pacific’s passenger trains in 1971.



## Chapter #4

# Ridership & Revenue

The market for passenger train service in I-10 Corridor has proved to be far more responsive to service improvement than Amtrak models predicted. The schedule change – which improved connections and provided better times in key cities – by itself has produced 99% of the ridership and 109% of the revenue gains that Amtrak projected for all three of the proposed service improvements: new schedule, daily service and the Fullerton reroute.

### Ridership & Revenue PIP Projections vs FY 2017 Actuals

	PIP Projection	FY 2017 Actual	Difference
Eagle/Sunset	442,300	444,328	2,028
Coast Starlight	447,700	438,781	(8,919)
<b>Total Passengers</b>	<b>890,000</b>	<b>883,109</b>	<b>(6,891)</b>
Eagle/Sunset	\$38,800,000	\$40,071,005	\$1,271,005
Coast Starlight	\$40,000,000	\$46,038,080	\$6,038,080
<b>Total Revenue</b>	<b>\$78,800,000</b>	<b>\$ 86,109,085</b>	<b>\$7,309,085</b>

This outcome is a surprise because, of the three proposed service improvements, daily service had the greatest power to increase ridership & revenue. Transportation experts agree that frequency is a critical factor for travelers considering the train especially for those traveling between both cities and rural areas 300 to 400 miles apart. Experience also has demonstrated that volume and revenue change roughly in proportion to changes in frequency – either up or down.

Examples of increased frequency:

- **Capitol Corridor:** increased frequencies produced enough additional volume and revenue to finance further increases without additional operating support;
- **Midwest Regionals:** volume and revenue increased in proportion to additional frequencies.
- **Lynchburg:** second frequency between DC and Lynchburg did not reduce volume and revenue on the Crescent.

Example of reduced frequency:

- **Florida:** elimination of a third frequency between Savannah and Miami (Silver Palm) did not produce any additional volume or revenue on the remaining two trains (Meteor and Star).

- **Mercer Management:** When Amtrak’s Intercity Strategic Business Unit implemented Mercer’s recommendation for less than daily service on its long-distance mainline routes, volume and revenue fell faster than costs.

In drawing on this experience, Rail Passengers concluded that a 133% increase in frequency could produce a similar increase in volume and revenue, especially because less than daily service does not meet the needs of most travelers in the short and medium distance markets where trip volumes are greatest.

In calculating the FY 2017 base ridership and revenue for the Sunset, Rail Passengers recognized that, because of connections, the Sunset route generates far more ridership and revenue than Amtrak’s financial statements attribute to it. For this reason, we used Amtrak’s connections statistics together with its origin and destination data to estimate the “base” volume and revenue that going from tri-weekly to daily would affect. The table below summarizes our calculations.<sup>7</sup>

**Daily Service  
Impact on Ridership & Revenue  
Projected from FY 2017 Tri-Weekly Actual**

	Ridership			Revenue		
	FY 2017 Tri Weekly	Projection for Daily	Increase	FY 2017 Tri Weekly	Projection for Daily	Increase
<b>Sunset</b>	98,649	221,960	123,311	\$12,362,058	\$27,814,630	\$15,452,572
<b>Connecting Routes</b>	38,928	87,588	48,660	\$4,055,349	\$9,124,535	\$5,069,186
<b>Total</b>	137,577	309,548	171,971	\$16,794,853	\$36,316,611	\$20,521,758

<sup>7</sup> See Table #3 in Appendix for detail. Projection for daily service obtained by multiplying FY 2017 base by 125%.

## Chapter #5

### Incremental Cost

The Sunset/Eagle Performance Improvement Plan addressed eight specific cost categories that the Amtrak Team believed would change with the increase in frequency.<sup>8</sup> Amtrak projected incremental costs based on the actual costs APT reported for FY 2010. RAIL PASSENGERS applied the Amtrak methodology, with a few adjustments, to the more current costs reported for FY 2017 to produce projected costs for daily service. The PIP report projected an incremental cost \$12.2 million. Rail Passengers estimates it today at \$20.4 million, an increase of \$8.2 million over the PIP proposal. The following table summarizes the differences in the projections. Appendix Table #4 explains the methodology used in making the projections.

**Incremental Cost of Daily Service  
2010 PIP vs. 2017 RAIL PASSENGERS Estimates**

	<b>PIP 2010</b>	<b>RAIL PASSENGERS 2017</b>	<b>Difference</b>
Host Railroad	\$3,100,000	\$6,038,000	\$2,938,000
Fuel	\$1,900,000	\$1,883,000	(\$17,000)
Train & Engine Labor	\$3,200,000	\$3,910,000	\$710,000
OBS Labor	(\$90,000)	\$3,793,000	\$3,883,000
F&B Commissary	\$1,144,495	\$1,350,000	\$205,505
Mechanical	\$1,900,000	\$2,220,000	\$320,000
Station	\$100,000	\$100,000	\$0
Remaining Direct & Shared	\$934,000	\$1,100,000	\$166,000
<b>Total Incremental Cost</b>	<b>\$12,188,495</b>	<b>\$ 20,394,000</b>	<b>\$8,205,505</b>

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<sup>8</sup> PRIIA Section 210, FY10 Performance Improvement Plan, Sunset Limited / Texas Eagle, Section IX. Financial and Operational Analysis, Section C, Incremental Impact, pages 37 through 39.

## **Chapter #6**

### **Service Plan**

Rail Passengers proposes a change to the service plan that eliminates a serious deficiency in the PIP proposal. It preserves through car service between New Orleans and Los Angeles that the PIP plan eliminated, recommending instead a separate, all coach train between San Antonio and New Orleans. Their goal was to eliminate extensive and expensive switching required to separate and combine the Eagle and the Sunset in San Antonio.

This service plan, however, would have forced passengers to and from points east of San Antonio to change trains in San Antonio. The absence of a single seat ride and a transfer that occurred either late at night (westbound) or early in the morning (eastbound) inconvenienced nearly one in four passengers and put at risk nearly half of all Sunset revenue. We do not speculate about the negative outcome. Some twenty years ago, Amtrak did the reverse, eliminating through cars between the Eagle and Sunset. Ridership and revenue plunged.

Rail Passengers has developed a simpler method for maintaining through car service that also achieves the PIP team's goal of eliminating extensive and expensive switching in San Antonio. We describe the method in Appendix #6.

## Chapter #7

# Equipment Requirements

Daily service, surprisingly, does not require any more equipment than the current tri-weekly operation although the type of car required is different in some cases. The RAIL PASSENGERS proposal releases a baggage car, a transition sleeper and four Sightseer Lounge Cars and requires four more diner lounges and one coach baggage.

### Cars Required by Type Tri-Weekly vs. Daily Service

	<b>Baggage</b>	<b>Transition</b>	<b>Sleeper</b>	<b>Diner Lounge</b>	<b>Diner</b>	<b>Lounge</b>	<b>Coach</b>	<b>Coach Baggage</b>	<b>Total</b>
<b>Current Tri-Weekly</b>									
NOL-LAX	4	4	4	4	4	4	4	4	32
CHI-LAX			4				4		8
CHI-SAS	4	4	4	4		4	8	4	32
<b>Total</b>	<b>8</b>	<b>8</b>	<b>12</b>	<b>8</b>	<b>4</b>	<b>8</b>	<b>16</b>	<b>8</b>	<b>72</b>
<b>Proposed Daily</b>									
NOL-LAX			5	5	0		5	5	20
CHI-LAX	7	7	7	7	0		7		35
CHI-SAS					0	4	4	4	12
<b>Total</b>	<b>7</b>	<b>7</b>	<b>12</b>	<b>12</b>	<b>0</b>	<b>4</b>	<b>16</b>	<b>9</b>	<b>67</b>
Change	(1)	(1)	0	4	0	(4)	0	1	(1)

## Chapter #8

### Conclusion: Public Benefit & Cost

Daily service would:

- Connect nine large and rapidly growing Metropolitan Statistical Areas (MSAs) that are, with one exception, within 300 to 400 miles of each other.
- Increase service to states that are now home to one in four Americans that Amtrak has ignored for 47 years.
- Serve the mobility needs of a large number of travelers that tri-weekly service does not.
- Have a reasonable probability of generating enough incremental revenue to cover most incremental operating costs.
- Require little in the way of additional operating support from the federal government.
- Not require any additional equipment.

#### Projected Fiscal Impact

	<b>FY 2017 APT Base</b>	<b>Projected Annual</b>	<b>Increase over 2017 Base</b>
<b>Total Amtrak Revenue</b>	<b>\$12,739,505</b>	<b>\$33,361,263</b>	<b>\$20,521,758</b>
<b>Total Amtrak Cost</b>	<b>\$47,118,725</b>	<b>\$67,917,725</b>	<b>\$20,799,000</b>
<b>Income or (Loss)</b>	<b>(\$34,379,221)</b>	<b>(\$34,656,462)</b>	<b>(\$277,242)</b>

Because daily service would produce “So much to so many for so little,” it is incumbent upon Amtrak to reach an accommodation with Union Pacific. To achieve an agreement, the Federal Railroad Administration (FRA) will likely need to take the lead in working with the states, Amtrak and Union Pacific to identify – using industry standard capacity modeling technology – the capital improvements UP’s freight infrastructure requires and to access federal programs that will help fund them.

# Appendix #1

## Population Change by County 1970-2017

County	Station Codes	1970 Population	2017 Population	Change	% Change	% US 2017 Population
<b>I-10 Corridor Counties</b>						
Los Angeles County, CA	LAX,POS,ONA	7,032,075	10,163,507	3,131,432	45%	3.1%
Riverside County, CA	PSN	459,074	2,423,266	1,964,192	428%	0.7%
Yuma County, AZ	YUM	60,827	207,534	146,707	241%	0.1%
Cochise County, AZ	BEN	61,910	124,756	62,846	102%	0.0%
Maricopa County, AZ	MRC	967,522	4,307,033	3,339,511	345%	1.3%
Pima County, AZ	TUS	351,667	1,022,769	671,102	191%	0.3%
Hidalgo County, NM	LDB	4,734	4,305	(429)	-9%	0.0%
Luna County, NM	DEM	11,706	24,078	12,372	106%	0.0%
El Paso County, TX	ELP	359,291	840,410	481,119	134%	0.3%
Brewster County, TX	ALP	7,780	9,337	1,557	20%	0.0%
Terrell County, TX	SND	1,940	810	(1,130)	-58%	0.0%
Val Verde County, TX	DRT	27,471	49,205	21,734	79%	0.0%
Bexar County, TX	SAS	830,460	1,958,578	1,128,118	136%	0.6%
Harris County, TX	HOS	1,741,912	4,652,980	2,911,068	167%	1.4%
Jefferson County, TX	BMT	244,773	256,299	11,526	5%	0.1%
Calcasieu Parish, LA	LCH	145,415	202,445	57,030	39%	0.1%
Lafayette Parish, LA	LFT	109,716	202,445	92,729	85%	0.1%
Iberia Parish, LA	NIB	57,397	72,176	14,779	26%	0.0%
Terrebonne Parish, LA	SCH	76,049	112,086	36,037	47%	0.0%
Orleans Parish, LA	NOL	593,471	393,292	(200,179)	-34%	0.1%
<b>Total I-10 Corridor</b>		<b>13,145,190</b>	<b>27,027,311</b>	<b>13,882,121</b>	<b>106%</b>	<b>8.3%</b>
<b>I-95 Corridor Counties</b>						
Fairfield County, CT	BRP,STM	792,814	949,921	157,107	20%	0.3%
Middlesex County, CT	OSB	114,816	163,410	48,594	42%	0.1%
New Haven County, CT	NHV	744,948	860,435	115,487	16%	0.3%
New London County, CT	MYS,NLC	230,348	269,033	38,685	17%	0.1%
New Castle County, DE	NRK,WIL	385,856	559,793	173,937	45%	0.2%
Washington, DC	WAS	756,510	693,972	(62,538)	-8%	0.2%
Anne Arundel County, MD	BWI	297,539	573,235	275,696	93%	0.2%
Harford County, MD	ABE	115,378	252,160	136,782	119%	0.1%
Prince George's County, MD	NCR	660,567	912,756	252,189	38%	0.3%
Baltimore city, MD	BAL	905,759	611,648	(294,111)	-32%	0.2%
Norfolk County, MA	RTE,BBY	605,051	700,322	95,271	16%	0.2%
Suffolk County, MA	BOS	735,190	797,939	62,749	9%	0.2%
Essex County, NJ	EWR,NWK	929,986	808,285	(121,701)	-13%	0.2%
Mercer County, NJ	PJC,TRE	303,968	374,733	70,765	23%	0.1%
Middlesex County, NJ	MET,NBK	583,813	842,798	258,985	44%	0.3%
New York County, NY	NYP	1,539,233	1,664,727	125,494	8%	0.5%
Westchester County, NY	NRO	894,104	980,244	86,140	10%	0.3%
Philadelphia County, PA	PHL,PHN	1,948,609	1,580,863	(367,746)	-19%	0.5%
Providence County, RI	PVD	580,261	637,357	57,096	10%	0.2%
Washington County, RI	KIN,WLY	83,586	126,150	42,564	51%	0.0%
<b>Total I-95 Corridor</b>		<b>13,208,336</b>	<b>14,359,781</b>	<b>1,151,445</b>	<b>9%</b>	<b>4.4%</b>
<b>Total United States</b>		<b>209,486,000</b>	<b>326,474,000</b>	<b>116,988,000</b>	<b>56%</b>	<b>100.0%</b>

## Appendix #2

### Population Change by State 1970-2016

State	1970	2016 Pop	Change	% Change	% US 2016 Population
<b>I-95 Corridor States</b>					
Maryland	3,923,897	6,016,447	2,092,550	53%	1.9%
New Jersey	7,171,112	8,944,469	1,773,357	25%	2.8%
New York	18,241,391	19,745,289	1,503,898	8%	6.1%
Pennsylvania	11,800,766	12,784,227	983,461	8%	4.0%
Massachusetts	5,689,170	6,811,779	1,122,609	20%	2.1%
Connecticut	3,032,217	3,576,452	544,235	18%	1.1%
Delaware	548,104	952,065	403,961	74%	0.3%
Rhode Island	949,722	1,056,426	106,704	11%	0.3%
District of Columbia	756,668	681,170	(75,498)	-10%	0.2%
<b>Total I-95 Corridor</b>	<b>52,113,047</b>	<b>60,568,324</b>	<b>8,455,277</b>	16%	18.7%
<b>I-10 Corridor States</b>					
California	19,971,071	39,250,017	19,278,946	97%	12.1%
Texas	11,198,657	27,862,596	16,663,939	149%	8.6%
Arizona	1,775,399	6,931,071	5,155,672	290%	2.1%
New Mexico	1,017,055	2,081,015	1,063,960	105%	0.6%
Louisiana	3,644,637	4,681,666	1,037,029	28%	1.4%
<b>Total I-10 Corridor</b>	<b>37,606,819</b>	<b>80,806,365</b>	<b>43,199,546</b>	115%	25.0%
<b>Total United States</b>	<b>203,302,037</b>	<b>323,127,513</b>	<b>119,825,476</b>	59%	100.0%



## Appendix #3 Ridership and Revenue

	Tri-Weekly Service (FY 2017 APT Actuals) <sup>9</sup>		Daily Service (Projected) <sup>10</sup>			
	Total Ridership	Total Revenue	Total Ridership	Total Revenue	Incremental Ridership	Incremental Revenue
Total APT Revenue Attributed to Sunset		\$2,739,505				
Less "Cost Sharing" Revenue		(\$377,447)				
<b>Sunset Only Ridership &amp; Revenue</b>	<b>98,649</b>	<b>\$ 12,362,058</b>	<b>221,760</b>	<b>\$2,781,630</b>	<b>123,311</b>	<b>\$15,452,572</b>
Eagle/Sunset Cross Platform Connections at SAS <sup>11</sup>	2,228	\$120,445	5,013	\$171,002	2,785	\$ 50,557
Trips transiting SAS on Eagle thru cars	11,766	\$2,415,547	26,474	\$5,434,981	14,708	\$ 3,019,434
NOL Connection with Crescent	2,244	\$312,023	5,049	\$702,052	2,805	\$ 390,029
NOL Connection with City of New Orleans	150	\$21,708	338	\$27,135	188	\$ 27,135
LAX Connection with Starlight	5,579	\$834,210	12,553	\$1,876,973	6,974	\$ 1,042,763
LAX Connection with Surfliners	6,995	\$182,613	19,244	\$410,880	8,744	\$ 228,267
LAX Connection with Chief	167	\$23,933	376	\$53,849	209	\$ 29,916
LAX Connection with Thruway Bus	9,799	\$144,869	22,048	\$325,995	12,249	\$ 181,086
<b>Total Sunset Dependent Ridership &amp; Revenue Attributed to Other Routes</b>	<b>38,928</b>	<b>\$4,055,349</b>	<b>85,588</b>	<b>\$9,124,535</b>	<b>48,660</b>	<b>\$5,069,186</b>
<b>Total Ridership &amp; Revenue</b>	<b>137,577</b>	<b>\$ 16,794,853</b>	<b>309,548</b>	<b>\$37,316,611</b>	<b>171,971</b>	<b>\$20,521,758</b>

Subsidy per passenger = \$34,379,000/221,760 = \$155

<sup>9</sup> FY 2017 Route-to-Route connections.

<sup>10</sup> FY 2017 base volume times 125%.

<sup>11</sup> Station codes: SAS=San Antonio; NOL=New Orleans; LAX=Los Angeles

## Appendix #4

### Projected Operating Costs FY 2017 Tri-Weekly Actual & Projected Daily

Explanatory Note #		FY 2017 APT Tri- Weekly Actual	Projected for Daily	Incremental
1	Host RR, Movement, Multiple & Support	\$2,685,670	\$8,723,670	\$6,038,000
2	Fuel	\$2,615,069	\$4,498,069	\$1,883,000
3	T&E - Crew	\$10,857,058	\$14,767,058	\$3,910,000
4	OBS - Crew	\$5,376,020	\$9,169,020	\$3,793,000
5	F&B Supplies & Commissary	\$2,454,484	\$3,804,484	\$1,350,000
6	Mechanical	\$9,653,644	\$11,873,644	\$2,220,000
7	Stations	\$2,689,107	\$2,789,107	\$100,000
8	Remaining Direct	\$9,504,249	\$10,604,249	\$1,100,000
	<b>Total Amtrak Cost</b>	<b>\$47,118,725</b>	<b>\$67,917,725</b>	<b>\$20,799,000</b>

The following explains the basis for Rail Passengers' update of the report's original estimate of incremental cost.

**1 - Host Railroad:** PIP projected that payments to host railroads would increase by \$3.1 million, 68% more than FY 2009 actual. PIP based the increase on what was then the "current methodology and cost formulas used for long distance routes." Rail Passengers believes that this projection was too low to provide reasonable incentives to UP and BNSF. We have instead projected that payments would rise in direct proportion to the number of train miles and applied that increase to actual payments in FY 2009, which were \$4,539,495 – or \$1.6 million *higher* than the \$2,939,318 actual in FY 2017.

**2 - Fuel:** PIP projected a 62% increase over the FY 2009 base using formulas that took into account train tonnage, mileage and per-gallon fuel cost. This estimate reflected a smaller consist with only one locomotive between San Antonio and New Orleans instead of the current two. We added an additional 10% "safety factor" and projected that fuel would rise by 72% over FY 2017 base.

**3 - Train and Engine (T&E) Labor:** PIP projected only a 36% increase even though the frequency rose by 133%. The productivity improvement came from the elimination of non-productive "held-away" payments associated with tri-weekly service. We applied the same 36% increase to the FY 2017 base of \$10,857,058.

**4 – On Board Service (OBS) Crew:** Instead of a proportional \$7,988,000 increase, PIP projected a *decrease* of \$90,000 because daily service would eliminate such inefficiencies as the

long, paid layovers in New Orleans caused by less than daily service. We assumed that implementing the revised schedule achieved some, but not all, of the labor efficiencies that daily service would produce. Instead of a decrease, we projected an *increase* in OBS cost over the FY 2017 actual of 70%, on the assumption that the revised schedule had already achieved only half of the potential savings.

**5 – Food F&B Supplies and Commissary:** PIP projected an increase of \$1.4 million based on changes in passenger volume. We applied an increase 125% to the \$1,075,000 cost that APT allocated to the Sunset in FY 2017 for F&B supplies. We assumed no increase in commissary management or crew support overhead.

**6 - Mechanical:** PIP projected \$1.9 million in additional expense to add ten employees at the Los Angeles maintenance facility as well as to cover the additional cost of running maintenance caused by increased mileage – a 23% increase over the FY 2009 base. We have applied the same percentage increase to the FY 2017 base.

**7 - Stations:** PIP assessed that daily service would not increase station cost except for an additional agent in Maricopa. Even though Amtrak eliminated the Maricopa agent, we have added the same amount to the base cost because it is likely that daily service should generate sufficient volume to warrant reinstatement.

**8 - Remaining Direct Costs:** PIP did not specify the nature of these costs. After reviewing detailed cost data from APT for FY 2017, we identified several cost lines that they probably included in this general category.

- **Maintenance of Way:** The Sunset uses only 3.5 miles of Amtrak owned infrastructure between Southport Junction and New Orleans Union Station. The addition of four additional round trips per week does not justify an increase over the \$860,000 (\$245,700 per track mile) annual cost that APT already allocates to the Sunset.
- **Yard:** We assumed a 133% increase over the FY 2017 base of \$364,000 after eliminating \$60,000 in New York and Chicago yard costs that APT erroneously allocated to the Sunset.
- **Credit Card and Travel Agent Commissions:** We assumed that these would change in direct proportion to revenue and applied a 1.25 multiplier to the FY 2017 base.
- **Reservations & Information:** a 125% increase in passengers should have some effect on reservation and information cost, especially if it required Amtrak to hire additional personnel in its reservations. However, between FY 2009 and FY 2017, the RSO time per passenger has decreased more than 30% as on-line booking gained greater passenger acceptance. Our analysis revealed an anomaly in the APT data. RSO time per passenger (and thus cost) for the Sunset was significantly higher than any mainline route other than Auto Train. Unless it resulted from additional talk time cause by tri-weekly service (unlikely since it was not present for the tri-weekly Cardinal), we found no reasonable explanation for the larger amount of time attributed to the Sunset. We assumed it reflected error in data collection. Since 28% of the “base volume” for the Sunset in FY 2017 also required reservations on other long distance or regional routes, we decided that

it was reasonable to estimate incremental RSO cost by multiply the system average RSO cost of \$2.20 times the projected increase in passengers.

## Rail Passengers Cost Projections Compared to FY 2009 and FY 2017 APT Actuals

	Fully Allocated Cost			Incremental Cost	
	FY 2009 APT Actual	FY 2017 APT Actual	Projected for Daily	Daily Incremental Over 2009 Actual	Daily Incremental Over 2017 Actual
<b>Host RR, Movement, Multiple &amp; Support</b>	\$5,986,304	\$2,685,670	\$8,723,670	\$2,737,366	\$6,038,000
<b>Fuel</b>	\$3,058,271	\$2,615,069	\$4,498,069	\$1,439,798	\$1,883,000
<b>T&amp;E - Crew</b>	\$9,136,933	\$10,857,058	\$14,767,058	\$5,630,125	\$3,910,000
<b>OBS - Crew</b>	\$6,006,168	\$5,376,020	\$9,169,020	\$3,162,851	\$3,793,000
<b>F&amp;B Supplies &amp; Commissary</b>	\$2,483,073	\$2,454,484	\$3,804,484	\$1,321,411	\$1,350,000
<b>Mechanical</b>	\$8,219,204	\$9,653,644	\$11,873,644	\$3,654,440	\$2,220,000
<b>Stations</b>	\$2,517,052	\$2,689,107	\$2,789,107	\$272,055	\$100,000
<b>Remaining Direct</b>	\$2,370,647	\$2,793,513	\$3,987,285	\$1,616,638	\$1,193,772
Maintenance of Way	\$350,833	\$859,338	\$859,338	\$508,505	\$0
Yard	\$633,867	\$424,087	\$829,087	\$195,220	\$405,000
Credit Card & Travel Agent Commissions	\$178,383	\$327,145	\$737,580	\$559,197	\$410,435
Reservations & Information	\$1,207,565	\$1,182,943	\$1,561,280	\$353,715	\$378,337
<b>Fixed Overhead</b>	\$6,953,697	\$7,994,161	\$7,994,161	\$1,040,464	\$0
Other Sales & Marketing	\$452,225	\$419,612	\$419,612	(\$32,613)	\$0
General and Administrative	\$5,558,847	\$6,756,253	\$6,756,253	\$1,197,407	\$0
Utilities	\$111,006	\$272	\$272	(\$110,734)	\$0
Police, Environmental & Safety	\$831,620	\$818,024	\$818,024	(\$13,597)	\$0
<b>Total Amtrak Cost</b>	\$56,055,695	\$47,118,725	\$67,606,497	\$11,550,802	\$20,487,772
<b>Income or Loss</b>	(\$37,259,049)	(\$34,379,221)	(\$34,345,234)	\$2,913,814	\$33,986

**Incremental Operating Cost  
Projected In the  
2010 Performance Improvement Plan**

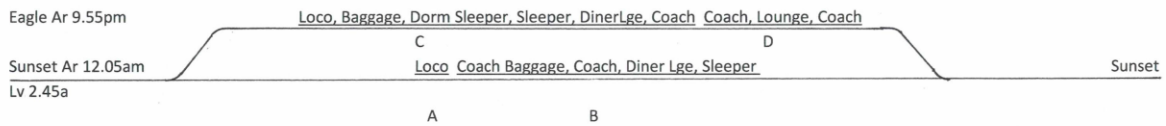
Host RR, Movement, Multiple & Support	\$3,100,000
Fuel	\$1,900,000
T&E - Crew	\$3,200,000
OBS – Crew	(\$90,000)
F&B Supplies & Commissary	\$1,144,495
Mechanical	\$1,900,000
Stations	\$100,000
Remaining Direct	\$934,000
<b>Total Amtrak Cost</b>	<b>\$12,188,495</b>

# Appendix #5

## San Antonio Switching Plan

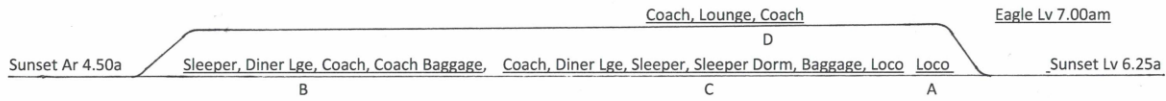
### Proposed San Antonio Eagle Sunset Switching

#### Westbound



Loco A Pulls way forward  
 Train C pulls up to loco A and couples  
 The A & C back onto Train B  
 Cars D spend the night  
 A B C Highball for LA

#### Eastbound



Set C&A uncouple from B and pull forward  
 C uncouples from A and backs onto D setting from the night before  
 Loco A backs onto Train B  
 Highball Sunset for New Orleans  
 Highball Eagle for Chicago

# **Appendix #6**

## **Routing to and from San Antonio**

### **Eastbound**

Sunset/Eagle with two units (operating elephant style) arrives into San Antonio Amtrak Station on the Del Rio Subdivision Main Track 1. The entire train pulls into station track #3 and pulls railroad east towards the Commerce Street crossing. Already sitting in station track #2 on ground power are additional cars for Eagle SAS-CHI. After switching and a 1,500-mile inspection, Eagle departs following the same northbound route it currently uses. It shoves west from station track # 3 to Del Rio Main Track # 1 and back to Tower 112. When it is clear of the Austin Subdivision Track 2 switch at Tower 112, it travels railroad north on the Austin Subdivision Track 2. The Sunset departs facing railroad east from San Antonio Station Track 2 onto the Del Rio Subdivision Main Track 1.

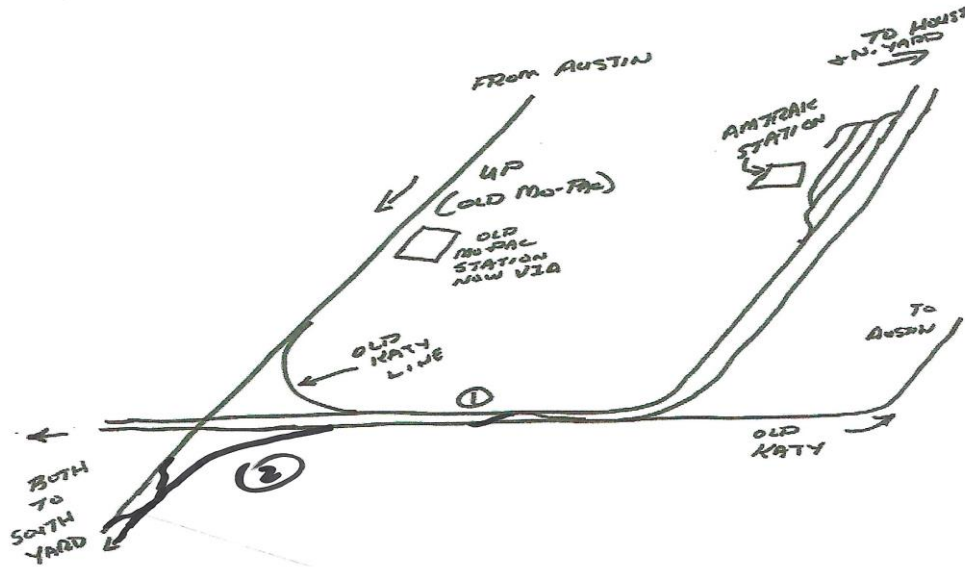
### **Westbound**

The Eagle arrives into San Antonio traveling southbound on Austin Subdivision Track 1 to Tower 105. It crosses Del Rio Subdivision double diamonds past the universal crossover. Then it backs railroad east on o the Del Rio Subdivision transfer track at CJ261 to Del Rio Subdivision Main Track 2; crosses over to Del Rio Main Track 1 at Tower 112 CP SA211; enters Amtrak Station Track 3 at the west end and shoves into station track 3 for unloading. The Sunset arrives in a westward direction off the Del Rio Subdivision on to station track 2. After completion of switching and a 1,500-mile inspection, the combined Sunset/Eagle departs on Del Rio Main Track 1 with two units operating elephant style.

### **Future Improvement**

Future capacity and operational analysis might reveal potential capital investments (track connections or alternative facilities) to eliminate backup moves and occupancy of the crossing of the Del Rio Subdivision and Austin Subdivision at Tower 105.

# San Antonio Track Map





## Appendix #7

### Public Officials Requesting Daily Sunset Limited Service

Community	Endorsement
Tucson AZ	Letter to Amtrak, Jonathan Rothschild, Mayor
Houston TX	Letter to Amtrak, Sylvester Turner, Mayor
San Antonio TX	Letter of support, Ron Nirenberg, Mayor
San Antonio TX	Resolution, San Antonio City Council
Del Rio TX	Letter of support, City of Del Rio, Bruno Lozano, Mayor
Del Rio TX	Letter of support, Chamber of Commerce
Alpine TX	Resolution, City Council, Andres Ramos, Mayor
Beaumont TX	Letter of support, Jefferson County Commissioners Court
Sanderson TX	Letter of support, Terrell County Commissioners Court
Orange TX	City Council
Jasper County TX	Commissioners Court
Jefferson County TX	Commissioners Court
Val Verde County TX	Letter of support, Lewis Owens Jr., Judge County Judge
Terrell County TX	Commissioners Court
Jasper County TX	Commissioners Court
City of Orange TX	City Council
City of Groves TX	City Council
City of Port Arthur TX	City Council